

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

X-Energy, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

4911
(Primary Standard Industrial
Classification Code Number)

41-3934505
(I.R.S. Employer
Identification Number)

**530 Gaither Road, Suite 700
Rockville, Maryland 20850
(301) 358-5600**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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**Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, or Securities Act, check the following box: ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Securities Exchange Act of 1934, as amended.

Large accelerated filer ☐
Non-accelerated filer ☒

Accelerated filer ☐
Smaller reporting company ☐
Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED , 2026
PRELIMINARY PROSPECTUS

Shares
X•ENERGY

X-Energy, Inc.
Class A Common Stock

This is the initial public offering of shares of Class A common stock of X-Energy, Inc. We are offering shares of our Class A common stock.

Prior to this offering, there has been no public market for our Class A common stock. We expect that the initial public offering price per share of our Class A common stock will be between \$ and \$ per share.

We intend to apply to list our Class A common stock on the Nasdaq Stock Market LLC (“Nasdaq”), under the symbol “XE.”

Upon consummation of this offering, we will be a holding company in an organizational structure commonly referred to as an umbrella partnership-C-corporation (or “Up-C”) structure, and our principal asset will consist of ownership of % of the common units (“Common Units”) of X-Energy Reactor Company, LLC (“XERC”) (or approximately % of the Common Units if the underwriters exercise in full their option to purchase additional shares of Class A common stock). See “Risk Factors — Risks Related to Our Capital Structure.” We will operate and control all of the business and affairs of XERC and its direct and indirect subsidiaries, and conduct our business through XERC.

Following this offering, we will have two series of authorized common stock: shares of Class A common stock, having one vote per share and economic rights, and shares of Class B common stock, having one vote per share and no economic rights (collectively, the “Common Stock”). Holders of Class A and Class B common stock will vote together as a single class on all matters to be presented to our shareholders for their vote or approval, except as otherwise required by applicable law or our Bylaws (as defined herein). Our outstanding Class A common stock and Class B common stock will represent approximately % and %, respectively, of the total voting power of our outstanding Common Stock immediately following this offering, assuming no exercise of the underwriters’ option to purchase additional shares of Class A common stock. See “Description of Capital Stock” and “Organizational Structure.”

In connection with the offering, we will enter into a Tax Receivable Agreement (“TRA”) (as defined elsewhere in this prospectus) with XERC and the TRA Holders (as defined elsewhere in this prospectus) that will provide for certain cash payments to be made by the Company to such TRA Holders in respect of certain future tax benefits received by X-Energy, Inc., utilizing cash for the benefit of such unitholders that otherwise would have been available to us for other uses and for the benefit of all of our shareholders. Although the actual timing and amount of any payments that may be made under the Tax Receivable Agreement will vary, the Company expects such payments under the Tax Receivable Agreement are substantial. Any payments made by the Company to the TRA Holders will benefit the TRA Holders and will reduce cash that might have otherwise been available to the Company for reinvestment or other uses. See “Risk Factors — Risks Related to Our Capital Structure” and “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.”

We are an “emerging growth company” as defined under the federal securities laws. As such, in this prospectus we have taken advantage of certain reduced disclosure obligations that apply to emerging growth companies regarding our financial statements and executive compensation arrangements.

Investing in our Class A common stock involves risks. See the section titled “Risk Factors” beginning on page 24 to read about factors you should consider before buying shares of our Class A common stock.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Class A Share	Total
Initial public offering price	\$	\$
Underwriting discounts and commissions ⁽¹⁾	\$	\$
Proceeds, before expenses, to us	\$	\$

(1) See the section titled “Underwriting” for a description of the compensation payable to the underwriters.

The underwriters have the option for a period of 30 days from the date of this prospectus to purchase up to an additional shares of our Class A common stock from us to cover over-allotments, if any, at the initial public offering price less underwriting discounts and commissions.

The underwriters expect to deliver the shares of our Class A common stock to purchasers on or about , 2026 through the book-entry facilities of The Depository Trust Company.

Joint Bookrunning Managers

J.P. Morgan Morgan Stanley Jefferies Moelis & Company
Cantor UBS Investment Bank TD Securities Guggenheim Securities Wolfe | Nomura Alliance
Prospectus dated , 2026

X·ENERGY

Building Energy Solutions that Empower the Unprecedented



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Neither we nor the underwriters have authorized anyone to provide you with information different from that contained in this prospectus and any free writing prospectus we have prepared. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell Class A common stock and seeking offers to buy Class A common stock only under circumstances and in jurisdictions where such offers and sales are lawful. The information in this prospectus is accurate only as of the date of this prospectus (or as of any earlier date as of which such information is given), regardless of the time of delivery of this prospectus or of any sale of the Class A common stock. Our business, liquidity position, financial condition, prospects or results of operations may have changed since the date of this prospectus.

This prospectus contains forward-looking statements that are subject to a number of risks and uncertainties, many of which are beyond our control. See the sections titled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements."

For investors outside the United States: Neither we nor the underwriters have done anything that would permit a public offering of the securities offered hereby or possession or distribution of this prospectus, any amendment or supplement to this prospectus, or any applicable free writing prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus, any amendment or supplement to this prospectus, or any applicable free writing prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus, any amendment or supplement to this prospectus, or any applicable free writing prospectus outside of the United States.

BASIS OF PRESENTATION AND DEFINITIONS

Organizational Structure

In connection with the closing of this offering, we will effect certain organizational transactions. Unless otherwise stated or the context otherwise requires, all information in this prospectus reflects the consummation of the organizational transactions and this offering, which we refer to collectively as the “Transactions.” See “Organizational Structure” for a description of the Transactions and a diagram depicting our organizational structure after giving effect to the Transactions, including this offering.

As used in this prospectus, unless the context otherwise requires, references to:

- “we,” “us,” “our,” the “Company,” “X-energy” and similar references refer, following the consummation of the Transactions, including this offering, to X-Energy, Inc., and, unless otherwise stated, all of its subsidiaries, including X-Energy Reactor Company, LLC, which we refer to as “XERC” and, unless otherwise stated, all of its subsidiaries. When used in a historical context, such terms collectively refer to X-Energy Reactor Company, LLC, which we refer to as “XERC,” our predecessor for financial reporting purposes, and its operating subsidiaries.
- “ARDP” means the U.S. Department of Energy’s Advanced Reactor Demonstration Program.
- “ARDP Agreement” means the Cooperative Agreement between the U.S. Department of Energy and X-Energy, LLC, Award No. DE-NE0009040, effective as of February 2, 2021.
- “Basis Adjustments” means the tax basis adjustments expected to be obtained by X-Energy, Inc. resulting from (a) any future redemptions or exchanges of Common Units from the TRA Holders; (b) certain distributions (or deemed distributions) by XERC; and (c) payments made under the Tax Receivable Agreement.
- “Blocker Companies” means entities that are owners of Common Units in XERC prior to the Reorganization Transactions and are taxable as corporations for U.S. federal income tax purposes.
- “Blocker Mergers” means the merger of each of the Blocker Companies with X-Energy, Inc. as part of the Reorganization Transactions, pursuant to which the Blocker Shareholders receive shares of Class A common stock as consideration for the applicable Blocker Merger.
- “Blocker Shareholders” means the owners of the Blocker Companies prior to the Reorganization Transactions, who will exchange their interests in the Blocker Companies for shares of our Class A common stock in connection with the consummation of the Blocker Mergers.
- “Blocker Tax Attributes” means (i) the share of tax basis (including under Sections 734(b), 743(b) and 754 of the Code and Section 1.743-1(h) of the Treasury Regulations and, in each case, the comparable sections of U.S. state and local tax law) of certain of XERC Group’s assets that are amortizable under Section 197 of the Code or that are otherwise amortizable or depreciable for U.S. federal income tax purposes, in each case, attributable to the Common Units acquired by us from the Blocker Companies in the Blocker Mergers and (ii) net operating losses (and carryforwards thereof), capital losses (and carryforwards thereof), disallowed interest expense carryforwards under Section 163(j) of the Code and credit carryforwards of the Blocker Companies relating to taxable periods ending on or prior to the date of this offering, but, in the case of clause, (ii) excluding any tax attribute of a Blocker Company that is used to offset taxes of such Blocker Company, if such offset taxes are attributable to taxable periods (or portion thereof) ending on or prior to the date of the Blocker Mergers.
- “Code” means the U.S. Internal Revenue Code of 1986, as amended.
- “Common Units” means common units of membership interest in X-Energy Reactor Company, LLC.
- “Continuation Application” means a non-competitive application for an additional budget period within the contractual award timeline under the ARDP Agreement.
- “Continuing Equity Owners” refers collectively to those Original Equity Owners (including and certain of their affiliates, but excluding Management LLC) that will own Common Units in XERC and our Class B common stock after the Reorganization Transactions and who may, following the

consummation of this offering, redeem their Common Units for cash or shares of our Class A common stock as described in “Certain Relationships and Related Party Transactions.”

- “*DGCL*” means the Delaware General Corporation Law, as amended.
- “*DOE*” means the U.S. Department of Energy.
- “*Dow*” means Dow Inc. or its subsidiaries.
- “*Exchange Act*” means the U.S. Securities Exchange Act of 1934, as amended.
- “*Exchange Existing Basis*” means the tax basis in certain assets of XERC and certain of its direct or indirect subsidiaries (including assets that will eventually be subject to depreciation or amortization once placed in service) that is obtained by X-Energy, Inc., in connection with and is attributable to a Common Unit exchanged or redeemed by a TRA Holder, including with respect to Common Units contributed to X-Energy, Inc. by a TRA Holder in connection with the consummation of this offering.
- “*Existing Basis*” means the Exchange Existing Basis and IPO Existing Basis.
- “*FOAK*” means first-of-a-kind.
- “*Former Equity Owners*” refers to those Original Equity Owners other than the Blocker Companies and the Continuing Equity Owners.
- “*GAAP*” means U.S. generally accepted accounting principles.
- “*GFR*” means Gas-cooled Fast Reactors.
- “*Ghaffarian Enterprises*” means Ghaffarian Enterprises, LLC.
- “*GM Enterprises*” means GM Enterprises, LLC.
- “*HALEU*” means high-assay low-enriched uranium.
- “*HTGR*” means High Temperature Gas-cooled Reactors.
- “*HTF*” means Helium Test Facility.
- “*Incentive Units*” means the Class B-2 Common Units of Management LLC granted under the Management LLC Profits Interest Plan prior to the closing of this offering.
- “*Interest Deductions*” means deductions attributable to imputed interest and other payments of interest by X-Energy, Inc. pursuant to the Tax Receivable Agreement.
- “*IPO Existing Basis*” means the tax basis obtained by X-Energy, Inc. in connection with this offering as a result of existing tax basis in certain assets of XERC and certain of its direct or indirect subsidiaries, including assets that will eventually be subject to depreciation or amortization, once placed in service.
- “*LLC Units*” means X-Energy Reactor Company, LLC’s existing Common Units and preferred units.
- “*Management LLC*” means X-Energy Management, LLC, a Delaware limited liability company.
- “*Material Breach*” means, with respect to the Tax Receivable Agreement, means (i) subject to the exceptions set forth in the Tax Receivable Agreement (including the exceptions for failure to pay due to restrictions in X-Energy, Inc.’s debt instruments and similar agreements) X-Energy, Inc.’s failure to make a payment (along with any applicable interest) within ninety (90) calendar days of the applicable Final Payment Date (as defined in the Tax Receivable Agreement) or (ii) the rejection of the Tax Receivable Agreement by operation of law in a case commenced in bankruptcy or otherwise.
- “*MPa*” means Megapascal.
- “*MSR*” means Molten Salt Reactors.
- “*NOAK*” means Nth-of-a-kind.
- “*NRC*” means the U.S. Nuclear Regulatory Commission.
- “*OPG*” means Ontario Power Generation, Inc.

- “*Original Equity Owners*” refers to the direct and certain indirect owners of XERC, collectively, prior to the Transactions.
- “*Person*” means any individual, firm, corporation, partnership, limited liability company, incorporated or unincorporated association, joint venture, joint stock company, governmental authority or instrumentality or other entity of any kind.
- “*Profits Interest Plan*” means the Profits Interest Plan of Management LLC in place prior to the closing of this offering.
- “*Recapitalization*” means the transactions whereby X-Energy Reactor Company, LLC will complete a recapitalization pursuant to which all outstanding equity interests in X-Energy Reactor Company, LLC will be converted or exchanged into Common Units.
- “*Reorganization Transactions*” has the meaning ascribed to it in “Organizational Structure”.
- “*Sarbanes-Oxley Act*” means the Sarbanes-Oxley Act of 2002.
- “*SEC*” means the U.S. Securities and Exchange Commission.
- “*Securities Act*” means the U.S. Securities Act of 1933, as amended.
- “*Series C-1 Investment*” means the purchase by the Series C-1 Investors of the Series C-1 Notes.
- “*Series C-1 Investors*” means those certain investors participating in the Series C-1 Investment.
- “*Series C-1 Notes*” means the Series C-1 Convertible/Exchangeable promissory notes issued by XERC.
- “*Series C-2 Investment*” means the purchase by the Series C-2 Investors of the Series C-2 Notes pursuant to the Series C-2 Securities Purchase Agreements.
- “*Series C-2 Investors*” means those certain investors participating in the Series C-2 Investment.
- “*Series C-2 Notes*” means the Series C-2 Convertible/Exchangeable promissory notes issued by XERC.
- “*Series C-2 Securities Purchase Agreements*” means the Series C-2 Convertible/Exchangeable Securities Purchase Agreements entered into between XERC and the Series C-2 Investors.
- “*SMR*” means Small Modular Reactors.
- “*Tax Receivable Agreement*” means the Tax Receivable Agreement to be entered into by and among X-energy, XERC and certain Original Equity Owners (the “*TRA Holders*”) at the consummation of this offering, pursuant to which, among other things, X-energy will be required to pay to each TRA Holder 85% of the amount of cash tax savings, if any, that it realizes (or in certain cases, is deemed to realize) as a result of the Existing Basis, Basis Adjustments, Blocker Tax Attributes and Interest Deductions. A copy of the form of Tax Receivable Agreement is attached to this prospectus.
- “*TRISO-X*” means TRISO-X, LLC, our wholly owned subsidiary.
- “*TRISO-X Fuel*” refers to the HALEU-based TRISO pebble fuel manufactured for the Xe-100 by our TRISO-X, LLC subsidiary.
- “*U.K.*” means the United Kingdom.
- “*U.S.*” means the United States of America.
- “*X-energy Founder*” means X-Energy Holdings, IBX Company Opportunity Fund 1, LP, IBX Company Opportunity Fund 2, LP, IBX Opportunity GP, Inc., X-energy KG Parent, LLC and GM Enterprises.
- “*X-Energy Holdings*” means X-Energy Holdings, LLC.
- “*XERC Group*” means XERC and each of its direct or indirect subsidiaries that is treated as a partnership or disregarded entity for U.S. federal, and applicable state and local, income tax purposes (but excluding any such subsidiary to the extent it is directly or indirectly held by or through any entity treated as a corporation for U.S. federal, and applicable state and local, income tax purposes (other than X-Energy, Inc.)).

- “*XERC LLC Agreement*” refers to XERC’s Eighth Amended and Restated Operating Agreement, which will become effective upon the consummation of this offering.
- “*XERC*” refers to our predecessor for financial reporting purposes, X-Energy Reactor Company, LLC.
- “*Xe-100 plant*” means the optimized four-reactor configuration of 320 MWe that the Xe-100 is expected to be commonly deployed in.

This prospectus includes certain historical condensed consolidated financial and other data for X-Energy Reactor Company, LLC. Immediately following this offering, we will be a holding company and the sole managing member of XERC, and upon completion of this offering and the application of proceeds therefrom, our principal asset will consist of common units of XERC. We will operate and control all the business and affairs of X-Energy Reactor Company, LLC and conduct our business through X-Energy Reactor Company, LLC and its subsidiaries. Following this offering, X-Energy Reactor Company, LLC will be the predecessor of X-Energy, Inc. for financial reporting purposes. As a result, the consolidated financial statements of X-Energy, Inc. will recognize the assets and liabilities received in the reorganization at their historical carrying amounts, as reflected in the historical financial statements of X-Energy Reactor Company, LLC. We will consolidate X-Energy Reactor Company, LLC on our consolidated financial statements and record a noncontrolling interest related to the LLC Units (as defined below) held by our Continuing Equity Owners (as defined below) on our consolidated balance sheet and statements of operations.

Presentation of Financial and Other Information

XERC is the predecessor of the issuer, X-Energy, Inc., for financial reporting purposes. X-Energy, Inc. will be the audited financial reporting entity following this offering. Accordingly, this prospectus contains the following historical financial statements:

- *X-Energy, Inc.:* Other than the balance sheet, dated as of December 31, 2025, the historical financial information of X-Energy, Inc. has not been included in this prospectus as it is a newly incorporated entity, has no business transactions or activities to date and had no assets or liabilities during the periods presented in this prospectus.
- *X-Energy Reactor Company, LLC:* As we will have no other interest in any operations other than those of X-Energy Reactor Company, LLC and its subsidiaries, the historical consolidated financial information included in this prospectus is that of X-Energy Reactor Company, LLC and its subsidiaries.
- *Unaudited Pro Forma Condensed Consolidated Financial Information:* This prospectus contains unaudited pro forma condensed consolidated financial information for the year ended December 31, 2025. The unaudited pro forma condensed consolidated financial information contained in this prospectus is derived from the “Unaudited Pro Forma Condensed Consolidated Financial Information” section of this prospectus. The unaudited pro forma condensed consolidated balance sheet as of December 31, 2025 contained in this prospectus presents the consolidated financial position of XERC after giving effect to the Transactions as if all such transactions had occurred on December 31, 2025 and has been prepared in accordance with Article 11 of Regulation S-X. The unaudited pro forma condensed consolidated statement of operations for the year ended December 31, 2025 contained in this prospectus presents the consolidated results of operations of XERC after giving effect to the Transactions as if all such transactions had occurred on January 1, 2025 and has been prepared in accordance with Article 11 of Regulation S-X. The unaudited pro forma condensed consolidated financial information is presented for informational purposes only and may not be indicative of the results that would have been achieved if the foregoing transactions had taken place on an earlier date or on the dates assumed. In addition, the unaudited pro forma condensed consolidated financial information does not purport to project the future financial condition and results of operations of XERC or X-Energy, Inc. See “Unaudited Pro Forma Condensed Consolidated Financial Information” for a complete description of the adjustments and assumptions underlying the summary unaudited pro forma condensed consolidated financial data.

Certain monetary amounts, percentages and other figures included in this prospectus have been subject to rounding adjustments. Percentage amounts included in this prospectus have not in all cases been calculated on the basis of such rounded figures, but on the basis of such amounts prior to rounding. For this reason,

percentage amounts in this prospectus may vary from those obtained by performing the same calculations using the figures in our consolidated financial statements included elsewhere in this prospectus. Certain other amounts that appear in this prospectus may not sum due to rounding. Figures shown as totals in certain tables or charts may not be the arithmetic aggregation of the figures that precede them, and figures expressed as percentages in the text may not total 100% or, as applicable, when aggregated may not be the arithmetic aggregation of the percentages that precede them.

Our fiscal year begins on January 1 and ends on December 31 of the same year.

TRADEMARKS, TRADE NAMES AND SERVICE MARKS

We use the X-energy logo and other marks as trademarks in the U.S. and other countries. This prospectus contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

MARKET AND INDUSTRY DATA

We are responsible for the disclosure contained in this prospectus. Information contained in this prospectus concerning the market and the industry in which X-energy competes, including its market position, general expectations of market opportunity, size and growth rates, is based on information from various third-party sources, X-energy's knowledge of the markets for its services and solutions, and assumptions made by X-energy based on such sources and knowledge. This information and any estimates provided in this prospectus involve numerous assumptions and limitations, and you are cautioned not to give undue weight to such information. Third-party sources generally state that the information contained in such source has been obtained from sources believed to be reliable but that there can be no assurance as to the accuracy or completeness of such information. Notwithstanding the foregoing, we are liable for the information provided in this prospectus. The industry in which X-energy engages or proposes to engage is subject to a high degree of uncertainty and risk. As a result, the estimates and market and industry information provided in this prospectus are subject to change based on various factors, including those described in the sections of this prospectus entitled "*Cautionary Note Regarding Forward-Looking Statements*" and "*Risk Factors—Risks Related to X-energy—Risks Relating to X-energy's Business*" and elsewhere in this prospectus.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and provides an overview of the Company. This summary does not contain all of the information you should consider before investing in our Class A common stock. For a more complete understanding of our business, you should read this entire prospectus carefully, including the sections titled “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations of X-energy,” “Business” and our audited consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Capitalized terms not otherwise defined in this prospectus have the meanings assigned to them under “Basis of Presentation and Definitions” included elsewhere in this prospectus.

Overview

Our company

X-energy is a leading designer of advanced nuclear reactor technology (commonly referred to as small modular reactors, “SMRs”) and manufacturer of advanced nuclear fuels. We believe these scalable, power generation technologies help satisfy historically unprecedented electricity demand growth, driven by the development of AI and associated data center infrastructure. Total demand for new electricity generation is expected to increase globally by 7,626 TWh from 2023 to 2030 and the challenges associated with meeting this demand have led policymakers and industry leaders to recognize nuclear energy, particularly advanced nuclear, as a key component to address this need.

Founded in 2009 by Dr. Kamal “Kam” Ghaffarian to bring clean, safe, secure and affordable technology to market, X-energy is seeking to redefine the energy industry through its flagship product, the Xe-100, an advanced small modular High Temperature Gas-cooled Reactor (“HTGR”), in development for nearly a decade. The Xe-100 reactor is designed to generate 80 megawatts of electric power or 200 megawatts of thermal output (heat), or a combination thereof. This reactor technology builds on more than 50 years of research and development by the global nuclear industry and the operating experience of previous HTGRs including those at Peach Bottom in the U.S., and Dragon in the U.K. in the 1960s-1970s, and more recently with China’s ongoing deployments of HTGRs in the 21st century.

The Xe-100 has several technological attributes that we believe make it advantaged compared to other sources of baseload generation. These include advanced safety features, virtually no direct greenhouse gas (“GHG”) emissions during generation, high thermal output, load-following capabilities and modularity, all of which allow X-energy to more specifically meet a customer’s power and/or industrial heat needs. X-energy’s simple Xe-100 design directly translates into simplicity of project delivery through reduced supply chain complexity and labor intensity during construction, which we believe will lead to lower cost and faster deployment timelines when compared with conventional nuclear energy sources. X-energy has optimized the deployment of its Xe-100 into a four-reactor format that outputs 320 MWe (or 800 MWt). By deploying four independent reactor modules instead of a single unit, this optimized four-reactor configuration inherently delivers the high levels of reliability and redundancy required for both AI and industrial heat applications.

X-energy’s reactors use a tri-structural isotropic (“TRISO”) coated particle fuel in the form of a spherical ‘pebble’, called TRISO-X fuel. This pebble fuel consists of HALEU fuel kernels individually encapsulated in layers of silicon carbide and pyrolytic carbon, forming miniature containment systems that trap fission products. These particles are then embedded in a graphite matrix to make fuel pebbles that possess exceptional safety margins and compacts, enabling operations at very high temperatures. The HALEU fuel used in our TRISO-X pebble fuel is enriched to 15.5%, a higher energy density form than the less than 5% low-enriched uranium (“LEU”) fuel used in conventional nuclear reactors. TRISO-X fuel will be produced at our fuel fabrication facility in Oak Ridge, Tennessee. The first facility, known as TX-1, began construction in October 2024 and is expected to be completed by the first half of 2028 (“TX-1”). Upon completion, it is expected to be North America’s first purpose-built commercial advanced nuclear fuel fabrication facility. The TX-1 facility will have sufficient production capacity to support the fuel fabrication needs of the first 11 Xe-100 reactors at steady state operations.

In addition to its technology leadership, X-energy has three high-quality customers in Dow, Amazon, and Centrica, who we expect will underpin the deployment of the initial fleets of Xe-100 reactors. Taken together, assuming each customer exercises its contingent rights in full, these three customers provide us with a more than 11 gigawatts electric (“GWe”), 144 reactor pipeline across the U.S. and the U.K. with advanced development efforts already underway on the first Dow project at its Seadrift Operations site in Texas and the first Amazon project in connection with Energy Northwest.

X-energy maintains a strong relationship with the DOE and in December 2020 was awarded an initial \$1.2 billion as part of its selection as one of two awardees in the ARDP, the most substantial federal commitment to deploying advanced nuclear technology. The cooperative agreement for the program, signed in February 2021 (the “ARDP Agreement”), provides 50/50 cost share of \$2.4 billion of eligible costs (\$1.2 billion reimbursement) through 2027, allowing X-energy to continue work toward design, licensing, commercialization and construction of its first-of-a-kind commercial advanced nuclear plant and commercial TRISO-X fuel fabrication facility, while benefiting from decades of nuclear experience and knowledge within the DOE.

As of December 31, 2025, X-energy has been reimbursed approximately \$438 million in funding under the ARDP Agreement. We submit our budgets through an ongoing “budget period” basis tied to project milestones under the ARDP Agreement, and our current budget covers a budget period that began in March of 2025 and extends through August 2026. We submit a Continuation Application to the DOE to extend funding into subsequent periods. Extensions beyond the current budget period are subject to DOE discretion and approval. Under the terms of the ARDP Agreement that rely on the Office of Management and Budget (OMB) guidance, the total extension of the award may not exceed three years (for a total period of performance of 10 years). Any additional extension would require an approval within DOE above the level of the Contracting Officer. If we are unable to obtain extensions and incur eligible costs beyond the currently approved period of performance, we would forgo reimbursement for such costs and may face de-obligation of unobligated funds at closeout. There can be no assurance that we will receive additional ARDP funding beyond the current budget period or that extensions will be granted.

Our organizational structure following the offering and the Reorganization Transactions is commonly referred to as an umbrella partnership-C corporation (or “Up-C”) structure. Pursuant to this structure, following this offering we will hold a number of Common Units equal to the number of shares of our issued and outstanding Class A common stock, and holders of Common Units (each, an “Common Unit holder”) (other than us) will hold a number of Common Units equal to the number of our issued and outstanding Class B common stock. The Up-C structure was selected in order to (i) provide our Continuing Equity Owners with an option to continue to hold their economic ownership interests in our business in “pass-through” form for U.S. federal income tax purposes through their ownership of Common Units and (ii) potentially allow our Continuing Equity Owners and us to benefit from certain net cash tax savings that we might realize in the future, as more fully described in the subsection titled “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.”

Our Market Opportunity

Load growth is accelerating globally with the International Energy Agency (the “IEA”) estimating electricity consumption to grow by more than 25% from approximately 30,000 TWh in 2023 to approximately 37,000 TWh by 2030. In the U.S., power demand is being driven by the increasing data center buildout from cloud computing providers, industrial growth and reshoring of manufacturing, and broader electrification (e.g., electric vehicle installed base). Other sources (BNEF New Energy Outlook 2025) also indicate that power demand is being driven by growing load growth demand from AI and industrial use. Policymakers and industry leaders recognize that nuclear, particularly advanced nuclear, will be a key contributor to meeting this load growth and securing America’s energy independence, with the stated goal of the current federal administration to expand U.S. nuclear capacity to 400 GWe by 2050 (from approximately 97 GWe at present).

We believe the market for SMRs is vast and that X-energy is well positioned to capture this opportunity. According to a 2024 report from PA Consulting, the U.S., the U.K. and Canada, X-energy’s planned core markets, comprise approximately one-third of potentially serviceable global electricity usage. Across these three geographies, there is an estimated total addressable market (“TAM”) of cumulative capacity additions of 743 GWe and 1,146 GWe by 2040 and 2050, respectively. Of this TAM, PA Consulting estimates 72 GWe in

2040 and 158 GWe in 2050 will be best served by SMRs based on needs, siting efficiencies, and demand for co-generation. These capacity additions, across a representative set of SMR use cases including powering data centers, utility power generation, industrial applications and behind-the-meter (“BTM”) generation, implies a potential need for approximately around 1,975 Xe-100 reactors (the equivalent of 494 four-reactor deployments), or an estimated \$2.3 trillion market opportunity for X-energy in 2050.

We believe the following secular movements will continue to support the use cases and power needs for scalable, firm, clean baseload power that SMRs, particularly the Xe-100, can deliver.

- ***Demand for AI is Prompting Investment in Nuclear Power Generation.*** Cloud computing providers and AI companies are deploying capital across data center infrastructure to keep up with the growing computing demand required by AI. As part of this expansion, electricity demand in the U.S. from data centers is expected to grow from approximately 108 TWh in 2020 to approximately 426 TWh by 2030. Since data center facilities must be continuously powered, nuclear generation can provide a key solution for reliable supply. SMRs are particularly well suited to meet the average 300 MW to 1,000 MW power capacity that data centers require. SMRs have a smaller physical footprint to meet siting requirements, and have modular scalability which provides the flexibility to meet facility-specific capacity needs.
- ***High Carbon-Intensity Industrials Require Replacement for Industrial Heat and Steam Production.*** Industrial companies have historically relied on fossil fuel fired boilers to generate electricity and steam for their industrial processes. The current installed base of industrial boilers operates below capacity and is frequently offline for maintenance. The current fleet is facing a near-term replacement cycle due to age. For industrial processes requiring consistent steam availability, X-energy’s HTGR solution can reliably provide industrial steam in addition to onsite power. With an expected capacity factor of 95%, X-energy’s SMR presents a compelling replacement opportunity for aging infrastructure to both decarbonize and achieve greater reliability.
- ***Current Alternatives Are Not Well-Suited to Deliver Reliable, Uninterrupted, Clean and Co-Located Power.***
 - ***Renewables with or without energy storage*** — Solar and wind generation have relatively low-capacity factors (i.e., the actual energy output in a given period of time relative to its theoretical maximum output) of 23% and 33% (EIA) respectively, since they only produce power when the sun is shining or the wind is blowing. Addressing this inherent intermittency issue would require the integration of large-scale battery energy storage systems or supplementary dispatchable generators for the production capacity of these renewables to even be comparable with the anticipated 95% capacity factor of our reactor. Large-scale deployment of battery storage is complicated by global supply chain availability and incremental cost.
 - ***Conventional fossil fuel generation with or without carbon capture*** — Standalone fossil fuel fired generation can deliver capacity factors similar to those of nuclear power but often require backup generation when maintenance takes key assets offline. Conversely, the Xe-100 can deliver critical redundancy due to its modular nature which results in a reliability advantage without requiring grid redundancy. Further, many consumers and governments have climate targets, giving SMRs (with virtually no direct GHG emissions from energy generation) a distinct advantage over carbon-intensive alternatives such as coal, oil, and natural gas generation, which would require pairing them with expensive carbon capture solutions to try to meet climate targets.
 - ***Traditional Nuclear Power*** — Large-scale nuclear, while typically operating around-the-clock (other than planned outage maintenance and refueling cycles, as compared to the Xe-100’s online refueling), requires a large footprint and has consistently suffered from historical project delays and cost overruns. By contrast, advanced nuclear requires a much smaller operating footprint, on average about 1/4th to 1/10th that of a traditional nuclear plant. Additionally, HTGR sites in the U.S. will require a significantly smaller safety zone radius (400 meters versus 16 kilometers) because of built-in passive safety features. These safety characteristics enable lower costs and more compact designs due to a reduction in the quantity of concrete and steel safety infrastructure. The smaller overall footprint of SMRs allows co-location with new power demand hubs, and the modular nature of the Xe-100 enables scalable power output through additional on-site reactors to match specific needs.

- **Ongoing Support from the U.S. Government Beyond the ARDP.** Support for nuclear power has been increasing over the past decade with billions of additional dollars being allocated to nuclear energy through recent energy-related legislation. For instance, the One Big Beautiful Bill Act (“OBBA”), signed in July 2025, maintained tax credits that were first introduced as part of the Energy Policy Act of 2005 and later expanded under the Inflation Reduction Act for nuclear projects. Additionally, the U.S. President issued four Executive Orders in May 2025, including support for the acceleration of regulatory review for advanced nuclear reactors and promotion of investment in a domestic nuclear supply chain. We believe these broader initiatives, building from U.S. nuclear policy precedent, will provide long-term support for advanced nuclear reactors like the Xe-100.

Competitive Strengths

As pioneers of next generation nuclear reactor and fuel technologies, we believe that our collective expertise can allow us to capitalize on our competitive strengths. We believe we will establish a leadership position in the evolving market, including by leveraging the strengths of our early customer relationships to give us a differentiated path to success.

Existing Customer Base Provides Initial Momentum and Support. Both Dow and Amazon have supported our initial projects, and we expect will serve as offtake customers in the future. These initial projects also enable X-energy’s goal of scaling its design to two different offtake customer applications: Industrial Heat Applications and Data Center Projects. Dow and Amazon also provide project development insight through their own operations portfolios. X-energy expects to learn from and engage with these and other customers as it builds the pipeline. This repeatable project schedule, which is also anticipated for the recently announced Centrica partnership, is expected to enable X-energy to scale from First-of-a-Kind to an Nth-of-a-Kind model that we believe will reduce our project cost and significantly derisk future projects.

Differentiated Design that Provides Attractive Solution for Customers. The characteristics of the Xe-100 provide several advantages over many other energy production alternatives. First, traditional renewables like wind and solar cannot provide reliable baseload power without being paired with longer-term storage technologies. They are also dependent on exogenous factors, which make them incapable of quickly ramping up to address increases in demand. Second, the Xe-100 has a versatile design that can be applied to several end markets, including industrial heat and conventional power generation. In addition, other emerging SMR technologies, many of which are based on conventional light water reactor (“LWR”) technology, may not be designed to efficiently load-follow or operate at temperatures high enough to provide industrial heat, and are further constrained by the availability of large amounts of water, a constraint that the Xe-100 does not have.

Improved Proven Technology. Unlike some other advanced reactor technologies, X-energy is leveraging HTGR technology that has been previously deployed across the globe, including in the U.S. at Peach Bottom and in the U.K. at Dorset (Dragon), and building on more than 50 years of research and development by the global nuclear industry. Both of these reactors served as proof-of-concept for the HTGR technology in the U.S. and, along with other HTGRs in Europe and Asia, provide valuable experience and data that X-energy has used to improve its design, leading to a more efficient, commercially deployable technology.

Intrinsically Safer Based on Physics without Needing Active Safety Systems. Our simplified Xe-100 reactor design is not dependent upon active safety systems, which are susceptible to failure and therefore necessitate the redundancy found in a typical LWR reactor design. Our design relies on physics and intrinsic safety features, such that in the event of a total loss of power to a Xe-100 reactor, the reactor does not require any operator or computer actions, grid connections, emergency backup power or additional water to cool the reactor. The reactor has a strong negative temperature coefficient, which means that increased temperature (such as from the loss of coolant circulation) slows the fission reaction, causing the reactor to shut down. Finally, due to the relatively low power density of the core, the remaining heat load is naturally dissipated through passive cooling.

Superior Fuel Based on Decades of Research & Development. We expect our TRISO-X fuel to demonstrate technical quality and a streamlined fuel qualification pathway, providing us a competitive edge in the commercial fabrication of TRISO fuel forms. The TRISO-X fuel used in the Xe-100 is a containment vessel itself and designed not to melt, enabling the technological and safety advantages of the HTGR. Due to decades of research, development and testing, including the DOE’s Advanced Gas Reactor (AGR) Fuel

Development and Qualification Program, the TRISO-X particle fuel is relatively well understood. This historical data has established the parameters for TRISO-X fuel testing and qualification. Our TRISO-X pebble fuel qualification methodology is approved by the NRC, and we have a streamlined path towards final fuel qualification by the time of our first Xe-100 deployment.

Attractive Intellectual Property-Driven Business Model. X-energy serves as both a reactor technology provider and a fuel fabrication provider, offering customers an integrated solution. In our reactor business line, we expect to receive technology fees for licensing use of our proprietary Xe-100 technology, while also receiving fees for coordinating assembly and construction support with customers and anticipated blue-chip third-party vendors. We also intend to leverage our knowledge and expertise in regulatory licensing, construction, procurement, operations, maintenance and other processes to provide customers with a full suite of services from the development of a project, and ultimately for the operating life of the reactors. We do not construct the power plants and do not plan to own or operate the power plants once constructed and, as a result, do not incur capital expenditures relating to constructing, maintaining, owning or operating the facilities. However, we intend to remain involved with the EPC process throughout the project by providing strategic consulting related to the integration of the reactor technology. We believe this intellectual property-driven business model will position us to generate attractive free cash flow.

Leading TRISO Fuel Provider. From our TRISO-X fuel manufacturing facilities in Oak Ridge, Tennessee, X-energy plans to provide customers with initial reactor fuel loads of as well as ongoing delivery of TRISO-X fuel required to refuel plants over the lifetime of a plant. This provision of fuel to our customers would generate a strong, recurring, revenue stream. X-energy's fuel can also be fabricated for other advanced reactor technologies, making it a key enabler of the broader advancement of the SMR space. X-energy was selected to receive one of the first allocations of HALEU from the DOE. This HALEU is required to begin initial fuel production but X-energy does not, and does not intend to, bear any significant inventory risk associated with uranium or fuel feedstock. We intend to provide only fabrication supply services (e.g., transformation of HALEU into the final TRISO-X fuel form) for customers and assume limited risks associated with holding the title to uranium or enriched uranium fuel feedstock.

Visionary Management Team and Highly Expert Employee Base. We have an experienced and passionate team of leaders and innovators who have been directly involved in the development of advanced nuclear technology and who have led large-scale nuclear projects and operations. As of January 1, 2026, we have a highly educated workforce of 889 employees, of whom 312 have master's degrees and 107 have Ph.Ds. Our executive leadership team has experience in nuclear design, nuclear project delivery, nuclear fuel fabrication, operations, government relations and public companies in organizations such as OPG, Hitachi-GE Nuclear Energy, Ltd. ("GEH"), the DOE, the Nuclear Regulatory Commission, Constellation Energy, Hunt Consolidated, BWXT, Westinghouse, Hartree Partners, and Emirates Nuclear Energy Corporation. The management team is led by our CEO, J. Clay Sell, who is one of the foremost leaders in the U.S. energy market. As the former Deputy Secretary of the DOE, he brings the perspective of the U.S. energy industry to X-energy. Further, his experience in renewables development after his time as Deputy Secretary has given him key experience in major project development and valuable insight into the limitations of intermittent renewable technologies, and in turn the value of nuclear generation.

Strength of Government Relationships. The ARDP significantly derisks the delivery of X-energy's First-of-a-Kind reactor deployments through the Dow Project. Because of the 50/50 cost share program, X-energy has had significant ongoing engagement with the DOE and benefits from the DOE's collective knowledge and support. Further, X-energy has developed high credibility with the Nuclear Regulatory Commission through our ongoing engagement for both our FOAK Fuel Fabrication facility and Dow projects, evidenced by the docketing of the first Construction Permit Application for an 18-month review schedule, one of the shortest CPA timelines ever given.

Our Business Model

We have an intellectual property-driven business model based on our reactor and fuel. We expect to derive revenues from technology licensing, services and fuel operations that span the development and operation of the reactors.

- **Reactors:** The revenue stream from reactors includes technology fees for the use of our intellectual property of the Xe-100 technology. We will not own and operate the facilities themselves, which we believe significantly reduces the amount of capital needed to operate our business.

We anticipate offering site-specific engineering and site characterization, project planning, assembly coordination, construction support, regulatory support, procurement support and long-term services to customers. Utilizing our knowledge and expertise in licensing, construction, procurement and other processes, we plan to provide customers with a full suite of value-added services during development of the nuclear power facilities. At the same time, we expect to generate long-term recurring revenue from services such as the ongoing maintenance and operator training through the anticipated 60-year life of a facility.

- **Fuel:** We intend to provide manufacturing services to customers, including producing an initial fuel load of both TRISO-X fuel and an LEU-based TRISO fuel at commissioning of a plant. We expect to generate additional long-term recurring revenue from our own proprietary TRISO-X fuel that is required to refuel plants during the anticipated 60-year life of each facility. We expect to bear limited inventory risks related to uranium or enriched uranium fuel feedstock. We intend to provide only fabrication supply services (e.g., transformation of HALEU into the final TRISO-X fuel form) for customers and assume limited risks associated with holding the uranium or enriched uranium fuel feedstock. Additionally, we will not have any responsibility for spent fuel management beyond the design of such facilities to adequately handle spent fuel during the life of the plant. During operations, spent fuel remains the responsibility of the plant operator. Thereafter, permanent spent fuel management remains the responsibility of the DOE.

Growth Strategies

We intend to grow our business by leveraging the competitive advantages of our differentiated and reliable Xe-100 technology and our strong customer and government relationships to achieve scale. We believe we have several avenues to achieve our growth objectives:

Continue to Develop our Next Generation Technology. We intend to continue developing our reactor and fuel technology with the goal of achieving commercial delivery of our first fleets of reactors by the early 2030s. We have substantially advanced detailed design for the Xe-100 and are working with our engineering and construction partners to complete that process. Furthermore, we will work with our initial Xe-100 customers to complete the site-specific environmental studies required for licensing and progress toward the submission of the construction permit application, including the preliminary safety analysis report. We have produced TRISO-X pebble fuel in kilogram batch quantities in our fuel fabrication pilot facility and have begun construction on North America's first purpose-built commercial advanced nuclear fuel fabrication facility in Oak Ridge, Tennessee.

Execute on Attractive Business Development Pipeline. We believe the market for our Xe-100 and TRISO-X fuel technologies is wherever non-intermittent, reliable power is needed. We are initially focused on deploying our advanced SMRs to both industrial (including large-scale chemical manufacturing) and cloud-based service provider customers (e.g. data centers) who have needs for both electric power and efficient production of high-temperature steam with high reliability needs. We also plan to serve traditional utilities and independent power producers ("IPPs") seeking to replace carbon-intensive fossil-fueled power plants in their jurisdictions.

Leverage Repeated Project Execution Learnings to Scale From FOAK to NOAK. Traditional nuclear has been plagued by cost and schedule overruns. Vogtle units 3 & 4 cost more than \$16 .0 billion each and were seven years over schedule in part because they were the first and second AP1000 reactors deployed in the U.S. While the fourth unit was reportedly approximately 20% less expensive than the third as learnings were applied, achieving expected Nth-of-a-Kind scale with standard costs and schedule timelines is possible only through repeated project delivery over a large order book. The DOE and industry experts expect that Nth-of-a-Kind delivery can unlock potential savings of more than 30%. Starting with Dow and Amazon, X-energy is already working to deliver eight reactors across its first announced sites at Seadrift, Texas and Richland, Washington, respectively. With substantial potential for further targeted pipeline with Amazon and Centrica, we expect to be able to achieve reductions in costs and the acceleration of schedule timelines as we deliver more reactors in

the future. We believe that NOAK will be achieved through repetitive project execution and financial de-risking, including early supply chain engagement, construction timeline compression, and regulatory streamlining. As we apply lessons learned from each deployment, we expect these steps will significantly reduce overall project execution costs and risks for subsequent Xe-100 projects.

Continue Geographic Expansion. Our initial core markets are the U.S., Canada and the U.K., which have sophisticated regulators that are capable of licensing our technology. Beyond these initial geographies, which together represent only one-third of the serviceable energy consumption, we anticipate expansion into new markets where we already have customer engagement, including countries in Eastern Europe, the Middle East and East Asia.

Drive Technology Advancements. Using our innovative technology platform, we believe that we are well-positioned to continue making technology advancements over time. These improvements include optimizing the Xe-100 for industrial heat applications and innovations in the design to support steam outlet temperatures greater than 800° C to support more efficient hydrogen production processes.

Develop New Products. We continue to explore the development of innovative new products based on our core technology and varied use cases for our proprietary Xe-100 reactor, TRISO-X fuel and other microreactor technologies. TRISO-X is currently performing fuel fabrication work for others whose reactor technologies also use TRISO-based fuel, including space applications. Similarly, our Emerging Technologies team is involved in U.S. government-funded studies (such as those from the DOD) for innovative remote powering and lunar applications that may involve our microreactor and related technologies.

Our Technology

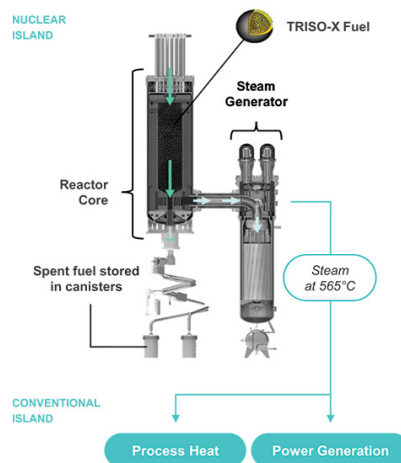
X-energy was founded by Kam Ghaffarian. The technology used today was matured through the Pebble Bed Modular Reactor program, a South African public-private partnership which advanced high temperature gas-cooled reactor technology. X-energy initially focused on the conceptual design of the Xe-100, discussed below, with an emphasis on top-level requirements designed to meet the broadest set of use cases. The company has continued to mature the Xe-100 design and has expanded into the production of TRISO fuel. Finally, X-energy has developed the design for the XENITH microreactor and we continue to invest in other research and development efforts.

Xe-100 — Our Advanced Reactor Technology

The Xe-100 is an HTGR which is designed to have advantages in economics, reliability and safety over conventional LWRs and other advanced SMR designs. The Xe-100 is a Generation IV advanced nuclear technology that has been designed to remedy weaknesses associated with traditional LWR designs. The Xe-100 can efficiently produce electricity or process heat. When configured for electricity generation, each reactor can power an 80 MW turbine generator. Deployment of these reactors is scalable and is optimized in a four-reactor configuration to form a 320 MWe power plant.

The Xe-100 has made substantial progress in the NRC licensing process in the U.S. After several years of pre-application engagement, we supported Dow's subsidiary, Long Mott Energy, LLC, in submitting a construction permit application to NRC for the proposed advanced nuclear project utilizing the Xe-100 reactor design in Dow's Seadrift, Texas site. The pre-application engagement was intended to help reduce licensing risk, as regulatory challenges or delays can materially affect a project's timing, cost, design or overall viability. Citing the completeness and quality of the application, and the effectiveness of pre-application engagements, the NRC established an 18-month review schedule to complete its safety and technical reviews for the Dow Construction Permit Application.

Xe-100 Schematic



One Xe-100 plant produces 320 MWe¹

Note: Figure is intended to represent an illustrative rendering and is for illustrative purposes only.

The Xe-100 has the following characteristics:

- **Cleaner and more reliable** — Like all nuclear reactors, HTGRs produce virtually zero direct GHG emissions during energy generation, are “always” on (at 95%+ availability), and provide firm, dispatchable power that is cleaner than most available firm alternatives.
- **Designed with Intrinsic Safety Features** — The Xe-100 HTGR is safer by design and because of the intrinsic physics of the reactor, requires fewer mechanical safety systems than traditional nuclear as well as fewer personnel for operations.
- **More Secure** — The TRISO-X pebble fuel is a containment vessel in itself, supporting the secure nature of the Xe-100.
- **Scalable** — The Xe-100 is expected to be commonly deployed in its optimized four-reactor configuration of 320 MWe, referred to as the “Xe-100 plant,” with the opportunity to scale on site to additional reactors as needed.
- **Streamlined** — Due to its superior intrinsic safety attributes, the Xe-100 design needs fewer safety-related specialized materials and therefore utilizes substantially more off-the-shelf components than traditional nuclear reactors, allowing for scalability from commercial vendors.
- **Versatile** — In addition to electricity, the Xe-100 plant can be configured to deliver high temperature steam at 565°C, providing a solution for difficult-to-decarbonize industrial heat applications such as oil sands operations, mining, chemical production and petroleum refining and other industrial processes.
- **Load-following** — The Xe-100 is designed to ramp down from full power to 40% power in minutes and ramp back up in a similar short time span.

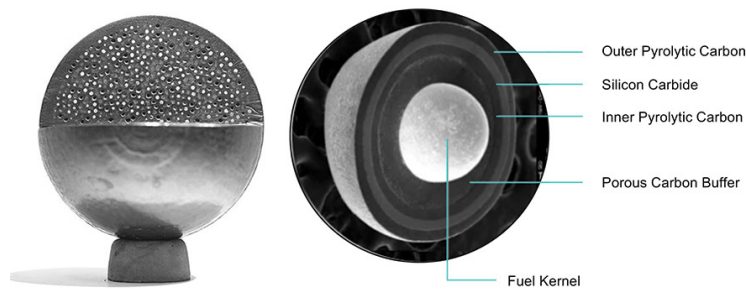
TRISO-X Pebble Fuel — Our Proprietary TRISO Fuel

Our reactors use TRISO particle fuel, a technology first developed in conjunction with the U.K.'s Dragon reactor in the 1960s. The DOE describes TRISO particles as “the most robust nuclear fuel on Earth.” We manufacture our own TRISO fuel using proprietary methods, through our wholly owned subsidiary, TRISO-X, LLC, to ensure supply and quality control. Further, many of the advanced nuclear reactor designs in development are expected to be powered by TRISO fuel or other coated-particle fuels. As part of our business model, we intend to not only fabricate and sell TRISO-X fuel to our customers but to also fabricate and sell TRISO-X fuel and other encapsulated fuels to other advanced nuclear reactor customers, including governmental and private entities.

Safe, established fuel form: While TRISO fuel is already an established fuel after decades of research and development, we expect our proprietary fabrication method to further differentiate our TRISO-X fuel and deliver a competitive edge in the commercial fabrication of TRISO fuel forms. We anticipate our patented and novel process will demonstrate superior quality characteristics as well as economic performance compared to historical TRISO and potential future TRISO competitors. The TRISO-X pebble fuel is a containment vessel in itself, encased in graphite, pyrolytic carbon and silicon carbide and designed not to melt due to its ability to withstand extreme temperatures. After HALEU has been encased in a TRISO pebble form, security and proliferation risks are substantially reduced. Its robust nature allows for passive safety and, we expect a small emergency planning zone for our reactors, providing additional flexibility in site design and access to non-traditional nuclear markets and customers.

Robust integrity: Our TRISO-X pebble fuel is designed not to melt due to its robust construction. This structure minimizes the requirement for the extensive use of expensive and large concrete and steel containment structures typically required in conventional reactors.

TRISO-X Fuel
X-energy's Proprietary TRISO Fuel



Integrated fuel fabrication business: We currently manufacture TRISO-X fuel in our TRISO-X Pilot Facility in Oak Ridge, Tennessee, which has operated since 2016. In February 2026, we received a Special Nuclear Material License from the NRC that establishes TX-1 as the first-ever Category II nuclear fuel facility licensed in the United States. TX-1 will be a state-of-the-art Category II nuclear facility designed specifically for handling and processing HALEU feedstock for the fabrication of TRISO-X pebble fuel. We anticipate constructing TX-2 on the same site, which will allow for the license to extend to both facilities. We do not expect to hold significant inventory of the fuel feedstock, which we expect to be procured by our customers. Our business will be fabricating the pebble fuels into their final fuel form for customers to purchase for operation of the Xe-100 reactor and its refueling needs.

Path to qualification due to extensive R&D: The ability to leverage decades of prior TRISO research and development, particularly the DOE's Advanced Gas Reactor (AGR) Fuel Development Program, provides

X-energy with a well-defined pathway for fuel qualification. X-energy's TRISO-X Pebble Fuel Qualification Methodology has been approved by the NRC and references the AGR test results as a basis for qualification. This established framework provides X-energy a streamlined path towards obtaining qualified TRISO-X fuel by the time of its first Xe-100 deployment. Based on the approved fuel qualification methodology, we are currently in the irradiation test phase and in the final stages of qualifying our TRISO-X pebble fuel.

Long-term revenues derisked: We plan to provide our Xe-100 customers with their initial fuel loads while generating additional long-term and recurring revenue streams by refueling Xe-100 reactors throughout their anticipated 60-plus year lives. We further assume that we will be the initial sole supplier of proprietary TRISO-X fuel.

Research and Development

In addition to our core Xe-100 reactor, we continue to innovate and develop new products with our Emerging Technologies team. We are expanding our portfolio to address a broader range of energy needs and use cases beyond utility-scale power generation.

XENITH Microreactor

We have developed the XENITH microreactor, a compact solution designed to deliver reliable energy in locations where traditional power infrastructure is unavailable, impractical or vulnerable. XENITH is designed to be deployed in months and operate continuously for 20 years, delivering 3-10 MW of electricity with minimal maintenance requirements.

XENITH is not yet operational but is currently exploring commercialization opportunities. The development of the microreactor began in the Pele program through the U.S. Department of Defense ("Project Pele"), for which X-energy was awarded approximately \$60 million in various contracts. Conceptual design was progressed during Pele Phase 1 and 2, and design work has continued into what is now the XENITH microreactor. The microreactor is likely to be deployed in a 5 MWe format, or as dual reactors in a 10 MWe electric format.

Like the Xe-100, XENITH is also a High Temperature Gas-cooled reactor that runs on TRISO fuel. The required fuel is expected to be in the form of compacts rather than pebbles. The expected operating temperature is 750 degrees Celsius. The value proposition is expected to be as follows:

- Scalable Power. Factory-built, transportable nuclear energy solution that prioritizes rapid site readiness and compatibility with existing infrastructure to support deployment in a wide range of locations.
- Resilient & Reliable. Provides reliable, long-term power with no required refueling over the 20-year lifetime, eliminating vulnerability to supply chain disruptions while providing 24/7 reliability.
- Tailored to the Target Market. Military, defense, and remote applications, including potential for black-starts, and remote communities that require secure, independent power.

Space Applications

Our innovative HTGR design and high-temperature-resistant fuel make a unique and compelling combination for nuclear electric propulsion, nuclear thermal propulsion and lunar surface power.

Our use of robust TRISO fuel in combination with innovative reactor designs and advanced moderator materials, all work together to increase the efficiency of the fission reaction while minimizing bulk and weight, keeping the reactor light enough for spaceflight. These characteristics have allowed us to develop viable concepts for a Fission Surface Power (FSP) reactor. This concept was studied through a joint venture award from the DOE and the U.S. National Aeronautics and Space Administration (NASA) in June 2022 to advance the design of a Fission Surface Power (FSP) solution.

Our Customers

Dow

Dow is X-energy's first customer to receive a reactor and is a global leader in the specialty chemicals industry, involved in the manufacturing and distribution of a wide range of chemical and plastic products. In

the course of its annual operations, Dow produces over 12 million MWh of electricity and is committed to the ongoing decarbonization of its operations.

X-energy has partnered through a Master Project Development Agreement (“MPDA”) and Commercial Cooperation Agreement (“CCA”) with Dow to provide our services in support of a FOAK deployment of four Xe-100 reactors to provide power with virtually zero direct GHG emissions and industrial steam at Dow’s UCC Seadrift site in Texas. With the support and assistance of X-energy, Long Mott Energy, LLC, a wholly owned subsidiary of Dow, filed a Construction Permit Application (“CPA”) with the NRC in March 2025 which was docketed in May 2025 for an 18-month review period with an expected review completion by late 2026 and receipt of the CPA expected in the first quarter of 2027. Initial construction can commence after receipt of the CPA.

Dow provides expertise in plant design and industrial heat as well as in the development of the Xe-100’s first plant, which will be a first-of-its-kind co-generation facility with unique heat capabilities not available in other technologies. Under the CCA, as between the parties, X-energy will own the intellectual property related to the reactor systems, controls, software, and related nuclear plant technologies, as well as fuel technology-related intellectual property, created by the parties for this project. As between the parties, Dow will own all of the conventional island intellectual property related to the non-nuclear systems that turn reactor steam into electricity and run steam and water for the facility, as well as intellectual property for equipment and processes that sit outside both the nuclear and conventional plant areas, created by the parties for this project.

Amazon

After an extensive evaluation of potential carbon free generation solutions for its extensive data center footprint, Amazon made an equity investment in X-energy in 2024 and announced options to bring more than 5 GWe of new Xe-100 projects online across the U.S. by 2039, which assuming full exercise of these options, will represent the largest commercial deployment target of SMRs to date as of August 2025.

The first deployment under this 5 GWe total potential target is a project with Energy Northwest in central Washington. Amazon and Energy Northwest entered into a Carbon Free Development and Funding Agreement for an initial deployment of four reactors representing 320 MWe, with the potential to upsize the power capacity to 960 MWe.

Centrica

Centrica is a major provider of energy services across the U.K. and owns a 20% stake in the full fleet of operating nuclear reactors in the country. In September 2025, X-energy and Centrica signed a Joint Development Agreement (“JDA”) dedicated to building and operating Xe-100 reactors in the U.K. The announcement followed a pledge from President Donald Trump and Prime Minister Keir Starmer to work together on nuclear power and constitutes a new strategic commercial alliance to accelerate the deployment of SMRs, bringing together a leading player in delivering the U.K.’s clean energy future and the developer of the world’s most advanced nuclear technology.

The Xe-100 was selected after a significant review period by Centrica of advanced Gen IV nuclear technologies. Centrica prioritized partnership with X-energy because of the reactor’s safety and capabilities for industrial heat that Centrica sees as key to expansion in the U.K. market. The U.K. government is currently pursuing a “three-legged” approach to nuclear development, designed to ensure a diverse and resilient nuclear energy sector. Under this strategy, the first “leg” focuses on large-scale nuclear projects, such as those being developed in partnership with EDF, to provide substantial baseload power. The second “leg” supports the deployment of Gen III+ light water SMRs, with Rolls Royce’s SMR technology selected as the leading solution in this category. The third “leg” is dedicated to other small and advanced modular reactors, including HTGRs like Xe-100, which are prioritized for their potential to deliver both electricity and high-grade industrial heat, supporting decarbonization across a range of sectors.

X-energy and Centrica have identified Hartlepool as the preferred site for the first of a planned U.K. fleet of approximately six GWe (representative of 76 reactors likely deployed as 19 four-reactor configurations). A project at Hartlepool will be comprised of up to twelve 80 MWe reactors, each with the capability to provide

high temperature steam for industrial decarbonization. Subject to securing appropriate permissions and licenses, the first electricity generation is expected to be in the mid-2030s.

Other Key Partnerships

Department of Energy

Through the ARDP, we are partnering with DOE and others to build the world's first commercial scale advanced nuclear reactor. In December 2020, X-energy, initially in collaboration with Energy Northwest, was selected for an award, initially in the amount of \$1.2 billion to deliver a first-of-a-kind commercial advanced nuclear plant and TRISO-X fuel fabrication facility. This project is now being developed with Dow with continued financial support from the DOE on a 50/50 cost share basis. As one of only two parties selected out of many applicants for the ARDP, X-energy was recognized as having an advanced reactor technology of choice.

Ontario Power Generation

In 2022, X-energy and OPG entered into a framework agreement to work exclusively with one another with respect to advanced nuclear power industrial applications in Ontario, Canada, and to co-market and advance the Xe-100 as the nuclear technology of choice for industrial applications throughout Canada. OPG will be the operator of any Xe-100 facilities that are deployed under this agreement. OPG is also an equity investor in X-energy.

Our Key Supply Chain Partners

We have a network of partners that enable our growth and success. These partners include:

- ***Curtiss-Wright.*** Curtiss-Wright is a leading U.S. designer and supplier of critical nuclear power plant systems, equipment, services, and spare parts to the U.S. domestic and global nuclear power industry. Following several competitive bid processes, X-energy selected Curtiss-Wright as the successful bidder for multiple Xe-100 systems. Curtiss-Wright was selected as a preferred strategic supplier to X-energy for the ARDP and subsequent Xe-100 projects in the U.S. Curtiss-Wright is an equity investor in X-energy.
- ***Doosan Enerbility ("Doosan").*** Doosan is a preferred strategic supplier to X-energy. Doosan is a major global manufacturer and supplier of core components of nuclear power plants, such as reactor pressure vessels, steam generators, and steam turbines. Doosan has a vertically integrated manufacturing facility in Changwon, Korea, which is capable of raw material production to final assembly of nuclear components. Doosan has manufactured and supplied 34 reactor pressure vessels and 124 steam generators globally. Doosan is an equity investor in X-energy. In December 2025, Doosan signed a Reservation Agreement with X-energy, committing to the construction of a new SMR fabrication facility to support the execution of X-energy's more than 11 GWe commercial pipeline.
- ***DL E&C.*** DL E&C will work with X-energy to identify opportunities around the world to employ best practices to support the development and deployment of Xe-100 plants on a global scale. Founded in 1939, DL E&C has the longest business history among construction companies in Korea and has maintained a top ten Korean engineering and construction company ranking for the past 50+ years. DL E&C is the flagship company of DL Group, and has a broad range of experience in global mid/downstream energy sector engineering, procurement and construction, providing total services and solutions in more than 35 nations, focusing on a more sustainable and better future. DL E&C is an equity investor in X-energy.
- ***Korea Hydro & Nuclear Power ("KHNP").*** KHNP is the Korean entity that operates its nuclear and hydroelectric sector as a subsidiary of Korea Electric Power Corporation ("KEPCO"), the majority state-owned utility. Since 1971, KHNP has successfully constructed and operated 30 nuclear power plants still in operation today, 26 in South Korea and four in the United Arab Emirates ("UAE"). KHNP provides significant expertise in the construction of nuclear reactors. In August 2025, KHNP

signed a joint compact with X-energy, Amazon, and Doosan outlining the intention to collaborate on the deployment of the Amazon order book in the U.S.

- *SGL Carbon LLC ("SGL")*. SGL is a developer and manufacturer of advanced carbon materials. X-energy and SGL have collaborated since 2015 on the qualification of NBG-18 graphite for use in the Xe-100, leveraging SGL's experience manufacturing graphite for high-temperature gas-cooled reactors. In January 2026, SGL announced a 10-year graphite supply agreement for reactor components of X-energy's Xe-100 SMRs, and has commenced production for the Dow Seadrift plant site as part of an initial three-year award valued at over \$100 million.

SUMMARY RISK FACTORS

Investing in our common stock involves substantial risk. The risks described under the section titled "Risk Factors" immediately following this prospectus summary may cause us to not realize the full benefits of our objectives or may cause us to be unable to successfully execute all or part of our strategy. Some of the more significant challenges include the following:

- We have not yet delivered a commercial Xe-100 or achieved final investment decisions (FIDs) for any deployments; our FOAK schedule, cost, and performance are uncertain and delays or setbacks, particularly on initial projects, could materially harm our business, reputation, and finances.
- We may not generate sufficient liquidity to fund operations and growth; our business is capital intensive and we will require substantial additional financing, which may not be available on acceptable terms and could be dilutive.
- Our business depends heavily on U.S. government support, including the ARDP; future appropriations are uncertain, and any reduction, delay, or termination, or failure to obtain needed extensions or modifications under the ARDP Agreement or increases due to inflation and cost growth, could materially and adversely affect our projects, TX-1 fuel facility plans, and commercialization.
- We face significant regulatory and licensing risks for both our reactors and fuel facilities; NRC and other regulatory approvals may be delayed, conditioned, or denied, including as a result of public interventions and hearings, which could increase costs and extend timelines.
- Access to HALEU is limited and failure of commercial HALEU supply to materialize on required timelines and at predictable costs could delay fuel fabrication (TX-1 and beyond) and reactor deployments and impair competitiveness.
- Our cost, schedule, and unit economics are subject to substantial uncertainty, including inflation, supply chain constraints, labor availability, site-specific factors, and first-of-a-kind risks; if cost reductions from NOAK learning are lower or slower than expected, our products may not be cost competitive.
- We have limited operating and commercial experience at our intended scale and configuration; latent design, manufacturing, construction, or operational issues may emerge late and be costly to remediate.
- We rely on a limited number of specialized suppliers (including graphite and other nuclear-grade materials and first-of-a-kind components); supply disruptions, quality issues, shipping/logistics risks, tariffs, or trade policy changes could delay projects and increase costs.
- Safety, security, and cybersecurity incidents at our facilities, our customers' facilities, or elsewhere in the nuclear industry, could result in regulatory actions, project delays, increased costs, reputational harm, and reduced demand.
- Market adoption of Gen IV SMRs is nascent and uncertain; demand may grow more slowly than expected, customers may defer or cancel projects, and our products may face competition from low-cost alternatives (including gas, renewables with storage, or other advanced reactors).
- We face intense competition from domestic and state-supported international nuclear suppliers; competitors may have greater resources, faster regulatory paths in some jurisdictions, or lower costs, which could pressure pricing and margins.

- Our reliance on key partners and customers, including Dow (ARDP) and cloud computing providers, exposes us to counterparty and execution risk; changes in partner priorities, funding, or timelines could materially affect our path to commercialization. Our JDA with Centrica is non-binding and may not result in definitive agreements or revenues.
- Customer contractual terms (including Amazon's priority queue slots, rights of first refusal, and most favored pricing) may constrain capacity allocation, compress margins, increase operational complexity, and expose us to payment or performance obligations.
- Our fuel business depends on licensing and scaling TX-1 and subsequent facilities; delays in NRC licensing, materials qualification, or facility construction, or inability to recruit and retain specialized talent, could impair fuel availability and recurring revenue.
- We may not carry insurance covering performance of the Xe-100 or all relevant project risks; even if obtained, insurance may be unavailable, insufficient, or costly.
- Changes in laws, regulations, incentives, export controls, or government policies could increase costs, delay approvals, limit market access, restrict technology transfers, or reduce the value of expected incentives.
- Public perception and political support for nuclear energy can shift; adverse events, activism, or changes in policy priorities could slow licensing and deployment and increase costs.
- Spent fuel and governmental waste management policies remain unsettled; customer concerns about storage or disposal costs and responsibilities could reduce demand for our technology.
- We depend on key personnel and our ability to hire and retain highly specialized talent; shortages, immigration constraints, or turnover could delay programs and increase costs.
- We have identified material weaknesses in internal control over financial reporting; failure to remediate the existing weakness or to maintain effective controls could adversely affect our financial reporting and the market price of our stock.
- We are subject to intellectual property risks; we may be unable to obtain, maintain, or enforce intellectual property rights, or we may face third-party claims that could require costly litigation, licensing, redesigns, or limit commercialization; our IP protection is territorial and may be limited abroad.
- Data privacy and cybersecurity risks could lead to service interruptions, regulatory inquiries, liability, and reputational harm; increased AI use introduces additional privacy, IP, bias, and compliance risks.
- We are exposed to construction, siting, industrial application, severe weather, disaster, and logistics risks; catastrophic events or unusual siting requirements could increase costs, delay schedules, and strain resources.
- Our illustrative capacity figures and unit economics in this prospectus are estimates based on numerous assumptions (including technology fees, services, and fuel pricing); actual results may differ materially, including lower pre- and post-COD revenues and margins.
- Compliance with government contracting requirements (FAR, False Claims, pricing/cost rules) and audits carries risk of penalties, repayment, suspension, or debarment; U.S. budget deficits, shutdowns, and continuing resolutions may disrupt program funding and payments.
- Export/import controls and sanctions can restrict sales, technology transfers, and collaborations; violations or policy shifts could result in penalties and lost market access.
- Energy market rules and oversight (including FERC, NERC, and ISO/RTO market design) may affect customer project economics and indirectly our demand; noncompliance could result in sanctions on customers.
- Tax law changes and interpretations (including OBBBA) may increase complexity, audit risk, and effective tax rates; changes in accounting estimates and quarterly variability could materially impact reported results.
- As a holding company, we will depend on distributions from our operating subsidiary to fund taxes, expenses (including under a Tax Receivable Agreement), and any dividends; such distributions may be

restricted, and TRA payments (including with respect to a change of control (as defined in the Tax Receivable Agreement), Material Breach or early termination) may be substantial and could exceed realized tax benefits, constraining liquidity.

- An active trading market for our Class A common stock may not develop or be sustained; our stock price may be volatile, large sales (including post lock-up) may depress the price, analyst coverage may be limited, and you may lose part or all of your investment.

Please see “Risk Factors” for a more complete discussion of these and other risks.

IMPLICATIONS OF BEING AN EMERGING GROWTH COMPANY

We are an emerging growth company, as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including relief from the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, less extensive disclosure obligations regarding executive compensation in our registration statements, periodic reports and proxy statements, exemptions from the requirements to hold a non-binding advisory vote on executive compensation, and exemptions from stockholder approval of any golden parachute payments not previously approved. We may also elect to take advantage of other reduced reporting requirements in future filings. As a result, our stockholders may not have access to certain information that they may deem important and the information that we provide to our stockholders may be different than, and not comparable to, information presented by other public reporting companies. We could remain an emerging growth company until the earliest of (i) the last day of the year following the fifth anniversary of the completion of this offering, (ii) the last day of the year in which we have total annual gross revenue of at least \$1.235 billion, (iii) the last day of the year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our Class A common stock and Class B common stock held by non-affiliates exceeded \$700.0 million as of the last business day of the second fiscal quarter of such year and (iv) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period.

In addition, the JOBS Act also provides that an emerging growth company may take advantage of the extended transition period provided in the Securities Act for complying with new or revised accounting standards. An emerging growth company may therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, as a result, will not be subject to the same implementation timing for new or revised accounting standards as are required of other public companies that are not emerging growth companies, which may make comparison of our financial information to those of other public companies more difficult.

CORPORATE INFORMATION

X-Energy Reactor Company, LLC is a Delaware limited liability company formed on December 14, 2018, and is the predecessor for financial reporting purposes of X-Energy, Inc., a Delaware corporation formed on September 18, 2025.

X-energy’s principal executive offices are located at 530 Gaither Road, Suite 700, Rockville, MD 20850 and our phone number is (301) 358-5600.

Our website address is www.x-energy.com. Information contained in, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is only an inactive textual reference.

ORGANIZATIONAL STRUCTURE

In connection with the closing of this offering, we will undertake certain organizational transactions subsequent to which we will conduct our business through what is commonly referred to as an “Up-C” structure, which is often used by partnerships and limited liability companies when they decide to undertake an initial public offering. Unless otherwise stated or the context otherwise requires, all information in this prospectus reflects the consummation of the Reorganization Transactions.

Following the consummation of the Reorganization Transactions, we will be a holding company. Our sole material asset will be our equity interest in XERC, which, through its direct and indirect subsidiaries, conducts all of our operations. Because X-Energy, Inc. will be the sole managing member of XERC, we will indirectly operate and control all of the business and affairs (and will consolidate the financial results) of XERC and its subsidiaries.

Prior to the consummation of the Transactions, the capital structure of XERC consists of three classes of membership interests: Common Units, Preferred Units and Incentive Units.

In connection with the consummation of this offering, we will complete a series of reorganization transactions, including: (i) the eighth amendment and restatement of the XERC LLC Agreement to, among other things, effect a recapitalization in which all existing ownership interests in XERC are converted into one class of Common Units; (ii) the amendment and restatement of the X-Energy, Inc. certificate of formation to, among other things, authorize two classes of common stock; (iii) X-Energy, Inc.’s designation as managing member of XERC; (iv) X-Energy, Inc.’s acquisition of Common Units held by the Blocker Companies pursuant to the Blocker Mergers; (v) X-Energy, Inc.’s acquisition of all of the Common Units held by the Former Equity Owners (except for Management LLC, who is addressed in clauses (vi) and (vii), below) and a portion of the Common Units held by the Continuing Equity Owners, in each case, in exchange for an equal number of shares of Class A common stock; (vi) the second amendment and restatement of the Management LLC Agreement to, among other things, effect a recapitalization in which all existing ownership interests in Management LLC are converted into one class of Common Units; (vii) Management LLC’s contribution of all of its Common Units of XERC to X-Energy, Inc. in exchange for an equal number of shares of Class A common stock, which shares shall remain subject to the same vesting conditions applicable to the corresponding Common Units immediately prior to such contribution and (viii) X-Energy, Inc.’s issuance to the Continuing Equity Owners of a number of shares of Class B common stock (equal to the number of Common Units held by the Continuing Equity Owners) in exchange for a nominal cash contribution made by such Continuing Equity Owners, resulting in a combined company organized in an umbrella partnership C corporation structure (such structure, an “Up-C”) in which substantially all of the assets and the business of the company will be held by X-Energy Reactor Company, LLC, as more fully described elsewhere in this prospectus (such transactions, the “*Reorganization Transactions*”). See “Certain Relationships and Related Party Transactions” for additional information.

Prior to the completion of the offering, X-Energy, Inc. will enter into a Tax Receivable Agreement with XERC and the TRA Holders. This Tax Receivable Agreement will provide for the payment by X-Energy, Inc. to the TRA Holders of 85% of the of the amount of cash tax savings, if any, that X-Energy, Inc. is deemed to realize (calculated using certain assumptions) as a result of the Basis Adjustments, Existing Basis, Blocker Tax Attributes and Interest Deductions. Assuming no material changes in the relevant tax laws and that we earn sufficient taxable income to realize all tax benefits that are subject to the Tax Receivable Agreement, we expect the tax savings associated with the purchase of Common Units in connection with this offering, together with future redemptions or exchanges of all remaining Common Units owned by the TRA Holders pursuant to the XERC LLC Agreement as described above, would aggregate to approximately \$ million over years from the date of this offering based on the assumed initial public offering price of \$ per share of our Class A common stock (the midpoint of the estimated price range set forth on the cover page of this prospectus), and assuming all redemptions or exchanges would occur immediately after the initial public offering for the remaining ownership of XERC not acquired by X-Energy, Inc. Under such scenario, assuming future payments are made on the date each relevant tax return is due, without extensions, we would be required to pay approximately 85% of such amount, or approximately \$ million over the -year period from the date of this offering, to the TRA Holders. The actual amounts we will be required to pay under the Tax Receivable Agreement may be significantly different from the amounts described in the preceding sentence.

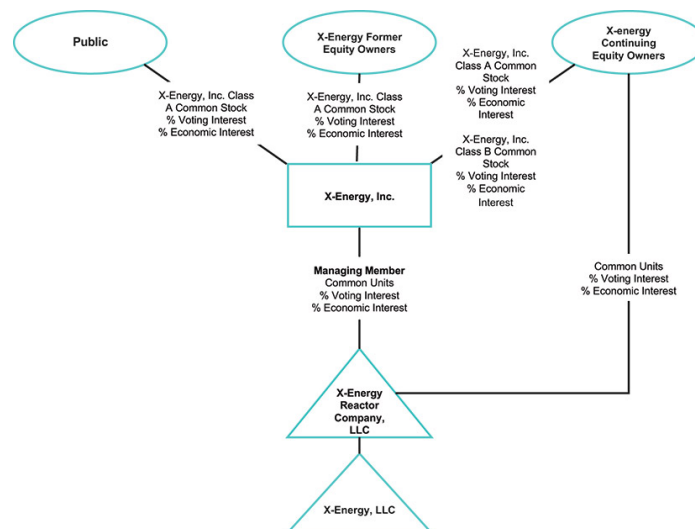
The term of the Tax Receivable Agreement will continue until all such tax benefits have been utilized or expired unless we exercise our right to terminate the Tax Receivable Agreement early, in which case, we would

be required to pay to the TRA Holders an amount representing the present value of anticipated future tax benefits under the Tax Receivable Agreement (computed using certain assumptions). For example, should we elect to terminate the Tax Receivable Agreement immediately following this offering, assuming no material changes in the relevant tax laws or tax rates and that we earn sufficient taxable income to realize all potential tax benefits that are subject to the Tax Receivable Agreement, we estimate that the aggregate of termination payments would be approximately \$ million (at a discount rate of SOFR plus 100 basis points) based on the assumed initial public offering price of \$ per share of our Class A common stock, which is the midpoint of the range set forth on the cover page of this prospectus, and assuming SOFR (as defined in the Tax Receivable Agreement) were to be %.

Importantly, upon a change of control or a Material Breach of our obligations under the Tax Receivable Agreement, the Tax Receivable Agreement will not terminate nor will a single, accelerated lump sum payment be due. Thus, if we commit a Material Breach under the Tax Receivable Agreement, experience a change of control (as defined in the Tax Receivable Agreement) or elect to terminate the Tax Receivable Agreement and do not elect to make a single, lump sum payment, our (or our successor's) future payments under the Tax Receivable Agreement for each taxable year after any such event would be calculated utilizing certain valuation assumptions, including that (i) any Common Units that have not been exchanged are deemed exchanged for the market value of the shares of our Class A common stock at the time of the change of control and (ii) X-Energy, Inc. will have sufficient taxable income to fully utilize the tax attributes covered by the Tax Receivable Agreement.

For additional information, see "Risk Factors — Risks Related to Our Capital Structure" and "Certain Relationships and Related Party Transactions — Tax Receivable Agreement" for additional information regarding the Tax Receivable Agreement.

The following diagram reflects our simplified organizational structure after giving effect to the Transactions, including this offering:



We intend to use all of the net proceeds we receive from this offering to purchase newly issued Common Units from XERC. In the event the underwriters exercise their option to purchase additional shares of Class A common stock, we intend to use any proceeds from such exercise to purchase additional newly

issued Common Units from XERC. See “Organizational Structure,” “Use of Proceeds,” and “Certain Relationships and Related Party Transactions”.

Subject to the terms and conditions of the XERC LLC Agreement, the Continuing Equity Owners will have the right to have XERC redeem their Common Units for shares of Class A common stock on a one-for-one basis or, at our election (determined solely by our independent directors (within the meaning of Nasdaq rules) who are disinterested), to the extent there is cash available from a contemporaneous public offering or private sale of Class A common stock by us, a corresponding amount of cash, in either case, contributed to XERC by X-Energy, Inc., unless X-Energy, Inc. elects, in its sole discretion (determined solely by our independent directors (within the meaning of Nasdaq rules) who are disinterested), to effect such transaction as a direct exchange with the relevant Continuing Equity Owner. Upon any such redemption or exchange of Common Units, the corresponding shares of Class B common stock held by such Continuing Equity Owner will be surrendered and immediately canceled. See “Certain Relationships and Related Party Transactions — XERC LLC Agreement” for additional information regarding such redemption and exchange rights.

THE OFFERING	
Common stock offered by us	shares of Class A common stock.
Class A common stock to be outstanding after this offering	shares, or shares if the underwriters exercise their option to purchase additional shares of Class A common stock in full.
Class B common stock to be outstanding after this offering	shares, or shares if the underwriters exercise their option to purchase additional shares of Class A common stock in full.
Common Units to be outstanding after this offering	Common Units, representing an approximately % economic interest in XERC (or Common Units, representing an approximately % economic interest in XERC, if the underwriters exercise their option to purchase additional shares of Class A common stock in full).
Option to purchase additional shares	The underwriters have an option to purchase up to an aggregate of additional shares of Class A common stock from us. The underwriters can exercise this option at any time within 30 days from the date of this prospectus.
Use of proceeds	We estimate that the net proceeds to us from the sale of shares of our common stock in this offering will be approximately \$ million. We intend to use the proceeds from this offering to acquire newly issued Common Units from XERC. The foregoing purchases of Common Units will be at a price per unit equal to the public offering price per share of Class A common stock in this offering, less the underwriting discounts and commissions. XERC intends to use the proceeds received from us for working capital and other general corporate purposes, which may include research and development and sales and marketing activities, general and administrative matters, and capital expenditures. We may also use a portion of the proceeds for future growth projects. See “Use of Proceeds.”
Voting rights	Holders of shares of our Class A common stock and our Class B common stock will vote together as a single class on all matters presented to shareholders for their vote or approval, except as otherwise required by law or our amended and restated certificate of incorporation. Each share of our Class A common stock and Class B common stock entitles its holder to one vote on all matters to be voted on by shareholders generally. See “Description of Capital Stock.”
Redemption rights for Common Units	Prior to this offering, we will amend and restate the XERC LLC Agreement so that the Continuing Equity Owners may (subject to the terms of such limited liability company agreement), elect to have XERC redeem their Common Units for either shares of Class A common stock on a one-for-one basis or at our election (determined solely by our independent directors (within the meaning of Nasdaq rules) who are disinterested), to the extent there is cash available from a contemporaneous public offering or private sale of Class A

	common stock by us, a corresponding amount of cash, in either case, contributed to XERC by X-Energy, Inc., unless X-Energy, Inc. elects, in its sole discretion (determined solely by our independent directors (within the meaning of Nasdaq rules) who are disinterested), to effect such transaction as a direct exchange with the relevant Continuing Equity Owner. Upon any such redemption or exchange of Common Units, the corresponding shares of Class B common stock will be canceled. See “Certain Relationships and Related Party Transactions — XERC LLC Agreement.”
Dividend policy	We do not expect to pay any dividends on our common stock for the foreseeable future. See “Dividend Policy.” The declaration, amount and payment of any future dividends will be at the sole discretion of our Board. Our Board may take into account general economic and business conditions, our financial condition and operating results, our available cash and current and anticipated cash needs, capital requirements, contractual, legal, tax, and regulatory restrictions, and implications on the payment of dividends by us to our shareholders or by our subsidiaries (including XERC) to us, and such other factors as our Board may deem relevant. Holders of our Class B common stock do not have any economic rights or any right to receive dividends, or to receive a distribution upon a liquidation, dissolution, or winding up of X-Energy, Inc., with respect to their Class B common stock. X-Energy, Inc. is a holding company and has no material assets other than a controlling equity interest in XERC. The XERC LLC Agreement that will be in effect at the time of this offering provides that certain distributions to cover the taxes of the holders of Common Units will be made based upon assumed tax rates and other assumptions provided in such limited liability company agreement. Additionally, in the event X-Energy, Inc. declares any cash dividend, we intend to cause XERC to make distributions to X-Energy, Inc., in an amount sufficient to cover such cash dividends declared by us. If XERC makes such distributions to X-Energy, Inc., the other holders of Common Units will also be entitled to receive the respective equivalent pro rata distributions in accordance with their respective ownership of vested Common Units.
Tax Receivable Agreement	Upon the completion of this offering, we will be a party to the Tax Receivable Agreement with XERC and the TRA Parties. Under the Tax Receivable Agreement, we generally will be required to pay to the TRA Parties 85% of the amount of cash tax savings, if any, that we actually realize (or in some circumstances are deemed to realize) as a result of (i) Basis Adjustments, (ii) Existing Basis, (iii) Blocker Tax Attributes and (iv) Interest Deductions. We will retain the benefit of the remaining 15% of these cash tax savings. See “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.”
Stock exchange symbol	“XE”
Risk factors	Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 24 in this prospectus for a discussion of factors you should carefully consider before investing in our common stock.

Except as otherwise indicated, the number of shares of our Class A common stock and Class B common stock to be outstanding immediately after this offering is based on an aggregate of shares of Class A common stock and Class B common stock (which includes shares of common stock and shares of unvested restricted common stock subject to a repurchase option by us) outstanding as of _____, and excludes:

- _____ shares of Class A common stock reserved for issuance upon redemption or exchange of Common Units that will be held by the Continuing Equity Owners on a one-for-one basis; and
- _____ shares of Class A common stock reserved for future issuance under our 2026 Equity Incentive Plan (the “2026 Plan”), which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part (which number includes _____ shares of our Class A common stock subject to restricted stock unit awards and stock options that will be granted to certain of our employees and directors pursuant to our 2026 Plan in connection with the consummation of this offering, based upon an assumed initial public offering price of \$ _____ per share (the midpoint of the estimated price range set forth on the cover page of this prospectus)).
- _____ shares of Class A common stock reserved for future issuance under our 2026 Employee Stock Purchase Plan (the “ESPP”), which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part.
- In addition, our 2026 Plan and ESPP each provide for annual automatic increases in the number of shares reserved thereunder.

Unless otherwise indicated, this prospectus assumes or gives effect to:

- the completion of the Transactions described under “Organizational Structure,” including the amendment and restatement of the XERC LLC Agreement and the reclassification of all outstanding equity of XERC into a single class of Common Units, which will occur immediately prior the closing of this offering (the Recapitalization);
- no exercise of outstanding stock options referred to above;
- no exercise by the underwriters of their over-allotment option;
- an assumed initial public offering price of \$ _____ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus; and
- the filing and effectiveness of our amended and restated certificate of incorporation and the effectiveness of our amended and restated bylaws, each of which will occur immediately prior to the completion of this offering.

SUMMARY HISTORICAL AND PRO FORMA FINANCIAL INFORMATION OF X-ENERGY

The following table shows summary historical and pro forma financial data for each of the periods indicated. The summary historical financial information for X-energy presented below for the years ended December 31, 2025 and 2024 have been derived from X-energy's audited financial statements included elsewhere in this prospectus. The unaudited summary pro forma consolidated financial data set forth below as of and for the year ended December 31, 2025 have been derived from our unaudited pro forma condensed consolidated financial statements included elsewhere in this prospectus.

The unaudited pro forma condensed statement of operations for the year ended December 31, 2025 gives effect to the pro forma events as if they had been consummated on January 1, 2025. The unaudited pro forma condensed balance sheet as of December 31, 2025 gives effect to the pro forma events as if they had been consummated on December 31, 2025. We have derived the summary unaudited pro forma condensed balance sheet and the unaudited pro forma condensed statement of operations from our unaudited pro forma condensed consolidated financial statements as of and for the year ended December 31, 2025, which are included elsewhere in this prospectus. The pro forma adjustments are based on available information and upon assumptions that management believes are reasonable in order to reflect, on a pro forma basis, the effect of the pro forma events on our historical financial information. The adjustments are described in the notes to the unaudited pro forma condensed balance sheet and the unaudited pro forma condensed statements of operations. The unaudited pro forma condensed financial information is presented for illustrative purposes only and do not purport to represent the results of operations or the financial position that would actually have occurred had the pro forma events been consummated on the dates assumed or to project the Company's results of operations or financial position for any future date or period.

The summary information in the following tables should be read in conjunction with “Basis of Presentation — Organizational Structure,” “Capitalization,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations of X-energy,” “Unaudited Pro Forma Condensed Consolidated Financial Information” and our financial statements and accompanying notes included elsewhere in this prospectus.

	Year ended December 31, 2024	Year ended December 31, 2025	Pro Forma Year Ended December 31, 2025
Consolidated Statements of Operations			
Services revenue	\$ 83,986	\$ 94,260	\$
Grant income	36,166	14,838	
Total revenues and grant income	\$ 120,152	\$ 109,098	
Operating expenses:			
Direct costs	130,115	161,367	
Selling, general and administrative	111,887	116,318	
Research and development	1,662	1,708	
Total operating expenses	243,664	279,393	
Operating loss	(123,512)	(170,295)	
Other income (expense):			
Interest expense	(16,190)	(475)	
Interest income	2,833	20,293	
Other income (expense), net	10,909	(239,301)	
Total other expense, net	(2,448)	(219,483)	
Net loss	<u>\$(125,960)</u>	<u>\$(389,778)</u>	<u>\$</u>

Balance Sheet Data	As of December 31, 2025	As of December 31, 2024	Pro Forma as of December 31, 2025
Total assets	\$ 1,211,271	\$ 579,510	
Total liabilities	369,011	125,695	
Total mezzanine equity	2,066,555	1,300,376	
Total members' deficit	(1,224,295)	(846,561)	

RISK FACTORS

Investing in our Class A common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations of X-energy” and our consolidated financial statements and the accompanying notes included elsewhere in this prospectus before deciding whether to invest in shares of our Class A common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of or that we deem immaterial may also become important factors that adversely affect our business. If any of the following risks occur, our business, financial condition, operating results, and future prospects could be materially and adversely affected. In that event, the market price of our Class A common stock could decline, and you could lose part or all of your investment.

Throughout this section, unless otherwise noted, the “Company,” “we,” “us” or “our” refers to X-Energy, Inc. and its consolidated subsidiaries.

Risks Relating to X-energy’s Business

Our ability to execute on our business plan and our continued existence are dependent upon our ability to obtain additional funding and financing.

While we currently expect that we have sufficient sources of liquidity, taking into account our current cash on hand and the expected net proceeds from this offering, to continue working on our reactor and fuel projects with our key customers and partners, we will need additional sources of funding and financing to support our ongoing operations and to execute on our business plan.

We have had, and expect that we will continue to have, an ongoing need to raise additional capital from outside sources to fund our operations and expand our business. Historically, our primary sources of funding to support our operations have been revenue from the ARDP Agreement, contributions and loans from members, loans from financial institutions and capital raises.

As of December 31, 2025, we had cash and cash equivalents of \$458.9 million, short-term investment balances of \$304.9 million and long-term investment balances of \$261.5 million and continue to meet our obligations to customers, vendors, counterparties and employees in the ordinary course of business. Our expected primary uses of cash on a short-term and long-term basis are for working capital requirements, capital expenditures, and other general corporate services. Our primary working capital requirements are for project execution activities including purchases of materials, subcontracted services and payroll which fluctuate during the year, driven primarily by the timing and extent of activities required on new and existing projects. We expect that working capital requirements will need to continue to be funded through a combination of cash on hand, funding awarded under the ARDP Agreement, further issuances of securities, and capital raises.

In addition, management expects that future operating losses and negative operating cash flows may increase from historical levels because of additional costs and expenses related to the development of our technology and the development of market and strategic relationships with other businesses. In particular, in connection with our business plan, management anticipates additional increases in operating expenses and capital expenditures relating to the development and commercialization of the Xe-100. We intend to finance these expenses with further issuances of debt or equity securities. Thereafter, we expect we will need to raise additional capital and generate revenues to meet long-term operating requirements.

If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our equity holders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing equity holders. If we raise additional funds by obtaining loans from third parties, the terms of those financing arrangements may include negative covenants or other restrictions on our business that could impair our operating flexibility and also require us to incur interest expense.

If we are unable to raise additional capital when desired, we may not be able to construct the TX-1, deliver the Xe-100 or any other reactor to customers on time or on budget or at all, conduct other research and

development, undertake other projects, or fulfill our business plan, and therefore, we may need to delay or abandon these and other projects.

Any of the foregoing would materially and adversely affect our business, financial condition, operating results, and future prospects.

We may not generate sufficient revenues or liquidity to operate our business, and a successful transition to attaining profitable operations depends upon achieving a level of revenue adequate to support us.

We expect that working capital requirements will need to continue to be funded through a combination of cash on hand, funding awarded under the ARDP Agreement, further issuances of securities, and capital raises. In addition, we will need to generate increased revenues sufficient to meet long-term operating requirements.

At present, our revenues are generally derived from contract services performed for the U.S. government and commercial entities from cost-share agreements such as the ARDP and research and development, product development, and fuel services provided to other government agencies and commercial entities. In the future, we expect to generate revenue through licensing or technology fees for the use of the proprietary intellectual property and build-to-print design of the Xe-100 technology, project planning, assembly coordination, construction support, regulatory support, procurement support, long-term services to customers and the supply of fuel and associated services. However, we have not yet entered into any such licensing, technology or other agreements, and there can be no assurances that customers will accept our anticipated fees and pricing under these agreements or that we will be able to charge the fees and pricing that we anticipate under our business plan. If we are unable to obtain sufficient fees and pricing under these agreements, our business, financial condition, operating results and future prospects will be materially and adversely affected.

Our revenue growth also may be adversely affected by other factors including: our inability to maintain, grow and develop the X-energy products; our ability to continue to receive funding from government contracts; weakness in the industry generally; general economic conditions, including as a result of tariffs, high interest rates and inflation; terrorism, sanctions or other geopolitical events globally; global pandemics and other public health emergencies; increasing competition; and the other risks described in this “Risk Factors” section.

Our historical revenue growth is not indicative of our future performance. If we are unable to maintain, grow, and develop X-energy’s business and generate sufficient revenue and achieve profitability, our business, financial condition, operating results and future prospects will be materially and adversely affected. We may also achieve business growth in quantity of deployed plants, but achieve lower than anticipated revenue on each deployment, including achieving lower than anticipated margin on our projects. Additionally, our cash needs may increase in the future as we focus on growing and developing products.

Our future capital requirements will depend on many factors, including the ability to meet (or continue to meet, as the case may be) the requirements of Nasdaq for listing or any other exchange, future credit losses, the ability to obtain the necessary financing to meet obligations and repay liabilities arising from business operations when they come due, the ability to generate and maintain sufficient cash, and the ability to generate profitable operations in the future. There can be no assurance that our liquidity will be sufficient to achieve our long-term objectives, grow and develop our products, operate our business, or comply with the terms of our indebtedness.

If we are not able to generate sufficient revenues or liquidity to operate our business, and to support our long-term business plan, it would materially and adversely affect our business, financial condition, operating results, and future prospects.

We have not yet delivered the Xe-100 or any other reactor to customers and have not achieved final investment decisions for the purchase or deployment of any of our reactors, and there is no guarantee that we will be able to do so. Any delays or setbacks we may experience during our first commercial delivery, which is planned for the early 2030s, or failure to obtain final investment decisions would have a material adverse effect on our business, financial condition, operating results, and future prospects, and could harm our reputation.

The success of our business will depend in large part on our ability to successfully deliver the Xe-100 to customers on time and on budget at guaranteed performance levels, which would give greater confidence in

our subsequent customers. There is no guarantee that our planned deployments of the Xe-100 will be successful, on schedule, or on budget, or that our customers will elect to exercise their options for additional Xe-100 units. We are in the design phase of the Xe-100, and as a result our cost and schedule estimates are subject to significant uncertainty and change. Our current cost model and estimates have limited fidelity and may prove inaccurate, which could result in material cost growth, schedule extensions, or scope changes that adversely affect project economics, final investment decisions and customer commitments.

Moreover, because the Xe-100 will be considered a first-of-a-kind technology, there can be no assurance that we will not experience operational or process failures and other problems during our first commercial deployment or any planned deployment thereafter. The nuclear industry has historically experienced significant cost overruns, schedule delays and cancellations on first-of-a-kind and follow-on projects, which have, in many cases, rendered projects uneconomical; similar dynamics could affect our projects notwithstanding our planning, risk management and contracting strategies. In the event that we fail to develop and successfully commercialize our technology, if we fail to develop such first-of-a-kind technologies before our competitors or if such technologies fail to perform as expected, are inferior to those of our competitors or are perceived as less safe than those of our competitors, our business and financial condition could be materially and adversely impacted. Any failures, delays or setbacks, particularly on our first commercial deployments, would likely harm our reputation and have a material adverse effect on our business prospects, financial condition, results of operation and cash flows.

Any delays in the development and manufacture of our SMRs and related technology may adversely impact our business and financial condition.

We have previously experienced and may experience in the future, delays, cost overruns or other complications in the design, manufacture, production and delivery of the Xe-100 and related technology, such as the TRISO-X Fuel Fabrication Facility, that could prevent us from delivering any SMRs on our current anticipated timeline. For example, as part of our iterative Xe-100 reactor design process, we employ phased development cycles and review gates to progress from concept through product delivery. Each system within the reactor plant undergoes a thorough assessment at each gate to determine if all product requirements (for example, performance, safety, delivery) are being met or are at risk of not achieving full capability. In the course of certain major gate reviews of the Xe-100 reactor design in the past, we identified areas where further design or analysis work was required to achieve a fully acceptable engineered design. Likewise, development delays at our Fuel Fabrication Facility site have occurred in connection with resolving certain infrastructure requirements and environmental analyses prior to commencing construction. While the aforementioned activities, and others like them, have not materially delayed delivery for a customer to date, they may do so in the future. If delays like these occur, if our remediation or resolution measures and process changes do not continue to be successful, if we fail to find satisfactory manufacturers or suppliers, or if we experience issues with planned manufacturing or construction activities or design and safety, we could experience issues or delays in reaching, sustaining or increasing deployment and sales of our SMRs. The effect of such delays may be increased as a result of rising commodity prices and interest rates, which may increase costs to us and to our customers and may adversely affect the competitiveness of our reactors compared to more established, competing means of supplying electricity or heat.

We are highly dependent on our partnership with Dow for the successful and timely installation of the Xe-100 at our first-of-a-kind facility at one of Dow's U.S. Gulf Coast sites under the ARDP, and any slowdown, suspension or termination of this project could have a material adverse effect on our business, financial condition, results of operations, cash flows and stock price.

Our agreements with Dow, including our MPDA and CCA, provide for certain engineering services, site selection, joint NRC licensing, technology use and further the ARDP-related work that is funded by Dow and is subject to the DOE's and Dow's ongoing support and approval. As such, we are reliant on Dow's continued partnership to develop and finalize the project selected for the ARDP and to establish a framework to pursue industrial projects in connection therewith, including the initial deployment of the Xe-100 pursuant to the ARDP. Such framework includes critical elements for the successful deployment of our initial Xe-100, including marketing, project ownership structures, project delivery models, plant operations, incentive structures, finance arrangements and other joint responsibilities and obligations.

Our strategic plan contemplates the Dow project serving as a cornerstone reference facility to validate our technology, execution capabilities and commercial model. There is no guarantee that this project will proceed as planned, on schedule or on budget. As a first-of-a-kind facility, it is subject to significant uncertainties, including permitting and regulatory approvals, engineering and design changes, supply chain constraints (including long-lead nuclear components and fuel), contractor performance, labor availability, site access and infrastructure, safety or environmental incidents, community opposition, financing availability, force majeure and other factors beyond our control. We also depend on Dow and other counterparties to perform their obligations; we do not control their decisions, priorities or operations. For example, Dow may terminate its MPDA and CCA with us at any time for convenience without regard for our performance. Cost growth, schedule extensions, scope changes or performance shortfalls at this facility could impair project economics, delay or prevent subsequent customer commitments and final investment decisions, and damage our reputation. If Dow were to terminate and neither Dow nor another potential near-term customer enters into similar agreements with us, our initial deployment of the Xe-100 and ongoing services associated with such deployment could be significantly delayed, and the initial deployment of the Xe-100 under the ARDP government cost-sharing arrangement could also be significantly delayed. This could adversely affect our business, financial condition, results of operations and cash flows.

Any slowdown, suspension or termination of work on the Dow facility due to technical challenges, regulatory or legal proceedings, funding constraints, counterparty defaults or termination or other disruptions could materially and adversely affect our ability to commercialize our technology, limit revenue generation, increase cash burn, require additional capital on unfavorable terms, and reduce investor confidence. Such events, particularly because of the project's prominence and first-of-a-kind nature, could have a material adverse effect on our business prospects, financial condition, results of operations and cash flows, and could result in significant volatility in, or a decline of, our stock price.

The Dow project timeline extends beyond the ARDP funding period, which could result in significant incremental funding requirements for Dow and adversely affect the project.

The Dow project's Construction Permit Application is anticipated to be received in the first quarter of 2027, following which construction can commence, and its commercial operations date is expected to be in the early 2030s. This timeline extends beyond our current ARDP budget period, which runs through August 2026, and beyond the maximum period of performance under the ARDP Agreement, even assuming all extensions are obtained. Based on the original February 2021 award contractual date, the outside date for ARDP funding is expected to be in or around 2030 (assuming the maximum three-year extension is granted). Without another extension or change in the contract, which would require approval above the level of the contracting officer, construction activities scheduled to occur after 2030 would not be eligible for ARDP reimbursement.

If the Dow project is unable to be completed within the ARDP funding period, Dow would then be requested to fund the remaining costs related to the construction of the reactor without ARDP reimbursement. The precise funding requirement that would need to be borne by Dow absent ARDP reimbursement depends on the stage of project completion at the time ARDP funding expires, the scope of remaining construction activities, and market conditions at that time. If Dow is unwilling or unable to do so, the Dow project could be delayed or terminated, which would have a material adverse effect on our business, financial condition, results of operations and cash flows.

As of December 31, 2025, we have been reimbursed approximately \$438 million in ARDP funding. The DOE manages allocation and reimbursement of funds appropriated by Congress, approval of extensions, and compliance with program requirements. If extensions are not granted or if the project timeline extends further than currently anticipated, the incremental funding requirement that Dow would need to bear for its portion of the ARDP project could increase materially. Any such increase could affect Dow's final investment decision, cause delays or modifications to the project scope or timeline, or lead Dow to terminate its participation in the project. X-energy is under no obligation to continue funding to the Dow project or construction on the plant itself in the event Dow does not make a final investment decision in the Dow project.

Our joint development agreement with Centrica is non-binding, and there can be no assurance that it will result in definitive agreements or any future revenue, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our JDA with Centrica to explore the potential deployment of the Xe-100 in the U.K. is non-binding. The JDA is preliminary in nature and does not obligate either party to enter into definitive agreements, commit

capital, or proceed with any specific project. The continuation of discussions and any future collaboration remain subject to a number of conditions and contingencies, including, among others, negotiation and execution of binding contracts, receipt of regulatory approvals, site selection, financing arrangements, and the satisfaction of other commercial and technical requirements.

There can be no assurance that we will be able to reach agreement with Centrica on definitive terms, or that any project contemplated by the JDA will proceed. Even if definitive agreements are reached, the timing, scope, and economics of any resulting project may differ materially from our current expectations. If the relationship with Centrica does not progress as anticipated, or if Centrica elects not to move forward with the development or purchase of our reactors, we would not realize any of the potential revenues or strategic benefits associated with the arrangement. Any failure to convert the JDA into a binding commercial agreement, or any delay or cancellation of potential projects under the JDA, could adversely affect our business, financial condition, results of operations and cash flows.

Our sales and profitability may be impacted by, and we may incur liabilities as a result of, terms to certain customers, our failure to meet performance guarantees under customer contracts or customer safety standards.

Terms in contracts or agreements we have entered into with existing or future customers may constrain our capacity allocation, impact our pricing and margins, and limit our strategic flexibility. Under our agreements with Amazon, we have granted Amazon first-priority allocation of Xe-100 manufacturing queue slots across 2031 to 2039 to allocate to utilities and independent power producers, primarily current nuclear operators, who will ultimately own and operate the SMR facilities. We have also granted Amazon a right of first refusal on a portion of our scheduled delivery. While Amazon is not obligated to purchase, its rights could limit our ability to allocate capacity to other customers and may lead to underutilization or planning inefficiencies if Amazon delays or declines to exercise its allocated capacity. Under our agreements with Amazon, we are also obligated to offer Amazon the most favorable pricing and commercial terms available to any non-affiliate customer, including minimum TRISO-X fuel allocations commensurate with our most favored customers. If we cannot make a reserved slot available, we must use commercially reasonable efforts to provide replacement capacity to honor our targets under the agreement.

These commitments may reduce our flexibility to prioritize higher-margin or strategic customers and require us to match the best terms we offer to others, which could compress margins and adversely affect revenue mix. They may also increase operational complexity and costs (including TRISO-X fuel allocations) and result in disputes. Additionally, successor and transfer provisions require any transferee of manufacturing assets or relevant equity interests to assume queue-slot obligations, which could limit our ability to pursue strategic transactions or restructurings on favorable terms.

Under our agreements with Amazon, beginning on the fifth anniversary of the commercial operations date of the first Amazon-sponsored project, we are required to make payments to Amazon reflecting the cost efficiencies we have achieved relative to the PPA prices applicable to the initial projects. These obligations could be material, and could adversely affect our liquidity, cash flows, and financing flexibility, particularly if our costs decline on other projects, which would increase the premium owed on Amazon-sponsored projects. The timing and magnitude of payments may be volatile due to annual reforecasts, project performance, and exogenous variables, reducing cash available for operations, investment, and debt service, and potentially extending the final maturity beyond our original expectations.

Further, we anticipate that our customers may require performance guarantees as to the performance of the Xe-100s we deliver. Prospective future customers may also require that we comply with their own unique requirements relating to their compliance with policies, priorities, regulations, controls, and mandates, including provision of data and related assurance for environmental, social, and governance related standards or goals, and such compliance may add cost and timeline uncertainty or risk. Failure of our products to operate properly or to meet specifications of our customers or our failure to meet our performance guarantees may increase costs by requiring additional engineering resources and services, replacement of parts and equipment or monetary reimbursement to a customer, or could otherwise result in liability to our customers. There are significant uncertainties and judgments involved in estimating performance guarantee obligations, including changing product designs, differences in customer installation processes and failure to identify or disclaim certain variables. To the extent that we incur substantial performance guarantee claims in any period, our earnings and ability to obtain future business could be materially adversely affected.

The illustrative capacity figures and unit economics included in this prospectus are illustrative in nature, are based on a number of assumptions, and may not reflect our actual future performance.

The illustrative capacity figures presented in this prospectus are based on our current agreements with customers, including Dow, Amazon, and Centrica, and reflect our internal assumptions regarding the capacity of the Xe-100, the number of units that may be deployed, and the time periods in which we anticipate such units being constructed and placed into service. Numerous risks and uncertainties could cause the actual deployed capacity to differ materially from the illustrative figures, including our and our customers' ability to successfully construct and deliver Xe-100s (none of which have been built or operated to date) or to do so on a timely basis, obtain required regulatory approvals, secure adequate financing, and manage supply chain constraints, labor availability, cost overruns, and construction delays. In addition, customers such as Dow, Amazon, and Centrica have rights to delay, reduce, or terminate their commitments, and any such changes, along with potential modifications in the scope, scale, or timing of customer projects, technological or engineering challenges, or shifts in energy policy, electricity market demand, or public acceptance of nuclear power, could materially impact our ability to achieve the levels of capacity reflected in this prospectus. As a result, our actual cumulative deployed capacity may be substantially less than that shown, or may not be achieved at all, and investors should not place undue reliance on these illustrative figures in evaluating our business, financial condition, operating results or future prospects.

We do not carry insurance coverage for the risks associated with the Xe-100 or its components, and our current insurance coverage may not be adequate, or we may not be able to obtain insurance at acceptable rates at all.

We do not carry insurance coverage for the performance of the Xe-100 or its components. Even if we purchase this kind of insurance, the insurance may not fully protect us from the financial impact of defending against product liability claims that may occur in future. In the event that our technologies fail to perform as expected, are inferior to those of our competitors or are perceived as less safe than those of our competitors, our business and financial condition could be materially and adversely impacted. Other than contractual protections provided by our vendors for certain components and systems, we have not employed other risk sharing structures to mitigate all risks associated with the successful delivery and performance of the Xe-100. As we have not yet delivered the Xe-100 or any other reactor to customers, we have determined that our current insurance coverage is sufficient for our business operations. However, we may need to purchase additional insurance to operate our business. If we fail to obtain the required insurance, or if we were to incur substantial losses or liabilities due to fire, explosions, floods, other natural disasters or accidents or business interruption that we are not adequately covered under our existing insurance, our business and results of operations could be materially and adversely affected.

We depend significantly on U.S. government contracts, which often are only partially funded, subject to immediate termination, and heavily regulated and audited. Continued full funding of, and any upward adjustments to funding available under, the ARDP are subject to future government appropriations and continued political support. Our ability to access ARDP funding is subject to significant timing and regulatory risks. The termination of, or failure to fully fund, the ARDP, or our failure to timely secure upward adjustments in the ARDP funding to cover actual costs could have a material, adverse impact on our business prospects, relationship with our partners, financial condition, results of operations and cash flows and may result in a more limited ARDP fuel facility development, changes to project development timelines, or other commercial changes to the ARDP.

In addition to at least \$500 million in funding appropriated in FY2020-FY2024, the Infrastructure Investment and Jobs Act (Public Law 11758) appropriated funds for the ARDP in total of \$2.47 billion. Of ARDP funding to date, at least \$1.1 billion has been allocated to X-energy's award. Ongoing ARDP funding is provided to X-energy through Continuation Applications for each "budget period", with the latest funding through at least August of 2026. Congress has appropriated funding that was allocated towards X-energy's award, in total of approximately \$1.1 billion of the \$1.2 billion commitment as part of the Infrastructure Investment and Jobs Act in 2022 to support our ARDP award, as well as recent additional appropriations of \$3.1 billion to ARDP, some portion of which we expect to be allocated to X-energy. In recent years, U.S. government appropriations have been affected by larger U.S. government budgetary issues and related legislation. As of December 31, 2025, we have been reimbursed over \$438 million in funding under the ARDP. We cannot predict the extent to which funding may be increased, if at all, or if total funding may be reduced as part of a subsequent appropriations process ultimately approved by U.S. Congress and the President of the

U.S. or in separate supplemental appropriations or continuing resolutions, as applicable. The termination of funding for the ARDP would result in a loss of anticipated future revenue attributable to that program, which could have an adverse impact on our operations. In addition, the termination of the ARDP or the failure to commit additional funds to the ARDP could result in lost revenue and increase our overall costs of doing business, and may result in the deferral or more limited development of TX-1 and subsequent fuel fabrication facilities, and jeopardize our ability to complete our initial deployments of the Xe-100, which could adversely affect our ability to market and deploy Xe-100 units to other customers and other commercial effects.

Under the ARDP Agreement, if we fail to incur eligible costs within the currently approved period of performance, including any DOE-approved extension, we would forgo reimbursement for such costs and could face de-obligation of unobligated funds at closeout. Extensions under the ARDP Agreement are at the DOE's discretion. If the DOE denies or limits an extension, our ability to claim ARDP reimbursement after 2027 could be materially curtailed. Continuation of funding across budget periods is further contingent on additional appropriations and DOE policy. Any adverse appropriations outcomes, performance shortfalls, or contractual compliance issues could materially reduce or eliminate ARDP funding available to us. Because the award is incrementally funded and DOE's maximum share at any time is capped at amounts actually obligated, even with an extension granted, we may not receive additional ARDP funding unless and until DOE agrees to obligate further amounts to us.

Generally, U.S. government contracts are subject to oversight audits by U.S. government representatives. Such audits could result in adjustments to our contract costs. Any costs found to be improperly allocated to a specific contract will not be reimbursed, and such costs already reimbursed must be refunded. We have recorded contract revenue based on costs we expect to realize upon final audit. However, we do not know the outcome of any future audits and adjustments, and we may be required to materially reduce our revenue or profits upon completion and final negotiation of audits. Negative audit findings could also result in termination of a contract, forfeiture of profits, suspension of payments, fines or suspension or debarment from U.S. government contracting or subcontracting for a period of time.

U.S. government contracts generally contain provisions permitting termination, in whole or in part, without prior notice at the U.S. government's discretion upon payment only for work done and commitments made at the time of termination. Under some contracts, we are a subcontractor and not the prime contractor, and in those arrangements, the U.S. government could terminate the prime contractor for convenience without regard for our performance as a subcontractor. We can give no assurance that one or more of our U.S. government contracts will not be terminated under those circumstances. Also, we can give no assurance that we would be able to procure new contracts to offset the revenue lost as a result of any termination of our U.S. government contracts. Because a majority of our revenue is dependent on our performance and payment under our ARDP Agreement, the loss of that particular contract could have a material adverse impact on our business, financial condition, operating results and future prospects.

Our contracts and services with the U.S. government are also subject to specific procurement regulations and a variety of socioeconomic and other requirements. These requirements, although customary in U.S. government contracts, increase our performance and compliance costs. These costs might increase in the future, reducing our margins, which could have a material adverse effect on our business prospects, financial condition, results of operations and cash flows. The U.S. government has implemented, and may continue to implement initiatives focused on efficiencies, affordability and cost control and other changes to its procurement practices. These initiatives and changes to procurement practices may change the way U.S. government contracts are solicited, negotiated and managed, which may affect whether and how we pursue opportunities to provide our products and services to the U.S. government, including the terms and conditions under which we do so, which may have an adverse impact on our business, financial condition, operating results and future prospects.

Failure to comply with applicable regulations and requirements could lead to fines, penalties, repayments, or compensatory or treble damages, or suspension or debarment from U.S. government contracting or subcontracting for a period of time. Among the causes for debarment are violations of various laws and regulations, including those related to procurement integrity, export control (including the International Traffic in Arms Regulations at 22 C.F.R. Parts 120-130), U.S. government security, employment practices, protection of the environment, accuracy of records, proper recording of costs and foreign corruption. The termination

of a U.S. government contract or relationship as a result of any of these acts would have an adverse impact on our operations and could have an adverse effect on our standing and eligibility for future U.S. government contracts.

Government funding is subject to the political process, which is inherently unpredictable, highly competitive and dependent on budgetary limitations, congressional appropriations and administrative allotment of funds, all of which may be affected by changes in U.S. government policies resulting from various political developments. If political support for the prioritization of the development of nuclear energy decreases, including due to policy changes by the current administration or future administrations and changing congressional funding priorities, we may be unable to secure continued government funding under the ARDP or any requested increases to such funding. Our failure to secure upward adjustments in the ARDP funding to cover actual costs, should such a need arise, could have a material, adverse impact on our business prospects, which would materially and adversely affect our development timeline, financial condition, relationship with our partners, results of operations and cash flows. In addition, any such failure to obtain requested increases to such funding could result in a more limited ARDP fuel facility development or other commercial changes to the ARDP.

In addition, in connection with future requests for increases to funding under the ARDP, in connection with our entry into U.S. government contracts, or for any other reason, the U.S. government may stipulate conditions or make certain requests of us in return, including, but not limited to, requests for amendments to existing U.S. government contracts or requests to acquire and/or purchase shares of our Class A common stock or securities that give the U.S. government the right to acquire shares of our Class A common stock. Any such conditions or requests, whether or not we agree to them, and the terms of any such securities, could have a material adverse impact on our relationship with the U.S. government, could have a material adverse effect on our business prospects, financial condition, results of operations and cash flows, and could result in significant volatility in, or a decline of, our stock price.

Our ability to receive ARDP funding is subject to budget period limitations, extension approvals, and an outside date, and we may not receive the full amount of the ARDP reimbursement.

Our current ARDP Agreement provides for 50% reimbursement of \$2.4 billion in eligible costs (\$1.2 billion in total reimbursement). As of December 31, 2025, we have received approximately \$438 million in ARDP funding. We submit our budgets through an ongoing “budget period” basis tied to project milestones under the ARDP Agreement, and our current budget covers a budget period that began in March of 2025 and extends through August 2026. At the time of the initial award, the estimated total project cost was approximately \$2.4 billion, which reflected management’s then-current estimates for design, licensing, fuel fabrication facility construction, and demonstrator reactor construction activities over the program period. Since 2020, the estimated total project costs have increased, and we expect that cost estimates will continue to be revised in connection with each budget period’s Continuation Application as project scope, market conditions, and external factors evolve.

Continuation of funding is contingent on DOE approval of additional budget periods. Extensions under the ARDP Agreement are at the DOE’s discretion and are subject to criteria including: (1) availability of appropriations; (2) availability of future-year budget authority; (3) substantial progress toward meeting project objectives; (4) submittal of required reports; and (5) compliance with the terms and conditions of the award. We submit a Continuation Application to the DOE to extend funding; however, there can be no assurance that extensions will be approved. As part of the Continuation Application process required under the ARDP Agreement, we are required to submit updated budgets for each subsequent budget period, which are subject to review and approval by the DOE. These updated budgets reflect the best information available at the time of submission and may differ materially from prior estimates due to the factors described above. The DOE’s current reimbursement share under the ARDP is \$1.2 billion (representing 50% of the original \$2.4 billion estimate), meaning any increases in estimated project costs above the original \$2.4 billion estimate without adjustment of the current award value would require X-energy and Dow to fund the incremental amounts from non-ARDP sources. If actual project costs exceed the amounts eligible for ARDP reimbursement we and Dow would be required to bear the full amount of such excess costs without government cost-sharing, which could have a material adverse effect on our business, financial condition, results of operations and cash flows. X-energy and Dow are under no obligation to continue funding the project scope from ARDP.

Under the ARDP Agreement, the total extension of the period of performance may not exceed three years beyond the original 7 year award period, resulting in a maximum period of performance of 10 years. Any additional extension would require an approval within DOE above the level of the Contracting Officer. Based on the original award date in February 2021, the outside date for ARDP funding, assuming all extensions are granted, is expected to be in or around 2030. Dow, as our partner under the ARDP Agreement, does not separately need to apply for ARDP funding or extensions. Dow's 50% reimbursements for the Dow project are tied to project milestones and they are not subject to our budget periods. If the Dow project, with a target commercial operations date in the early 2030s, is unable to be completed within the ARDP funding period and Dow elects to construct the project, Dow would then fund remaining costs related to the construction of the reactor without ARDP reimbursement. If Dow is unwilling or unable to do so, the Dow project could be delayed or terminated, which would have a material adverse effect on our business, financial condition, results of operations and cash flows. X-energy is under no obligation to fund the construction of the Dow project, and is under no obligation to construct a reactor without a final investment decision from Dow.

If we fail to incur eligible costs within the currently approved period of performance, including any DOE-approved extension, we would forgo reimbursement for such costs and could face de-obligation of unobligated funds at closeout. Even with an extension granted, we may not receive additional ARDP funding unless and until DOE agrees to obligate further amounts to us. Any adverse appropriations outcomes, performance shortfalls, contractual compliance issues, or denial of extension requests could materially reduce or eliminate ARDP funding available to us, which would have a material adverse effect on our business, financial condition, results of operations and cash flows.

The original ARDP cost estimate was developed in 2020 and has since increased; future cost increases may require us and our partners to fund amounts in excess of available ARDP reimbursement.

The ARDP Agreement was based on management's reasonable cost estimates developed at the time of X-energy's ARDP application in 2020. At the time of award, total estimated project costs were approximately \$2.4 billion, with DOE providing \$1.2 billion in 50/50 cost-share reimbursement for eligible costs under the ARDP Agreement. This reflected management's then-current estimates and did not account for subsequent inflation, supply chain cost increases, scope evolution, or other factors that have since affected project costs.

Since the original award in 2020, our estimated project costs have increased, and we expect that cost estimates will continue to be revised in connection with each budget period's Continuation Application. The nuclear industry has historically experienced significant cost overruns on first-of-a-kind projects. While the Xe-100's modular design is intended to reduce first-of-a-kind risks, we cannot provide assurance that cost increases will not occur. Factors that may contribute to cost increases include:

- Inflation and general price escalation across labor, materials, and services;
- Supply chain disruptions and increased costs for nuclear-grade materials and components;
- Scope refinements and design modifications resulting from ongoing engineering work;
- First-of-a-kind engineering challenges and regulatory requirements;
- Extended project timelines, including potential delays in obtaining regulatory approvals; and
- Changes in tariff regimes or trade restrictions affecting procurement costs.

As part of the Continuation Application process, we submit updated budgets to the DOE for each budget period, including cost estimates and supporting justification. These updated estimates are subject to DOE review and approval and may differ materially from prior estimates. In January 2026, Congress appropriated additional funding of \$3.1 billion towards three Advanced Reactor programs, including 1) the Generation III SMR deployments, 2) the Risk Reduction for Future Demonstrations Program, and 3) the Advanced Reactor Demonstration Program, of which X-energy is one of two awardees. We expect to be allocated some portion of this to our project incremental to the current \$1.1B allocated to date. If the DOE does not approve updated budgets or if additional funding is not appropriated by Congress, we may be unable to complete project activities within the ARDP cost-share framework. This could require us to obtain additional capital on terms that may not be favorable, which could materially impact our business, financial condition, operating results and future prospects.

Our business plan may also include the development of other configurations of our SMR or other new projects, and makes certain assumptions with respect to learnings, efficiencies, and regulatory approvals as a result of this new development approach which may not be accurate or correct. Any adverse change to these assumptions may have a material adverse effect on our business prospects, financial condition and results of operations and cash flows.

We compete in a market characterized by rapid technological advances, evolving regulatory standards in software technology and frequent new product introductions and enhancements. To succeed, we may also rely on the development of other configurations of our SMRs or other new projects we may decide to undertake. The development of other configurations of our SMRs, or the undertaking of other new projects, has inherent risks, including, but not limited to:

- higher than expected research and development costs;
- delays or unexpected costs in developing new plant configurations;
- ability or delays in obtaining regulatory approval;
- customers delaying purchase decisions in anticipation of new configurations;
- customer confusion and extended evaluation and negotiation time;
- educating our sales, marketing, and consulting personnel to work with new configurations;
- competition from earlier and more established entrants;
- market acceptance of earlier configurations; and
- the accuracy of assumptions about the nature of customer demand.

If we are unable to successfully introduce, market, and sell other configurations of our SMRs, or undertake any other new projects in a timely and cost-effective manner, and properly position and/or price our products, our business, financial condition, operating results and future prospects could be materially impacted.

If we fail to manage our growth effectively, we may be unable to execute our business plan, and our business, financial condition, operating results and future prospects could be harmed.

In order to achieve the substantial future revenue growth we have projected, we must finalize our reactor design, receive regulatory approvals, including NRC licensing of additional fuel fabrication facilities, and continue to develop and market new products and services to traditional and nontraditional end users. We intend to expand our operations significantly to meet anticipated demand. To properly manage our growth, we will need to hire and retain additional personnel, upgrade our existing operational management and financial and reporting systems, and improve our business processes and controls. Our future expansion will be dependent on:

- hiring and training new personnel with the skill and expertise required;
- completing the licensing and construction of TX-1 and subsequent fuel fabrication facilities and optimizing the production of our TRISO-X fuel;
- finalizing our reactor design and developing new technologies and services (e.g., training, maintenance, procurement);
- optimizing applications of our reactors to serve both traditional utility and electric power customers and a broad base of nontraditional industrial customers interested in utilizing the efficient high temperature heat produced by our design;
- controlling expenses and investments in anticipation of expanded operations and rising costs;
- manufacturing and maintaining a sufficient supply of pebbles;
- managing the costs of our reactors;
- managing construction timelines, performance and budgets of our engineering, procurement and construction (“EPC”) partners and other third-party contractors;

- upgrading the existing operational management and financial reporting systems and team to comply with requirements as a public company; and
- implementing and enhancing administrative infrastructure, systems and processes.

If our operations continue to grow as planned, of which there can be no assurance, we will need to expand our sales and marketing, research and development, customer and commercial strategy, products and services, supply chain, and manufacturing functions, among others. These efforts will require us to invest significant financial and other resources, including in industries and sales channels in which we have limited experience to date. We will also need to continue to leverage our manufacturing and operational systems and processes, and there is no guarantee that we will be able to scale the business as currently planned or within the planned timeframe. The continued expansion of our business may also require additional manufacturing and operational facilities, as well as space for administrative support, and there is no guarantee that we will be able to find suitable locations for such facilities.

Our continued growth could increase the strain on our resources, and we could experience operating difficulties, including difficulties in hiring and training employees, finding manufacturing capacity to produce our SMRs and related equipment, delays in production, challenges in scaling up fuel and component fabrication capacity and difficulty sourcing adequate raw material, such as graphite and HALEU (which our customers are responsible for procuring), for our reactors. These difficulties may divert the attention of management and key employees and impact financial and operational results. If we are unable to drive commensurate growth, these costs, which include lease commitments, headcount and capital assets, could result in decreased margins, which could have a material adverse effect on our business, financial condition, operating results and future prospects.

Further, if our capital needs are greater than anticipated or the timing of expenditures accelerates, we may need to raise additional debt or equity, reduce scope, defer projects, or pursue alternative delivery models and risk-sharing structures; there can be no assurance such capital will be available when needed or on acceptable terms. See *Risks Related to X-energy's Capital Resources — In order to fulfill our business plan, we will require additional funding. To the extent we require such additional investor funding in the future, such funding may be dilutive to our investors and no assurances can be provided as to terms of any such funding. Any such funding and the associated terms will be highly dependent upon market conditions and the progress of our business at the time we seek such funding. The terms of any financing that we pursue may be less favorable than previously anticipated and could become even less favorable depending on the amount of funds we may require.*

There is limited commercial operating experience for our planned SMRs and facilities, configuration, and scale. This creates risks in cost and schedule estimates and lack of recent domestic commercial experience in terms of labor and supply chain and other factors may result in greater than expected construction cost, deployment timelines, maintenance requirements, differing power output and greater operating expense.

While our SMR design will be actively managed through design reviews, prototyping, testing, involvement of external partners with subject matter expertise, and application of approaches utilized in the operation of the Xe-100, we could still fail to identify latent design, manufacturing, construction, and operations issues early enough to avoid negative effects on production, fabrication, construction or ultimate performance of the Xe-100 and related technologies, or we may encounter unexpected regulatory issues. Moreover, the cost and time associated with the construction and maintenance of our SMRs may be greater than we or our customers expect because we or they may face a lack of a domestic labor force with relevant commercial experience and an inexperienced or insufficient supply chain for this type of reactor. Where these issues arise at later stages of deployment, deployment could be subject to greater costs or be significantly delayed, which could materially and adversely affect our business. Although nearly all of the cost to construct the Xe-100 is borne by our customers, such costs incurred by our customers could significantly exceed their and our expectations, including for reasons outside of their and our control, which could make existing or prospective customers less likely to contract with us and use our SMR design in the future, which could have a material adverse effect on our business, results of operations and financial prospects.

We have not yet entered into any technology fee agreements with our customers, which could materially impact our revenue model.

A key component of our business model generally and the illustrative unit economics provided in this prospectus is the ability to reach binding agreements with potential customers for use of and access to our

Xe-100 technology and designs and to realize the fees associated with such agreements. To date, we have not entered into any such agreements with our customers, and our customers have not paid such fees, and there can be no assurance that they will enter into such agreements in the future at levels currently anticipated or at all. Potential customers may resist paying technology fees given the substantial capital expenditures already associated with the construction of SMRs, or the potential development of technologies that may prove more efficient or effective. If we are unable to enter into these agreements or enforce or collect these fees, our expected revenue streams could be materially reduced.

Any failure to effectively create the design, ensure its commercial viability and implement the construction and operations of our planned SMRs and facilities or ensure cost competitiveness could reduce the marketability of X-energy designs and has the potential to impact deployment schedules.

Creating our designs and ensuring their commercial viability and implementing the construction and operations will be necessary to be competitive and attractive in the market, particularly in the U.S. where the price of power is generally lower than in certain other key markets. If we are not able to achieve and maintain cost competitiveness of our fuel or our planned SMRs in the U.S. or elsewhere, our business could be materially and adversely affected.

We may not attract customers to our Xe-100 technology as quickly as we expect, or at all, and acquiring customers may be more expensive than we currently anticipate.

Adoption of the Xe-100 among our potential customers may progress more slowly than we anticipate or it may be more expensive to bring potential customers into our pipeline. Any delay or failure to attract potential customers to our reactors or SMR technology may have a material and adverse impact on our business and financial condition.

The amount of time and funding needed to bring our nuclear fuel to market at scale may significantly exceed our expectations. Any material change to our assumptions or expectations, or any material overruns or other unexpected increases in costs, could have a material adverse effect on our expected revenues, gross margins and on the other information included in the illustrative unit economics provided in this prospectus or our ability to develop and market other coated particle fuels.

The development of our TRISO-X fuel at scale will take a significant amount of time and funding. TRISO-X fuel is produced through a highly specialized, small-batch manufacturing process. Scaling from pilot-scale production to commercial-scale production involves significant technical, regulatory, and economic challenges. Any shortfall in research, development, and testing funds, unexpected or significant increases in costs, any delay in achieving fuel development milestones, and any uncertainty in regulatory licensing timelines or adverse public reaction to developments in the use of nuclear power by special interest groups, community organizations and state and local government agencies leading to environmental litigation or other legal proceedings could result in significant delays and cost overruns and could adversely affect our ability to deploy, and our customers' ability to operate, the Xe-100. At this stage, we cannot accurately predict the amount of funding or the time required to successfully manufacture and sell our nuclear fuel in the future at scale. The actual cost and time required to commercialize our fuel technology may vary significantly from our initial forecasts depending on, among other things:

- the results of our research and product development efforts;
- the cost of developing or licensing our nuclear fuel and TX-1 and any subsequent fuel facilities;
- the cost to construct and operate TX-1 and subsequent fuel fabrication facilities, including potential construction delays;
- the ability of customers to efficiently adopt and use TRISO-X fuel in their reactors;
- changes in the focus and direction of our research and product development programs;
- access to test facilities;
- competitive and technological advances;
- the cost of filing, prosecuting, defending, and enforcing claims with respect to patents;

- the regulatory approval process;
- the fuel manufacturing process;
- adverse public reaction to the developments in the use of nuclear power resulting in environmental litigation or other legal proceedings;
- staffing and training qualified personnel to operate TX-1 and any other TRISO-X fuel facilities;
- the scalability of our TRISO-X fuel operations;
- availability and cost of LEU and HALEU;
- availability and cost of other raw materials necessary for fuel manufacturing, including graphite, process gases, and chemicals, among others; and
- marketing and other costs associated with commercialization of these technologies.

Because of this uncertainty, even if financing is available to us, we may need significantly more capital than anticipated, which may not be available on terms acceptable to us or at all. As a result, the expected revenues and other expected benefits from our nuclear fuel technology may be delayed or never realized. Any material change to our assumptions or expectations, or any material overruns or other unexpected increase in costs, could have a material adverse effect on our expected revenues, gross margins and on the other information included in the illustrative unit economics provided in this prospectus or our potential to develop and market other coated particle fuels.

If our customers are unable to access HALEU, our ability to manufacture TRISO-X fuel will be adversely affected, which could have a material adverse effect on our business, financial condition, operating results and future prospects.

Existing commercial nuclear infrastructure, including enrichment facilities and fuel fabrication facilities, were in most cases designed and are currently licensed to handle uranium in pellet and rod form, with enrichment up to 5% of the isotope Uranium 235 (LEU). Our fuel designs are based on a spherical pebble design composed of graphite, pyrolytic carbon and silicon carbide encapsulated uranium particles that have been enriched up to 15.5% for use in the Xe-100. This higher enriched uranium (greater than 5% but still below 20%) is known as HALEU. Supplying HALEU to our TX-1 and any subsequent fuel fabrication facilities, which will manufacture the fuel for our SMRs, will require certain modifications to NRC licensing of existing commercial uranium enrichment facilities, none of which are owned or operated by us, along with the construction of our TX-1 facility and construction and NRC licensing of any subsequent fuel fabrication facilities.

Presently, HALEU enrichment services are available only in limited quantities globally. In the U.S., HALEU can be sourced in limited quantities from the DOE, and a limited domestic supply from the private sector that we do not expect will be a significant source of our HALEU. Despite U.S. government initiatives designed to ensure initial HALEU quantities, including the establishment of the HALEU Availability Program to ensure access to HALEU for civilian domestic research, development, demonstration, and commercial use, the HALEU program is still in its early stages, and significant progress is required to achieve reliable and scalable production.

Government funding is subject to the political process, which is inherently unpredictable and can be highly competitive. The funding of government programs is dependent on budgetary limitations, congressional appropriations and administrative allotment of funds, all of which may be affected by changes in U.S. government policies resulting from various political developments, including recent efforts to negotiate an increase in, or suspension of, the debt ceiling. If an alternative commercial-scale supply of HALEU outside of Russia or China fails to materialize, including as a result of a lack of political support for the prioritization of the development of nuclear energy or otherwise, it may affect our ability to secure HALEU fuel in the future, which would materially adversely affect our business, financial condition, operating results and future prospects.

Our initial ARDP plant deployment may consequently depend on HALEU feedstocks released by the U.S. government, which may initially be in the form of highly enriched uranium, or “HEU” (enriched above

20%), that will be down-blended to HALEU levels for use in our TX-1, any subsequent fuel fabrication facilities and, ultimately, in ARDP reactors owned and operated by our partners. HEU can be processed to HALEU by only a limited number of licensed U.S. third parties. These third parties do not currently produce commercial levels of HALEU and may require regulatory approvals and process changes in order to produce the HALEU we require for the ARDP project. Our customers' longer term fuel feedstock supply arrangements and subsequent fuel fabrication, whether related to X-energy's TRISO-X fuel or other coated particle fuels we may manufacture for others, are likely to rely on commercial suppliers that do not yet produce and market HALEU, and which will also require NRC regulatory licenses in order to do so. Therefore, our customers' ability to obtain adequate long term HALEU supplies for our reactors on a predictable schedule and at predictable cost may be impaired, and activities like fuel loading, testing, and ultimate operation of our SMRs may be delayed, and our customers exposed to cost and schedule uncertainty, all of which may negatively affect the competitiveness of our SMRs.

Any HALEU enrichment facility will need to secure NRC licenses to enrich uranium to HALEU levels, and our TX-1 and any subsequent fuel fabrication facilities will require an NRC license to accept and fabricate HALEU into TRISO-X fuel. In February 2026, we received a Special Nuclear Material License from the NRC that establishes TX-1 as the first-ever Category II nuclear fuel facility licensed in the United States, enabling TRISO-X to commercially manufacture fuel using HALEU at its TX-1 site under an initial 40-year license. We anticipate constructing TX-2 on the same site, which will allow for the license to extend to both facilities. There is risk of relevant entities within the nuclear power industry being slow to make any required facility infrastructure modifications or to obtain, maintain or extend required licenses or approvals to enable such enrichment of HALEU fuel. Finally, there is a risk associated with possible negative public perception of uranium enrichment to greater than 5% that could potentially delay or hinder regulatory approval of our nuclear fuel designs. Should any of these events occur, our business would be materially adversely impacted.

Unsatisfactory safety performance or security incidents at our facilities, or any nuclear facility around the world, could have a material adverse effect on our business, financial condition, operating results and future prospects.

We design and will facilitate the manufacturing of highly sophisticated SMRs that depend on complex technology. We also work cooperatively with our suppliers, subcontractors, venture partners and other parties. Failures, disruptions or compromises to our or our third parties' systems or facilities may be caused by natural disasters, accidents, power disruptions, telecommunications failures, acts of terrorism or war, computer viruses, bugs or vulnerabilities, physical or electronic break-ins, human error, targeted cyberattacks, other intentional conduct, or similar events or incidents. While we have built operational processes to ensure that the design, manufacture, performance and servicing of our SMRs meet rigorous safety standards and performance goals, there can be no assurance that we will not experience operational or process failures or other problems, including through manufacturing or design defects, failure of third-party safeguards, mishandling or process failures, natural disasters, cyber attacks, or other intentional acts, that could result in potential safety risks. There can be no assurance that our preparations, or those of third parties, will be able to prevent or address any such incidents.

Any actual or perceived safety issues at our facilities, those of our customers, or any nuclear facility around the world may result in significant reputational harm to our businesses; in addition, such safety issues at our or our customers' facilities could result in enforcement proceedings brought by government regulators, tort liability, maintenance costs, increased safety infrastructure requirements and other costs that may arise. Such issues with our SMRs, facilities, or customer safety could result in delaying or cancelling delivery of SMRs to our customers, increased regulation or other systemic consequences. Our inability to meet our safety standards or address adverse publicity affecting our reputation as a result of accidents, mechanical failures, damages to customer property or medical complications could have a material adverse effect on our business, financial condition and results of operation.

In the nuclear industry, an accident or incident involving the mishandling of nuclear materials at any nuclear facility in the world can have an impact on other nuclear facilities around the world in terms of public acceptance, political pressures, and regulatory requirements and scrutiny. For example, the March 2011 accident at the Fukushima Daiichi plant in Japan resulted in millions of dollars in additional regulatory reviews and requirements for U.S. nuclear power plants. As a result of the Fukushima accident, some countries that were considering launching new domestic nuclear power programs delayed or cancelled the preparatory

activities they were planning to undertake as part of such programs. If a safety incident occurs at any nuclear facility in the world, it could delay licensing and/or drive up costs to license or own our SMRs and negatively impact our business or financial condition.

We rely on a limited number of suppliers for certain materials and supplied components, some of which are highly specialized and are being designed for first-of-a-kind or sole use in the Xe-100. We and our third-party vendors may not be able to obtain sufficient materials or supplied components to meet our manufacturing and operating needs, or obtain such materials on favorable terms or at expected costs.

We rely on a limited number of suppliers for certain raw materials and supplied components. We may not be able to obtain sufficient raw materials or supplied components to meet our manufacturing and operating needs, or obtain such materials on favorable terms or at expected costs, which could impair our ability to fulfill our orders in a timely manner or increase our costs of production.

We do not directly manufacture any of the components of our SMRs. Our ability to manufacture our SMRs is dependent upon sufficient availability of raw materials and supplied components, including many highly technical components that are still under design, are being designed for first-of-a-kind or sole use in the Xe-100 and have not yet been qualified for use, are only produced by a limited number of suppliers and may be particularly susceptible to cost increases, supply chain disruptions or inflationary pressures. Any supply chain disruption incurred by our third party suppliers or degradation in the quality and processes of our manufacturer partners, may result in delays, cost overruns or impairments to the development of our reactors.

Certain materials, such as the graphite used to line our reactor cores and for our TRISO-X fuel and helium, which is used as a reactor coolant, are currently produced in limited quantities and currently available from a limited number of vendors, which in some cases are predominantly outside of the U.S. (e.g., Germany and Japan). There is also increasing scrutiny on the environmental, social, or geographic provenance of certain goods, including critical minerals, which may require us to incur certain costs or further limit our ability to source certain goods required for our operations. For example, in December 2021, the U.S. adopted the Uyghur Forced Labor Prevention Act (“UFLPA”) which creates a rebuttable presumption that any goods, wares, articles, and merchandise mined, produced, or manufactured in whole or in part in the Xinjiang Uyghur Administrative Region of China or that are produced by certain entities are prohibited from importation into the United States. These import restrictions came into effect on June 21, 2022. While we are not presently aware of any direct impacts of these restrictions on our supply chain, the UFLPA may have an adverse effect on global supply chains which could adversely impact our business and results of operations. Although U.S. graphite suppliers are developing the capability and capacity to supply our needs, our current reliance on foreign suppliers to secure raw materials and supplied components exposes us to volatility in the prices and availability of these materials, and may result in our being susceptible to changes in geopolitical relationships. We may not be able to obtain a sufficient supply of raw materials or supplied components, on favorable terms or at all, which could result in delays in, or the inability to, manufacture our TRISO-X fuel and SMRs or result in increased costs.

We are dependent on the ability of our supplier partners to scale their production output to meet the requirements of our forecast. If our supplier partners cannot increase their production capacity to meet the demand, it could result in delays in our ability to manufacture our reactors at the rates required.

Certain key components of our SMR are currently manufactured outside the U.S. and we rely on the timely and cost-effective transportation of goods via ocean freight. Disruptions to global shipping networks, such as port congestion, vessel capacity shortages, labor strikes, extreme weather events, piracy, geopolitical tension, or new environmental regulations could significantly delay shipments, increase transportation costs, or impair our ability to meet customer demand. If such disruptions occur, we may be unable to secure alternative transportation in a timely manner, which could adversely affect our supply chain, customer relationships and financial performance.

Moreover, a major shipping accident could have a severe, negative impact on the delivery schedule and cost of our early projects, such as in the case of key components being lost at sea due to severe weather.

Additionally, the imposition of tariffs and impacts of inflation on raw materials or supplied components for our reactors could have a material adverse effect on our operations. Prolonged disruptions in the supply of

any of our key raw materials or components, difficulty qualifying new sources of supply, implementing use of replacement materials or new sources of supply or any volatility in prices could have a material adverse effect on our ability to operate in a cost efficient, timely manner. Such prolonged disruptions could also cause us to experience cancellations or delays of scheduled launches, customer cancellations or reductions in our prices and margins, any of which could harm our business, financial condition, operating results and future prospects.

In particular, recent global trade tensions and policy shifts have created an unpredictable environment for businesses operating across international borders. Changes in trade agreements, sanctions, export controls, and customs regulations may limit our ability to source materials from certain countries or entities, potentially forcing rapid and costly adjustments to our supply chain. Trade policies can change with limited notice, making long-term planning difficult and increasing operational costs.

While we attempt to mitigate these risks through diversification of our supplier base, inventory management strategies, and contractual protections, there can be no assurance that these measures will be effective. Any significant disruption to our supply chain resulting from tariffs or trade policy changes could have a material adverse effect on our business, financial condition, and ability to meet projected deadlines and milestones.

We depend on key executives and management to execute our business plan and conduct our operations. A departure of key personnel could have a material adverse effect on our business.

Our success depends, in significant part, on the continued services of our senior management team and on our ability to attract, motivate, develop and retain a sufficient number of other highly skilled personnel, including engineers, manufacturing and quality assurance, finance, marketing and sales personnel. Our senior management team has extensive experience in the energy industry, including nuclear, and manufacturing industries, and we believe that their depth of experience is instrumental to our continued success. The loss of any one or more members of our senior management team, for any reason, including resignation or retirement, could impair our ability to execute our business strategy and have a material adverse effect on our business and financial condition if we are unable to successfully attract and retain qualified and highly skilled replacement personnel.

Our business plan requires us to attract and retain qualified personnel including personnel with highly technical expertise. Were we not to be able to successfully recruit and retain experienced and qualified personnel, it could have a material adverse effect on our business.

Our future success depends in part on our ability to contract with, hire, integrate, and retain highly competent nuclear reactor and fuels focused engineers and scientists, and other qualified personnel. Competition for the limited number of these skilled professionals is intense. If we are unable to adequately anticipate our needs for certain key competencies and implement human resource solutions to recruit or improve these competencies, our business, financial condition, operating results and future prospects would suffer. Additionally, U.S. immigration policy may make it more difficult for qualified foreign nationals to obtain or maintain work visas. These visa limitations may make it more difficult and more expensive for us to hire the skilled professionals we need to execute our growth strategy and may adversely impact our business. If we are unable to recruit and retain highly skilled personnel, especially personnel with sufficient technical expertise to develop our reactors and fuel, we may experience delays, increased costs and reputational harm, additional requirements, which could adversely affect our results of operations.

We must complete nuclear grade material qualifications and obtain regulatory approvals for the use of various materials in our TRISO-X fuel and our reactor designs. This includes long lead time irradiation testing and analysis, which may require redesign or use of alternative suppliers if results are unsatisfactory. Further, certain key nuclear grade materials and components, such as graphite, are only produced in limited quantity and predominantly outside of the U.S. Cultivating expanded foreign or domestic U.S. supply chain manufacturing capacity for key materials and components depends on cooperation from government and supply chain partners that may result in shortages and delays if not accomplished within assumed timelines or costs. These key materials and components may also be particularly vulnerable to inflationary pressures and cost increases.

The equipment, components, and materials used in a nuclear power plant are subject to a heightened level of manufacturing and quality assurance scrutiny, in compliance with NRC regulations, applicable codes and

nuclear industry standards. Moreover, it is critical to demonstrate in facility design and development that the materials used in the reactor facility, which will be exposed to radioactive materials, perform in accordance with necessary design parameters. The heightened manufacturing and quality assurance requirements and regulatory oversight limit the number of potential suppliers from whom we can procure many types of equipment, components, and materials used in our reactors and within TX-1, as well as the types of facilities where we can test certain materials. We may not be able to obtain sufficient materials or supplied components to meet our manufacturing and operating needs, or obtain such materials on favorable terms, which could impair our ability to fulfill our orders in a timely manner or increase our costs of production.

Our suppliers' ability to manufacture components for our fuel fabrication facilities is dependent upon sufficient availability of materials and possibly other supplied components, some of which are highly specialized and are being designed for first-of-a-kind or sole use in our fuel fabrication facilities. Any supply chain disruption incurred by our third-party suppliers or degradation in the quality and processes of our manufacturer partners, may result in delays, cost overruns or impairments to the development of our fuel fabrication facilities.

These suppliers and the key materials and essential components may be particularly vulnerable to price increases, as a result of supply and demand dynamics, inflation, the current administration's implemented tariffs, and other price pressures. As a result, supplier delays, unexpected performance testing results, issues in the manufacturing process or procuring necessary materials, international procurement needs, regulatory compliance issues, component qualification issues or delays, increases in costs as a result of inflation or otherwise, and geopolitical considerations can all impact our ability to perform necessary R&D, assist a customer in licensing a reactor, license TX-1, assist customers in constructing and operating an X-energy reactor design, or construct and operate TX-1. Such prolonged disruptions could also cause us to experience cancellations or delays of scheduled projects, customer cancellations or reductions in our prices and margins, any of which could harm our business, financial condition, operating results and future prospects.

Our business is subject to the risks of earthquakes, fire, floods and other natural catastrophic events, global pandemics, and interruptions by man-made problems, such as network security breaches, computer viruses or terrorism. Material disruptions of our business or information system resulting from these events could adversely affect our operating results.

We are vulnerable to damage from catastrophic events, such as natural disasters, global pandemics, power loss, and similar unforeseen events beyond our control. Catastrophic events could disrupt our business operations, reduce or restrict our supply of products and services, incur significant costs to protect our employees and facilities, or result in regional or global economic distress, which may materially and adversely affect our business, financial condition, operating results and future prospects. Actual or threatened war, terrorist activities, political unrest, civil strife, and other geopolitical uncertainty could have a similar adverse effect on our business, financial condition, and results of operations. Any one or more of these events may adversely affect our operation results, or even for a prolonged period of time, which could materially and adversely affect our business, financial condition, and results of operations.

We cannot guarantee that we are adequately protected from the effects of earthquakes, fire, floods, typhoons, global pandemics, power loss, telecommunications failures, break-ins, war, riots, network security breaches, computer viruses, terrorist attacks or similar events. Any of the foregoing events may give rise to interruptions, damage to our property, delays in production, breakdowns, system failures, technology platform failures, or internet failures, which could cause the loss or corruption of data or malfunctions of our internet system as well as adversely affect our business, financial condition, and results of operations.

If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, damaged critical infrastructure, or otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place are unlikely to provide adequate protection in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business.

Our use of AI-based technology may present new risks and challenges to our business.

The rapidly evolving use of AI in our industry presents significant risks. If we fail to adopt, manage, and govern AI responsibly, our brand, regulatory approvals, operations, and financial results could be adversely affected.

We may explore the usage of third-party AI or machine learning (“ML”) platforms, offerings and tools, including AI chatbots and generative AI products (“AI/ML Technology”), in our internal operations. The development and use of AI/ML Technology present various privacy and security risks that may impact our business. AI/ML technology is subject to privacy and data security laws, as well as increasing regulation and scrutiny. The use of AI/ML technology and third-party open-source AI tools by our employees and consultants could pose risks relating to the protection of data, including the potential exposure of our proprietary, confidential or otherwise protected information to unauthorized recipients and the misuse of our or third-party intellectual property. Use of AI tools may result in allegations or claims against us related to violation of third-party intellectual property rights, unauthorized access to or use of proprietary information and failure to comply with open-source software requirements.

We have developed policies governing the use of AI/ML Technology by our employees, contractors, and authorized agents that are designed to protect our assets, including intellectual property, competitive information, personal information we may collect or process, and customer information. Any failure by our personnel, contractors or other agents to adhere to our policies could result in a violation of confidentiality obligations or applicable laws and regulations (including data privacy laws), jeopardize our intellectual property rights, cause or contribute to unlawful discrimination, result in the misuse of personally identifiable information, or introduce greater vulnerabilities to cybersecurity attacks or malware into our systems. We also could be subject to claims from providers of third-party AI/ML Technology that we are using their products, tools or outputs in a manner that is inconsistent with their terms of use, and such claims may result in costly legal proceedings.

The regulatory framework for AI/ML Technology is rapidly evolving as many federal, state and foreign government bodies and agencies have introduced or are currently considering additional laws and regulations. Additionally, existing laws and regulations may be interpreted in ways that would affect our use of AI/ML Technology, or could be rescinded or amended as new administrations take differing approaches to evolving AI/ML Technology. As a result, we cannot be certain that our policies or adherence to the existing laws and regulations will offer us sufficient protection or that the use of the AI/ML Technology will not harm our reputation, financial condition or operating results.

Several jurisdictions around the world, including Europe, the U.S. federal government and certain U.S. states, have proposed, enacted or are considering laws and policies governing the development, deployment and use of AI/ML, such as the EU Artificial Intelligence Act. It is possible that further new laws and regulations will be adopted in the U.S. and in other non-U.S. jurisdictions, or that existing laws and regulations, including competition and antitrust laws, may be interpreted in ways that would limit our ability to use AI/ML Technology for our business. Additionally, certain privacy laws extend rights to consumers (such as the right to delete certain personal data) and regulate automated decision making, which may be incompatible with our use of AI/ML. These obligations may make it harder for us to conduct our business using AI/ML, jeopardize our proprietary information, lead to regulatory fines or penalties, require us to change our business practices, retrain our AI/ML, or prevent or limit our use of AI/ML. If we cannot use AI/ML or our use is restricted, our business may be less efficient, or we may be at a competitive disadvantage. In addition, uncertainties regarding developing legal and regulatory requirements and standards may require significant resources to modify and maintain business practices to comply with laws in the U.S. and other jurisdictions concerning the use of AI/ML Technology, the nature of which cannot be determined at this time.

The use of third-party AI/ML Technology by our business partners and employees with access to our confidential information, including trade secrets, may continue to increase. This could lead to the misuse or disclosure of such information, which could negatively impact us, including our ability to realize the benefits of our intellectual property. The use of AI/ML Technology by our business partners may lead to cybersecurity risks, which could have a material adverse effect on our operations and reputation as well as the operations of any of our business partners. Finally, the use of AI/ML Technology also presents emerging ethical issues, and

if our use of third-party AI/ML Technology becomes controversial, we may experience brand or reputational harm or legal liability or we may be at a competitive disadvantage.

Further, constraints or shocks in AI/ML Technology supply chains could increase costs or delay projects as we continue to rely on them for faster design and delivery of our solutions. Availability and pricing of advanced computing, specialized chips, and cloud capacity used for model development and simulation fluctuate with industry demand. Supply constraints could slow our digital engineering or analytics roadmaps or increase spend.

Any of these risks could be difficult to eliminate or manage and, if not addressed, could have a material adverse effect on our business, financial condition, operating results and future prospects.

Risks Related to the Industry, Competition and General Economic Conditions

The market for our products and services is still in the early stages of growth and if it does not continue to grow, it grows more slowly than we expect, or fails to grow as large as we expect, our business, financial condition, operating results and future prospects may be adversely affected.

Our success depends substantially on the willingness of consumers to widely adopt our products and services and to pay associated prices for our products and services sufficient to meet our revenue and margin targets in terms of percentage and gross receipts. To be successful, we will have to educate consumers about our products and services through significant investment and provide quality products that are superior to the products provided by our competitors. It is difficult to predict the future growth rates, if any, and size of our market. We cannot assure you that our market will develop or that our products and services will be widely adopted. If our market does not develop, develops more slowly than expected, or becomes saturated with competitors, or if our products and services do not achieve market acceptance, our business, financial condition, operating results and future prospects could be adversely affected.

The market for Gen IV advanced nuclear reactor designs generating electric power and high-temperature heat is not yet established and may not achieve the growth potential we expect or may grow more slowly than expected.

The market for Gen IV advanced nuclear reactor designs such as the Xe-100 has not yet been established. SMRs utilizing advanced nuclear technologies have limited operational history and have not been proven at scale. Estimates for the total addressable market and our expectations, inclusive of recent updates, with regard to certain illustrative unit economics provided in this prospectus are based on a number of internal and third-party estimates, including our potential contracted revenue, the number of potential customers who have expressed interest in our SMRs, assumed prices and production and regulatory costs for our SMRs, our ability to leverage our current logistical and operational processes, assumptions regarding our technology and general market conditions. However, our assumptions and the data underlying our estimates may not be correct and the conditions supporting our assumptions or estimates may change at any time, reducing the predictive accuracy of these underlying factors. As a result, our expected performance as indicated by the illustrative unit economics provided in this prospectus, our estimates of the annual total addressable market and serviceable addressable market for our services, as well as the expected growth rate for the total addressable market and serviceable addressable market for our services, may prove to be incorrect.

In addition, our reactors, financial models and the illustrative unit economics included in this prospectus assume an anticipated plant life of 60 years. However, the licenses we receive from the NRC and other government authorities are limited to an initial term of 40 years, which is the maximum initial licensing term currently permitted. There is no assurance that we will be able to obtain license renewals or extensions, and if we are unable to do so, our reactors may be required to cease operations before the end of their useful lives, which could reduce the economic return of our projects, adversely affect customer demand, and negatively impact our business, financial condition, operating results and future prospects.

Our cost estimates are highly sensitive to broader economic factors, and our ability to control or manage our costs may be limited.

Capital and operating costs for the deployment of a first-of-a-kind reactor such as the Xe-100 are difficult to project, inherently variable and are subject to significant change based on a variety of factors, including site

specific factors, customer offtake requirements, regulatory oversight, operating agreements, supply chain availability, local labor rates, inflation, detailed design, engineering and other factors. Opportunities for cost reductions with subsequent deployments are similarly uncertain. To the extent cost reductions are not achieved within the expected timeframe or magnitude, the Xe-100 and TRISO-X fuel may not be cost competitive with alternative technologies, which could materially and adversely affect our expected revenues, gross margins and the information included in the illustrative unit economics provided in this prospectus.

In addition, our cost estimates and project economics could be materially impacted by tariffs or other trade restrictions imposed on materials, components or equipment required for the construction and operation of our reactors and fuel facilities. While we do not expect to purchase certain key materials and components for several years, changes in tariff regimes or the imposition of new tariffs prior to or during our procurement period could significantly increase our costs or limit our ability to source necessary items. The potential for future tariffs or trade actions creates additional uncertainty in our cost projections and could adversely affect our competitiveness, margins and financial results.

The illustrative unit economics presented in this prospectus are estimates only, reflecting management's current expectations and based on numerous assumptions. The illustrative unit economics presented in this prospectus may not be realized, and actual results could differ materially from the illustrative estimates presented.

Given our early stage of development, it is difficult to predict what results we might ultimately achieve. While we present "illustrative unit economics" in this prospectus, these figures are not projections, forecasts, targets or guidance for our future operating results but what we believe to be illustrative of potential revenues based on customer fees, and associated costs, based on information available to us as of the date of the prospectus. Our ability to actually achieve these unit economics and our business model depend on numerous factors and are based on numerous assumptions. In particular, the illustrative unit economics described in this prospectus are based on management's current expectations and assumptions regarding customer fees, costs, and margins for a single plant. Actual results will depend on numerous factors outside our control, including customer negotiations and fee structures, market conditions, supply-chain costs and dynamics, manufacturing efficiency and utilization, financing terms and assumptions, customer adoption and actual operational performance, and are subject to the risks described below and elsewhere in this "Risk Factors" section. Any variation in these assumptions could cause our actual results to differ materially from the illustrative estimates presented.

Technology Fees. The illustrative unit economics reflect management's current expectations regarding the amount and timing of technology fees we would expect to charge for customers' use of our Xe-100 technology. These expectations are based on management's internal benchmarking of IP licensing and industrial technology fees across various similar industries and sectors, together with the experience of our team and ongoing customer discussions. However, there is no directly comparable technology against which to benchmark the fee, and there can be no assurance that we would be able to collect from our customers fees that are typical in other industries or sectors. While we have had preliminary discussions with certain customers regarding a proposed fee estimate within the middle of the range reflected in the illustrative unit economics, we have not yet entered into any technology, intellectual property or related agreements, and we can provide no assurance that customers will accept our anticipated fee structure or pricing. In addition, because the technology fees relates to the use of our intellectual property, the associated cost to us is assumed to be zero.

The final fee will be negotiated on a case-by-case basis with each customer, based on numerous factors specific to each customer, and our actual revenues and customer fees from our technology fee may differ materially from the estimates in the illustrative unit economics, including as a result of the following factors, among others:

- customer negotiations that result in materially lower fees or delayed payment schedules;
- variations in project scope, timing, and customer profile that affect negotiated pricing;
- the potential emergence of competitors or alternative reactor technologies that exert downward pressure on fees;
- evolving market conditions, regulatory developments, and cost of capital for nuclear projects;
- customer reluctance to pay milestone-based technology fees prior to commercial operation;

- customers not being willing to pay higher fees for later stage plants, even after scaling and validation; and
- litigation, claims or other events that could result in an associated costs to us related to the use of our intellectual property.

If we are not able to receive our anticipated technology fee structure and pricing, it would have an impact on the amount of revenues, the timing of revenues and the percentage of revenues we anticipate generating pre-COD. For example, we expect approximately 15 – 35% of revenue in our reactor line of business to be realized prior to (and including) COD, and this includes both the technology fee and the services fees described below. If the actual technology fee we receive is lower, or customers are not willing to pay the assumed higher fees for later stage plants or on the milestone-based payment structure, then our illustrative pre-COD revenues and our illustrative percentage of pre-COD revenue will be lower, which could have a material and adverse impact on our business, results of operations and financial prospects, including our need to obtain additional financing or to generate sufficient liquidity or revenues to operate our business pre-COD.

Services. The illustrative unit economics reflect management’s current expectations regarding the amount and timing of services fees we would expect to charge customers for providing them with a suite of project development and operating services, including site selection, permitting, engineering, training, and procurement support and, following commercial operation date (“COD”), ongoing maintenance and operator training. Our assumptions regarding services pricing, timing, and margins are based on limited experience to date from the provision of initial strategic business and other services we have provided to customers and potential customers, as well as industry benchmarking and our team’s collective experience. However, there can be no assurance that we would be able to collect from our customers fees that are typical in other industries or sectors. To date, we have entered into only limited services or other agreements with potential customers, and we can provide no assurance that customers will accept our anticipated fee structure or pricing. The illustrative unit economics also assume that our customers will continue to rely on us as a service provider throughout the operational life of a plant, and there is no assurance that they will continue to do so. In addition, our services business depends on assumptions about customer demand, pricing, and long-term relationships that may not materialize.

- Our actual services revenues, customer fees, costs and margins may differ materially from the estimates in the illustrative unit economics, including as a result of the following factors, among others: our estimates are based on our limited history providing services at commercial scale, and actual costs to provide these services may be higher, and we may not be able to pass through all of the costs to our customers at our estimated fees and our estimated margin;
- we have only entered into a small number of services agreements with potential customers and those may not be representative of future revenues, fees, costs or margins that we are able to achieve;
- third-party service providers could enter the market, introducing price competition and thereby reducing revenue and fees, increasing costs and reducing margins;
- customers may elect to self-perform or contract with alternative vendors for site services, maintenance, or operator training; and
- our ability to maintain efficient staffing, supply-chain arrangements, and project execution will directly affect costs and profitability.

If our services assumptions prove inaccurate, our expected revenues, fees and margins could be materially reduced, and we may experience higher costs than currently anticipated. Because we do not construct, own, or operate plants, following COD, we depend entirely on customers’ continued engagement of our services to generate recurring revenue from our reactor line of business, with approximately 65-85% of revenue from our reactor line expected to be from the provision of long-term services offered post-COD. In addition, if the actual pre-COD services fees we receive are lower, then our illustrative pre-COD revenues and our illustrative percentage of pre-COD revenue will be lower, which could have a material and adverse impact on our business, results of operations and financial prospects, including our need to obtain additional financing or to generate sufficient liquidity or revenues to operate our business pre-COD. Similarly, if we do not generate the anticipated revenues post-COD, or if our costs are higher or margins are lower than anticipated, it could

have a material and adverse impact on our business, results of operations and financial prospects, including our need to obtain additional financing or to generate sufficient liquidity or revenues to operate our business post-COD.

Fuel Pricing. The illustrative unit economics reflect management's current expectations regarding the amount of TRISO-X fuel we will sell to customers, the price at which we will do so, and our related operating and capital costs. Our expectations assume that we will supply the initial core fuel load at COD and, following COD, provide recurring fuel supply for refueling over the life of each plant. We further assume that we will be the initial sole supplier of proprietary TRISO-X fuel. We have not yet entered into definitive fuel supply agreements, and there can be no assurance that customers will agree to the anticipated fee structure, pricing, or volume commitments. Customers may seek lower-cost alternatives, negotiate volume discounts, or purchase from other suppliers once alternative sources of TRISO-X fuel become available.

Our actual revenues, fees, costs and margins from selling TRISO-X fuel to our customers may differ materially from the estimates in the illustrative unit economics, including as a result of the following factors, among others:

- the emergence of third-party suppliers or alternative fuel technologies that compete on price or performance;
- changes in uranium, feedstock, or manufacturing costs that adversely affect our margins;
- delays or cost overruns in developing and commissioning our fuel fabrication facilities, including the costs of labor, materials, and overhead;
- customer decisions to source fuel from other vendors once alternative supply chains are available; and
- the need to finance future fuel facilities at assumed utilization levels that may not be achieved.

If actual utilization of our manufacturing or fuel-fabrication facilities is lower than expected, or if costs increase due to inflation, regulatory delays, or operational inefficiencies, our margins could be materially reduced. In addition, the assumptions underlying the illustrative unit economics also exclude any costs or risk related to uranium procurement or inventory, feedstock procurement, or spent fuel management, which are borne by our customers. If we are required to bear any of these costs, or if fuel costs increase due to inflation, supply-chain constraints, or regulatory changes, our expected margins could be materially reduced. If our fuel pricing assumptions prove inaccurate, expected revenues, fees and margins could be materially reduced, and we may experience higher costs than currently anticipated. In addition, if the costs borne by our customers exceed their expectations, our reputation with our customers may be negatively impacted. Any of the foregoing could have a material and adverse impact on our business, results of operations and financial prospects, including our need to obtain additional financing or to generate sufficient liquidity or revenues to operate our business.

Our economics are based on an anticipated 60-year operating life of a reactor. While the Atomic Energy Act of 1954 limits initial licensing to 40 years, the current operating fleet was designed to operate beyond that limit. Similarly, the Xe-100 is designed with substantial margins to support operation beyond the initial 40-year licensing term. The NRC established a license renewal program that permits licensees to seek approval for subsequent 20-year operating periods. In license renewal, the NRC focuses on evaluating whether aging management programs adequately address the effects of aging on structures, systems, and components important to safety. For much of the current operating fleet, license renewal requirements were not in place at the time of initial licensing, and comprehensive aging management programs were therefore developed and reviewed as part of the license renewal process. Almost every U.S. commercial nuclear power plant operates under a renewed license, valid for 40–60 years of potential total operations, and the NRC is now reviewing applications for "subsequent license renewal," valid for 60–80 years of potential operations. The Xe-100 design contemplates long-term operations, and while X-energy is incorporating aging management considerations into the reactor design from the outset to be well positioned to support future license renewal applications, NRC approval cannot be assured.

While the NRC license renewal process is well established and the majority of applications have been approved, the NRC has, in limited circumstances, denied or reversed license renewal approvals where applications failed to satisfy applicable safety, environmental, or regulatory requirements. Accordingly,

X-energy's proactive approach to aging management and regulatory compliance may not eliminate license renewal risk. If the NRC does not approve our license renewal application, or if the anticipated operating life of a reactor is lower than anticipated, it could have a material and adverse impact on our business, results of operations and financial prospects.

Competition from existing or new companies could cause us to experience downward pressure on prices, fewer customer orders, reduced margins, the inability to take advantage of new business opportunities, and the loss of market share.

We operate in highly competitive markets and are subject to competition based upon product design, performance, project execution, constructability, pricing, quality, and services, from competing nuclear suppliers as well as from alternative means of producing electricity and/or heat. There are a number of advanced reactor designs, and some advanced reactor projects, under development in the U.S. Many of these designs are involved in preapplication review with the NRC. Our advanced design, projected product design performance, engineering expertise, and quality control have been important factors in our growth; nonetheless other companies providing competing technologies could capture customers or market share from us, which could have a material adverse effect on our business or financial condition.

In addition, some markets experience very low power prices due to a combination of subsidized renewables and low-cost fuel sources, and we may not be able to compete in these markets unless the benefits of the Xe-100 and our TRISO-X fuel are sufficiently valued in the market.

For sales and/or deployments outside of jurisdictions with highly developed nuclear regulatory frameworks, some of our foreign competitors currently benefit from, and others may benefit in the future from, permissive regulatory and licensing regimes and/or from protective measures by their home countries where governments are providing financial support, including significant investments in the development of new technologies. Competitors based in Russia and China, such as China National Nuclear Corporation, currently operate commercial or near-commercial SMRs in their home countries, while competitors based in Korea are pursuing SMR development but do not currently operate commercial SMRs. Although their SMR designs have not been approved or licensed for use by the NRC or any other nuclear regulator in any jurisdiction outside of their native countries, those competitors may have a competitive advantage if they are able to obtain approvals, or if they can demonstrate to potential customers the value and benefits of their SMRs, particularly in jurisdictions that have less stringent nuclear regulatory requirements. These competitors may have access to greater sources of funding to develop and commercialize their SMRs than we do, whether as a result of potential competitive advantages or from supportive national governments. This market environment may result in increased pressures on our pricing and other competitive factors.

We believe our ability to compete successfully in designing, engineering and manufacturing our products and services at significantly reduced costs to customers does and will depend on a number of factors which may change in the future due to increased competition, our ability to meet our customers' needs and the frequency and availability of our offerings. If we are unable to compete successfully, our business, financial condition, operating results and future prospects would be adversely affected.

Changes in the availability and cost of electricity, natural gas, oil and other forms of energy are subject to volatile market conditions that could adversely affect our business.

The prices for and availability of electricity, natural gas, oil and other energy resources are subject to volatile market conditions. We do not control these market conditions, which are, moreover, often affected by political and economic factors beyond our control. Decreases in energy prices, or changes in nuclear energy costs relative to other forms of energy, may adversely affect our business. To the extent that these uncertainties cause suppliers and customers to be more cost sensitive or to adjust their business plans and operations, decreased energy prices may have an adverse effect on our results of operations and financial condition.

The cost of electricity generated from nuclear sources may not be cost competitive with other electricity generation sources in some markets, which could materially and adversely affect our business.

U.S. electricity markets are heavily regulated at the federal, state and local levels. Many U.S. electricity markets price electric energy, capacity, and/or ancillary services on a competitive basis, with market prices

subject to substantial fluctuations. Other markets require that power purchase decisions by electric utilities be subject to various competitiveness or prudence tests. As a result of competitive pressures, some electricity markets experience low marginal energy prices at certain times due to a combination of subsidized generating resources, competitors with low cost or no cost fuel sources, or market design features that create incentives for certain attributes or deliver revenue in unpredictable ways over time, and X-energy may not be able to compete in these markets unless the benefits of the low carbon, reliable and/or resilient energy generation provided by the Xe-100 are sufficiently valued. Even in electricity markets that price reliable capacity on a long term basis, there is no guarantee that our customers' Xe-100 units will be sufficiently low cost so as to clear auction style capacity markets, and clearing a capacity auction in any one year is no guarantee of clearing in successive years.

Given the relatively lower electricity prices and higher availability of power in the U.S. when compared to many international markets, the risk associated with lower cost alternatives may be greater with respect to our business and operations in the U.S. Regardless of jurisdiction, however, failure of our SMRs to provide competitively priced electric energy, capacity and/or ancillary services could materially and adversely affect our business.

We and our customers operate in a politically sensitive environment, and the public perception of nuclear energy can affect our customers and us.

Successful execution of our business model is dependent upon public support for nuclear power in the U.S. and other countries. The risks associated with uses of radioactive materials, both in our proposed TX-1 fuel fabrication facility, and subsequent fuel fabrication facilities and by our customers in future deployments of our SMR designs, and the public perception of those risks, can affect our business. Opposition by third parties can delay or prevent the licensing and construction of new nuclear power facilities and in some cases can limit the operation of nuclear reactors. Adverse public reaction to developments in the use of nuclear power could directly affect our customers and indirectly affect our business. Adverse public reaction, increased regulatory scrutiny and related litigation could contribute to extended licensing and construction periods for new nuclear reactors, delay construction schedules, or even shut down operations at already-constructed reactors. There have only been two new nuclear reactors built in the U.S. over the past 30 years, so there is not a good calibration today of the level of public acceptance or adverse reactions to nuclear power. Public perception of nuclear energy, as with most energy sources tends to be locally generated depending on the politics of the impacted communities rather than federally driven. As with other very visible technologies, a potential accident by any company or organization in the nuclear community can negatively impact the public perception of a particular project, such as our or our customer's projects.

From a political perspective, while the current U.S. federal administration and select members of Congress are currently quite favorable towards nuclear energy, we cannot guarantee that such sentiment will last or that opponents of nuclear energy will not be successful in increasing the cost, complexity, or timelines associated with nuclear energy, whether in our operations or those of the broader industry and value chain. Any such delays may also impact the marketability of our technology internationally or our competitive position relative to others. For example, China already has a 500 MWt High Temperature Gas-cooled Reactor (HTGR) plant in operation, has a TRISO-X fuel facility, and is already marketing their technology internationally. Although Russian and Chinese competitors have SMR designs that have not been approved by the NRC or in any jurisdiction outside of their native countries, those competitors may have a competitive advantage if they are able to obtain approval comparable to the NRC's Standard Design Approval, or if they can otherwise demonstrate to potential customers the value and benefits of their SMRs, particularly in jurisdictions that have less stringent regulatory requirements. In addition, these competitors may have access to greater government or other funding to develop and commercialize their SMRs than we do.

The direct and indirect impact on us and our customers from severe weather and other effects of climate change and the economic impacts of the transition to noncarbon based energy, could adversely affect our financial condition, operating results, and cash flows.

There are inherent climate-related risks wherever business is conducted. Our operations and properties, and those of our customers, may in the future be adversely impacted by flooding, wildfires, high winds, drought and other effects of severe weather conditions. Climate change is expected to increase the frequency and

severity of such events, as well as contribute to chronic changes (such as changes to meteorological and hydrological patterns) that may result in similar risks. These events can force us or our customers to suspend operations at impacted properties and may result in significant damage to such properties. Even if these events do not directly impact us or our customers they may indirectly impact us and our customers through increased insurance, energy or other costs. The ongoing transition to non-carbon based energy also presents certain risks, including macroeconomic risks related to higher energy costs and energy shortages, among other things, which may also impact us directly or indirectly, such as through our supply chain. The speed and direction of the energy transition are also uncertain and subject to various competing pressures, including as a result of political, market, and other forces. If policymakers or the market coalesce around alternative energy technologies — such as renewables with battery storage, hydrogen, geothermal, or fossil fuels with carbon capture — such trend may adversely impact our ability to capture benefits associated with the energy transition. These direct and indirect impacts from climate change could adversely affect our financial condition, operating results, supply chain and cash flows.

We are subject to a series of risks related to sustainability matters.

There is ongoing scrutiny from investors, customers, policymakers and other stakeholders regarding companies' consideration and management of climate change, human capital, and various other environmental and social matters. We from time to time engage in various initiatives (including disclosures) to address such matters and related stakeholder expectations; however, such initiatives entail costs and may not have the desired effect. Methodologies, standards, and data associated with sustainability disclosures are often complex and continuing to evolve. As with other companies, our approach to such matters is also expected to evolve, and we cannot guarantee that our approach will align with the expectations or preferences of any particular stakeholder. For example, in some instances, companies have been subject to accusations of greenwashing due to alleged deficiencies in disclosure, methodology, or actions. Additionally, in some instances, such stakeholders have different, or even conflicting, expectations, which can increase the cost and complexity of response. Failure to successfully navigate such expectations (including any regulatory requirements) may result in reputational harm, loss of customers or contracts, engagement from regulators or capital providers, or other adverse impacts to our business. Certain of our suppliers, customers, and other stakeholders are also subject to similar expectations, which may result in new or greater risks, including risks that may not currently be known to us.

Risks Related to X-energy's Use of Technology

Technological changes could render our technology and products uncompetitive or obsolete, which could prevent us from achieving market share and sales.

Our failure to refine or advance our SMR technologies could cause our reactor technology to become uncompetitive or obsolete, which could prevent us from achieving market share and sales. We may need to invest significant financial resources in research and product development to keep pace with technological advances in the industry and to compete in the future; we may be unable to secure such financing. A variety of competing alternative technologies may be in development by other companies that could result in lower manufacturing or operating costs and/or higher performance than those expected for our technology. Our development efforts may be rendered obsolete by the technological advances of others, and other technologies may prove more advantageous for commercialization.

We and our third-party providers are subject to information technology and cyber security risks which could result in material adverse effects to our business, financial condition, operating results and future prospects, including damage to our reputation, material financial penalties, and legal liability.

We are increasingly dependent upon information technology systems, infrastructure and data to operate our business (collectively "IT Systems"). We own and manage some of these IT Systems but also rely on third parties for a range of IT Systems and related products and services. In the ordinary course of business, we collect, store and transmit confidential information (including but not limited to intellectual property, proprietary business information and personal information) (collectively, "Confidential Information") through our IT Systems. It is critical that we do so in a secure manner to maintain the confidentiality and integrity of

such Confidential Information. We also have outsourced elements of our operations to third parties, and as a result we manage a number of third-party contractors who have access to our Confidential Information.

The IT Systems and those of our contractors and consultants face numerous and evolving cybersecurity risks that threaten the confidentiality, integrity and availability of our IT Systems and Confidential Information, including breakdown or other damage or disruption from service interruptions, system malfunction, natural disasters, terrorism, war and telecommunication and electrical failures, as well as security breaches from inadvertent or intentional actions by our employees, contractors, consultants, business partners, and/or other third parties, or from cyberattacks by malicious third parties (including the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information).

Cyberattacks are expected to accelerate on a global basis in frequency and magnitude as threat actors are becoming increasingly sophisticated in using techniques and tools, including AI, that circumvent security controls, evade detection and remove forensic evidence. As a result, we may be unable to detect, investigate, remediate or recover from future attacks or incidents, or to avoid a material adverse impact to our IT Systems, Confidential Information or business. There can also be no assurance that our cybersecurity risk management program and processes, including our policies, controls or procedures, will be fully implemented, complied with or effective in protecting our IT Systems and Confidential Information. Furthermore, given the nature of complex systems, software and services like ours, and the scanning tools that we deploy across our networks and products, we regularly identify and track security vulnerabilities to include potential risk level and severity. We are unable to comprehensively apply patches or confirm that measures are in place to mitigate all such vulnerabilities, or that patches will be applied before vulnerabilities are exploited by a threat actor.

While we have not experienced any material cyberattacks or other incidents to date, we cannot assure you that such incidents will not occur in the future, which could have a material adverse effect on our reputation, business, financial condition and results of operations. For example, we maintain databases comprised of our Xe-100 nuclear design technical engineering information and operations information, which have been and will continue to be used to design the Xe-100 reactors and will be utilized in “digital twin” construction and operations environments to allow for highly efficient construction and operations of these designs. If this database were to be lost or compromised, our ability to efficiently deploy and operate our reactors could be significantly impaired.

Furthermore, any adverse impact to the availability, integrity, or confidentiality of our IT Systems or Confidential Information could result in financial, legal, business, and reputational harm to us. For example, any such event that leads to unauthorized access, use, or disclosure of Confidential Information, including personal information related to our employees, could harm our reputation directly, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information, which could result in significant legal and financial exposure and reputational damages that could potentially have an adverse effect on our business. Finally, we cannot guarantee that any costs and liabilities incurred in relation to an attack or incident will be covered by our existing insurance policies or that applicable insurance will be available to us in the future on economically reasonable terms or at all.

If we fail to continuously offer innovative products and services and keep pace with changes in technology, our fees and our ability to obtain new engagements will be adversely affected and our revenues and profitability will decline.

Our business depends, in part, on our ability to anticipate industry, business and technology trends that help businesses to become more competitive and profitable. To remain competitive, we will need to continue to develop new services and products for our clients that distinguish us from our competitors. We also will need to identify new and evolving technologies that will gain acceptance in the marketplace and develop relationships with new leaders in technology as they emerge. If we fail to accomplish these objectives, we may be unable to compete effectively for new engagements, which may cause our revenues and profitability to decline. We may also invest resources in new services that are not competitive or that do not gain wide acceptance from our clients, which may cause our profitability to decline. When providing innovative services that distinguish us from our competitors, we expect to be able to obtain higher margin fees. Over time, however,

if our competitors begin to offer services which we may have developed or pioneered, we may experience decreases in the amount of fees we can charge for these services.

Risks Related to Ongoing and Future Changes to Our Reactor and Fuel Design

Our reactor and fuel designs have evolved over time and are expected to continue to change as we progress through development, regulatory review, and commercialization. The process of refining and optimizing our technology is ongoing and may result in material modifications to the design, configuration, or performance characteristics of our products. These changes may be driven by regulatory feedback, advances in technology, supply chain constraints, customer requirements, or lessons learned during prototyping, testing, and early deployment.

Any significant changes to our design may require additional engineering, testing, and regulatory review, which could result in increased costs, delays in our development timeline, or the need to repeat certain qualification or licensing activities. Design changes may also impact our ability to achieve standardization, scale manufacturing, or meet previously communicated performance, safety, or cost targets. Furthermore, customers or partners may delay purchase decisions or require renegotiation of terms in response to design changes, which could adversely affect our business prospects and financial condition.

There is also a risk that changes made to address one set of requirements may introduce new technical challenges or unforeseen issues, potentially impacting the commercial viability or regulatory acceptance of our products. If we are unable to effectively manage ongoing design changes, or if such changes result in negative perceptions among customers, regulators, or investors, our business, financial condition, and results of operations could be materially and adversely affected.

If we are unable to scale our fuel fabrication facilities, our ability to manufacture pebble fuel will be adversely affected, which could have a material adverse effect on our business prospects, financial condition, results of operations and cash flows.

The Xe-100 requires pebble fuel in order to function, the manufacturing of which is not yet at scale. We may not be able to manufacture a sufficient amount of pebble fuel in order to support our reactors. Our ability to become profitable in the future will not only depend on our ability to successfully market the Xe-100 and TRISO-X fuel, but also to ensure we have a sufficient supply of fuel pebbles to support our business. If we are unable to efficiently design, manufacture, market, sell, distribute and service our pebble fuel, our margins, profitability and prospects would be materially and adversely affected.

Our ability to introduce new features, integrations, capabilities and enhancements is dependent on adequate research and development resources.

To remain competitive, we must maintain adequate research and development resources, such as the appropriate personnel and development technology, to meet the demands of the market. If we are unable to develop features, integrations, capabilities and enhancements internally due to certain constraints, such as employee turnover, a lack of management ability or a lack of other research and development resources, our business may be harmed. Moreover, research and development projects can be technically challenging and expensive. The nature of these research and development cycles may cause us to experience delays between the time we incur expenses associated with research and development and the time we are able to offer compelling features, integrations, capabilities and enhancements and generate revenue, if any, from such investment. If we expend a significant amount of resources on research and development and our efforts do not lead to the successful introduction or competitive improvement of features, integrations, capabilities and enhancements, it could harm our business, financial condition, operating results and future prospects. In addition, our failure to maintain adequate research and development resources or to compete effectively with the research and development programs of our competitors may harm our business, financial condition, operating results and future prospects.

Operating a nuclear reactor in an unusual environment, whether due to unusual siting or an industrial application, has additional risks and costs compared to conventional electric power applications.

We expect our initial deployment of the Xe-100 under the ARDP to include industrial heat applications. This deployment is expected to be the first instance of using SMR technology for such applications. Such a

deployment will require additional overhead associated with the licensing process, configuration control of the plant, chemistry control, Tritium containment, minimum operating staff, training, security infrastructure, radiation protection, government reporting, and nuclear insurance, all of which may be cost prohibitive or require separate operating agreements to provide necessary nuclear overhead without disrupting industrial processes. While we have attempted to address such increases in our updated cost estimates, any additional costs or increased regulatory requirements may cause delays under our project timelines and costs and may have an adverse impact on our ARDP partner.

Additionally, our technologies are also designed to be able to serve customers in locations historically atypical for nuclear energy, whether due to being far away from urban infrastructure, in closer proximity to population centers, and/or areas that may experience more extreme planetary conditions. Such deployment may come with additional risks and costs, including beyond any projections we may have made, which may adversely impact our business.

Risks Related to X-energy's Proprietary and Intellectual Property Rights

We rely heavily on our intellectual property portfolio. Our ability to maintain, protect or enforce our patents and other intellectual property rights may be challenged and is not guaranteed. If we are unable to protect our intellectual property rights, our business and competitive position may be harmed.

Our success depends in part on our ability to maintain, protect and enforce our intellectual property rights, including our patents in connection with our SMRs. We rely on a combination of the intellectual property protections afforded by patent, trademarks/service mark, copyright and trade secret laws in the U.S. and other jurisdictions, as well as contractual restrictions in our agreements such as confidentiality agreements, assignment agreements, and license agreements with our employees, consultants, suppliers, and other third parties with whom we have a business relationship, to protect, establish, maintain and enforce our intellectual property rights, including rights associated with our SMRs and related proprietary technologies. However, the steps we take to protect our intellectual property and other confidential information may not adequately secure our intellectual property rights, and we may not be able to prevent the unauthorized disclosure or use of confidential information. Furthermore, if any of our employees, consultants, suppliers, or other third parties with whom we have a business relationship breaches or violates the terms of any of these agreements, we may not have adequate remedies for any such breach or violation. It is also possible that our confidential or other proprietary information could be obtained by third parties as a result of breaches of our physical or electronic security systems. Even where remedies are available, enforcing a claim that a party illegally disclosed or misappropriated our confidential or other proprietary information is expensive and time consuming, and the outcome is unpredictable. In addition, we cannot be certain that our competitors will not independently develop same or similar technology, obtain information we regard as proprietary, or design around intellectual property rights of ours.

For example, on August 13, 2024, X-energy, through counsel, notified Ultra Safe Nuclear Corporation ("Ultra Safe") of our belief that Ultra Safe could be infringing certain of our patents relating to fuel fabrication. Ultra Safe subsequently filed for bankruptcy and we have filed an objection and reservation of rights to Ultra Safe's debtors' bidding procedures and sale before the Delaware Bankruptcy Court, objecting to the potential sale of the certain assets believed by us to be infringing on our patents. While we are seeking to resolve the matter, an adverse outcome or prolonged litigation could materially impact our ability to operate or commercialize our technology.

Our success depends in large part on our ability to obtain and enforce patent protection for our SMRs. We either own or have license rights to certain intellectual property applicable to our SMRs and fuel technology, including issued patents and patent applications. However, merely holding patents or licenses to patents on our nuclear power reactors and fuel technologies is not a guarantee of protection or rights. Furthermore, we cannot be certain that our patent applications will result in patents being issued, or that our existing or future issued patents will afford protection against competitors with similar technology. During the patent prosecution process, a patent office may require us or our licensors to narrow the scope of the claims of our or our licensors' patent applications. This may limit the scope of patent protection and our or our licensors' ability to assert patent infringement if the patent is subsequently issued. In some cases, a patent may not be issued if we or our licensors are unable to overcome rejections from a patent office, which may have a material

adverse effect on our ability to prevent others from commercially exploiting products similar to ours. By pursuing patent rights by filing a patent application, we or our licensors may lose trade secrets that would have otherwise been protected had a patent not been sought, and third parties may be able to exploit such published information in our patent application. Additionally, even if we obtain a patent in one jurisdiction (e.g., the U.S.), we cannot guarantee that we will obtain a corresponding patent in another jurisdiction (e.g., China) as patent laws differ from jurisdiction to jurisdiction. Additionally, maintaining and enforcing patent rights can involve complex legal and factual questions, and may be subject to litigation in some cases. For example, third parties may challenge the validity or enforceability of our or our licensors' patents at a tribunal such as the Patent Trial and Appeal Board at the U.S. Patent and Trademark Office or in federal court. Third parties may prevail in invalidating a patent or preventing a patent application from being issued as a patent. Furthermore, issued patents or patent applications owned by third parties exist in the fields in which we have developed, are developing or will develop in the future our technology. In addition to the risk of infringing those patents, those patents may also be used as a basis to invalidate our patents or prevent our patent applications from issuing as patents.

Even if our patent applications succeed and we are issued patents, it is still uncertain whether these patents will be contested, circumvented, infringed upon, invalidated or limited in scope in the future. The rights granted under any issued patents may not provide us with meaningful protection or competitive advantages, and some foreign countries provide significantly less effective patent enforcement than in the U.S. In addition, the claims of our issued patents may not be broad enough to prevent others from developing technologies that are similar or that achieve results similar to ours. The intellectual property rights of others could also bar us from licensing and exploiting our issued patents. In addition, patents issued to us may be infringed or designed around by others and others may obtain patents that we need to license or design around, either of which would increase costs and may adversely affect our business, financial condition, operating results and future prospects.

We currently enjoy only limited geographical protection with respect to certain issued patents and may not be able to protect our intellectual property rights throughout the world.

We do not have worldwide patent rights for our SMRs and related proprietary technologies because intellectual property rights are territorial. Accordingly, we may not be able to protect our intellectual property rights in certain jurisdictions. Filing, prosecuting and defending patents on our SMRs in multiple jurisdictions can pose several challenges. First, procuring patent rights in multiple jurisdictions may be cost prohibitive because individual patent offices in different jurisdictions examine each patent application separately. Once a patent is issued, we or our licensors will also have the continued obligation of paying maintenance fees periodically to avoid patents from becoming abandoned or lapsed. Second, the breadth of claims in patents may vary from jurisdiction to jurisdiction. For instance, certain patent offices may require narrower claims, resulting in patent rights that are less extensive. Further, we may not be able to obtain patents in some jurisdictions even if we obtain patents in other jurisdictions. Accordingly, our competitors may operate in countries where we do not have patent protection and can freely use our technologies and discoveries in such countries to the extent such technologies and discoveries are publicly known or disclosed in countries where we have issued patents or patent applications.

Further, many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. Many countries also limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business and financial condition may be adversely affected.

We may be subject to intellectual property rights claims by third parties, which are extremely costly to defend, could require us to pay significant damages and could limit our ability to use certain technologies.

We cannot be certain the conduct of our business does not or will not infringe, misappropriate or otherwise violate the intellectual property rights of a third party. Third parties, including our existing and future competitors, may currently hold or obtain in the future patents, trademarks/service marks or other intellectual property rights that cover aspects of our proprietary technology or other intellectual property that

would prevent, limit or interfere with our ability to develop our intellectual property and make, use, develop, import, offer to sell or sell our SMRs and related technology, which may have a materially adverse effect on our business and financial condition. From time to time, we have received and may in the future receive communications from holders of patents or other intellectual property rights inquiring whether we are infringing their intellectual property rights, seeking court declarations that we do not infringe their intellectual property rights or requesting us to obtain a license from them. If we are determined to have infringed a third party's intellectual property rights, we may be required to do one or more of the following, among other things: (i) cease selling, incorporating or using SMRs that are found to be infringing; (ii) pay substantial damages; (iii) pay for and obtain a license from the holder of the infringed intellectual property right, which may not be available on reasonable terms or at all; or (iv) redesign part or all of our technology. In the event of a successful claim of infringement against us and our failure or inability to obtain a license to the infringed technology, our business, financial condition, operating results and future prospects could be materially adversely affected. In addition, any litigation or claims, whether or not valid, could result in substantial costs and diversion of resources and management's focus and attention.

We also license patents and other intellectual property from third parties, and we may face claims that the use of this intellectual property infringes the rights of other third parties. In such cases, we may seek indemnification from the licensors under our license contracts with those licensors, or other damages. However, our rights to indemnification or damages may be unavailable or insufficient to cover our costs and losses, depending on our use of the technology, whether we choose to retain control over conduct of the litigation, and other factors.

We review and assess third-party patents and other intellectual property rights relevant to our products and fuel fabrication processes. However, we may not identify all relevant third-party patents, or may incorrectly interpret their scope, relevance, or expiration. Any such oversight could expose us to infringement claims, require us to modify our technology, or limit our ability to develop, manufacture, or market our SMRs and related products. This could result in costly litigation, delays, or the need to obtain licenses on unfavorable terms, any of which could adversely affect our business, financial condition, and results of operations.

In addition, there are several circumstances under which a patent application may not be published and accessible to us or our licensors. For example, patent applications in the U.S. and many foreign jurisdictions are typically not published until 18 months after filing, but some patent applications in the U.S. may be maintained in secrecy until the patents are issued. Publications in the scientific literature also often lag behind actual discoveries. Therefore, we cannot be certain that others have not filed patent applications for technology covered by our issued patents or patents applications, or that we were the first to invent the technology or to file a patent application covering the technology. Our competitors may have filed, and may in the future file, patent applications covering our SMRs or technology similar to ours without us knowing. Any such patent application may have priority over our patent applications or patents, which could require us to procure rights to issued patents covering such technologies in order to avoid infringement claims.

We may be subject to claims of ownership and other rights to our patents and other intellectual property by third parties.

While we require our employees, consultants, contractors and other third parties to assign the intellectual property conceived by them to us in the event that the intellectual property is not automatically assigned (*e.g.*, as work made for hire), those agreements may not be effective or honored, and obligations to assign intellectual property may be challenged or breached. Moreover, there may be some circumstances where we are unable to negotiate for such ownership rights, or where others misappropriate those rights.

We may be subject to claims that former or current employees, consultants, contractors or other third parties have an interest in our patents or other intellectual property. Litigation may be necessary to resolve these claims challenging inventorship and ownership. Furthermore, we may enter into agreements to clarify the scope of our rights in such intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may lose exclusive ownership of, or the right to use or license, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Risks Relating to Compliance with Law, Government Regulation and Litigation

Our business and the businesses of our customers are subject to the policies, priorities, regulations, mandates and funding levels of multiple governmental entities and may be negatively impacted by any change thereto.

We and our customers are subject to a wide variety of complex laws and regulations relating to various aspects of our business, including with respect to the use, possession and manufacturing of radioactive materials; design, manufacture, operations, marketing and export of nuclear technologies; employment and labor; tax; data security of the operational and information technology we use; the U.S. Foreign Corrupt Practices Act and other applicable anti-bribery laws; health and safety; zoning and environmental issues. All of our facilities and our customers' projects are subject to various regulations regarding matters such as human health and safety, including, among others, wastewater, stormwater, air emissions, investigation and cleanup of contaminated sites, and storage of hazardous materials, including petroleum. We must also comply with the Occupational Safety and Health Act (OSHA). Laws and regulations at the international, federal, state and local levels frequently change and are often interpreted in different ways, especially in relation to new and emerging industries, and we cannot reasonably predict the impact from, or the ultimate cost of compliance with, current or future law or regulatory or administrative changes. We cannot guarantee that our measures to monitor these developments and the time and resources we spend to comply with these laws, regulations, and guidelines will be satisfactory to regulators or other third parties, such as our customers, who are also subject to extensive government regulation. Our efforts to comply with new and changing laws and regulations may result in increased general and administrative expenses and a diversion of management time and attention. Our insurance and compliance costs may increase as a result of changes in environmental, health and safety laws and regulations or changes in enforcement. Moreover, changes in law or the interpretation of existing laws, the imposition of new or additional regulations, or the enactment of any new or more stringent legislation that impacts our business could require us to change the way we operate and could have a material adverse effect on our sales, profitability, cash flows, financial condition, and lead to regulatory delays that could impact our ability to obtain licenses, certificates, authorizations, permits, approvals, and/or certifications from regulatory agencies (collectively "Regulatory Approvals").

Failure to comply with laws, regulations or Regulatory Approvals may result in civil, criminal or administrative enforcement actions and penalties, the imposition of remedial obligations, installation of additional pollution control equipment, the issuance of orders enjoining our operations, private lawsuits, liability for property damage and personal injuries, or the suspension or revocation of those Regulatory Approvals, any of which would have a negative impact on our or our customers' business and could prevent us from operating our business. With respect to our TX-1, we require regulatory approval from the NRC to construct and operate the facility under a nuclear materials license, in addition to local and state permitting requirements. While we have already obtained NRC approval, we must comply with the requirements to maintain this approval and may need to extend the license in the future. Any of these Regulatory Approvals may be subject to denial, revocation or modification under various circumstances, including:

- failure to provide adequate financial assurance for closure;
- failure to comply with environmental, health and safety laws and regulations or permit conditions;
- local community, political or other opposition;
- executive action; and
- legislative action.

Failure on our or our customers' part to comply with these laws and regulations, obtain the required Regulatory Approvals, or receive exemptions from such regulations when available could result in fines, penalties, or the inability to operate our business. Any delays in regulatory actions allowing us to manufacture our TRISO-X fuel could also adversely affect our ability to meet fuel contract requirements and thereby affect our financial performance.

Our SMRs are subject to regulations in all jurisdictions related to nuclear safety, environmental, health and safety and financial qualification. Regulatory Approvals, such as construction permits and operating licenses issued by the NRC, are necessary for our customers to construct and operate our SMRs. Our plans to deploy SMRs rely on timely receipt of such Regulatory Approvals in the jurisdictions in which we seek to do

business. Such regulatory approval processes may be subject to change, can be technically challenging to address, may result in the imposition of conditions that impact the financial viability of our SMR products, and may also provide opportunities for third parties to lodge objections or seek more stringent requirements for our products that, in each case, could hinder or prevent developments of our or our customer's projects.

Over the past several years, Congress has enacted laws that aim to put nuclear energy on a level playing field with respect to government incentives, tax credits, and other financial instruments to make nuclear energy more economically competitive with other energy sources. These incentives have been signed into law through the Infrastructure Investment and Jobs Act (IIJA) and the OBBBA. The benefits of these government financial tools are incorporated into our business model and that of our customers. The benefit from these subsidies are subject to cancellations and sunsets or changes to sunset provisions by both Congress and the current administration. The impact of changes to these financial benefits could materially impact the demand for our products.

The reduction or elimination of Section 48C, the Qualifying Advanced Energy Project Credit under the Inflation Reduction Act of 2022 ("48C"), investment tax credits ("48E") and production tax credits ("45Y") received through the U.S. government and Clean Technology Investment Tax Credits ("CT ITCs") received through the Canadian government related to clean energy solutions could adversely affect our business and reduce the demand for our Xe-100 and other technologies.

Our business model and financial performance are significantly dependent on the availability of 48C, 48E, CT ITCs and 45Y. The reduction, denial, delay, recapture, or adverse modification of federal, state, or local tax incentives for clean energy — including 48C, 48E, 45Y, and CT ITCs — could adversely affect our business and reduce demand for our Xe-100 and other technologies. Our business model and the economics of customer projects, supplier expansions, and financing structures are significantly dependent on the availability, amount, timing, and monetization of these incentives.

Many of our counterparties rely on the receipt and monetization of 48C, 48E, CT ITCs or 45Y to finance or price projects involving our technologies. If these parties do not receive, cannot monetize, or later lose expected credits — due to changes in law, allocation caps, eligibility requirements, compliance failures, or market conditions — they may delay, renegotiate, or terminate contracts, reduce order sizes, or default on obligations to us. In addition, changes in transferability, direct pay rules, or market liquidity for these credits could further diminish project returns and impair demand.

Any reduction or unavailability of these incentives, or counterparties' inability to obtain or monetize them as anticipated, would likely reduce the demand for the Xe-100, SMRs and nuclear energy solutions in general, which would have a material, adverse impact on our business, financial condition, operating results and future prospects.

The U.S. government's budget deficit and the national debt, as well as any inability of the U.S. government to complete its budget or appropriations process for any government fiscal year could have an adverse impact on our business, financial condition, results of operations and cash flows.

The U.S. government's budget deficit and the national debt, along with any negotiated resolution to increase or suspend the so-called debt ceiling, as well as any inability of the U.S. government to complete its budget process for any government fiscal year and consequently having to shut down or operate on funding levels equivalent to its prior fiscal year pursuant to a "continuing resolution," could have an adverse impact on our business, financial condition, results of operations and cash flows.

Uncertainty will continue to exist regarding how future budget and program decisions will unfold, including the energy spending priorities of the U.S. government, what challenges budget reductions will present for the energy industry and whether annual appropriations bills for all agencies will be enacted for U.S. government fiscal 2026 and thereafter. Some of the changes in the political environment, include a change to the leadership within the current administration, and any resulting uncertainty or changes in policy or priorities and resultant funding. There can be no assurance that increases in funding we may currently experience will continue, and any plateau or reduction in funding for our programs could adversely affect our ability to execute our strategy, meet milestones, and achieve projected financial results. The U.S. government's

budget deficit and the national debt could have an adverse impact on our business, financial condition, results of operations and cash flows in a number of ways, including the following:

- the U.S. government could reduce or delay its spending on, reprioritize its spending away from, or decline to provide funding for the government programs in which we participate, or fail to increase funding as anticipated;
- U.S. government spending could be impacted by arrangements similar in effect to sequestration, which increases the uncertainty as to U.S. government spending priorities and levels; and
- we may experience declines in revenue, profitability and cash flows as a result of reduced or delayed orders or payments or other factors caused by economic difficulties of our customers and prospective customers, including U.S. federal, state and local governments.

Other contributing factors that could impact the company's financial situation are rising interest rates as more U.S. government spending must be appropriated to servicing the national debt or the potential impact of tariffs on our supply chain as we begin to long lead procurements on certain materials and systems. Budget and program decisions made in this environment would have long-term implications for us and the entire nuclear energy industry.

We are required to comply with numerous laws and regulations, some of which are highly complex, and our failure to comply could result in fines or civil or criminal penalties or suspension or debarment by the U.S. government that could result in our inability to continue to work on or receive U.S. government contracts, which could materially and adversely affect our results of operations.

We must comply with laws and regulations relating to the formation, administration, and performance of U.S. government contracts, which affect how we do business. Such laws and regulations may potentially impose added costs on our business and our failure to comply with those laws and regulations may lead to civil or criminal penalties, including termination of our U.S. government contracts, including the ARDP Agreement, and/or suspension or debarment from contracting with federal agencies. Some significant laws and regulations that affect us include:

- the Federal Acquisition Regulation (the "FAR"), and agency regulations supplemental to the FAR, which regulate the formation, administration, and performance of U.S. government contracts. For example, the FAR 52.203-13 requires contractors to establish a Code of Business Ethics and Conduct, implement a comprehensive internal control system, and report to the government when there is credible evidence that a principal, employee, agent, or subcontractor, in connection with a government contract, has violated certain federal criminal laws, violated the civil False Claims Act, or has received a significant overpayment;
- the False Claims Act, which imposes civil and criminal liability for violations, including substantial monetary penalties, for, among other things, presenting false or fraudulent claims for payments or approval;
- the False Statements Act, which imposes civil and criminal liability for making false statements to the U.S. government;
- the Truthful Cost or Pricing Data Statute (formerly known as the Truth in Negotiations Act), which requires certification and disclosure of cost and pricing data in connection with the negotiation of certain contracts, modifications, or task orders;
- the Procurement Integrity Act, which regulates access to competitor bid and proposal information and certain internal government procurement sensitive information, and our ability to provide compensation to certain former government procurement officials;
- laws and regulations restricting the ability of a contractor to provide gifts or gratuities to employees of the U.S. government;
- post-government employment laws and regulations, which restrict the ability of a contractor to recruit and hire current employees of the U.S. government and deploy former employees of the U.S. government;

- laws, regulations, and executive orders restricting the handling, use and dissemination of information classified for national security purposes or determined to be “controlled unclassified information” or “for official use only” and the export of certain products, services, and technical data, including requirements regarding any applicable licensing of our employees involved in such work;
- laws, regulations, and executive orders regulating the handling, use, and dissemination of personally identifiable information in the course of performing a U.S. government contract;
- international trade compliance laws, regulations and executive orders that prohibit business with certain sanctioned entities and require authorization for certain exports or imports in order to protect national security and global stability;
- laws, regulations, and executive orders governing organizational conflicts of interest that may restrict our ability to compete for certain U.S. government contracts because of the work that we currently perform for the U.S. government or may require that we take measures such as firewalling off certain employees or restricting their future work activities due to the current work that they perform under a U.S. government contract;
- laws, regulations and executive orders that impose requirements on us to ensure compliance with requirements and protect the government from risks related to our supply chain;
- laws, regulations and mandatory contract provisions providing protections to employees or subcontractors seeking to report alleged fraud, waste, and abuse related to a government contract; and
- the FAR Cost Accounting Standards and Cost Principles, which impose accounting and allowability requirements that govern our right to reimbursement under certain cost-based U.S. government contracts and require consistency of accounting practices over time.

In addition, the U.S. government adopts new laws, rules, and regulations from time to time that could have a material impact on our results of operations. Adverse developments in legal or regulatory proceedings on matters relating to, among other things, cost accounting practices and compliance, contract interpretations and statute of limitations, could also result in materially adverse judgments, settlements, withheld payments, penalties, or other unfavorable outcomes.

Our performance under our U.S. government contracts and our compliance with the terms of those contracts and applicable laws and regulations are subject to periodic audit, review, and investigation by various agencies of the U.S. government, and the current environment has led to increased regulatory scrutiny and sanctions for non-compliance by such agencies generally. In addition, from time to time we may report potential or actual violations of applicable laws and regulations to the relevant governmental authority. Any such report of a potential or actual violation of applicable laws or regulations could lead to an audit, review, or investigation by the relevant agencies of the U.S. government. If such an audit, review, or investigation uncovers a violation of a law or regulation, or improper or illegal activities relating to our U.S. government contracts, we may be subject to civil or criminal penalties or administrative sanctions, including the termination of contracts, forfeiture of profits, the triggering of price reduction clauses, withholding or suspension of payments, fines and suspension, or debarment from contracting with U.S. government agencies. Such penalties and sanctions are not uncommon in the industry, and there is inherent uncertainty as to the outcome of any particular audit, review, or investigation. If we incur a material penalty or administrative sanction or otherwise suffer harm to our reputation, our profitability, cash position, and future prospects could be materially and adversely affected.

Further, if the U.S. government were to initiate suspension or debarment proceedings against us or if we are indicted for or convicted of illegal activities relating to our U.S. government contracts following an audit, review, or investigation, we may lose our ability to be awarded contracts in the future or receive renewals of existing contracts for a period of time which could materially and adversely affect our results of operations or financial condition. We could also suffer harm to our reputation if allegations of impropriety were made against us, which would impair our ability to win awards of contracts in the future or receive renewals of existing contracts.

Uncertain global macro-economic and political conditions could materially adversely affect our results of operations and financial condition.

Our results of operations are materially affected by economic and political conditions in the U.S. and internationally, including inflation, deflation, interest rates, availability of capital, energy and commodity prices, trade laws and the effects of governmental initiatives to manage economic conditions. Current or potential customers may delay or decrease spending on our products and services as their business and budgets are impacted by economic conditions. The inability of current and potential customers to pay us for our products and services may adversely affect our earnings and cash flows.

We are subject to stringent U.S. export and import control laws and regulations. Unfavorable changes in these laws and regulations or U.S. government licensing policies, our failure to secure timely U.S. government authorizations under these laws and regulations, or our failure to comply with these laws and regulations could have a material adverse effect on our business, financial condition, and results of operations.

The inability to secure and maintain required export licenses or authorizations could negatively impact our ability to compete successfully or market our SMR technology and TRISO-X fuel for commercial applications outside the U.S. For example, if we were unable to obtain or maintain our licenses to export certain nuclear hardware, software, source code, or technical assistance, we would be effectively prohibited from exporting our SMR and TRISO-X fuel technology to non-U.S. locations, limiting our customer base to the U.S. and providing a competitive advantage to international SMR suppliers. In such cases, these restrictions could also require us to implement design changes to our SMRs to address issues with our domestic supply chain, which may increase costs or result in delays in delivery of new plants and subsequent additional SMRs when ordered. Certain key components of our SMRs are currently manufactured outside the U.S., and the imposition of sanctions, tariffs, or material changes in import and export requirements on a nation-by-nation basis, on materials or supplied components for our SMRs could have a material adverse effect on our operations. Additionally, we may require U.S. approvals in order to import certain materials and components that may be predominantly produced outside of the United States. Failure to comply with import and export requirements and regulations could expose us to civil or criminal penalties, fines, investigations, more onerous compliance requirements, loss of export privileges, debarment from government contracts or limitations on our ability to enter into contracts with the U.S. government. Any changes in export control regulations or U.S. government licensing policy, such as that necessary to implement U.S. government commitments to multilateral control regimes, may restrict our operations. Any delays, conditions or unexpected requirements may increase costs for us or our customers and may result in uncertainty regarding the ability to deploy our technology in a predictable way, which may adversely impact our competitiveness.

We are part of the highly regulated nuclear power industry. Our fuel designs differ from fuels currently licensed and used by commercial nuclear power plants, and our SMR designs similarly differ from reactors currently in operation, including with respect to potential industrial applications. As a result, the regulatory licensing and approval process for our nuclear power plants and for others that operate with our nuclear fuels will be first-of-a-kind and therefore may experience delays and increased costs as part of the regulatory review process. Industry acceptance of our nuclear fuels may also be hindered.

All entities that operate nuclear power facilities, fabricate nuclear fuel, or transport nuclear materials in the U.S. are subject to the jurisdiction of the NRC (except for those facilities and applications separately regulated by the DOE or the U.S. Department of Defense (the “DOD”)), and entities performing the same activities in other countries are subject to regulation by the NRC’s counterparts around the world. Our SMR designs also differ significantly from the reactors used today by commercial nuclear power facilities. These differences may result in a more extensive and prolonged review by the NRC and its counterparts around the world, potentially causing delays in fuel and reactor development program and in commercialization.

TRISO-X fuel cannot be used in existing nuclear reactors, and no currently available commercial fuel will work in our SMRs. Our fuel development timeline depends on the relevant nuclear regulator accepting and approving technical information and documentation that is generated during the fuel qualification program. There is a risk that regulators may require additional information regarding the fuel’s behavior or performance that could necessitate unplanned analytical or experimental work, resulting in schedule delays and increased research and development costs. Similarly, our reactor development timeline depends on the relevant nuclear

regulator accepting and approving technical information and documentation about our reactor designs in the course of any design-specific licensing, certification, approval or similar process, or facility-specific licensing. There is a risk that regulators may require additional information regarding the reactor's behavior or performance that could cause delays and additional costs. They may impose operational restrictions, such as lower fuel burnup limits, power levels, or more frequent maintenance and testing of components, which could adversely affect the commercial viability of our products.

We must obtain governmental licenses to possess and use radioactive materials, including isotopes of uranium, in our TX-1 operations. Failure to obtain or maintain, or delays in renewing, such licenses could impact our ability to fabricate TRISO-X fuel for our customers, who will initially be reliant on us for TRISO-X fuel, and have a material adverse effect on our business, financial condition and results of operation.

In February 2026, TRISO-X received an initial 40-year Special Nuclear Material License under 10 CFR Part 70 from the NRC enabling TRISO-X to commercially manufacture X-energy's TRISO-X fuel at TX-1, a facility intended to manufacture the fuel for our reactor designs and for other advanced reactor designs that utilize coated particle fuel. We expect this license to also cover our TX-2 facility if built as currently planned on the same site. Failure to maintain compliance with the NRC license during construction and operation of TX-1 or to appropriately extend such license could interfere with or prevent provision of our TRISO-X fuel to initial and subsequent Xe-100 reactors, inhibit interest in our reactors by future customers, impair our ability to produce and market other coated particle fuels, or impact our ability to begin plans for TX-2, our second facility. We also face the risk that the NRC could impose conditions in future extensions of the license that are not acceptable to us, which could materially and adversely affect our business and the commercial viability of our nuclear fuel products.

Given the nature and length of the permitting process, significant turnover and organizational changes within the NRC's workforce, including at the Commission, project management, and technical staff levels could cause a reduced and transitioning workforce and could lengthen review timelines for any future extensions of the license — particularly in light of the increasing number of applications being submitted to the NRC by other companies. The combination of staffing adjustments and a heavier workload may result in delays in the review and approval of any future license extension applications, which would negatively impact our business and ability to develop our and our customers' projects.

The operations of our planned TX-1 facility in Tennessee, and any future fuel fabrication facilities, will be highly regulated by U.S. federal and state level governmental authorities, including the NRC as well as the State of Tennessee and any other state jurisdictions in which we may establish operations. Our operations could be significantly impacted by changes in government policies and priorities.

The NRC has the authority to issue notices of violation for violations of the Atomic Energy Act of 1954, as amended (the "Atomic Energy Act"), NRC's regulations and conditions of licenses, certificates of compliance, and orders. The NRC has authority to impose civil penalties (the maximum amount of which is adjusted annually to account for inflation) or additional requirements and to order cessation of operations for violations of these requirements. Penalties under the NRC regulations and applicable agency guidelines could include substantial fines, imposition of additional requirements, or withdrawal or suspension of licenses or certificates. Any penalties imposed on us could adversely affect our results of operations and liquidity. The NRC also has the authority to issue new regulatory requirements or to change existing requirements. Changes to the regulatory requirements also could adversely affect our results of operations and financial condition.

Our TX-1 in Oak Ridge, Tennessee will also be regulated by the State of Tennessee pursuant to Atomic Energy Act authority transferred under the NRC's Agreement State Program and applicable state laws and regulations. Any future fuel fabrication facilities will be highly regulated in the location in which they are located.

Additionally, certain aspects of our current fuels R&D activity take place within DOE's Oak Ridge National Laboratory (separate and apart from our TX-1 within the City of Oak Ridge). These activities are subject to DOE regulation and contractual requirements. Changes to those requirements could also materially affect our operations.

Changes in federal, state or local government laws, regulations, policies and priorities can impact our nuclear fuel operations. These could include changes in interpretations of regulatory requirements, increased inspection or enforcement activities, changes in budgetary priorities, changes in tax laws and regulations and other government actions or inaction. Any of these local, state and federal agencies may have the authority to impose civil and criminal penalties and our designs, facilities and projects must be approved by various regulatory bodies and to date, have not been approved. The public has the ability to intervene in licensing proceedings before the NRC for a fuel fabrication facility or a reactor.

The Xe-100 design has not yet been approved or licensed for use at any site by the NRC or any other national regulatory body, and approval or licensing of these designs is not guaranteed. Under the Atomic Energy Act and the implementing NRC regulations, members of the public, including state, local or tribal governments, have the right to request a public hearing or file a petition to intervene in connection with the NRC's review of a license or permit application. Such requests may oppose the issuance of a license or permit in whole, or challenge specific aspects of the application or the NRC's review. These proceedings can be complex and time-consuming, requiring the devotion of significant management attention and incur substantial legal and technical expenses to prepare responses, participate in hearings and address intervenor contentions. These proceedings may also delay or prevent the issuance of required Regulatory Approvals for any of our or our customer's projects, including TX-1 or a customer's Xe-100. The outcome of such proceedings is inherently uncertain and could result in the imposition of additional licensing conditions, or, in some cases, the denial of a Regulatory Approval. Any such delays or adverse outcomes could materially affect the timing, cost and feasibility of the projects and operations. Additionally, these hearing processes may also have adverse impacts on the local population's perception of the safety of our facilities adversely impacting their timely deployment and efficient operations.

For example, as of August 12, 2025, one such public entity has filed a petition to intervene and request a hearing in connection with the pending application for a construction permit for one of our customer's projects which will utilize our SMR technology under NRC Docket No. 50-614-CP. The petition challenges certain safety and environmental findings contained in the construction permit application. As of January 22, 2026, the NRC's Atomic Safety and Licensing Board granted Waterkeeper's intervention, admitted for litigation two contentions concerning financial qualifications, and rejected the remaining contentions. As of the date of this prospectus, the adjudicatory proceeding is ongoing. The Board also directed the parties to proceed with mandatory disclosures and scheduling, and indicated the proceeding will be conducted under 10 C.F.R. Part 2, Subparts C and L, which may extend timelines and increase costs. In addition, the NRC has received admissible contentions from Waterkeepers, an advocacy group, related to their opposition of our fuel fabrication facility plans. Should such a petition result in delay or denial of regulatory approvals, our business would be materially adversely impacted. We are also subject to Canadian regulatory approval processes for a portion of our business seeking approval in Canada. We must work through material parts of the Canadian review processes and engage with the NRC to address technical, policy, and programmatic matters ahead of formal application reviews for new projects.

To date, the Xe-100 has not yet been licensed, certified or approved by the U.S. NRC, U.K. Office for Nuclear Regulation ("ONR") or the Canadian Nuclear Safety Commission ("CNSC"), and no currently operating NRC or CNSC-regulated reactor uses high temperature gas-cooled reactor technology or our TRISO-X fuel.

If the NRC, ONR or CNSC disagrees with our, or our customers', licensing approach or the technical bases supporting the nuclear safety and environmental impact evaluations, the construction and operating license application processes could take longer than currently expected, or a license may not be granted at all, which would materially and adversely affect our business. Further, the NRC or CNSC could impose conditions in a license that are not favorable or acceptable to us or our customers, which could materially and adversely affect our business. Any delays, conditions or unexpected requirements may increase costs for us or our customers and may result in uncertainty regarding the ability to deploy our technology in a predictable way, which may adversely impact our competitiveness.

Since taking office in January 2025, President Trump has announced, revised, paused, and enacted various executive orders and tariffs which could have wide-reaching economic and regulatory impact, including but not limited to causing the NRC to change its regulatory standards and thresholds. Any unexpected changes to

the NRC's requirements may result in substantial delay or increased costs for us or our customers, which may adversely impact our competitiveness.

Even if the Xe-100 is licensed in the U.S., U.K. and Canada, we must still obtain approvals on a country-by-country basis to deploy this reactor technology, which approvals may be delayed or denied or which may require modification to our design.

Even if the Xe-100 is licensed, certified and/or approved in the U.S., U.K. and Canada, if we are to deploy our technology in other countries, we must first obtain regulatory approvals for our technology in those countries. The regulatory framework to obtain approvals is complex, varies from country to country, and may involve authorities on a subnational or local level. Timelines are likely to be longer for initial deployments of our technology in any jurisdiction, as regulatory agencies may not be familiar with our technology and how it differs from the technology used in legacy nuclear power facilities. Moreover, other countries' approval processes may differ markedly from the NRC process or the CNSC process, or they may require that we alter aspects of our design before providing approval. Design modifications to meet country-specific requirements could adversely impact our ability to achieve standardization and therefore increase design, construction, and/or operational costs. Denial or delay in approvals abroad could materially and adversely affect our business outside of the U.S. and Canada.

Our operations involve the use, transportation and disposal of toxic, hazardous and/or radioactive materials and could result in liability without regard to fault or negligence.

Our operations involve the use, transportation, and disposal of toxic, hazardous and radioactive materials. A release of these materials could pose a health risk to humans, plants and animals or the environment. If an accident were to occur, its severity would depend on the volume and location of the release and the speed of corrective action taken by emergency response personnel, as well as other factors beyond our control, such as weather and wind conditions.

Under federal, state and local laws and regulations, a current or former owner or operator of real property may be liable for costs to remediate contamination resulting from the presence or release of hazardous substances, wastes or petroleum products. These laws and regulations continue to evolve and have generally become more stringent over time. The costs associated with remediating contamination could be substantial, and liability under such laws is strict, joint and several and may attach whether or not the owner or operator knew of or caused such contamination. Moreover, the presence of contamination may expose us to third-party claims for property damage or bodily injury, subject our properties to liens in favor of the government for damages and cleanup costs, impose restrictions on the manner in which we use our properties, and materially adversely affect our ability to sell, lease, insure or develop our properties. We also may be liable for costs of remediating third-party disposal sites to which we arranged for the disposal or treatment of hazardous substances without regard to whether such disposal occurred in compliance with environmental laws. These matters could have an adverse effect on our financial condition.

Additionally, we may be responsible for decontamination or decommissioning of facilities where we conduct, or previously conducted, operations. Activities of our contractors, suppliers or other counterparties similarly may involve toxic, hazardous, and radioactive materials, and we may be liable contractually, or under applicable law, to contribute to remedy damages or other costs arising from such activities, including the decontamination or decommission of third-party facilities.

In the U.S., the nuclear liability law codified at 42 U.S.C. 2210 (along with subsequent amendments, the "Price Anderson Act") and applicable NRC regulations and corresponding insurance requirements channel liability to the nuclear operator of a nuclear power plant for third-party offsite damages caused by a nuclear incident or a precautionary evacuation due to a possible or actual nuclear incident. U.S. law is substantially similar in effect to global nuclear liability regimes wherein operators are subject to robust liability channeling and financial protection regimes, such as required insurance policies or government indemnification, to cover the operator's financial risk in the event of a nuclear incident that gives rise to third-party offsite liability. If, however, an incident or precautionary evacuation is not covered under such a nuclear liability limiting regulatory framework we could be financially liable for damages arising from such incident or evacuation, which could have an adverse effect on our results of operations and financial condition.

The Price Anderson Act does not, however, cover onsite loss or damage to property due to a nuclear incident. Rather, the NRC, like many nuclear regulators around the world, requires nuclear operators to maintain onsite property damage insurance for loss or damage to property due to a nuclear incident. If an incident resulting in onsite property damage is not otherwise covered by the mandatory insurance policy maintained at the facility or the damages exceed policy coverage limits, then we could be potentially liable for damages arising from such incident, which could have an adverse effect on our results of operations and financial condition. We cannot provide assurance that any insurance we obtain will be adequate to cover our losses or liabilities or that such coverage will continue to be available, or available on acceptable terms or at acceptable rates.

There is no assurance that our contractual limitations on liability will be effective in all cases or in all jurisdictions. The costs of defending against a claim arising out of a nuclear incident or precautionary evacuation not otherwise covered by insurance, and any damages awarded as a result of such claim, could adversely affect our results of operations and financial condition.

Unresolved spent nuclear fuel storage and disposal issues and associated costs could have a significant negative impact on X-energy's business operations if potential Xe-100 customers view the risks associated with these issues and costs as unacceptably high. Additionally, U.S. policy related to storage and disposal of used fuel from our power plant and/or negative customer perception of risks relating to these policies could have a significant negative impact on our business prospects, financial condition, results of operations and cash flows.

During the licensing process, a nuclear power plant operator must indicate how it will decommission its power plant and must have a "standard agreement" with the DOE related to the storage of the fuel waste created during its operating life. Therefore, the requirement for our customers' facilities to establish the disposal of fuel may create challenges related to timeline and optimal use of our TRISO-X fuel. The Nuclear Waste Policy Act ("NWPA") of 1982 requires the DOE to take title to, and to provide for the permanent geologic disposal of, spent nuclear fuel ("SNF") and associated high-level nuclear radioactive waste ("HLW") generated by domestic nuclear reactors. In 1987, Congress amended the NWPA to designate Yucca Mountain, in Nevada, as the only site that the DOE could consider for a permanent repository. The DOE has suspended the Yucca Mountain licensing process due to lack of congressional appropriations, but the site remains designated in federal law. Under the NWPA and the Standard Contracts DOE has entered into with nuclear utilities, DOE remains obligated to provide for permanent disposal of all SNF and HLW. Interim storage of SNF and HLW is authorized under the NWPA and NRC regulations and requires the construction and maintenance of NRC licensed SNF/HLW storage facilities. While the costs of developing and maintaining these interim storage facilities can have a significant effect on the costs associated with waste storage and disposal for nuclear reactors, including X-energy's reactors, these costs could themselves be impacted by the timing of the opening of a disposal facility, as well as any possible future changes to the interim storage or transportation requirements for SNF and other forms of HLW, and the extent to which operators are able to continue to successfully recover costs from DOE through breach-of-contract litigation for its continued failure to provide for permanent disposal.

There are currently two consolidated interim storage ("CIS") facilities under development in the U.S. for the interim storage of SNF/HLW. Both facilities — Holtec International's HI-STORE CIS in New Mexico and Interim Storage Partners' facility in Texas — have been issued licenses by the NRC for construction and operation. These licenses were challenged in federal court, and in June 2025, the U.S. Supreme Court upheld the NRC's authority to issue the licenses; however, further engagement with the states and DOE is necessary to construct the projects. It is possible that SNF/HLW generated at an X-energy reactor could be stored at one of these CIS facilities; however, it is also possible that these CIS facilities are never built or become operational, or are unable to store such waste from an X-energy reactor, in which case, the waste would need to be stored onsite or at another interim SNF storage facility until another disposal option became available, such as a U.S. government-determined permanent national repository or other government storage facility.

The establishment of a national repository for the storage and/or permanent disposal of SNF, such as the one previously considered at Yucca Mountain, Nevada, the timing of such a facility's opening and the ability of such a facility to accept waste from an X-energy reactor, and any related regulatory action, could impact the costs associated with our Xe-100 customers' storage and/or disposal of SNF/HLW. Likewise, the establishment of a CIS for the storage of SNF/HLW, the timing of such a facility's opening and being able to

accept waste from an X-energy reactor, and any related regulatory action, could impact our customers' costs associated with storage of SNF/HLW. These waste storage issues, and changes to the current waste disposal practices or changes to reactor operators' ability to recover storage costs from DOE through litigation, could be material to X-energy's operations if potential customers view waste disposal as problematic, detrimental or a negative factor when considering an investment in an X-energy reactor.

Our SMRs may not qualify as low-emissions or emissions-free pursuant to regulatory or incentive frameworks that consider emissions on a lifecycle basis or that otherwise account for fuel cycle emissions or energy consumption.

While our SMRs directly generate virtually no air emissions, including greenhouse gas emissions, during operations, our SMRs may nonetheless not qualify as providers of emissions-free, carbon-free, low-carbon or similar generating resources under emissions-limitation schemes that assess emissions on a lifecycle basis or that otherwise consider emissions from energy consumed in our fuel cycle because of the use of carbon in our TRISO-X fuel production and because our TRISO-X fuel and its feedstocks require substantial amounts of energy to produce. Our fuel fabrication facilities and our suppliers' facilities may rely on the local electric grid and its mix of generating sources for electricity or may rely on contracted supply that does not provide a choice among electric generation sources. We cannot control the generation and electricity purchasing decisions of local electric utilities and their suppliers or of electric suppliers to our third-party partners. Certain regimes, such as various sustainability "taxonomies," may also consider eligibility based on a wider array of environmental objectives, which we cannot guarantee we or our customers will be able to meet. The failure of our SMRs to qualify for inclusion in emissions reduction or climate change related emissions control schemes, or emissions-based incentive programs may result in higher costs or lower revenues for us or our customers, as well as eligibility for financing from capital providers focused on certain sustainability criteria, and may adversely impact the demand for our products from our customers, which could materially and adversely affect our business, financial condition, operating results and future prospects.

Changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our results of operations and financial condition.

We are subject to taxation by U.S. federal, state, and local tax authorities. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- allocation of expenses to and among different jurisdictions;
- changes to our assessment about our ability to realize, or in the valuation of, our deferred tax assets that are based on estimates of our future results, the prudence and feasibility of possible tax planning strategies, and the economic and political environments in which we do business;
- expected timing and amount of the release of any tax valuation allowances;
- tax effects of stock-based compensation;
- costs related to intercompany restructurings;
- changes in tax laws, regulations, or interpretations thereof;
- the outcome of current and future tax audits, examinations, or administrative appeals;
- lower than anticipated future earnings in jurisdictions where we have lower statutory tax rates and higher than anticipated future earnings in jurisdictions where we have higher statutory tax rates; and
- limitations or adverse findings regarding our ability to do business in some jurisdictions.

Any changes in U.S. taxation may increase our effective tax rate and harm our business, financial condition, and results of operations. In particular, new income or other tax laws or regulations could be enacted at any time, which could adversely affect our business operations and financial performance. Further, existing tax laws and regulations could be interpreted, modified, or applied adversely to us.

The unavailability, reduction or elimination of government and economic incentives and credits could have a material adverse effect on our business, prospects, financial condition, results of operations, and cash flows.

Any unavailability, reduction, or elimination of government and economic incentives and credits because of policy changes, or the reduced need for such incentives and credits due to the perceived success of nuclear

energy or other reasons, may result in the diminished competitiveness of the alternative fuel and nuclear energy industry generally or our reactors, software and services in particular. Any of the foregoing could materially and adversely affect the growth of the alternative fuel automobile markets and our business, prospects, financial condition, results of operations, and cash flows.

While certain tax credits and other incentives for alternative energy production, alternative fuel, and nuclear energy have been available in the past, there is no guarantee these programs will be available in the future. Some of these tax credits and incentives require interpretations from government bodies and any changes could impact the applicability of these tax credits and incentives. Incentives provided by federal or state authorities may have predetermined expiration dates, may conclude once allocated funds are depleted, or could be reduced or discontinued due to changes in regulatory or legislative priorities. Consequently, the availability of tax credits or other government incentives and our ability and that of our customers and competitors to benefit from these credits and incentives remain uncertain at this time.

We may become involved in litigation that may materially adversely affect us.

From time to time, we may become involved in various legal proceedings relating to matters incidental to the ordinary course of our business, including intellectual property, commercial, product liability, employment, class action, whistleblower, personal injury, property damage, and other litigation and claims, and governmental and other regulatory investigations and proceedings. Such matters can be time-consuming, divert management's attention and resources from the operation of our business and cause us to incur significant expenses or liability or require us to change our business practices. Because of the potential risks, expenses and uncertainties of litigation, from time to time, we may settle disputes, even where we believe that we have meritorious claims or defenses. Because litigation is inherently unpredictable, we cannot assure you that the results of any of these actions will not have a material adverse effect on our business.

Some of our customers' projects will be regulated by U.S. federal energy regulators and may be materially adversely affected by changes in law, policy or regulation, or a failure to comply with laws or regulations.

Some of our customers' projects in the U.S. will be subject to regulation at the federal level, by the Federal Energy Regulatory Commission ("FERC"). Under the Federal Power Act, FERC regulates the sale of electric energy at wholesale in interstate commerce and the transmission of electric energy in interstate commerce. FERC rate regulation will subject projects making wholesale sales of energy to a suite of regulations as well as certain risks, including the possibility that FERC may revoke or otherwise restrict their authorizations to make sales if FERC determines that such a company and its affiliates can exercise horizontal or vertical market power, create barriers to entry or engage in abusive affiliate transactions or market manipulation. Public utilities and their holding companies are subject to FERC reporting requirements that impose administrative burdens and that can expose a public utility to criminal and civil penalties for failure to comply with such requirements. Our projects will also likely be subject to certain reliability standards overseen by the North American Electric Reliability Corporation ("NERC"). Failure to comply with NERC reliability standards could lead to sanctions, including substantial monetary penalties.

Some of our customers' U.S. projects will be located within organized bulk power markets administered by electric grid operators and some of our U.S. project companies will sell power in, and participate in, those markets. These electric grid operators each have their own rules set forth in FERC-approved tariffs and related documents that govern the functioning of the wholesale electricity markets they oversee, as well as interconnection to the transmission system. These electric grid operators, which operate like quasi-regulatory bodies, can impose new rules or adopt new interpretations thereof that can have a material adverse effect on our business. Electric grid operators market rules regularly change over time, and such changes may materially adversely affect our project companies' ability to sell energy, capacity, and ancillary services at a beneficial price and materially adversely affect our business.

A failure to comply with U.S. energy laws or FERC, NERC or electric grid operator rules and regulations could have a material adverse effect on our customers, which could in turn have a material adverse effect on our business, including any existing or future financing arrangements.

Any actual or perceived failure to comply with new or existing laws, regulations and other requirements relating to the privacy, security and processing of Personal Information could adversely affect our business, results of operations, or financial condition.

In connection with running our business, we receive, store, use and otherwise process information that relates to individuals and/or constitutes “personal data,” “personal information,” “personally identifiable information,” or similar terms under applicable data privacy laws (collectively, “Personal Information”), including from and about actual and prospective customers, as well as our employees and business contacts. We therefore may be subject to laws, regulations and other requirements relating to the privacy, security and handling of Personal Information.

The application and interpretation of such laws, regulations, and other requirements are constantly evolving and are subject to change, creating a complex compliance environment. In some cases, these requirements may be either unclear in their interpretation and application or they may have inconsistent or conflicting requirements with each other. Further, there has been a substantial increase in legislative activity and regulatory focus on data privacy and security in the U.S. and elsewhere, including in relation to cybersecurity incidents.

It is possible that new laws, regulations and other requirements, or amendments to or changes in interpretations of existing laws, regulations and other requirements, may require us to incur significant costs, implement new processes, or change our handling of information and business operations. In addition, any failure or perceived failure by us to comply with laws, regulations and other requirements relating to the privacy, security and handling of information could result in legal claims or proceedings, regulatory investigations, or enforcement actions. We could incur significant costs in investigating and defending such claims and, if found liable, pay significant damages or fines or be required to make changes to our business. These proceedings and any subsequent adverse outcomes may subject us to significant negative publicity and an erosion of trust. If any of these events were to occur, our business, results of operations, and financial condition could be materially adversely affected.

Risks Relating to X-energy’s Capital Resources

In order to fulfill our business plan, we will require additional funding. To the extent we require such additional investor funding in the future, such funding may be dilutive to our investors and no assurances can be provided as to terms of any such funding. Any such funding and the associated terms will be highly dependent upon market conditions and the progress of our business at the time we seek such funding. The terms of any financing that we pursue may be less favorable than previously anticipated and could become even less favorable depending on the amount of funds we may require.

Our business is capital intensive. We expect that significant additional capital will be needed in the future to continue our planned operations, including commercialization efforts, expanded research and development activities, investment in our customers’ projects, risk-sharing arrangements, and costs associated with operating as a public company. To raise capital, we may enter into financing arrangements that may be costly or impose certain restrictive covenants or otherwise restrict our ability to seek additional leverage or financing. We may also seek to sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock. Any of the above events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our common stock to decline.

Our corporate expenditures, including our corporate level outspend, are subject to numerous risks and uncertainties.

Our current and future operating expenses are uncertain and impacted by various factors outside of our control, including rising costs and other impacts of inflation, evolving regulatory requirements, raw material availability, global conflicts, global supply chain challenges and component manufacturing and testing uncertainties, among other factors. Accordingly, it is possible that our overall expenses and related outspend

could be higher than the levels we currently estimate, and any increases could have a material adverse effect on our business, financial condition, operating results and future prospects.

We may experience a disproportionately higher impact from inflation and rising costs.

Inflation has resulted in, and may continue to result in, higher interest rates and capital costs, higher shipping costs, higher material costs, supply shortages, increased costs of labor and other similar effects. Although the impact of material cost, labor, or other inflationary or economically driven factors will impact the entire nuclear and energy transition industry (including renewable sources of electricity, like solar and wind), the relative impact may not be the same across the industry, and the particular effects within the industry will depend on a number of factors, including material use, design, structure of supply agreements, project management and others, which could result in significant changes to the competitiveness of our technology and our ability to sell Xe-100 reactors and our TRISO-X fuel, which could have a material adverse effect on our business, financial condition, operating results and future prospects.

We have a history of losses and may not achieve profitability in the future. We will need substantial additional capital to fund our operations. If we fail to obtain significant additional capital in connection with the consummation of this offering, we will be unable to sustain operations unless we are able to raise additional capital following this offering from additional funding sources.

We expect to continue to incur operating losses for the foreseeable future as we continue to expand and develop, and we will need additional capital from external sources. If we are unable to raise additional capital, we will have to significantly delay, scale back or discontinue one or more of our research and development programs. We may be required to cease operations or seek partners for our product candidates at an earlier stage than otherwise would be desirable and on terms that are less favorable than might otherwise be available. In the absence of additional capital, we may also be required to relinquish, license or otherwise dispose of rights to technologies, product candidates or products that we would otherwise seek to develop or commercialize on terms that are less favorable than might otherwise be available. If we are unable to secure additional capital, we may be required to take additional measures to reduce costs in order to conserve our cash in amounts sufficient to sustain operations and meet our obligations. These measures may significantly alter our business plan and could cause significant delays in the development of our product candidates.

Future indebtedness could expose us to risks that could adversely affect our business, financial condition, operating results and future prospects.

In the future, we may incur indebtedness. Future indebtedness could have significant negative consequences for our security holders, business, results of operations and financial condition by, among other things:

- increasing our vulnerability to adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, which will reduce the amount of cash available for other purposes;
- limiting our flexibility to plan for, or react to, changes in our business; and
- placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital.

Our business may not generate sufficient funds, and we may otherwise be unable to maintain sufficient cash reserves, to pay any additional indebtedness that we may incur. Any future indebtedness that we may incur may contain financial and other restrictive covenants that will limit our ability to operate our business, raise capital or make payments under our indebtedness. If we fail to comply with such covenants or to make payments under any of our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that indebtedness becoming immediately payable in full and cross-default or cross-acceleration under our other indebtedness and other liabilities.

Our actual operating results may differ significantly from our guidance.

From time to time, we may release guidance in our quarterly earnings releases, quarterly earnings conference calls, or otherwise once we are a public company, regarding our future performance that represents our management's estimates as of the date of release. This guidance, which includes forward-looking statements, will be based on projections prepared by our management. These projections are not prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, and neither our registered public accountants nor any other independent expert or outside party compiles or examines the projections. Accordingly, no such person expresses any opinion or any other form of assurance with respect to the projections.

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic, and competitive uncertainties and contingencies, many of which are beyond our control, such as the effects of inflation on our cost estimates and expectations, and are based upon specific assumptions with respect to future business decisions, some of which will change. Any material change to the assumptions or estimates underlying the projections management prepares, or any material overruns or other unexpected increase in costs, could have a material adverse effect on the projections and the guidance on which it is based. The rapidly evolving market in which we operate may make it difficult to evaluate our current business and our future prospects, including our ability to plan for and model future growth. We intend to state possible outcomes as high and low ranges which are intended to provide a sensitivity analysis as variables are changed. However, actual results will vary from our guidance and the variations may be material. The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook as of the date of release with analysts and investors. We do not accept any responsibility for any projections or reports published by any such persons. Investors are urged not to rely upon our guidance in making an investment decision regarding our common stock.

Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in this "*Risk Factors*" section could result in our actual operating results being different from our guidance, and the differences may be adverse and material.

Our financial results may vary significantly from quarter to quarter.

We expect our revenue and operating results to vary from quarter to quarter. We may incur significant operating expenses during the startup and early stages of large contracts and may not be able to recognize corresponding revenue in that same quarter. We may also incur additional expenses when contracts are terminated or expire and are not renewed.

Payments due to us from our customers may be delayed due to billing cycles or as a result of failures of government budgets to gain congressional and administration approval in a timely manner. The U.S. government's fiscal year ends September 30. If a federal budget for the next federal fiscal year has not been approved by that date in each year, our customers may have to suspend engagements that we are working on until a budget has been approved. Any such suspensions may reduce our revenue in the fourth quarter of the federal fiscal year or the first quarter of the subsequent federal fiscal year.

Additional factors that may cause our financial results to fluctuate from quarter to quarter include those addressed elsewhere in this "*Risk Factors*" section and the following factors, among others:

- the terms of customer contracts that affect the timing of revenue recognition;
- variability in demand for our services and solutions;
- commencement, completion or termination of contracts during any particular quarter;
- timing of shipments and product deliveries;
- timing of award or performance incentive fee notices;
- timing of significant bid and proposal costs;
- the costs of remediating unknown defects, errors or performance problems of our product offerings;

- variable purchasing patterns under blanket purchase agreements and other indefinite delivery/indefinite quantity contracts;
- restrictions on and delays related to the export of nuclear articles and services;
- costs related to government inquiries;
- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs and joint ventures;
- strategic investments or changes in business strategy;
- changes in the extent to which we use subcontractors;
- seasonal fluctuations in our staff utilization rates;
- changes in our effective tax rate, including changes in our judgment as to the necessity of the valuation allowance recorded against our deferred tax assets; and
- the length of sales cycles.

Changes in our accounting estimates and assumptions could negatively affect our financial position and results of operations.

We prepare our consolidated financial statements in accordance with U.S. GAAP. These accounting principles require us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of our financial statements. We are also required to make certain judgments that affect the reported amounts of revenues and expenses during each reporting period. We periodically evaluate our estimates and assumptions including, but not limited to, those relating to amortization and depreciation, estimates of costs to complete long-term contracts and the associated revenues, the valuation of profits interests, unit-based compensation, preferred units, warrants, exchanged debt, and liabilities measured at fair value. We base our estimates on historical experience and various assumptions that we believe to be reasonable based on specific circumstances. These assumptions and estimates involve the exercise of judgment and discretion, which may evolve over time in light of operational experience, regulatory direction, developments in accounting principles and other factors. Actual results could differ from these estimates as a result of changes in circumstances, assumptions, policies or developments in the business, which could materially affect our consolidated financial statements.

Risks Related to our Capital Structure

Our principal asset after the completion of this offering will be our interest in XERC, and, as a result, we will depend on distributions from XERC to pay our taxes and expenses (including payments under the Tax Receivable Agreement) and pay dividends. XERC's ability to make such distributions may be subject to various limitations and restrictions.

Upon the consummation of this offering and the Transactions, we will be a holding company and will have no material assets other than our ownership of Common Units. As such, we will have no independent means of generating revenue or cash flow, and our ability to pay our taxes and operating expenses or declare and pay dividends in the future, if any, will be dependent upon the financial results and cash flows of XERC and distributions we receive from XERC. There can be no assurance XERC will generate sufficient cash flow to distribute funds to us or that applicable state law and contractual restrictions, including negative covenants in any applicable debt instruments, will permit such distributions. XERC is currently subject to debt instruments or other agreements that restrict its ability to make distributions to us, which may in turn affect XERC's ability to pay distributions to us and thereby adversely affect our cash flows.

XERC will continue to be treated as a partnership for U.S. federal income tax purposes and, as such, generally will not be subject to any entity-level U.S. federal income tax. Instead, any taxable income of XERC will be allocated to holders of Common Units, including us. Accordingly, we will incur income taxes on our allocable share of any net taxable income of XERC. Under the terms of the XERC LLC Agreement, XERC will be obligated, subject to various limitations and restrictions, including with respect to our debt agreements, to make tax distributions to holders of Common Units, including us. In addition to tax expenses, we will also

incur expenses related to our operations, including payments under the Tax Receivable Agreement, which we expect will be significant. See “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.” We intend, as its managing member, to cause XERC to make cash distributions to the holders of Common Units in an amount sufficient to (i) fund all or part of their tax obligations in respect of taxable income allocated to them and (ii) cover our operating expenses, including payments under the Tax Receivable Agreement. However, XERC’s ability to make such distributions may be subject to various limitations and restrictions, such as restrictions on distributions that would either violate any contract or agreement to which XERC is then a party, including debt agreements, or any applicable law, or that would have the effect of rendering XERC insolvent. If we do not have sufficient funds to pay tax or other liabilities, or to fund our operations (including, if applicable, because of an acceleration of our obligations under the Tax Receivable Agreement), we may have to borrow funds, which could materially and adversely affect our liquidity and financial condition, and subject us to various restrictions imposed by any lenders of such funds. To the extent we are unable to make timely payments under the Tax Receivable Agreement for any reason, such payments generally will be deferred and will accrue interest until paid; provided, however, that nonpayment for a specified period may constitute a Material Breach under the Tax Receivable Agreement resulting in the future payments under the Tax Receivable Agreement for each taxable year after any such Material Breach being calculated utilizing certain deemed exchanges and valuation assumptions. See “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.” In addition, if XERC does not have sufficient funds to make distributions, our ability to declare and pay cash dividends will also be restricted or impaired, although we do not anticipate declaring or paying any cash dividends on our Class A common stock in the foreseeable future. See “Risk Factors — Risks Related to the Offering and Ownership of our Class A common stock” and “Dividend Policy.”

In addition, the tax distributions that XERC may be required to make may be substantial, and the amount of any additional tax distributions XERC is required to make likely will exceed the tax liabilities that would be owed by a corporate taxpayer similarly situated to XERC. As a result of (i) potential differences in the amount of net taxable income allocable to us and to the other holders of Common Units, (ii) the lower tax rate applicable to corporations as opposed to individuals, and (iii) certain tax benefits covered by, and payments under, the Tax Receivable Agreement, these tax distributions may be in amounts that exceed our tax liabilities. Our board of directors will determine the appropriate uses for any excess cash so accumulated, which may include, among other uses, the payment of obligations under the Tax Receivable Agreement and the payment of other expenses. We will have no obligation to distribute such cash (or other available cash) to our shareholders. No adjustments to the exchange ratio for Common Units and corresponding shares of Class A common stock will be made as a result of any cash dividend or distribution by us or any retention of cash by us. As a result, the holders of Common Units (other than us) may benefit from value, if any, attributable to such cash balances if they acquire shares of Class A common stock in exchange for their Common Units, notwithstanding that such holders may have participated previously as holders of Common Units in distributions that resulted in such excess cash balances to us. See “Description of Capital Stock.” To the extent we do not distribute such excess cash as dividends on our Class A common stock we may take other actions with respect to such excess cash, for example, holding such excess cash, lending or contributing it (or a portion thereof) to XERC, which may result in shares of our Class A common stock increasing in value relative to the value of Common Units, or repurchasing outstanding shares of our Class A common stock. Following a contribution of such excess cash to XERC, we may, but are not required to, make an adjustment to the outstanding number of Common Units held by holders of Common Units (other than us).

Funds used by XERC to satisfy its obligation to make tax distributions will not be available for reinvestment in our business, except to the extent we or certain other Continuing Equity Owners use any excess cash received to reinvest in XERC for additional Common Units.

Moreover, because cash available for additional tax distributions will be determined by taking into account the ability of XERC and its subsidiaries to take on additional borrowing, XERC may be required to increase its indebtedness in order to fund additional tax distributions. Such additional borrowing may adversely affect our results of operations, cash flows and financial position by, without limitation, limiting our ability to borrow in the future for other purposes, such as capital expenditures, and increasing our interest expense and leverage ratios.

The Tax Receivable Agreement with XERC and the TRA Holders requires us to make cash payments to the TRA Holders in respect of certain tax benefits to which we may become entitled, and we expect that such payments will be substantial.

In connection with the consummation of this offering, we will enter into a Tax Receivable Agreement with XERC and the TRA Holders. Under the Tax Receivable Agreement, we will be required to make cash payments to the TRA Holders equal to 85% of the cash tax savings, if any, that we actually realize, or in certain circumstances are deemed to realize, as a result of (i) Basis Adjustments, (ii) Existing Basis, (iii) Blocker Tax Attributes and (iv) Interest Deductions. We will be required to make such payments to the TRA Holders even if all of the TRA Holders were to exchange or redeem their remaining Common Units.

The payment obligations under the Tax Receivable Agreement are an obligation of the Company and not of XERC. We expect that the amount of the cash payments we will be required to make under the Tax Receivable Agreement will be substantial. Any payments made by us to the TRA Holders under the Tax Receivable Agreement will not be available for reinvestment in our business and will generally reduce the amount of overall cash flow that might have otherwise been available to us. To the extent that we are unable to make timely payments under the Tax Receivable Agreement for any reason, the unpaid amounts will be deferred and will accrue interest until paid by us; provided, however, that nonpayment for a specified period may constitute a Material Breach under the Tax Receivable Agreement. In the case of a Material Breach, in the event of certain changes of control (as defined under the Tax Receivable Agreement), which includes certain mergers, asset sales and other forms of business combinations, or upon X-Energy, Inc.'s election to early terminate the Tax Receivable Agreement (and X-Energy, Inc. does not make an election to make a single, lump sum payment) the Tax Receivable Agreement will not terminate nor will a single, accelerated lump sum payment be due; however, the calculation of certain future payments made under the Tax Receivable Agreement will utilize certain valuation assumptions, including that (i) any Common Units that have not been exchanged are deemed exchanged for the market value of the shares of our Class A common stock at the time of the change of control and (ii) X-Energy, Inc. will have sufficient taxable income to fully utilize the tax attributes covered by the Tax Receivable Agreement. See "Certain Relationships and Related Party Transactions — Tax Receivable Agreement." These payment obligations could (i) make us a less attractive target for an acquisition, particularly in the case of an acquirer that cannot use some or all of the tax benefits that are the subject of the Tax Receivable Agreement and (ii) result in holders of our Class A common stock receiving substantially less consideration in connection with a change of control transaction than they would receive in the absence of such obligation. Accordingly, the TRA Holders' interests may conflict with those of the holders of our Class A common stock. Furthermore, if we exercise our right to terminate the Tax Receivable Agreement, we would be obligated to make an immediate payment, and such payment may be significantly in advance of, and may materially exceed, the actual realization, if any, of the future tax benefits to which the payment relates.

Assuming no material changes in the relevant tax laws and that we earn sufficient taxable income to realize all tax benefits that are subject to the Tax Receivable Agreement, we expect that the tax savings associated with the purchase of Common Units in connection with this offering, together with future redemptions or exchanges of all remaining Common Units owned by the TRA Holders pursuant to the XERC LLC Agreement as described above, would aggregate to approximately \$ million over years from the date of this offering based on the assumed initial public offering price of \$ per share of our Class A common stock, which is the midpoint of the range set forth on the cover page of this prospectus, and assuming all redemptions or exchanges would occur immediately after the initial public offering for the remaining ownership of XERC not acquired by X-Energy, Inc., which is assumed to occur on for purposes of the pro forma information presented herein and elsewhere in this prospectus. Under such scenario, assuming future payments are made on the date each relevant tax return is due, without extensions, we would be required to pay approximately 85% of such amount, or approximately \$ million, over the -year period from the date of this offering, to the TRA Holders. The actual Basis Adjustments, Existing Basis, Blocker Tax Attributes and Interest Deductions and the actual utilization of any resulting tax benefits, as well as the amount and timing of any payments under the Tax Receivable Agreement, will vary depending upon a number of factors including: the timing of redemptions by the TRA Holders; the price of shares of our Class A common stock at the time of the exchange; the extent to which such exchanges are taxable; the amount of gain recognized by such TRA Holders; the amount and timing of the taxable income allocated to us or otherwise

generated by us in the future; the portion of our payments under the Tax Receivable Agreement constituting imputed interest; and the federal and state tax rates then applicable.

Our organizational structure, including the Tax Receivable Agreement, confers certain benefits upon the Continuing Equity Owners that will not benefit holders of our Class A common stock to the same extent that it will benefit the Continuing Equity Owners.

Our organizational structure, including the Tax Receivable Agreement, confers certain benefits upon the Continuing Equity Owners that will not benefit the holders of our Class A common stock to the same extent that it will benefit the Continuing Equity Owners. We will enter into the Tax Receivable Agreement with XERC and the TRA Holders in connection with the completion of this offering and the Transactions, which will provide for the payment by us to the TRA Holders of 85% of the amount of cash tax savings, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of (i) Basis Adjustments, (ii) Existing Basis, (iii) Blocker Tax Attributes and (iv) Interest Deductions. See “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.” Although we will retain 15% of the amount of such tax benefits, this and other aspects of our organizational structure may adversely impact the future trading market for our Class A common stock.

In certain cases, payments under the Tax Receivable Agreement to the TRA Holders may be accelerated or significantly exceed any actual benefits we realize in respect of the tax attributes subject to the Tax Receivable Agreement.

The Tax Receivable Agreement will generally apply to each of our taxable years, beginning with the first taxable year ending after the consummation of the Transactions. There is no maximum term for the Tax Receivable Agreement. Importantly, upon a change of control, the Tax Receivable Agreement will not terminate nor will the lump sum payment be due. However, the Tax Receivable Agreement will provide that if we (i) commit a Material Breach under the Tax Receivable Agreement or (ii) undergo a change of control, which includes certain mergers, asset sales, other forms of business combinations or other changes of control occurring after the consummation of this offering, then our obligations, or our successor’s obligations, under the Tax Receivable Agreement to make payments will be calculated utilizing certain valuation assumptions, including that (x) any Common Units that have not been exchanged are deemed exchanged for the market value of the shares of our Class A common stock at the time of the change of control and (y) X-Energy, Inc. will have sufficient taxable income to fully utilize the tax attributes covered by the Tax Receivable Agreement. Furthermore, the Tax Receivable Agreement will provide that if we elect an early termination of the Tax Receivable Agreement, then, at our sole election, either (i) the payment obligations will be paid out over time and determined in the same manner as described above for a change of control and Material Breach or (ii) the payment obligations will be accelerated and we will be required to make a single, lump sum payment to the TRA Holders based on certain assumptions, including an assumption that we will have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax Receivable Agreement.

As a result of the foregoing, we would be required to make an immediate cash payment equal to the present value of the anticipated future tax benefits that are the subject of the Tax Receivable Agreement, based on certain assumptions, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. Such cash payment to the TRA Holders could be greater than the specified percentage of any actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement. In these situations, our obligations under the Tax Receivable Agreement could have a substantial negative impact on our liquidity and could have the effect of delaying, deferring, or preventing certain mergers, asset sales, other forms of business combinations or other changes of control. For example, should we elect to terminate the Tax Receivable Agreement immediately following this offering, assuming no material changes in the relevant tax laws or tax rates and that we earn sufficient taxable income to realize all potential tax benefits that are subject to the Tax Receivable Agreement, we estimate that the aggregate of termination payments would be approximately \$ _____ million (at a discount rate of SOFR plus 100 basis points) based on the assumed initial public offering price of \$ _____ per share of our Class A common stock, which is the midpoint of the range set forth on the cover page of this prospectus, and assuming SOFR (as defined in the Tax Receivable Agreement) were to be _____. There can be no assurance that we will be able to fund or finance our obligations under the Tax Receivable Agreement. We may need to incur

debt to finance payments under the Tax Receivable Agreement to the extent our cash resources are insufficient to meet our obligations under the Tax Receivable Agreement as a result of timing discrepancies or otherwise.

We will not be reimbursed for any payments made to the TRA Holders under the Tax Receivable Agreement in the event that any tax benefits are disallowed.

Payments under the Tax Receivable Agreement will be based on the tax reporting positions that we determine, and the Internal Revenue Service ("IRS"), or another tax authority, may challenge all or part of the Basis Adjustments, Existing Basis, Blocker Tax Attributes, Interest Deductions or other tax benefits we claim, as well as other related tax positions we take, and a court could sustain such challenge. If the outcome of any such challenge would reasonably be expected to materially and adversely affect the rights and obligations of TRA Holders under the Tax Receivable Agreement, then we will not be permitted to settle such challenge without the consent (not to be unreasonably withheld or delayed) of the TRA Holders. The interests of the TRA Holders in any such challenge may differ from or conflict with our interests and your interests, and the TRA Holders may exercise their consent rights relating to any such challenge in a manner adverse to our interests and your interests. We will not be reimbursed for any cash payments previously made to the TRA Holders under the Tax Receivable Agreement in the event that any tax benefits initially claimed by us and for which payment has been made to a TRA Holder are subsequently challenged by a taxing authority and are ultimately disallowed. Instead, any excess cash payments made by us to a TRA Holder will be netted against future cash payments, if any, that we might otherwise be required to make to such TRA Holder, under the terms of the Tax Receivable Agreement. However, we might not determine whether we have effectively made an excess cash payment to a TRA Holder for a number of years following the initial time of such payment. Moreover, the excess cash payments we made previously under the Tax Receivable Agreement could be greater than the amount of future cash payments against which we would otherwise be permitted to net such excess. The applicable U.S. federal income tax rules for determining applicable tax benefits we may claim are complex and factual in nature, and there can be no assurance that the IRS or a court will agree with our tax reporting positions. As a result, payments could be made under the Tax Receivable Agreement significantly in excess of any actual cash tax savings that we realize in respect of the tax attributes with respect to a TRA Holder that are the subject of the Tax Receivable Agreement.

The acceleration of payments under the Tax Receivable Agreement in the case of an early termination or the application of certain valuation assumptions under the Tax Receivable Agreement in the case of an earlier termination, certain changes of control or a Material Breach may negatively impact the value received by owners of our Class A common stock.

The Tax Receivable Agreement will provide that if we elect an early termination of the Tax Receivable Agreement, at X-Energy, Inc.'s election, either (i) X-Energy, Inc.'s (or its successor's) payment obligations with respect to the Tax Receivable Agreement would be accelerated and a single, lump sum payment would be due, which payment is based on certain assumptions, including that we (or our successor) would have sufficient taxable income to fully utilize the benefits arising from the increased tax deductions and tax basis and other benefits covered by the Tax Receivable Agreement or (ii) the payment obligations will be paid out over time and determined in the same manner as described below for a change of control and Material Breach. In the event of certain changes of control, a Material Breach of the Tax Receivable Agreement by X-Energy, Inc., an insolvency event, or X-Energy, Inc.'s election with respect to an early termination, the calculation of certain future payments made under the tax receivable agreement will utilize certain valuation assumptions, including that (i) any Common Units that have not been exchanged are deemed exchanged for the market value of the shares of our Class A common stock at the time of the change of control and (ii) X-Energy, Inc. will have sufficient taxable income to fully utilize the tax attributes covered by the Tax Receivable Agreement. Such payments may significantly exceed the actual benefits X-Energy, Inc. realizes in respect of the tax attributes subject to the Tax Receivable Agreement. Consequently, it is possible, in these circumstances, that the actual cash tax savings realized by us may be significantly less than the corresponding tax benefit payments under the Tax Receivable Agreement. We expect that the payments that we may make under the Tax Receivable Agreement following a change of control will be substantial and may be in excess of 85% of X-Energy, Inc.'s actual cash tax benefits. X-Energy Inc.'s accelerated payment obligations and/or assumptions adopted under the Tax Receivable Agreement may negatively impact the value received by owners of our Class A common stock in a change of control transaction.

The Continuing Equity Owners, including the X-energy Founder and certain of their affiliates, may have conflicting interests with holders of shares of our Class A common stock.

Immediately following this offering and application of the net proceeds therefrom, the X-energy Founder and certain of their affiliates will beneficially own approximately % of the combined voting power of our Class A common stock or Class B common stock (or approximately % if the underwriters exercise in full their option to purchase additional shares of Class A common stock). Each share of Class A common stock entitles the holder to one vote per share and each share of Class B common stock entitles the holder to one vote per share on all matters on which shareholders are entitled to vote generally. For a description of our multi-class structure, see “Description of Capital Stock.”

In addition, immediately following this offering and application of the net proceeds therefrom, the Continuing Equity Owners, including the X-energy Founder and certain of their affiliates, will own approximately % of the Common Units (or approximately % if the underwriters exercise in full their option to purchase additional shares of Class A common stock). Because they hold their ownership interest in our business directly in XERC, rather than through the Company, the Continuing Equity Owners, including the X-energy Founder and certain of their affiliates, may have conflicting interests with holders of shares of our Class A common stock. For example, if XERC makes distributions to the Company, the non-managing members of XERC will also be entitled to receive such distributions pro rata in accordance with their ownership of Common Units and their preferences as to the timing and amount of any such distributions may differ from those of our public shareholders. The Continuing Equity Owners, including the X-energy Founder and certain of their affiliates, may also have different tax positions from us that could influence their decisions regarding whether and when to dispose of assets, especially in light of the existence of the Tax Receivable Agreement that we entered into in connection with this offering with XERC and the TRA Holders, whether and when to incur new or refinance existing indebtedness and whether and when the Company should terminate the Tax Receivable Agreement and accelerate its obligations thereunder. In addition, the structuring of future transactions may take into consideration our Continuing Equity Owners tax or other considerations even where no similar benefit would accrue to us. See “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.”

Our shares of Class B common stock will not have economic rights. Immediately following the consummation of this offering, all of our Class B common stock will be held by certain Continuing Equity Owners, and certain of their affiliates.

Changes in tax laws and unanticipated tax liabilities could adversely affect our effective income tax rate and profitability.

We are subject to income taxes in the U.S. Our effective income tax rate and profitability could be adversely affected in the future by several factors, including changes in tax laws, regulations, administrative guidance or interpretations at the federal, state, or international level and changes in the valuation of deferred tax assets and liabilities.

On July 4, 2025, the President signed into law the OBBBA, a sweeping tax and spending law that makes permanent many provisions of the 2017 Tax Cuts and Jobs Act (the “TCJA”), while introducing new tax policies and restructuring others. While certain provisions may reduce our tax liability, such as modifications to corporate tax rates, deductions, credits, treatment of foreign income, and expensing rules, others may introduce new complexity and audit risk. We will continue to monitor the potential impact of the OBBBA. Because tax laws are dynamic and often retroactive or uncertain in interpretation, projected tax liabilities may differ significantly from eventual obligations. The net impact remains uncertain, and misapplication of the new rules could lead to materially adverse outcomes.

We regularly assess all of these tax-related matters to determine the adequacy of its tax provision. If current tax strategies are ineffective or not in compliance with domestic and international tax laws, our financial position, operating results, and cash flows could be adversely affected.

Risks Related to the Offering and Ownership of our Class A common stock

There has been no prior public market for our Class A common stock, the stock price of our Class A common stock may be volatile or may decline regardless of our operating performance, and you may not be able to resell your shares at or above the initial public offering price.

There has been no public market for our Class A common stock prior to this offering. The initial public offering price for our Class A common stock was determined through negotiations between us and the underwriters and may vary from the market price of our Class A common stock following this offering. The market prices of the securities of newly public companies such as us, particularly in the nuclear industry, have historically been highly volatile. The market price of our Class A common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- overall performance of the equity markets and the performance of technology companies in particular;
- variations in our operating results, cash flows, and other financial metrics and non-financial metrics, and how those results compare to analyst expectations;
- changes in the financial projections we may provide to the public or our failure to meet these projections;
- failure of securities analysts to initiate or maintain coverage of us, changes in financial estimates by any securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- recruitment or departure of key personnel;
- the economy as a whole and market conditions in our industry;
- negative publicity related to problems in our manufacturing or the real or perceived quality of our products, as well as the failure to timely launch new products or services that gain market acceptance;
- rumors and market speculation involving us or other companies in our industry;
- announcements by us or our competitors of new products, services, features and content, significant technical innovations, acquisitions, strategic partnerships, joint ventures, or capital commitments;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- lawsuits threatened or filed against us, litigation involving our industry, or both;
- developments or disputes concerning our or other parties' products, services, or intellectual property rights;
- other events or factors, including those resulting from war, incidents of terrorism, or responses to these events;
- the expiration of contractual lock-up or market standoff agreements; and
- sales of shares of our Class A common stock by us or our stockholders.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. Stock prices of many companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. In the past, stockholders have instituted securities class action litigation following periods of market volatility. If we were to become involved in securities litigation, it could subject us to substantial costs, divert resources and the attention of management from our business, and adversely affect our business.

Sales, directly or indirectly, of a substantial amount of our Class A common stock in the public markets by our existing security holders may cause the price of our Class A common stock to decline.

Sales of a substantial number of shares of our Class A common stock into the public market, particularly sales by our directors, executive officers, and principal stockholders, or the perception that these sales might occur, could cause the market price of our Class A common stock to decline and could impair our ability to

raise capital through the sale of additional equity securities. Many of our existing security holders have substantial unrecognized gains on the value of the equity they hold, and may take, or attempt to take, steps to sell, directly or indirectly, their shares or otherwise secure, or limit the risk to, the value of their unrecognized gains on those shares.

All of the shares of Class A common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act except that any shares held by our affiliates, as defined in Rule 144 under the Securities Act, would only be able to be sold in compliance with Rule 144 and any applicable lock-up agreements described below.

In connection with this offering, subject to certain customary exceptions, we, all of our directors and executive officers, and substantially all of the holders of the Common Units, have entered into market standoff agreements with us or lock-up agreements with the underwriters that prohibit them from selling, contracting to sell, granting any option for the sale of, transferring, or otherwise disposing of any shares of common stock, stock options, or any security or instrument related to common stock or stock options without the permission of J.P. Morgan Securities LLC on behalf of the underwriters for a period of 180 days from the date of this prospectus, subject to early termination as described below. See “Underwriting.”

Holders of our outstanding shares of Class A common stock and securities convertible into or exercisable or exchangeable for shares of our Class A common stock are subject to restrictions on their ability to sell or transfer their equity either prior to the pricing of this offering or from the pricing of this offering through the date that is 180 days after the date of this prospectus. We refer to such period as the “lock-up period”. Pursuant to the lock-up agreements with the underwriters, if (1) at least 120 days have elapsed since the date of this prospectus, (2) we have publicly released our earnings results for the quarterly period during which this offering occurred, and (3) such lock-up period is scheduled to end during or within five trading days prior to a broadly applicable period during which trading in our securities would not be permitted under our insider trading policy, or a blackout period, such lock-up period will end ten trading days prior to the commencement of such blackout period. We and the underwriters may release certain stockholders from the market standoff agreements or lock-up agreements prior to the end of the lock-up period. Record holders of our securities are typically the parties to the lock-up agreements with the underwriters and to the market standoff agreements with us referred to above, while holders of beneficial interests in our shares who are also not holders in respect of such shares are not typically subject to any such agreements or other similar restrictions. Accordingly, we believe that holders of beneficial interests who are not holders and are not bound by market standoff or lock-up agreements could enter into transactions with respect to those beneficial interests that negatively impact our stock price. In addition, an equity holder who is neither subject to a market standoff agreement with us nor a lock-up agreement with the underwriters may be able to sell, short sell, transfer, hedge, pledge, or otherwise dispose of or attempt to sell, short sell, transfer, hedge, pledge, or otherwise dispose of, their equity interests at any time after the closing of our initial public offering. Any such transaction described above involving shares of our Class A common stock, or any perception by the market that such transaction may occur, could cause our stock price to decline.

When the applicable lock-up and market standoff periods described above expire, we and our security holders subject to a lock-up agreement or market standoff agreement will be able to sell our shares in the public market. In addition, J.P. Morgan Securities LLC on behalf of the underwriters, may, in its sole discretion, release all or some portion of the shares subject to lock-up agreements prior to the expiration of the lock-up period. Sales of a substantial number of such shares upon expiration of the lock-up and market standoff agreements, or the perception that such sales may occur, or early release of these agreements, could cause our market price to fall or make it more difficult for you to sell your Class A common stock at a time and price that you deem appropriate.

We may also issue our shares of common stock or securities convertible into shares of our common stock from time to time in connection with a financing, acquisition, investment, or otherwise. Any further issuance could result in substantial dilution to our existing stockholders and cause the market price of our Class A common stock to decline.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, the price of our Class A common stock and trading volume could decline.

The trading market for our Class A common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business, our market, and our competitors. We do not

have any control over these analysts. If few securities analysts commence coverage of us, or if industry analysts cease coverage of us, the trading price for our Class A common stock would be negatively affected. If one or more of the analysts who cover us downgrade our Class A common stock or publish inaccurate or unfavorable research about our business, our Class A common stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our Class A common stock could decrease, which might cause our Class A common stock price and trading volume to decline.

We have identified a material weakness in our internal control over financial reporting. If our remediation of such material weakness is not effective, or if X-energy experiences additional material weaknesses or otherwise fails to design and maintain effective internal control over financial reporting in the future, X-energy's ability to timely and accurately report its financial condition and results of operations or comply with applicable laws and regulations could be impaired, which may adversely affect investor confidence in X-energy and, as a result, the value of X-energy Class A common stock.

In connection with the preparation of our consolidated financial statements for the years ended December 31, 2024 and 2023, we identified a material weakness in our internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

For the years ended December 31, 2024 and 2023, the material weakness primarily relates to the following matter that is relevant to the preparation of our consolidated financial statements:

- we lacked a sufficient complement of accounting and financial reporting personnel to analyze and interpret complex technical agreements and related valuations and ensure we record and disclose transactions appropriately.

The material weakness described above was not remediated during the year ended December 31, 2025, and if not remediated in the future, could result in a misstatement of one or more account balances or disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected.

In order to remediate this material weakness, we have taken and plan to take the following actions:

- continuing to hire additional, qualified accounting and finance personnel; and
- designing and implementing additional controls and processes that operate at an appropriate level of precision to ensure adequate review of highly complex technical agreements and valuations.

We cannot assure you that the measures we have taken to date, and that we are continuing to implement, will be sufficient to remediate the material weakness we have identified or to avoid the identification of additional material weaknesses in the future. If the steps we take do not remediate the material weakness in a timely manner, there could continue to be a reasonable possibility that this control deficiency or others could result in a material misstatement of our annual or interim consolidated financial statements that would not be prevented or detected on a timely basis.

The process of designing and implementing internal control over financial reporting required to comply with the disclosure and attestation requirements of Section 404 of the Sarbanes-Oxley Act will be time consuming and costly. If, during the evaluation and testing process we identify additional material weaknesses in our internal control over financial reporting or determine that the existing material weakness has not been remediated, our management will be unable to assert that our internal control over financial reporting is effective and our independent registered public accounting firm may conclude that there are material weaknesses with respect to our internal control over financial reporting. If we are unable to assert that our internal control over financial reporting is effective, or when required in the future, if our independent registered public accounting firm is unable to express an unqualified opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could be adversely affected and we could become subject to litigation or investigations by the stock exchange on which our securities are listed, the SEC, or other regulatory authorities, which could require additional financial and management resources.

An active, liquid trading market for X-energy's securities may not develop, which may limit your ability to sell such securities.

Although we intend to apply to list the Class A common stock on the Nasdaq under the ticker symbol XE, an active trading market for the Class A common stock may never develop or be sustained following this offering. The initial valuation of \$_____ per share may not be indicative of the market price of the Class A common stock that will prevail in the open market after this offering. A public trading market having the desirable characteristics of depth, liquidity and orderliness depends upon the existence of willing buyers and sellers at any given time, such existence being dependent upon the individual decisions of buyers and sellers over which neither we nor any market maker has control. The failure of an active and liquid trading market to develop and continue would likely have a material adverse effect on the value of the Class A common stock, and you may not be able to sell your Class A common stock at an attractive price or at all. An inactive market may also impair our ability to raise capital to continue to fund operations by issuing additional shares of Class A common stock.

We will have broad discretion in the use of the net proceeds we receive in this offering and may not use them effectively.

We will have broad discretion in the application of the net proceeds we receive in this offering, including for any of the purposes described in the section titled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether we are using the net proceeds appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. If we do not use the net proceeds that we receive in this offering effectively, our business, financial condition, operating results, and prospects could be harmed, and the market price for our Class A common stock could decline. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market accounts, certificates of deposit, commercial paper, and guaranteed obligations of the U.S. government that may not generate a high yield to our stockholders. These investments may not yield a favorable return to our investors.

We do not intend to pay dividends on the common stock of X-energy for the foreseeable future.

We have never declared or paid any cash dividends on the common stock of X-energy and do not intend to pay any cash dividends in the foreseeable future. Additionally, our ability to pay dividends on our common stock is limited by the restrictions under the terms of our loan and security agreement. We anticipate that for the foreseeable future we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our board of directors. Holders of our Class B common stock do not have any economic rights or any right to receive dividends, or to receive a distribution upon a liquidation, dissolution or winding up X-Energy, Inc., with respect to their Class B common stock. Accordingly, investors must rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

X-energy will incur significant transaction and transition costs in connection with the registration of securities.

X-energy will have incurred and expects to continue to incur significant, nonrecurring costs in connection with consummating the initial public offering and operating as a public company. For example, we will be subject to the reporting requirements of the Exchange Act and will be required to comply with the applicable requirements of the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC, including the establishment and maintenance of effective disclosure and financial controls, changes in corporate governance practices and required filing of annual, quarterly and current reports with respect to our business and operating results. These requirements will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. In addition, our management and other personnel will need to divert attention from operational and other business matters to devote substantial time to these public company requirements. We will also need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge and will need to establish an internal audit function. We also expect that

operating as a public company will make it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. This could also make it more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

In addition, after we no longer qualify as an “emerging growth company,” as defined under the JOBS Act, we expect to incur additional management time and cost to comply with the more stringent reporting requirements applicable to companies that are deemed accelerated filers or large accelerated filers, including complying with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act. We are just beginning the process of compiling the system and processing documentation needed to comply with such requirements. We may not be able to complete our evaluation, testing and any required remediation in a timely fashion. In that regard, we currently do not have an internal audit function, and we will need to hire or contract for additional accounting and financial staff with appropriate public company experience and technical accounting knowledge.

We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public company or the timing of such costs.

We are eligible to be treated as an emerging growth company, as defined in the Securities Act, and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our Class A common stock less attractive to investors because we may rely on these reduced disclosure requirements.

We are eligible to be treated as an emerging growth company, as defined in Section 2(a) of the Securities Act, as modified by the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised financial accounting standards until such time as those standards apply to private companies. We intend to take advantage of this extended transition period under the JOBS Act for adopting new or revised financial accounting standards.

For as long as we continue to be an emerging growth company, we may also take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including presenting only limited selected financial data and not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes Oxley Act. As a result, our shareholders may not have access to certain information that they may deem important. We could be an emerging growth company for up to five years, although circumstances could cause us to lose that status earlier, including if our total annual revenue exceeds \$1.235 billion, if we issue more than \$1.0 billion in nonconvertible debt securities during any three-year period, or if before that time we are a “large accelerated filer” under U.S. securities laws. We cannot predict if investors will find our Class A common stock less attractive because we may rely on these exemptions. If some investors find our Class A common stock less attractive, as a result, there may be a less active trading market for our Class A common stock and our share price may be more volatile.

We will incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, and particularly after we are no longer an emerging growth company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform, the Consumer Protection Act, the listing requirements of and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and make it more difficult for us to attract and retain qualified members of our board of directors.

We are evaluating these rules and regulations and cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may

evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Key members of our management team have limited experience managing a public company.

Many members of our management team have limited experience managing a publicly traded company, interacting with public company investors and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage our transition to being a public company subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These new obligations and constituents will require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, financial condition, operating results and future prospects.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. These forward-looking statements include, without limitation, statements relating to expectations for future financial performance, business strategies or expectations for X-energy's business. These statements are based on the beliefs and assumptions of the management of X-energy. Although X-energy believes that their plans, intentions and expectations reflected in or suggested by these forward-looking statements are reasonable, X-energy cannot assure you that it will achieve or realize these plans, intentions or expectations. These statements constitute projections, forecasts and forward-looking statements, and are not guarantees of performance. Such statements can be identified by the fact that they do not relate strictly to historical or current facts. When used in this prospectus, words such as "anticipate," "believe," "can," "continue," "could," "estimate," "expect," "forecast," "intend," "may," "might," "plan," "possible," "potential," "predict," "project," "seek," "should," "strive," "target," "will," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking.

Forward-looking statements in this prospectus and in any document incorporated by reference in this prospectus may include, for example, statements about X-energy, including:

- the ability to obtain and maintain the listing of the Class A common stock on the Nasdaq following this offering;
- the ability to raise financing in the future and to comply with restrictive covenants related to indebtedness;
- the future financial performance of X-energy;
- anticipated trends, growth rates, and challenges in our business and in the markets in which we operate;
- the expectations and estimates presented regarding certain illustrative unit economics, including expectations with respect to costs, revenue and sources of revenue, and gross margins;
- the anticipated timeline for the completion of the design and target delivery estimates of the Xe-100 under the ARDP;
- X-energy's ability to maintain, protect, and enhance its intellectual property;
- X-energy's ability to retain or recruit, or to effect changes required in, its officers, key employees or directors following this offering;
- X-energy's ability to comply with laws and regulations applicable to its business; and
- expansion plans and opportunities.

These forward-looking statements are based on information available as of the date of this prospectus and X-energy's management teams' current expectations, forecasts and assumptions. They involve a number of judgments, known and unknown risks and uncertainties and other factors, many of which are outside the control of X-energy and its directors, officers and affiliates. Accordingly, forward-looking statements should not be relied upon as representing X-energy's management teams' views as of any subsequent date. X-energy does not undertake any obligation to update, add or to otherwise correct any forward-looking statements contained in this prospectus to reflect events or circumstances after the date they were made, whether as a result of new information, future events, inaccuracies that become apparent after the date of this prospectus or otherwise, except as may be required under applicable securities laws.

You should not place undue reliance on these forward-looking statements in deciding how your vote should be cast or in voting your shares on the proposals set out in this prospectus. Should one or more of a number of known and unknown risks and uncertainties materialize, or should any of our assumptions prove incorrect, our actual results or performance may be materially different from those expressed or implied by these forward-looking statements. Some factors that could cause actual results to differ include, but are not limited to:

- changes in applicable laws or regulations;
- changes to applicable government policies, priorities, regulations, mandates and funding levels relating to X-energy's business with government entities;

- the impact to X-energy and its potential customers from changes in interest rates or inflation and rising costs, including commodity and labor costs;
- changes to the appropriations or funding available under the ARDP, including any failure by the U.S. government to appropriate additional funding to the ARDP, either to complete the existing award or in light of increased project costs and inflationary pressures;
- construction delays affecting the initial deployment of the Xe-100 under the ARDP;
- the ability to raise sufficient capital to fund X-energy's business plan, including limitations on the amount of capital raised in the initial public offering;
- the impact and potential extended duration of the current supply/demand imbalance in the market for high-assay low-enriched uranium;
- X-energy's business with various governmental entities being subject to the policies, priorities, regulations, mandates and funding levels of such governmental entities and being negatively or positively impacted by any change to such policies, priorities, regulations, mandates and funding levels;
- X-energy's and its commercial partners' ability to obtain regulatory approvals necessary to deploy small modular reactors in the U.S. and abroad in a timely way, or at all;
- X-energy's and its commercial partners' ability to deliver cost-competitive electricity from X-energy's small modular reactors and to deliver cost-competitive fuel for such reactors;
- the inclusion or exclusion of advanced nuclear technologies in regulatory schemes related to climate change and/or reductions in carbon emissions;
- costs related to the initial public offering;
- the ability to accurately assess costs associated with developing the Xe-100 and fuel fabrication facilities; and
- other risks and uncertainties indicated in this prospectus, including those set forth under the section of this prospectus entitled "*Risk Factors*" beginning on page [24](#).

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$ million (or approximately \$ million, if the underwriters exercise in full their over-allotment option) from the sale of shares of our common stock in this offering, assuming an initial public offering price of \$ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares from the expected number of shares of common stock to be sold by us in this offering, assuming no change in the assumed initial offering price per share, would increase (decrease) our net proceeds from this offering by \$ million. A \$1.00 increase (decrease) in the assumed initial public offering price would increase (decrease) the net proceeds to us from this offering by \$ million, assuming the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the proceeds from this offering to purchase newly issued Common Units from XERC. In the event the underwriters exercise their option to purchase additional shares of Class A common stock, we intend to use any proceeds from such exercise to purchase newly issued Common Units from XERC. The foregoing purchases of Common Units will be at a price per unit equal to the initial public offering price per share of Class A common stock in this offering, less the estimated underwriting discounts and commissions. XERC currently intends to use the net proceeds it receives from this offering for working capital and other general corporate purposes, which may include research and development and sales and marketing activities, general and administrative matters, and capital expenditures, including spending necessary for supply chain and procurement activities. We may also use a portion of the proceeds for future growth projects.

DIVIDEND POLICY

We currently expect to retain all future earnings for use in the operation and expansion of our business and have no current plans to pay dividends on our common stock. Holders of our Class B common stock are not entitled to participate in any dividends declared by our Board. The declaration, amount and payment of any future dividends will be at the sole discretion of our board of directors, and will depend on, among other things, general and economic conditions, our results of operations and financial condition, our available cash and current and anticipated cash needs, capital requirements, contractual, legal, tax and regulatory restrictions and implications on the payment of dividends by us to our stockholders or by our subsidiaries to us, including restrictions under our credit agreements and other indebtedness we may incur, and such other factors as our board of directors may deem relevant. If we elect to pay such dividends in the future, we may reduce or discontinue entirely the payment of such dividends at any time. X-Energy, Inc. is a holding company and its operations are conducted through its wholly owned subsidiaries. In the event that we do pay a dividend, we intend to cause our operating subsidiaries to make distributions to us in an amount sufficient to cover such dividend. Any additional financing arrangement we enter into in the future may include restrictive covenants that limit our subsidiaries' ability to pay dividends to us. In addition, Delaware law may impose requirements that may restrict our ability to pay dividends to holders of our common stock.

Immediately following this offering, we will be a holding company, and our principal asset will be the Common Units we purchase from XERC. If we decide to pay a dividend in the future, we would need to cause XERC to make distributions to us in an amount sufficient to cover such dividend. If XERC makes such distributions to us, the other holders of Common Units will be entitled to receive pro rata distributions. See "Risk Factors — Risks Related to Our Capital Structure — Our principal asset after the completion of this offering will be our interest in XERC, and, as a result, we will depend on distributions from XERC to pay our taxes and expenses (including payments under the Tax Receivable Agreement) and pay dividends. XERC's ability to make such distributions may be subject to various limitations and restrictions."

CAPITALIZATION

The following table sets forth the cash and cash equivalents and capitalization as of December 31, 2025 of X-Energy Reactor Company, LLC on an actual basis and of X-Energy, Inc. on a pro forma basis to reflect:

- the Transactions; and
- the sale of shares of our common stock offered by us in this offering at an assumed initial public offering price of \$ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, and the application of the net proceeds to us therefrom as described under “*Use of Proceeds*.”

You should read this table in conjunction with the information contained in “*Use of Proceeds*,” “*Summary Historical and Pro Forma Financial Information of X-energy*,” and “*Management’s Discussion and Analysis of Financial Condition and Results of Operations of X-energy*” as well as our audited consolidated financial statements and related notes, each included elsewhere in this prospectus.

	As of December 31, 2025		
	X-Energy Reactor Company, LLC	X-Energy, Inc.	X-Energy, Inc. Pro Forma
	Actual	Pro Forma	as Adjusted
Cash and cash equivalents	\$ 458,932	\$	\$
Mezzanine Equity:			
Class A Common Units	1,800		
Class B Common Units	93,353		
Series A Redeemable Convertible Preferred Units	218,408		
Series A-1 Redeemable Convertible Preferred Units	21,477		
Series B Redeemable Convertible Preferred Units	101,382		
Series C Redeemable Convertible Preferred Units	265,797		
Series C-1 Redeemable Convertible Preferred Units	686,715		
Series D Redeemable Convertible Preferred Units	677,623		
Total mezzanine equity	2,066,555		
Members’ Deficit:			
Class A common stock	—		
Class B common stock	—		
Additional paid-in-capital	12,167		
Accumulated and other comprehensive income	(117)		
Accumulated deficit	(1,236,345)		
Total members’ deficit / stockholders’ equity (deficit) attributable to X-Energy, Inc.	(1,224,295)		
Non-controlling interest	—		
Total capitalization	1,211,271		

A \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share of Class A common stock, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds that we receive in this offering and each of additional paid-in capital, total stockholders’ equity and total capitalization by approximately \$, assuming the number of shares of Class A common stock offered by us remains the same as set forth on the cover page of this prospectus and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the expected number of shares of Class A common stock to be sold by us in this offering, assuming no change in the assumed initial public offering

price, would increase (decrease) our net proceeds from this offering and each of additional paid-in capital, total stockholders' equity and total capitalization by approximately \$. The pro forma column reflects the issuance of shares of common stock of X-Energy, Inc. in connection with the contribution of X-Energy Reactor Company, LLC by its unitholders and related reorganization transactions and related cancellation of all outstanding members' equity at X-Energy Reactor Company, LLC in connection with the offering.

The table above does not include:

- shares of Class A common stock reserved for issuance upon redemption or exchange of Common Units that will be held by the Continuing Equity Owners on a one-for-one basis;
- shares of Class A common stock reserved for future issuance under the 2026 Plan, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part (which number includes shares of our Class A common stock subject to restricted stock unit awards and stock options that will be granted to certain of our employees and directors pursuant to our 2026 Plan in connection with the consummation of this offering, based upon an assumed initial public offering price of \$ per share (the midpoint of the estimated price range set forth on the cover page of this prospectus)); and
- shares of Class A common stock reserved for future issuance under the ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part.

DILUTION

The Continuing Equity Owners will own Common Units after the Transactions. Because the Continuing Equity Owners will not have any right to receive distributions from X-Energy, Inc. with regards to their Common Units, we have presented dilution in pro forma net tangible book value per share both before and after this offering assuming that all of the holders of Common Units (other than X-Energy, Inc.) had their Common Units redeemed or exchanged for newly issued shares of Class A common stock on a one-for-one basis (rather than for cash) and the transfer to the Company and cancellation for no consideration of all of their shares of Class B common stock common stock (which are not entitled to receive distributions or dividends, whether cash or stock from X-Energy, Inc.) in order to more meaningfully present the dilutive impact on the investors in this offering. We refer to the assumed redemption or exchange of all Common Units for shares of Class A common stock as described in the previous sentence as the Assumed Redemption.

Dilution is the amount by which the offering price paid by the investors of the Class A common stock in this offering exceeds the pro forma net tangible book value per share of Class A common stock after the offering. XERC's pro forma net tangible book value (deficit) as of prior to this offering and after giving effect to the other Transactions, and the Assumed Redemption was \$ million. Pro forma net tangible book value per share prior to this offering is determined by subtracting our total liabilities from the total book value of our tangible assets and dividing the difference by the number of shares of Class A common stock deemed to be outstanding after giving effect to the Assumed Redemption.

If you invest in our Class A common stock in this offering, your ownership interest in us will be diluted to the extent of the difference between the initial public offering price per share of our Class A common stock and the pro forma net tangible book value (deficit) per share of our Class A common stock after giving effect to this offering. Dilution results from the fact that the per share offering price of the Class A common stock is substantially in excess of the pro forma net tangible book value per share attributable to our existing owners.

Our pro forma net tangible book value (deficit) as of was approximately \$ million, or \$ per share of our Class A common stock. We calculate pro forma net tangible value (deficit) per share by taking the amount of our total tangible assets, reduced by the amount of our total liabilities, and then dividing that amount by the total number of shares of Class A common stock outstanding on a pro forma basis giving effect to the Reorganization Transactions.

After giving effect to (i) our sale of shares of Class A common stock in this offering at an assumed initial public offering price of \$ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and (ii) the use of proceeds therefrom, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma net tangible book value (deficit) as of would have been \$ million, or \$ per share of our Class A common stock. This amount represents an immediate increase in pro forma net tangible book value (deficit) of \$ per share of Class A common stock to our existing owners and an immediate and substantial dilution in pro forma net tangible book value (deficit) of \$ per share of Class A common stock to new investors purchasing shares in this offering.

The following table illustrates this dilution on a per share of common stock basis assuming the underwriters do not exercise their option to purchase additional shares of Class A common stock:

Assumed initial public offering price per share of Class A common stock	\$
Pro forma net tangible book value (deficit) per share of Class A common stock as of	
Increase in pro forma net tangible book value per share of Class A common stock attributable to investors in this offering	
Pro forma net tangible book value (deficit) per share of Class A common stock after giving effect to this offering	
Dilution in pro forma net tangible book value per share of Class A common stock to investors in this offering	\$

Dilution is determined by subtracting pro forma net tangible book value (deficit) per share of Class A common stock after the offering from the initial public offering price per share of Class A common stock.

Each \$1.00 increase or decrease in the assumed initial public offering price per share of Class A common stock would increase or decrease, as applicable, the pro forma net tangible book value by \$ per share and the dilution to new investors in the offering by \$ per share, assuming that the number of shares offered in this offering, as set forth on the cover page of this prospectus, remains the same. The pro forma information discussed above is for illustrative purposes only. Our net tangible book value (deficit) following the completion of the offering is subject to adjustment based on the actual offering price of our common stock and other terms of this offering determined at pricing.

The following table summarizes, on the same pro forma basis as of , the total number of shares of Class A common stock purchased from us, the total cash consideration paid to us and the average price per share of Class A common stock paid by our existing owners and by new investors purchasing shares of Class A common stock in this offering.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
	(in thousands)				
Existing owners		%	\$	%	\$
New investors in this offering					
Total		%	\$	%	\$

If the underwriters were to exercise in full their option to purchase additional shares of our Class A common stock from us, the percentage of shares of our Class A common stock held by existing owners as of would be %, the percentage of Class A common stock held by the Continuing Equity Owners would decrease to approximately % of the total number of shares of our Class A common stock outstanding after this offering and the percentage of shares of our common stock held by new investors in this offering would be %.

UNAUDITED PRO FORMA CONDENSED CONSOLIDATED FINANCIAL INFORMATION

Defined terms included below will have the same meaning as terms defined and included elsewhere in this prospectus.

The unaudited pro forma condensed consolidated financial information has been prepared in accordance with Article 11 of Regulation S-X under the Securities Act, as amended. The unaudited pro forma condensed consolidated financial information is presented to provide relevant information necessary for an understanding of X-energy upon consummation of the Company's initial public offering after giving pro forma effect to the following (collectively, the "pro forma events"):

- the amendment and cashless exercise of the 2024 Warrants in exchange for Series C-1 Preferred Units, as described in the subsequent event footnote to the Company's historical financial statements as of and for the year ended December 31, 2025, which is presented below within Other Material Adjustments;
- the Reorganization Transactions;
- the impacts associated with the Tax Receivable Agreement, as described under "Certain Relationships and Related Party Transactions — Tax Receivable Agreement;" and
- this offering and the application of the estimated net proceeds from this offering as described under "Use of Proceeds."

The unaudited pro forma condensed consolidated balance sheet as of December 31, 2025 gives effect to the pro forma events as if they had been consummated on December 31, 2025.

The unaudited pro forma condensed consolidated statement of operations for the year ended December 31, 2025 gives effect to the pro forma events as if they had been consummated on January 1, 2025.

We have derived the unaudited pro forma condensed consolidated balance sheet and the unaudited pro forma condensed consolidated statement of operations from our consolidated financial statements as of and for the year ended December 31, 2025, which are included elsewhere in this prospectus. The foregoing historical financial statements have been prepared in accordance with GAAP.

Except as otherwise indicated, the unaudited pro forma condensed consolidated financial information presented assumes no exercise by the underwriters of their over-allotment option to purchase additional shares.

As a public company, we will be implementing additional procedures and processes for the purpose of addressing the standards and requirements applicable to public companies. We expect to incur additional annual expenses related to these additional procedures and processes and, among other things, additional directors' and officers' liability insurance, director fees, additional expenses associated with complying with the reporting requirements of the SEC, transfer agent fees, costs relating to additional accounting, legal, and administrative personnel, increased auditing, tax, and legal fees, stock exchange listing fees, and other public company expenses. We have not included any pro forma adjustments relating to these costs in the information below.

The pro forma adjustments are based on available information and upon assumptions that management believes are reasonable in order to reflect, on a pro forma basis, the effect of the pro forma events on our historical financial information. The adjustments are described in the notes to the unaudited pro forma condensed consolidated balance sheet and the unaudited pro forma condensed consolidated statement of operations. The unaudited pro forma condensed consolidated financial information is presented for illustrative purposes only and do not purport to represent the results of operations or the financial position that would actually have occurred had the pro forma events been consummated on the dates assumed or to project the Company's results of operations or financial position for any future date or period.

The unaudited pro forma condensed consolidated financial information should also be read together with "Basis of Presentation — Organizational Structure," "Capitalization," "Management's Discussion and Analysis of Financial Condition and Results of Operations of X-energy," and our financial statements and accompanying notes included elsewhere in this prospectus.

Offering

The Company is offering _____ shares of common stock in this offering at an assumed initial public offering price of \$ _____ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus.

Reorganization Transactions

Reorganization Transactions refer to the organizational transactions immediately before the Offering by which (i) the eighth amendment and restatement of the XERC LLC Agreement to, among other things, effect a recapitalization in which all existing ownership interests in XERC are converted into one class of Common Units; (ii) the amendment and restatement of the X-Energy, Inc. certificate of formation to, among other things, authorize two classes of common stock; (iii) X-Energy, Inc.'s designation as managing member of XERC; (iv) X-Energy, Inc.'s acquisition of Common Units held by the Blocker Companies pursuant to the Blocker Mergers; (v) X-Energy, Inc.'s acquisition of all of the Common Units held by the Former Equity Owners (except for Management LLC, who is addressed in clauses (vi) and (vii), below) and a portion of the Common Units held by the Continuing Equity Owners, in each case, in exchange for an equal number of shares of Class A common stock; (vi) the second amendment and restatement of the Management LLC Agreement to, among other things, effect a recapitalization in which all existing ownership interests in Management LLC are converted into one class of Common Units; (vii) Management LLC's contribution of all of its Common Units of XERC to X-Energy, Inc. in exchange for an equal number of shares of Class A common stock, which shares shall remain subject to the same vesting conditions applicable to the corresponding Common Units immediately prior to such contribution and (viii) X-Energy, Inc.'s issuance to the Continuing Equity Owners of a number of shares of Class B common stock (equal to the number of Common Units held by the Continuing Equity Owners) in exchange for a nominal cash contribution made by such Continuing Equity Owners, resulting in a combined company organized in an Up-C in which substantially all of the assets and the business of the company will be held by X-Energy Reactor Company, LLC, as more fully described elsewhere in this prospectus.

Following the consummation of this offering, Continuing Equity Owners may redeem their Common Units for cash or Class A stock on a one-for-one basis.

Tax Receivable Agreement

Upon closing, we will enter into a Tax Receivable Agreement with XERC and the TRA Holders. Pursuant to the Tax Receivable Agreement, we will generally be required to pay the TRA Holders 85% of the amount of the cash tax savings, if any, in U.S. federal, state, and local taxes that are based on, or measured with respect to, net income or profits, and any interest related thereto that we realize, or are deemed to realize, as a result of the tax attributes subject to the Tax Receivable Agreement, including:

- Basis Adjustments;
- Existing Basis;
- Blocker Tax Attributes; and
- Interest Deductions.

Due to the uncertainty as to the amount and timing of future exchanges of Common Units by the TRA Holders and as to the price of our Class A common stock at the time of any such exchanges, the unaudited pro forma condensed consolidated financial information does not assume that any Continuing Equity Owners have exchanged Common Units that would create an obligation under the Tax Receivable Agreement. Therefore, no increases in tax basis in the XERC Group's assets or other tax benefits that may be realized under the Tax Receivable Agreement with respect to the Continuing Equity Owners redemption right, have been reflected in the unaudited pro forma condensed consolidated financial information. Future exchanges will result in incremental tax attributes and potential cash tax savings for us. Depending on our assessment of the realizability of such tax attributes, the arising Tax Receivable Agreement liability will be recorded at the exchange date against equity, or at a later point through income.

However, if the Continuing Equity Owners as TRA Holders were to exchange or sell us all of their Common Units, we would recognize an incremental deferred tax asset of approximately \$ _____ million and an incremental liability under the Tax Receivable Agreement of approximately \$ _____ million, assuming:

(i) all exchanges or purchases occurred on the same day; (ii) a price of \$ per share; (iii) a constant corporate tax rate; (iv) that we will have sufficient taxable income to fully utilize the tax benefits; and (v) no material changes in tax law. These amounts are estimates and have been prepared for illustrative purposes only. The actual amount of deferred tax assets and related liabilities that we will recognize will differ based on, among other things, the timing of the exchanges, the price per share of our Class A common stock at the time of the exchange, and the tax rates then in effect and certain change of control, Material Breach or early termination events occurring.

The term of the Tax Receivable Agreement will continue until all such tax benefits have been utilized or expired unless we exercise our right to terminate the Tax Receivable Agreement, in which case all obligations under the Tax Receivable Agreement will be accelerated and we will be required to make a payment to the TRA Holders in an amount equal to the present value of future payments under the Tax Receivable Agreement. This payment would be based on certain assumptions, including that we would have sufficient taxable income to fully utilize the benefits arising from the tax attributes subject to the Tax Receivable Agreement. Importantly, upon a change of control, the Tax Receivable Agreement will not terminate nor will a single, accelerated lump sum payment be due. If there is a Material Breach under the Tax Receivable Agreement, we experience a change of control (as defined in the Tax Receivable Agreement) or we elect an early termination of the Tax Receivable Agreement and do not elect to make a single, lump sum payment, our (or our successor's) future payments under the Tax Receivable Agreement for each taxable year after any such event would be calculated utilizing certain valuation assumptions, including that (i) any Common Units that have not been exchanged are deemed exchanged for the market value of the shares of our Class A common stock at the time of the change of control and (ii) X-Energy, Inc. will have sufficient taxable income to fully utilize the tax attributes covered by the Tax Receivable Agreement.

Unaudited Pro Forma Condensed Consolidated Balance Sheet
As of December 31, 2025
(in thousands)

	X-Energy Reactor Company, LLC	Other Material Transactions	Reorganization Transaction Adjustments	Subtotal	Offering Transaction Adjustments	X-Energy, Inc. Pro Forma
ASSETS						
Current assets						
Cash and cash equivalents	\$ 458,932	\$ —	\$ —	\$ —	\$ (E)	\$ (F)
Short-term investments	304,908	—	—	—	—	—
Accounts receivable	32,940	—	—	—	—	—
Unbilled receivables and contract assets	41,529	—	—	—	—	—
Prepaid and other current assets	11,491	—	—	—	—	—
Due from related parties	4,580	—	—	—	—	—
Total current assets	854,380	—	—	—	—	—
Long-term investments	261,458	—	—	261,458	—	261,458
Restricted cash	3,698	—	—	—	—	—
Property and equipment, net	50,105	—	—	—	—	—
Operating lease right-of-use-assets	22,696	—	—	—	—	—
Other long-term assets	18,934	—	—	—	—	—
Total assets	\$1,211,271	\$ —	\$ —	\$ —	\$ —	\$ —
LIABILITIES, MEZZANINE EQUITY, AND MEMBERS' DEFICIT						
Current liabilities:						
Accounts payable	\$ 3,363	\$ —	\$ —	\$ —	\$ (F)	\$ —
Accrued liabilities	51,217	—	—	—	—	—
Due to related parties	4,225	—	—	—	—	—
Total current liabilities	58,805	—	—	—	—	—
Long-term deferred revenue	15,153	—	—	15,153	—	15,153
Long-term operating lease liabilities	20,887	—	—	—	—	—
Warrant liabilities	274,166	(263,390)	(A)	(C)	—	—
Total liabilities	\$ 369,011	\$ (263,390)	\$ —	\$ —	\$ —	\$ —
Mezzanine equity						
Class A Common Units	1,800	—	—	(B)	—	—
Class B Common Units	93,353	—	—	(B)	—	—
Series A redeemable convertible preferred units	218,408	—	—	(B)	—	—
Series A-1 redeemable convertible preferred units	21,477	—	—	(B)	—	—
Series B redeemable convertible preferred units	101,382	—	—	(B)	—	—
Series C redeemable convertible preferred units	265,797	—	—	(B)	—	—
Series C-1 redeemable convertible preferred units	686,715	263,390	(A)	(B)	—	—
Series D redeemable convertible preferred units	677,623	—	—	(B)	—	—
Total mezzanine equity	2,066,555	263,390	—	—	—	—
Class A Common Stock	—	—	—	(B)	(E)	—
Class B Common Stock	—	—	—	(B)	—	—

	X-Energy Reactor Company, LLC	Other Material Transactions	Reorganization Transaction Adjustments	Subtotal	Offering Transaction Adjustments	X-Energy, Inc. Pro Forma
Accumulated deficit	(1,236,345)	—		(C)		
Accumulated other comprehensive income	(117)	—				
Additional paid-in capital	12,167	—		(B)	(E)	
				(D)	(F)	
					(D)	
Members' deficit / Total shareholders' equity (deficit) attributable to X-energy	(1,224,295)	—				
Noncontrolling Interest	—	—		(D)		(D)
Total shareholders' equity / members' deficit	(1,224,295)	—				
Total liabilities and shareholders' equity / members' deficit	\$ 1,211,271	\$—	\$	\$	\$	\$

Unaudited Pro Forma Consolidated Statement of Operations
For the Year Ended December 31, 2025
(in thousands, except share and per share amounts)

	XERC	Transaction Accounting Adjustments – Reorganization	Subtotal	Transaction Accounting Adjustments – Offering	X-energy Pro Forma
Services revenue	\$ 94,260	\$	\$	\$	\$
Grant income	14,838				
Total revenues and grant income	109,098	—		—	
Operating expenses					
Direct costs	161,367				
Selling, general and administrative	116,318				(CC)
Research and development	1,708				
Total operating expenses	279,393	—		—	
Operating loss	(170,295)	—		—	
Other income (expense)					
Interest expense	(475)				
Interest income	20,293				
Other income (expense), net	(239,301)				(BB)
Total other income (expense), net	(219,483)	—			
Net loss	(389,778)	—			
Net loss attributable to noncontrolling interest	—		(AA)		(AA)
Net loss attributable to common shareholders	\$(389,778)	\$	\$	\$	\$
Pro forma net income per share:					
Basic and diluted					\$
Weighted average shares outstanding					
Basic and diluted					

Please refer to the notes to the unaudited pro forma condensed consolidated financial information.

Notes to Unaudited Pro Forma Condensed Consolidated Financial Information

Note 1 Basis of Presentation

The unaudited pro forma condensed consolidated financial information has been prepared in accordance with Article 11 of Regulation S-X and presents the pro forma financial condition and results of operations of the Company based upon the historical financial information after giving effect to the pro forma events and related adjustments set forth in the notes to the unaudited pro forma condensed consolidated financial information.

The unaudited pro forma condensed consolidated financial information does not reflect any management adjustments for expected effects of the pro forma events.

The unaudited pro forma condensed consolidated balance sheet as of December 31, 2025, gives effect to the pro forma events as if they had occurred on December 31, 2025. The unaudited pro forma condensed consolidated statement of operations for the year ended of December 31, 2025, gives effect to the pro forma events as if they had occurred on January 1, 2025.

The unaudited pro forma condensed consolidated financial information does not give effect to any income tax benefit or expense associated with the pro forma adjustments due to the history of losses in the current and previous periods and full valuation allowance on our deferred tax assets.

Note 2 Adjustments to the Unaudited Pro Forma Condensed Consolidated Balance Sheet

The following adjustments were made related to the unaudited pro forma condensed consolidated balance sheet as of December 31, 2025:

- A. Reflects the cashless exercise of the 2024 Warrants in exchange for Series C-1 Preferred Units, which occurred in March 2026.
- B. Immediately preceding the closing, as part of the Reorganization Transactions, XERC's legacy Series A redeemable convertible preferred units, Series A-1 redeemable convertible preferred units, Series B redeemable convertible preferred units, Series C redeemable convertible preferred units, Series C-1 redeemable convertible preferred units, and Series D redeemable convertible preferred units will be converted into Class A common stock, equal to the number of Common Units retained by each, and reclassified as permanent equity.

As a result of the Reorganization Transactions, the operating agreement of XERC will be amended and restated to, among other things, modify XERC's capital structure by reclassifying each of the outstanding units in XERC into a single class of LLC Units, the Common Units.

This adjustment further reflects the acquisition of a number of shares of Class B common stock by the Continuing Equity Holders, equal to the number of Common Units retained by each, for nominal consideration.

- C. Represents the elimination of XERC's legacy warrants, which were subject to cashless exercise immediately prior to closing. The issuance of shares related to this instrument are reflected in adjustment (B).
 - D. Immediately following closing, the economic interests held by the noncontrolling interest (comprising Common Units issued at closing to Continuing Equity Owners) will be approximately %.
- The following table shows the economic interest of XERC immediately following the offering:

	Units	%
X-energy		
Other Common Units		
Total Common Units		

- E. Reflects the net effect on cash of the receipt of offering proceeds to us of \$ million, based on the sale by the Company of million shares of Class A common stock at an assumed initial public offering price of \$ per share (the midpoint of the price range set forth on the cover of this prospectus), after deducting the estimated underwriting discounts and commissions.
- F. Reflects estimated transaction costs of \$ million, including certain legal, accounting, and other related costs. Upon completion of the offering, deferred transaction costs of \$ will be charged against the proceeds from the offering with a corresponding reduction to additional paid-in capital; and transaction costs of \$ will be expensed as incurred based on the nature of the costs.

Note 3 Adjustments to the Unaudited Pro Forma Condensed Consolidated Statement of Operations

The following adjustments were made related to the unaudited pro forma condensed consolidated statements of operations for the years ended December 31, 2025:

- AA. Represents net income/(loss) attributable to the noncontrolling interest based on the ownership structure at closing, as noted at adjustment (D).
- BB. Represents the elimination of the income statement impact related to the change in fair value of XERC's legacy warrants. The elimination of these warrants, which do not survive the offering, is reflected at adjustment (A) and (C), respectively.
- CC. Represents recurring stock-based compensation expense associated with the IPO Equity Awards, which are expected to be issued at closing.

Note 4 Pro Forma Income/Loss Per Share

Represents the pro forma income/(loss) per share calculated using the weighted average shares outstanding as a result of the pro forma events, assuming the shares were outstanding since January 1, 2025. As the pro forma events are being reflected as if they had occurred at the beginning of the periods presented, the calculation of weighted average shares outstanding for basic and diluted pro forma income/(loss) per share assumes that the shares issuable relating to the pro forma events have been outstanding for the entire periods presented.

	Year Ended December 31, 2025
Pro forma basic and diluted income/loss per share	
Numerator:	
Pro forma net income/(loss)	\$
Less: Pro forma net income/(loss) attributable to noncontrolling interests	
Pro forma net income/(loss) attributable to common stockholders – basic and diluted	\$
Denominator:	
Pro forma weighted average shares outstanding of Class A common stock – basic and diluted	
Pro forma basic and diluted income/(loss) per share, Class A common stock⁽¹⁾	\$

(1) Pro forma basic and diluted income/(loss) per share of Class B common stock is not presented as these shares have no economic rights.

The computation of pro forma diluted loss per share does not assume conversion, exercise or contingent issuance of securities as their inclusion in the pro forma loss per share calculation would have been antidilutive.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS OF X-ENERGY

The following discussion and analysis of X-energy's financial condition and results of operations should be read with X-energy's audited consolidated financial statements and notes thereto included elsewhere in this prospectus. Certain of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to plans and strategy for X-energy's business, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the section "Risk Factors," X-energy's actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. Refer to the section entitled "Risk Factors" to gain an understanding of the important factors that could cause actual results to differ materially from X-energy's forward-looking statements. For more information, see the section entitled "Cautionary Note Regarding Forward-Looking Statements."

Unless otherwise indicated or the context otherwise requires, references in this section to the "Company," "we," "us," "X-energy," or "our" refer to the business of XERC for the period prior to the initial offering and X-Energy, Inc. and its subsidiaries for all periods after the initial offering.

Overview of Our Business and History

X-energy is a leading designer of advanced nuclear reactor technology (commonly referred to as small modular reactors, "SMRs") and manufacturer of advanced nuclear fuels. We believe these scalable, power generation technologies help satisfy historically unprecedented electricity demand growth, driven by the development of AI and associated data center infrastructure. Total demand for new electricity generation is expected to increase globally by 7,626 TWh from 2023 to 2030 and the challenges associated with meeting this demand have led policymakers and industry leaders to recognize nuclear energy, particularly advanced nuclear, as a key component to address this need.

Founded in 2009 by Dr. Kamal "Kam" Ghaffarian to bring clean, safe, secure and affordable technology to market, X-energy is seeking to redefine the energy industry through its flagship product, the Xe-100, an advanced small modular HTGR, in development for nearly a decade. The Xe-100 reactor is designed to generate 80 megawatts of electric power or 200 megawatts of thermal output (heat), or a combination thereof. This reactor technology builds on more than 50 years of research and development by the global nuclear industry and the operating experience of previous HTGRs including those at Peach Bottom in the U.S., and Dragon in the U.K. in the 1960s-1970s, and more recently with China's ongoing deployments of HTGRs in the 21st century.

The Xe-100 has several technological attributes that we believe make it advantaged compared to other sources of baseload generation. These include advanced safety features, virtually no direct GHG emissions during generation, high thermal output, load-following capabilities and modularity, all of which allow X-energy to more specifically meet a customer's power and/or industrial heat needs. X-energy's simple Xe-100 design directly translates into simplicity of project delivery through reduced supply chain complexity and labor intensity during construction, which we believe will lead to lower cost and faster deployment timelines when compared with conventional nuclear energy sources. X-energy has optimized the deployment of its Xe-100 into a four-reactor format that outputs 320 MWe (or 800 MWt). By deploying four independent reactor modules instead of a single unit, this optimized four-reactor configuration inherently delivers the high levels of reliability and redundancy required for both AI and industrial heat applications.

X-energy's reactors use a TRISO coated particle fuel in the form of a spherical 'pebble', called TRISO-X fuel. This pebble fuel consists of HALEU fuel kernels individually encapsulated in layers of silicon carbide and pyrolytic carbon, forming miniature containment systems that trap fission products. These particles are then embedded in a graphite matrix to make fuel pebbles that possess exceptional safety margins and compacts, enabling operations at very high temperatures. The HALEU fuel used in our TRISO-X pebble fuel is enriched to 15.5%, a higher energy density form than the less than 5% LEU fuel used in conventional nuclear reactors. Our TRISO-X fuel will be produced at our fuel fabrication facility in Oak Ridge, Tennessee. The first facility, known as TX-1, began construction in October 2024 and is expected to be completed by the first half of 2028. Upon completion, it is expected to be North America's first purpose-built commercial advanced nuclear fuel

fabrication facility. The TX-1 facility will have sufficient production capacity to support the fuel needs of the first 11 Xe-100 reactors at steady state operations.

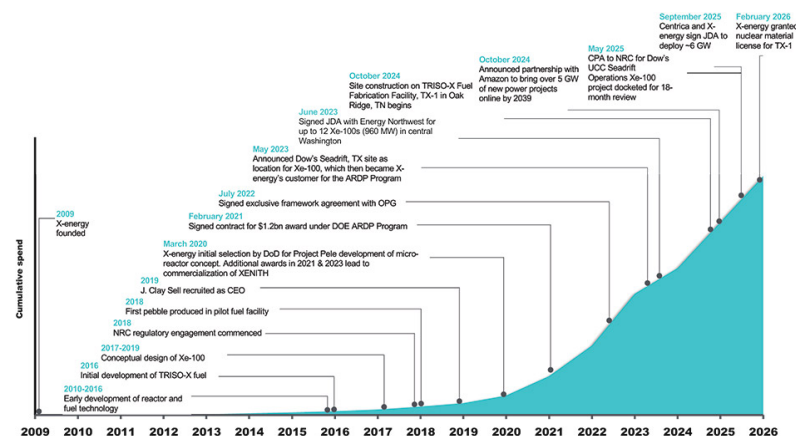
In addition to its technology leadership, X-energy has three high-quality customers in Dow, Amazon, and Centrica, who we expect will underpin the deployment of the initial fleets of Xe-100 reactors. Taken together, assuming each customer exercises its contingent rights in full, these three customers provide us with a more than 11 gigawatts electric (“GWe”), 144 reactor pipeline across the U.S. and the U.K. with advanced development efforts already underway on the first Dow project at its Seadrift Operations site in Texas and the first Amazon project in connection with Energy Northwest.

X-energy maintains a strong relationship with the DOE and in December 2020 was awarded an initial \$1.2 billion as part of its selection as one of two awardees in the ARDP, the most substantial federal commitment to deploying advanced nuclear technology. The cooperative agreement for the program, signed in February 2021, provides 50/50 cost share of \$2.4 billion of eligible costs (\$1.2 billion reimbursement) through 2027, allowing X-energy to continue work toward design, licensing, commercialization and construction of its first-of-a-kind commercial advanced nuclear plant and commercial TRISO-X fuel fabrication facility, while benefiting from decades of nuclear experience and knowledge within the DOE.

As of December 31, 2025, we have been reimbursed approximately \$438 million in funding under the ARDP. We submit our budgets through an ongoing “budget period” basis tied to project milestones under the ARDP Agreement, and our current budget covers a budget period that began in March of 2025 and extends through August 2026. We submit a Continuation Application to the DOE to extend funding into subsequent periods. Extensions beyond the current budget period are subject to DOE discretion and approval. Under the terms of the ARDP Agreement that rely on the Office of Management and Budget (OMB) guidance, the total extension of the award may not exceed three years (for a total period of performance of 10 years). Any additional extension would require an approval within DOE above the level of the Contracting Officer. If we are unable to obtain extensions and incur eligible costs beyond the currently approved period of performance, we would forgo reimbursement for such costs and may face de-obligation of unobligated funds at closeout. There can be no assurance that we will receive additional ARDP funding beyond the current budget period or that extensions will be granted.

Our organizational structure following the offering and the Reorganization Transactions is commonly referred to as an umbrella partnership-C corporation (or “Up-C”) structure. Pursuant to this structure, following this offering we will hold a number of Common Units equal to the number of our issued and outstanding shares of Class A common stock, and holders of Common Units (each, an “Continuing Equity Owner”) (other than us) will hold a number of Common Units equal to the number of our issued and outstanding shares of Class B common stock. The Up-C structure was selected in order to (i) provide our Continuing Equity Owners with an option to continue to hold their economic ownership interests in our business in “pass-through” form for U.S. federal income tax purposes through their ownership of Common Units and (ii) potentially allow our Continuing Equity Owners and us to benefit from certain net cash tax savings that we might realize in the future, as more fully described in the subsection titled “Certain Relationships and Related Party Transactions — Tax Receivable Agreement.”

Key Milestones that Transformed Our Business



- **2009:** X-energy founded by Kam Ghaffarian to bring safe, secure, clean and affordable technologies to the global marketplace.
- **2010–2011:** Early studies working with a small team of engineers and consultants on nuclear technologies.
- **2012–2014:** Onboarding expertise on HTGRs from South Africa's Pebble-bed Modular Reactor program: Dr. Martin van Staden and Dr. Eben Mulder.
- **2015–2016:** Conducted multi-dimensional trade studies on market needs, reactor size, and fuel form to refine early reactor concepts.
- **2016:** Initial development of TRISO-X pebble fuel at Oak Ridge Pilot Facility.
- **2017–2019:** Conceptual design of the Xe-100 after years of research & development.
- **2018:** NRC regulatory engagement commenced.
- **2018:** First pebble produced on commercial-scale equipment in pilot fuel facility at Oak Ridge National Lab in Tennessee.
- **2019:** J. Clay Sell appointed as CEO.
- **March 2020:** X-energy initial selection by the DOD for Project Pele development of micro-reactor concept. Across three awards (2020: \$14.3 million, 2021: \$28.7 million, 2023: \$17.5 million), X-energy received approximately \$60.0 million from the DOD which eventually lead to commercialization of XENITH microreactor. As of the date of this prospectus, the period of performance for the XENITH microreactor has expired, but the period of performance for Project Pele remains active.
- **February 2021:** Signed contract for initial \$1.2 billion award won under the DOE's ARDP.
- **July 2022:** Signed exclusive framework agreement with Ontario Power Generation for Xe-100 deployment in Canada. OPG also became an equity investor in this year.
- **May 2023:** Announced Dow's Seadrift, Texas site as location for Xe-100. Dow becomes customer for ARDP from the DOE.
- **June 2023:** Signed JDA with Energy Northwest for up to 12 Xe-100s (960 Mw) in central Washington.
- **October 2024:** Construction of TX-1 site in Oak Ridge, Tennessee commenced. Vertical construction began in **September 2025**.

- **October 2024:** Announced engagement with Amazon for options to bring over 5 GWe of new power projects online by 2039. First Amazon project identified as Energy Northwest site.
- **May 2025:** Construction permit application to NRC for Dow's UCC Seadrift Xe-100 project docketed for 18 month review timeline after March 2025 submission.
- **September 2025:** Centrica and X-energy sign JDA to deploy 6 GWe of new nuclear capacity in the U.K.
- **February 2026:** TRISO-X receives NRC Special Nuclear Material License for advanced fuel fabrication facility.

Our Business Model

We have an intellectual property-driven business model based on our reactor and fuel. We expect to derive revenues from technology licensing, services and fuel operations that span the development and operation of the reactors.

- **Reactors:** The revenue stream from reactors includes technology fees for the use of our intellectual property of the Xe-100 technology. We will not own and operate the facilities themselves, which we believe significantly reduces the amount of capital needed to operate our business.

We anticipate offering site-specific engineering and site characterization, project planning, assembly coordination, construction support, regulatory support, procurement support and long-term services to customers. Utilizing our knowledge and expertise in licensing, construction, procurement and other processes, we plan to provide customers with a full suite of value-added services during development of the nuclear power facilities. At the same time, we expect to generate long-term recurring revenue from services such as the ongoing maintenance and operator training through the anticipated 60-year life of a facility.

- **Fuel:** We intend to provide manufacturing services to customers, including producing an initial fuel load of both TRISO-X fuel and an LEU-based TRISO fuel at commissioning of a plant. We expect to generate additional long-term recurring revenue from our own proprietary TRISO-X fuel that is required to refuel plants during the anticipated 60-year life of each facility. We expect to bear limited inventory risks related to uranium or enriched uranium fuel feedstock. We intend to provide only fabrication supply services (e.g., transformation of HALEU into the final TRISO-X fuel form) for customers and assume limited risks associated with holding the uranium or enriched uranium fuel feedstock. Additionally, we will not have any responsibility for spent fuel management beyond the design of such facilities to adequately handle spent fuel during the life of the plant. During operations, spent fuel remains the responsibility of the plant operator. Thereafter, permanent spent fuel management remains the responsibility of the DOE.

Factors Affecting Our Performance

The growth and future success of our business depends on many factors. While each of these factors present significant opportunities for our business, they also pose important challenges that we must successfully address in order to sustain our growth, improve our results of operations and achieve and maintain our long-term profitability.

Our ability to commence and expand commercial operations

Our business model is dependent on our commencing and expanding commercial operations. We currently anticipate initial customer deliveries to achieve mechanical completion in the early 2030s, which we expect to take place 1-2 years ahead of commencement of operations. Commencement of nuclear construction for these projects is dependent upon finalizing and achieving design maturity, producing fuel for customers, and supporting our customers in pursuing necessary permits and licenses from the NRC. Our team of engineers, scientists, and other staff is highly motivated and committed to accomplishing these challenges. Failure to complete any one of these tasks in a timely manner could result in us being unable to begin production in the anticipated timeframe.

We are developing a global network of potential customers and supply chain partners that we expect will play an integral role in bringing our technology to market. In the near term, TRISO-X and its customers will

depend on the U.S. government for access to HALEU given the current inability to access global markets. The government and commercial enrichers are developing enrichment capabilities for future supplies. Additionally, the imposition of tariffs and impacts of inflation on raw materials or supplied components for our reactors could have a material adverse effect on our operations. Management has considered the potential economic impact of these tariffs as they relate to our suppliers and raw material needs, and believes our timeline to expand commercial operations will soften the impact these tariffs may have to the overall cost of our reactors. To the extent the U.S. government restricts our access to HALEU or otherwise fails to obtain sufficient HALEU for our needs, our ability to commence and expand commercial operations may be significantly impaired.

We have three publicly announced customers in (1) Dow, (2) Amazon, both of whom have made an equity investment in X-energy and (3) Centrica. As of the date of this prospectus, we also have a growing pipeline of customer opportunities across both power generation and industrial heat use cases across multiple geographies. We believe this growing pipeline of announced and potential customers is a demonstration of the increased market interest in, and provides external validation for, our products.

Widespread acceptance of nuclear power as an emissions-free energy source

Our growth and future success are dependent on public support for nuclear power in the U.S. and other countries where we intend to market and sell our technology, including Canada, the U.K. and certain countries in Europe and Asia, among others. Electricity demand is accelerating globally with the IEA estimating electricity consumption to grow by more than 25% from approximately 30,000 TWh in 2023 to approximately 37,000 TWh by 2030. In the U.S., electricity demand is currently driven by data center buildout from cloud computing providers, industrial growth and reshoring of manufacturing, and broader electrification (e.g., electric vehicle installed base). Given the importance of nuclear power to meeting data center expansion, Amazon, Google and Meta, among other companies, have signed a pledge to increase global nuclear capacity threefold by 2050. Industrial companies have historically relied on traditional fossil fuels such as natural gas to generate electricity and steam to power their facilities' industrial processes. In order for our business model to succeed, we will depend on energy providers sourcing a larger percentage of energy from nuclear power facilities instead of sourcing energy from fossil fuel facilities. Additionally, the market for SMRs has not yet been established, as we are one of the pioneers in the industry. As we scale and continue to invest in the capabilities of our SMRs, we expect a growing number of jurisdictions throughout the U.S. and globally to adopt SMRs as an always-on, carbon emissions-free alternative to other energy sources. As nuclear power and SMRs, in particular, gain widespread acceptance, we expect the revenue we generate from sales of our SMRs to increase.

Inflation, supply chain pressures, and rising development costs could increase our operating expenses and adversely affect our margins

We are a development and design stage company that is preparing its flagship product for market, with substantial governmental support and collaboration from a team of commercial partners. As we develop the Xe-100, TRISO-X fuel and other aspects of our business, we have been, and expect to continue to be, adversely affected by price increases from our suppliers and logistics partners as a result of inflation as well as other factors such as increased development, labor and overhead costs.

The Xe-100 and corresponding TRISO-X fuel are costly, complex and challenging to design and build. Sources of funding for the estimated cost include U.S. government funding, whether via the ARDP or other sources, and additional funding to be provided by X-energy's designated partner under the ARDP. Currently, Dow is a sub-awardee and our designated partner under the ARDP. The ARDP grant is inclusive of three different components. First, for non-recurring engineering work related to the design of the Xe-100, X-energy is responsible for the funding of such engineering work and is eligible to receive 50% reimbursement for this funding through the ARDP program. Secondly, for TRISO-X, X-energy is responsible for the funding and is eligible to receive 50% reimbursement for this funding through the ARDP program. These two ARDP-related programs are not tied to Dow's funding requirements. Finally, for the construction of the Xe-100 plant, Dow is responsible for the funding of the Xe-100 plant at the Seadrift site and is eligible to receive 50% reimbursement for this funding through the ARDP program.

Dow's current funding commitments are representative of a typical energy project development process. At present, Dow's funding is released as project milestones are reached; however, X-energy has no financial obligation to construct the plant without Dow's funding. As we are currently in preliminary design, X-energy is receiving revenues from Dow pursuant to our MPDA for services including engineering services related to the Seadrift site, NRC licensing activities, and other technology use typical of services rendered during this development phase. As project milestones are reached, Dow's funding commitments are expected to increase, as Dow will need to fund long-lead procurement and engineering services years in advance of commercial operations. X-energy has no obligation to move forward with the project without funding from Dow. If final investment decision is made, Dow is expected to continue to be responsible for the funding of the construction of the Xe-100 plant, which work is eligible under the ARDP grant for 50/50 cost share. If Dow does not make a final investment decision with respect to the Seadrift project, X-energy is under no obligation to continue funding to the Dow project or construction on the plant itself. However, in order to continue our participation in the ARDP program, we would need to identify another customer within a reasonable amount of time for the demonstration portion of the project, and failure to do so could result in significant delays, increased costs, and loss of revenue.

We continue to work with our commercial partners to seek opportunities for cost reduction associated with ARDP work. Irrespective of ARDP funding, we nonetheless expect sustained and increased inflation in the future to directly impact our operating expenses, which could ultimately impact expected gross margins across our business.

The capital expenditure for our reactors will not be included on our balance sheet.

Our ability to obtain and maintain regulatory approvals at federal, state and local levels

Our capacity for continued growth and ability to achieve and maintain profitability depends in large part on our ability to obtain and maintain regulatory approvals across multiple jurisdictions, including at the international, federal, state and local levels. The federal government, along with each state and local jurisdiction in which we operate, maintains distinct regulatory frameworks. These include laws and regulations that can directly or indirectly affect our operations and those of our customers, including matters related to real estate usage, environmental sustainability, employment and labor practices and community engagement. We believe that we have an experienced licensing team that has developed strong working relationships with the NRC and other regulators. Our success will depend on our licensing team's ability to continue to obtain and maintain Regulatory Approvals on commercially reasonable timelines. The Dow project's first Construction Permit Application ("CPA") received an 18-month review schedule, and while our engagement with the regulator to date has been constructive, future projects may experience longer time horizons or difficulties related to agency interaction due to staffing changes or shortages. The CPA was submitted in March 2025, docketed in May 2025, and the review is expected to be complete by the end of year in 2026, with receipt of the CPA anticipated in the first quarter of 2027; however, any delay in this timeline or unforeseen challenges to this or other Regulatory Approvals for us or our customers could negatively impact our business, financial condition, or results of operations. In addition, because the Dow project and future projects represent first-of-a-kind deployments, they may attract heightened scrutiny or opposition from local communities, non-governmental organizations, or advocacy groups, which could result in additional review, procedural challenges, or delays in obtaining Regulatory Approvals. We engage experienced regulatory, environmental, and stakeholder-engagement advisors to anticipate and manage such risks; however, there can be no assurance that these efforts will prevent delays, increased costs, or adverse outcomes.

At the same time, certain U.S. federal policy initiatives currently support the advancement of advanced energy, infrastructure, and domestic manufacturing projects aligned with energy abundance, security, and decarbonization objectives, which may support regulatory coordination or resource allocation.

While we operate in an industry that is subject to, and benefits from, safety and environmental regulations, such regulations have generally become more stringent over time, particularly across developed markets. While efforts have been underway in recent years to improve regulatory efficiency and costs, regulations in our target markets include nuclear safety regulations, grid interconnections and power market considerations, environmental permits and assessments, and export controls. As a company in a highly regulated industry, our margins could be particularly and adversely impacted by increasingly stringent regulatory developments or regulatory scrutiny. Regulations on nuclear energy, while historically similar across the U.S., the U.K., Canada

and the European Union, where most of our production and sales are expected, are subject to unknown and unpredictable change that could impact our ability to meet projected sales or margins. Moreover, our and our customers' ability to obtain Regulatory Approvals and comply with applicable nuclear regulatory requirements may affect our ability to market our technologies and obtain approvals in other countries.

Our dependence on government policy support and funding for nuclear energy development

Our future growth is largely dependent on our ability to continue to capitalize on government policy support and corporate investment in the nuclear energy industry.

Congress has successfully reinvigorated the U.S. nuclear industry with a concentration on four main legislative priorities: (1) The initiation of the Advanced Reactor Demonstration Program, and its associated funding, to mitigate first-of-a-kind reactor cost and schedule risks; (2) Regulatory framework reform that is more aligned with the increased safety of advanced reactors through the Nuclear Energy Innovation and Modernization Act (NEIMA) in 2019 and the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act (ADVANCE ACT) in 2024; (3) Enacting financial instruments such as Investor Tax Credits, Manufacturing Tax Credits and Production Tax Credits that are on a par with other clean energy tax credits, such as wind and solar, as included in the Inflation Reduction Act of 2022, and (4) Expanding and deploying federal credit support through the DOE's Loan Programs Office, which provides loan guarantees and other credit assistance to catalyze first-of-a-kind and large-scale nuclear projects, fuel cycle facilities, life-extension and uprate initiatives, and other qualifying nuclear infrastructure, thereby lowering the cost of capital and accelerating commercial deployment.

X-energy was selected by the DOE as an awardee under the ARDP in 2020 for one of two "demonstration" projects in the United States, and it is particularly critical to our success. The ARDP is structured as a 50/50 cost-share between the DOE and its private sector awardee for eligible costs, intended to reduce first-of-a-kind reactor risks with the goal to attract follow-on customers both domestically and in the global marketplace. More specifically, through the ARDP, X-energy is eligible to receive from the DOE approximately 50% of the cost of designing the Xe-100. X-energy is also eligible to receive approximately 50% of the cost of TX-1, its first fuel fabrication facility. Finally, X-energy's first customer to build a reactor, Dow, is eligible to receive 50% approximately of the cost to build the first Xe-100, which it will do at its Seadrift site in Texas.

Congress has appropriated funding that was allocated towards X-energy's award, in total of approximately \$1.1 billion, as well as recent additional appropriations of \$3.1 billion to ARDP, some incremental portion of which we expect to be allocated to X-energy. DOE's ability to receive the not-yet-appropriated portion of the ARDP is subject to the political process, which is inherently unpredictable and highly competitive. As of December 31, 2025, we have been reimbursed over \$438 million in funding under the ARDP. The funding of government programs is dependent on budgetary limitations, congressional appropriations and administrative allotment of funds, all of which may be affected by changes in U.S. government policies resulting from various political developments. If political support for the prioritization of the development of nuclear energy decreases, including due to policy changes by the current administration and future administrations and changing congressional funding priorities, we may be unable to secure continued government funding under the ARDP, which would adversely affect our business, development timeline, and financial condition.

Our ability to expand our services offerings

We intend to offer customers a diversified suite of services throughout the life of a project / reactor, beginning approximately eight years prior to a plant's commercial operation date. Our envisioned suite of services includes pre- and post-commercial operations date offerings, whereby we intend to provide customers with critical services related to the design, development, licensing, construction, fueling, operations and maintenance of the Xe-100. We expect that, as we refine our services offerings, first with Dow and the early Amazon and Centrica projects, the number of services we offer and the percentage of revenue we generate from our services offerings will grow. We anticipate that our services offerings will have high penetration rates across our future clients and will provide consistent, recurring revenues throughout the expected life of each reactor.

Our ability to obtain additional capital

We operate in a capital intensive industry and expect to continue to incur operating losses for the foreseeable future as we continue to expand and develop, and may need to raise additional capital in the future. If we are unable to raise additional capital when needed, we may have to delay, scale back or discontinue one or more of our lines of business. We may be required to cease operations or seek partners for our lines of business at an earlier stage than otherwise would be desirable and on terms that are less favorable than might otherwise be available. If we are unable to raise additional capital when needed, we may also be required to relinquish, license or otherwise dispose of rights to technologies or lines of business that we would otherwise seek to develop or commercialize on terms that are less favorable than might otherwise be available. If we are unable to secure additional capital when needed, we may be required to take additional measures to reduce costs in order to conserve our cash in amounts sufficient to sustain operations and meet our obligations. These measures may significantly alter our business plan and could cause significant delays in the development of our product candidates and ultimately our financial condition and ability to operate as a going concern.

Key Components of Results of Operations***Revenues and grant income***

At present, our revenues and grant income are generally derived from contract services performed for the U.S. Government and commercial entities. In the future, we expect to generate revenue through technology fees for the use of the design of the Xe-100 technology, project planning, assembly coordination, construction support, regulatory support, procurement support, long-term services to customers and the supply of fuel and associated services. Our revenues are generally derived from cost-share agreements such as the ARDP provided by the U.S. government and research and development, product development, and fuel services provided to other government agencies and commercial entities. A majority of our contracts with the U.S. government are generally subject to FAR and are competitively priced based on estimated costs of providing the contractual goods or services.

Operating expenses***Direct costs***

Direct costs include all costs directly attributable to providing services under contracts with customers and grants related to income, such as direct labor, direct materials and subcontracting costs. Indirect costs are allocated to direct costs in the same manner as such costs are defined in disclosure statements under U.S. Government Cost Accounting Standards.

Selling, general and administrative

Selling, general and administrative expenses consist of human capital related expenses for employees involved in general corporate functions; rent relating to our office space; professional fees; and other general corporate costs.

Research and development

We conduct research and development activities related to the development and improvement of technologies pertaining to nuclear reactor and fuel design engineering. The costs incurred for conducting the research and development primarily include equipment, material, and labor hours.

Other income (expense)***Interest expense***

Interest expense consists of interest paid and accrued on the Live Oak Credit Facility, Bank of New York Credit Facility, 2023 Bridge Loan, 2024 Convertible Note, and the 2024 Bridge Loan, as further discussed below, along with the amortization of deferred financing fees, costs and debt discounts.

Interest income

Interest income is related to our investment of excess cash in money market funds and debt securities.

Other income (expense), net

Other income (expense), net consists of miscellaneous income and expenses such as mark-to-market gains and losses on various instruments detailed in Note 13 — Fair Value Measurements of our audited consolidated financial statements. Other income (expense), net also consists of the gain and losses on conversion of C-1 Notes and C-2 Notes and related reclassification of other comprehensive income, losses on extinguishment of debt, gains and losses on foreign currency transactions, and other miscellaneous expenses.

Results of Operations

The following tables set forth our results of operations for the periods presented. The period-to-period comparison of financial results is not necessarily indicative of future results.

Comparison of Fiscal Years Ended December 31, 2025 and 2024

The following tables set forth our historical results for the periods indicated and the changes between periods:

(\$ in thousands)	2025	2024	\$ Change	% Change
Services revenue	\$ 94,260	\$ 83,986	\$ 10,274	12%
Grant income	14,838	36,166	(21,328)	(59)%
Total revenues and grant income	109,098	120,152	(11,054)	(9)%
Operating expenses				
Direct costs	161,367	130,115	31,252	24%
Selling, general and administrative	116,318	111,887	4,431	4%
Research and development	1,708	1,662	46	3%
Total operating expenses	279,393	243,664	35,729	15%
Operating loss Other income (expense)	(170,295)	(123,512)	(46,783)	38%
Interest expense	(475)	(16,190)	15,715	(97)%
Interest income	20,293	2,833	17,460	616%
Other income (expense), net	(239,301)	10,909	(250,210)	(2,294)%
Total other income (expense), net	(219,483)	(2,448)	(217,035)	8,866%
Net loss	<u>\$(389,778)</u>	<u>\$(125,960)</u>	<u>\$(263,818)</u>	<u>209%</u>

Revenues and grant income

Revenues and grant income decreased by \$11.1 million or 9% for the year ended December 31, 2025 from 2024. The decrease is driven by a \$19.9 million decrease in a service revenue contract with Dow to develop a small modular reactor at one of Dow's U.S. Gulf Coast sites as a result of work slowing down after the submission of the application to the NRC in March 2025 and before the start of construction, and a \$5.3 million decrease related to a service revenue contract with the DOD. This was offset by an increase of \$12.7 million increase in revenue and grant income from contracts with the DOE attributable to the ARDP Agreement with the DOE and an increase of \$3.4 million related to service revenue contract with Energy Northwest, which began during the second quarter of 2024. Total revenues and grant income for the year ended December 31, 2025 and 2024 attributable to the ARDP Agreement with the DOE, which contemplates an aggregate of \$1.2 billion in funding to support design, licensing, and commercialization of the Xe-100 and construction of the TX-1, were \$89.2 million and \$76.5 million, respectively, of which \$14.8 million and \$36.2 million, respectively were recorded within grant income. The increase in revenue and grant income from the ARDP Agreement with the DOE is due to the increase in activities and nature of services performed during the year ended December 31, 2025.

Operating expenses*Direct costs*

Direct costs increased by \$31.3 million or 24% for the year ended December 31, 2025 from 2024 primarily due to an increase of \$19.9 million in direct labor, which is driven by an increase in employee headcount and an increase in bonuses, and an increase of \$6.7 million and \$6.6 million in subcontracting costs and direct materials, respectively, which is driven by an increase in activity related to the ARDP Agreement.

Selling, general and administrative

Selling, general and administrative expenses increased by \$4.4 million or 4% for the year ended December 31, 2025 from 2024. This increase was primarily due to a \$26.8 million increase in payroll related costs due to an increase in employee headcount and a \$13.5 million increase in unit-based compensation due to new grants made during the year ended December 31, 2025. Selling, general and administrative expenses further increased by \$12.1 million due to contractor costs related to corporate projects, a \$5.5 million increase in technology costs, and a \$0.5 million increase in insurance costs.

The increase in selling, general and administrative expenses was partially offset by the absence of a \$55.3 million one-time warrant issuance cost incurred in the prior year. In the year ended December 31, 2024, the Company issued the 2024 Warrant for no consideration and without receiving any identifiable asset or benefit, requiring the fair value to be expensed immediately upon issuance.

Research and development

Research and development had an immaterial increase for the year ended December 31, 2025 from 2024.

Other income (expense)*Interest expense*

Interest expense decreased by \$15.7 million or 97% for the year ended December 31, 2025 from 2024 due to the settlement, maturity, redemption and conversion of substantially all of the outstanding debt during the year ended December 31, 2024.

Interest income

Interest income increased by \$17.5 million or 616% for the year ended December 31, 2025 from 2024 due to investment of excess cash into money market funds starting in the fourth quarter of 2024 and investment in held-to-maturity securities starting in the fourth quarter of 2025.

Other income (expense), net

Other income (expense), net, was \$239.3 million of expenses for the year ended December 31, 2025 compared to \$10.9 million of income for the year ended December 31, 2024, representing an increase in expenses of \$250.2 million, or 2,294%. The increase was primarily due to a mark-to-market loss on warrant liabilities amounting to \$223.5 million for the year ended December 31, 2025 compared to a mark-to-market gain on warrant liabilities amounting to \$7.9 million for the year ended December 31, 2024.

Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate adequate amounts of cash to meet current and future needs. Our expected primary uses of cash on a short-term and long-term basis are for working capital requirements, capital expenditures, and other general corporate services. Our primary working capital requirements are for project execution activities including purchases of materials, subcontracted services and payroll which fluctuate during the year, driven primarily by the timing and extent of activities required on new and existing projects. Management expects that future operating losses and negative operating cash flows may increase from historical levels because of additional costs and expenses related to the development of our

technology and the development of market and strategic relationships with other businesses. Consequently, our continued existence is dependent upon our ability to obtain additional capital to support our ongoing operations.

Historically, our primary source of funding to support our operations has been revenue and grant income from the ARDP Agreement, contributions and loans from members, loans from financial institutions as well as capital raises. During the year ended December 31, 2025, we successfully raised approximately \$700.0 million from issuance of our Series D Preferred Units and approximately \$53.4 million from issuance of our Series C-1 Preferred Units. During the year ended December 31, 2024, we successfully raised \$626.5 million from issuance of Series C-1 Preferred Units. While we have historically been successful in obtaining the capital necessary to support our operations, there is no assurance that we will be able to secure additional capital or other financing in the future.

We have had, and expect that we will continue to have, an ongoing need to raise additional capital from outside sources to fund our operations and expand our business. If we are unable to raise additional capital when desired, our business, financial condition, operating results and future prospects would be harmed, and we may not be able to construct the TX-1 fuel fabrication facility, support development of the Xe-100 plant or conduct other research and development or project and fulfill our current business plan, and therefore, we may need to delay or abandon these and other projects. A successful transition to attaining profitable operations depends upon achieving a level of revenue and grant income adequate to support us.

We expect that working capital requirements will continue to be funded through a combination of cash on hand, funding awarded under the ARDP, further issuances of securities, and successful capital raises. In connection with our business plan, management anticipates additional increases in operating expenses and capital expenditures relating to the development and commercialization of the Xe-100 and fuel fabrication facility. We intend to finance these expenses with further issuances of debt or equity securities. Thereafter, we expect we will need to raise additional capital and generate revenues and grant income to meet long-term operating requirements. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our equity holders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing equity holders. If we raise additional funds by obtaining loans from third parties, the terms of those financing arrangements may include negative covenants or other restrictions on our business that could impair our operating flexibility and also require us to incur interest expense.

Bank of New York Credit Facility

On July 28, 2020, we executed a credit agreement with Pershing LLC, an affiliate of Bank of New York Mellon, in the form of a revolving credit facility (the “Bank of New York Credit Facility”), which was subject to the guarantee by Ghaffarian Enterprises, who represented a related party investor. During the year ended December 31, 2024, we entered into Credit Support Fee and Subrogation Agreements (the “2024 Credit Support Fee Agreements”) with GM Enterprises, LLC and Ghaffarian Enterprises, LLC, entities affiliated with an owner and member of our Board of Directors, which increased the availability under the Bank of New York Credit Facility to \$20.0 million and extended the maturity of the credit support to March 26, 2025. In conjunction with the agreements, we agreed to pay GM Enterprises, LLC and Ghaffarian Enterprises, LLC, a monthly 12% credit support fee to be paid in-kind. Pursuant to the terms of the 2024 Credit Support Fee Agreements, we paid credit support fees and issued 562,483 Class B Common Units to GM Enterprises, LLC and Ghaffarian Enterprises, LLC. The Class B Common Units have the same rights as the Class B Profits Interests. In October 2024, we settled the outstanding principal and interest associated with the Bank of New York Credit Facility with a payment of \$20.2 million, and the Credit Support Fee Agreements were terminated. The Bank of New York Credit Facility did not have an outstanding balance as of December 31, 2024, and the facility matured with no balance on March 26, 2025.

Apart from the Bank of New York Credit Facility as disclosed above, we had the following debt outstanding during the years ended December 31, 2025 and 2024 which were settled, matured, redeemed or converted:

- *Series C-1 Convertible Notes:* During 2022, we issued a series of convertible promissory notes (“C-1 Notes”), in the aggregate principal amount of \$57.4 million with an annual interest rate of 7.00%.

Of the \$57.4 million in principal, \$37.4 million was due on March 31, 2024 and \$20.0 million was due on October 7, 2024 to a related party. On December 5, 2023, in connection with the issuance of the Series C Preferred Units, a portion of the C-1 Notes equal to \$37.4 million of principal automatically converted into 5,957,402 Series C Preferred Units at a discounted price per unit of \$7.94. On March 29, 2024, the remaining \$20.0 million principal outstanding of C-1 Notes was converted into 3,210,405 Series C Preferred Units.

- **2023 Bridge Loan:** On October 4, 2023, we entered into a credit agreement (the “2023 Bridge Loan”) with Ares Acquisition Holdings, LP, which was amended through various amendments. In connection with the amendments, the maturity date was extended to March 26, 2025. Subsequent to the initial October 4, 2023 issuance of \$10.0 million, \$14.2 million and \$25.8 million was drawn during 2024 and 2023, respectively through amendments and delayed draws. On October 11, 2024, in accordance with the 2023 Bridge Loan’s stated terms, we paid the outstanding principal and interest on the 2023 Bridge Loan of \$53.5 million, and the 2023 Bridge Loan was settled.
- **2024 Convertible Note:** On September 26, 2024, we entered into a convertible note with Amazon.com NV Investment Holdings LLC in the principal amount of \$20.0 million (the “2024 Convertible Note”). On October 11, 2024, in conjunction with the Series C-1 Preferred Units financing and in accordance with the 2024 Convertible Note’s stated terms, the outstanding principal and interest of the 2024 Convertible Note of \$20.1 million was converted into 3,097,477 Series C-1 Preferred Units.
- **2024 Bridge Loan:** On September 26, 2024, we entered into a bridge loan with Escape2, LLC, an entity affiliated with an owner and member of our Board of Directors (the “2024 Bridge Loan”), in the amount of \$3.8 million. Concurrently with the issuance of this debt, the Company issued 124,430 Class B Common Units to Ghaffarian Enterprises. On October 11, 2024, in accordance with its stated terms, the 2024 Bridge Loan was automatically redeemed, and we paid the outstanding principal and interest associated with the 2024 Bridge Loan of \$3.8 million.
- **Series C-2 Convertible Notes:** During 2022 and 2023, we issued convertible notes payable in an aggregate principal amount of \$28.0 million and \$85.0 million (“C-2 Notes”), respectively, of which \$70.0 million of the C-2 Notes were issued to related parties. The C-2 Notes were scheduled to mature on September 30, 2025 and accrue 10.0% of payable-in-kind interest annually. On October 11, 2024, a portion of the C-2 Notes with an aggregate principal balance of \$98.0 million converted into 16,960,021 Series C Preferred Units. On September 30, 2025, the remaining \$18.4 million of outstanding principal and unpaid accrued interest on the C-2 Notes were converted into 2,870,172 Series C Preferred Units.
- **Live Oak Credit Facility:** On June 14, 2021, we and one of our subsidiaries entered into a credit agreement for a revolving credit facility (the “Live Oak Credit Facility”) with Live Oak Bank. The Live Oak Credit Facility was amended various times from the date of entering into the facility till the maturity. In accordance with the Live Oak Credit Facility’s stated terms, we settled the outstanding principal associated with the Live Oak Credit Facility with a payment of \$4.1 million in October 2024. On October 31, 2024, with no outstanding borrowings, the facility matured. On May 9, 2025, we reestablished the facility, with an expiration date of December 1, 2025. There have been no draws on the facility during the year ended December 31, 2025. On December 1, 2025, with no outstanding borrowings, the facility matured.

Please refer to Note 7 — Debt of our audited consolidated financial statements included elsewhere in this prospectus for additional information.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements.

Cash Flows for the Years Ended December 31, 2025 and 2024

(\$ in thousands)	2025	2024
Net cash used in operating activities	\$(149,860)	\$ (96,159)
Net cash used in investing activities	(628,344)	(1,865)
Net cash provided by financing activities	726,130	598,340

Operating Activities

For the year ended December 31, 2025, our operating activities used \$149.9 million of net cash compared to \$96.2 million for the year ended December 31, 2024. The increase in cash used in operating activities is primarily driven by an increase in activity on the ARDP Agreement, an increase in corporate headcount, and an increase in technology and corporate contractors during the year ended December 31, 2025. These increases were partially offset by lower transaction costs compared to the prior year, which included one-time expenses related to the 2023 SPAC transaction.

Investing Activities

For the year ended December 31, 2025, our investing activities used \$628.3 million of net cash compared to \$1.9 million for the year ended December 31, 2024. The increase in net cash used in investing activities was primarily attributable to purchases of investments amounting to \$565.9 million, and a \$113.1 million increase in capital expenditures related to the construction of new facilities. This increase was partially offset by \$52.5 million in reimbursements received during the period for capital expenditures qualifying under government grant programs.

Financing Activities

For the year ended December 31, 2025, financing activities provided \$726.1 million of net cash compared to \$598.3 million for the year ended December 31, 2024. The net cash provided by financing activities the year ended December 31, 2025 was primarily due to the November 2025 issuance of Series D Preferred Units of \$700.0 million and January 2025 issuance of Series C-1 Preferred Units of \$53.4 million, offset by \$25.3 million of cash paid for issuance costs. The net cash provided by financing activities during the year ended December 31, 2024 was primarily due to the October 2024 issuance of Series C-1 Preferred Units of \$626.5 million and proceeds received from debt instruments of \$139.1 million; these increases were partially offset by repayment on debt instruments of \$152.6 million, \$10.8 million of cash paid for equity issuance costs and \$3.8 million of cash paid for debt issuance costs.

Contractual Obligations and Commitments

In addition to our contractual obligations and commitments described under “— Liquidity and Capital Resources,” we lease real estate for office space. These leases are classified as operating leases with various expiration dates through 2037. See Note 8 — Leases of our audited consolidated financial statements included elsewhere in this prospectus for more information regarding our lease commitments.

Critical Accounting Policies and Estimates

We believe that the following accounting policies involve a high degree of judgment and complexity.

Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of our operations. See Note 2 — Summary of Significant Accounting Policies and Recent Accounting Pronouncements to our audited consolidated financial statements appearing elsewhere in this prospectus for a description of our other significant accounting policies.

The preparation of our consolidated financial statements and related disclosures requires us to make estimates and judgements that affect the amounts reported in those financial statements and accompanying notes. Although we believe that the estimates we use are reasonable, due to the inherent uncertainty involved in making those estimates, actual results reported in future periods could differ from those estimates.

Revenue and Cost Recognition

The Company generated all of its services revenue from contracts with customers, a substantial portion of which was generated from contracts with the U.S. Government. A majority of the Company’s contracts with the U.S. Government are generally subject to the Federal Acquisition Regulation and are priced based on estimated costs of providing the contractual services.

The Company accounts for a contract when the parties have approved the contract and are committed to perform on it, the rights of each party and the payment terms are identified, the contract has commercial substance, and collection of substantially all of the consideration is probable.

The Company evaluates if its contracts are partially in the scope of ASC 606, Revenue from Contracts with Customers, and partially in the scope of other guidance. For contracts partially in the scope of other guidance, the Company separates and allocates the arrangement consideration to those components in accordance with ASC 606 unless the other guidance provides its own separation and allocation guidance.

At contract inception, the Company determines whether the services to be provided are to be accounted for as a single performance obligation or as multiple performance obligations. This evaluation requires professional judgment, and it may impact the timing and pattern of revenue recognition.

The Company's contracts may include variable consideration, such as adjustments to pricing based on performance or other contractual terms. Variable consideration is estimated at contract inception and updated throughout the contract term as additional information becomes available. The Company includes variable consideration in the transaction price only to the extent that it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

The Company generally recognizes revenue over time throughout the performance period as the customer simultaneously receives and consumes the benefits provided on services-type revenue arrangements. The Company satisfies its performance obligation as services are rendered. An input method is used for cost-based contracts, based on the cost of services which correspond directly with the value of the Company's performance completed to date. For fixed-fee contracts, the Company applies an input method — specifically the cost-to-cost approach — where revenue is recognized in proportion to costs incurred, reflecting progress towards complete satisfaction of the performance obligation.

Contract modifications are reviewed to determine whether they should be accounted for as part of the original performance obligation or as a separate contract. When a contract modification changes the scope or price and the additional performance obligations are at their standalone selling price, the original contract is terminated and the Company accounts for the change prospectively when the new services to be transferred are distinct from those already provided. When the contract modification includes services that are not distinct from those already provided, the Company records a cumulative adjustment to revenue based on a remeasurement of progress towards the complete satisfaction of the not yet fully delivered performance obligation.

The Company utilizes other parties in the performance of some services. Based on the Company's evaluation using a control model, the Company determined that in all of its performance obligations, it serves as a principal rather than an agent within its revenue arrangements. Revenue and the associated expenses are both reported on a gross basis within the consolidated statements of operations and comprehensive loss.

Financial Instruments and Fair Value Measurements

We estimate fair value based on assumptions that active market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs. Fair value measurements are categorized according to the criteria below based on the lowest level of input that is significant to the overall fair value measurement of the instrument:

- Level 1 inputs: Quotes prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date;
- Level 2 inputs: Inputs other than quoted prices included within Level 1 inputs that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs: Unobservable inputs for the asset or liability. These are used to measure fair value to the extent those observable inputs are not available, thereby allowing for situations in which there is minimal, if any, market activity for the asset or liability at the measurement date.

Recent Accounting Pronouncements

Please refer to Note 2 — Summary of Significant Accounting Policies and Recent Accounting Pronouncements of our audited consolidated financial statements included elsewhere in this prospectus for additional information.

Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in foreign currency exchange rates and interest rates. Information related to quantitative and qualitative disclosure about this market risk is set forth below.

Foreign Currency Exchange Risk

Currency exchange rate fluctuations may impact our results of operations and cash flows. Foreign currency translation gains and losses arising primarily from changes in exchange rates on foreign currency transactions and balances are not hedged and are recorded in other expenses, net in the consolidated statements of operations and comprehensive loss. We do not trade in financial instruments for speculative purposes. Business is generally transacted in a single currency not requiring meaningful currency transaction costs. As such, a 10% or greater move in exchange rates versus the U.S. dollar would not have a material impact on our financial results and position.

Interest Rate Risk

The Company had no debt instrument outstanding during the year ended December 31, 2025 with variable interest rates. However, during the year ended December 31, 2024, two debt instruments were outstanding which were subject to a floating interest rate, the Bank of New York Credit Facility and Live Oak Credit Facility. Neither debt instrument had an outstanding balance at December 31, 2024. As of December 31, 2025 and 2024, we did not have any interest rate swaps. As no amounts were drawn on December 31, 2025 and 2024, a 10% movement in the variable rate on our indebtedness would not have a material impact on our financial results and position.

We had cash and cash equivalents of \$458.9 million and \$514.6 million as of December 31, 2025 and 2024, respectively. Cash and cash equivalents consist of cash deposits, cash held in financial institutions and short-term investments, including debt securities purchased with an original maturity of three months or less. Our cash and cash equivalents are held for working capital purposes. We also had investments in debt securities, which are classified as held-to-maturity, of \$566.4 million as of December 31, 2025 consisting of corporate bonds, U.S. government treasury bills, commercial paper and certificates of deposit and foreign issuer debt securities. Such interest-earning instruments carry a degree of interest rate risk. The primary objectives of our investment activities are the preservation of capital, the fulfillment of liquidity needs, and the fiduciary control of cash. We do not enter into investments for trading or speculative purposes. A 10% change in interest rates during any of the periods presented would not have had a material impact on our consolidated financial statements as of December 31, 2025 and 2024.

NUCLEAR INDUSTRY OVERVIEW

This section includes industry and market data, including our general expectations and market position, market opportunity and market size, as well as future growth rates relating to our market opportunity and the industry and markets in which we operate, that is based on industry publications and other published industry sources prepared by third parties. Although we believe the industry and market data to be reliable as of the date of this prospectus, this information could prove to be inaccurate. Moreover, projections, assumptions and estimates of the future performance of the industry in which we operate, including future growth rates and related estimates, forecasts and projections relating to the industry in which we operate and our market position, market opportunity and market size, are prospective in nature. Any such projections, assumptions and estimates are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the sections captioned “Risk Factors” and “Cautionary Note Regarding Forward-Looking Statements” elsewhere in this prospectus. These and other factors could cause any such projections, assumptions and estimates, to differ materially from those expressed in the projections, assumptions and estimates made by third parties and by us and you are cautioned not to give undue weight to such projections, assumptions and estimates. See “Market and Industry Data” for further information and important limitations and uncertainties regarding the industry and market data we present.

Evolution of Generation IV nuclear fission technologies

The existing nuclear fleet in the U.S. is largely considered “Generation II”, and consists of Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs), making up about 2/3rd and 1/3rd of the fleet, respectively. Both produce steam directly inside the reactor vessel to power the turbine, with condensed steam recycled back into the core. Newer “Generation III” systems, all Advanced Boiling Water Reactors and predecessor to Gen III+, were brought online in the 1990s, when few new nuclear reactors were built globally. No Gen III plants are in service in the U.S.

Small modular reactors have become more advanced as close following “Generation III+” reactor designs come online, including the AP1000 at Vogtle Units 3 and 4, offering significant improvements in safety with the introduction of passive safety features. Gen III+ includes both large conventional reactors and SMRs that adopt similar new safety features into a smaller, more compact design, generally considered to be around 10 MW to around 300 MW in size.

Advanced nuclear reactor technologies considered Gen IV are differentiated by their cooling methods and fuels that offer advantages in performance, safety and use cases (e.g., higher heat for industrials). The Xe-100 is considered a Generation IV reactor, but is based on decades of research that have brought these non BWR/LWR-based design concepts to commercialization. These technologies include:

High Temperature Gas-cooled Reactor: A Generation IV design using helium coolant and graphite moderator, operating at 700-950 °C. Fuel uses coated particle technology for high safety margins. Produces both electricity and industrial process heat. Modular HTGRs emphasize passive safety, low use and versatile energy applications. Currently, only China has commercially deployed HTGR technology. China’s HTR-PM project was formally launched in 2001, with basic design completion in 2008, and commercial operation in 2021 at Shidaowan. It is a 210 MWe demonstration plant consisting of two modular 250 MWt pebble-bed HTGR units.

Sodium-Cooled Fast Reactor: A fast-spectrum reactor cooled by liquid sodium, allowing efficient neutron economy and closed fuel cycles. Operates at near-atmospheric pressure with high thermal conductivity. Enables actinide recycling, reducing long-lived waste. Challenges include sodium’s reactivity with air/water. Demonstration reactors exist globally, with Generation IV designs targeting sustainability and safety.

Lead-Cooled Fast Reactor: Uses molten lead or lead-bismuth eutectic as coolant in a fast neutron spectrum. Offers excellent passive safety, high boiling point, and corrosion resistance. Capable of long refueling intervals and creating, or breeding, fuel. Challenges include structural material compatibility and coolant handling.

Molten Salt Reactor: Employs liquid fluoride or chloride salt as coolant, with fuel dissolved in salt or in solid form. Operates at low pressure and high temperatures (around 700 °C), enhancing efficiency and safety.

Compatible with thorium fuel cycles and actinide recycling, which reduces the radioactivity and half-life of the nuclear waste. MSRs offer inherent safety features but face material and chemistry challenges.

Supercritical Water-Cooled Reactor: A high-efficiency design using water above its critical point (around 374 °C, 22 MPa) as coolant and moderator. Achieves thermal efficiencies greater than 45% with simpler, once-through steam cycle. Operates in thermal or fast neutron spectra. Challenges include material durability under extreme conditions.

Gas-cooled Fast Reactor: GFRs use helium as coolant and operate with a fast neutron spectrum. Core materials are advanced ceramic composites, tolerating outlet temperatures around 850°C. GFRs aim for high efficiency, closed fuel cycles, and hydrogen production. The design faces challenges in fuel development, decay heat removal, and structural material resilience.

See below for a comparison table across Generation IV reactors compiled by the U.K.'s Nuclear Innovation and Research Office (NIRO) as an objective view of the different advanced reactor concepts.

	HTGR	SFR	LFR	MSR	SCWR	GFR
Timescales for delivery	Very high	Very high	Medium	Medium	Low	Low
Heat	Very high	Medium	Medium	High	Medium	High
Safety	Very high	Medium	Medium	Medium	Low	Low
Security	Very high	Medium	Medium	Medium	Medium	Medium
Economic Cost	High	Medium	Medium	Medium	Medium	Medium
Deployability	High	High	High	High	Medium	High
Adaptability	High	High	High	Very high	Medium	High
Waste & Environment	Medium	High	High	High	High	Very high
International	Very high	High	Medium	Medium	Low	Low

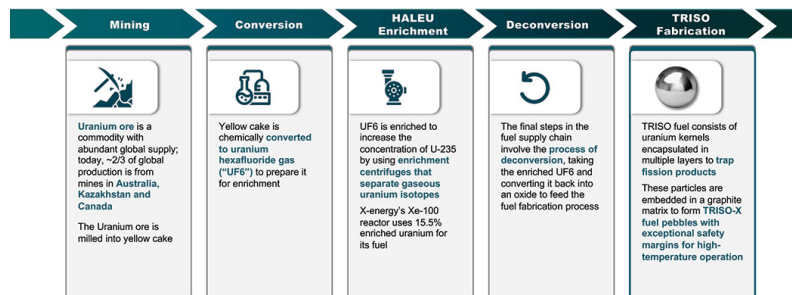
Note: A higher performing system scores a higher number. For example, with economic cost a low-cost system would score 'very high' and a high-cost system would score 'low.'

Fuel value chain overview

The supply chain for nuclear fuel is dependent on a select few countries that contribute uranium ore and enrichment capabilities. Uranium ore reserves are concentrated in deposits across the world with about two-thirds of the global production of uranium ore coming from mines in Australia, Kazakhstan and Canada. Once the uranium ore is mined and refined it needs to be enriched. Only nine countries have commercial enrichment capabilities: Russia, the U.K., Germany, Netherlands, the U.S., France, China, Japan and Brazil. The enrichment process is a critical step in the nuclear fuel cycle that enables nuclear energy generation and depends on the following critical steps: (i) Uranium ore is mined from both surface and underground mines, (ii) Uranium ore is milled into yellow cake, (iii) Yellow cake is chemically converted to uranium hexafluoride gas ("UF₆") to prepare it for enrichment, (iv) UF₆ is enriched to increase the concentration of U-235 by using enrichment centrifuges that separate gaseous uranium isotopes. There are three categories of enriched uranium, LEU with enrichment of less than 5%, HALEU with enrichment between 5% – less than 20% and High Enriched Uranium ("HEU") with enrichment of greater than or equal to 20%. X-energy's Xe-100 reactor uses 15.5% enriched uranium for its fuel. The final steps in the fuel supply chain involve the process of deconversion, fabrication of fuel pellets, kernels and assembly into final fuel forms (e.g. TRISO pebbles, compacts) and final fuel configurations which are then used to produce nuclear energy.

Conventional nuclear reactors based on Generation II and III technology such as PWRs and BWRs use LEU for fuel to generate electricity. There is currently a greater supply of LEU-based fuel due to market

demand, government support, and a simpler enrichment process to achieve a lower (less than 5%), level of enrichment, and because of this, there is an established global supply chain for this type of fuel. Generation IV technologies including Advanced Small Modular Reactors use HALEU as input for fuel and certain Generation IV reactors, including the Xe-100, rely on a specific HALEU-based fuel called TRi-structural ISotropic fuel (TRISO) to generate electricity.



Differentiation for HTGRs among SMR and Gen IV technologies

Benefits of TRISO fuel

TRISO fuel was developed in the 1960s in the U.K. and Germany for High Temperature Gas-cooled Reactors and was later adopted in the U.S. for research during the 1970s-1980s. The DOE revived the fuel in the 2000s under the Advanced Gas Reactor Fuel Development Program to support research efforts for the next generation reactors. Current TRISO fuel production in the U.S. is limited to R&D and low-volume production for DOE reactor demonstration programs. This is being expanded through new government efforts to secure a U.S.-based uranium enrichment supply chain that will enable additional fuel form production. First, the U.S. government plans to bridge the supply of HALEU until private enrichment plants can operate at scale. Second, private actors such as Centrus and Urenco are being supported by DOE cost-sharing contracts to accelerate commercial operation. DOE's stated goal for such commercial efforts is for plants to come online as early as 2027.

TRISO fuel consists of uranium fuel kernels individually encapsulated in multiple layers of pyrolytic carbon and silicon carbide, forming miniature containment systems that trap fission products. These particles are then embedded in a graphite matrix to make fuel pebbles and compacts that possess exceptional safety margins and compacts, enabling operations at very high temperatures.

Additional benefits of TRISO fuel include:

- high fuel efficiency that can achieve a 19% maximum burnup rate which is around 4x higher than current LEU yields and significantly higher than other HALEU-based fuels including uranium nitride which have burnup rates of up to 8%, allowing reactors to run longer between refueling and reduce overall downtime;
- longer operational life of reactors due to the fuel's durable structure and resistance to neutron irradiation, corrosion and oxidation;
- robust structure as TRISO pebbles are manufactured to withstand high temperatures and cannot melt down as well as prevent the release of radioactive nuclear materials due to its advanced coating structure;
- versatile fuel form as it can be used for various reactor technologies including High Temperature Gas-cooled, Molten Salt and Micro reactors;
- can be made from both LEU and HALEU; and

- complex and layered fuel design that makes it more difficult for enriched uranium proliferation.

Benefits of Helium as a Coolant

While other gases have been investigated, helium has emerged as the coolant of choice for HTGRs through decades of research on the properties of the gas that make it uniquely suited for the high temperature safety requirements. As a noble gas, helium's chemical inertness, prevents corrosion of reactor components and ensures long-term structural integrity. It aids in efficient heat transfer and doesn't become radioactive under neutron exposure. As it remains in gaseous form throughout all operating temperatures of the reactor, the use of helium eliminates concerns about phase changes and thermal stress on the reactor components. Helium is also transparent and non-toxic, enabling easier visual inspection and safety use cases for the reactor serving lifetime. With a helium outlet temperature of 750°C in the Xe-100 HTGR design, the use of helium enables significantly higher steam production temperatures than conventional reactors.

BUSINESS

Unless the context otherwise requires, all references in this section to the “Company,” “X-energy,” “we,” “us” or “our” refer to the business of X-Energy, Inc. collectively.

OVERVIEW

Our company

X-energy is a leading designer of advanced nuclear reactor technology (commonly referred to as small modular reactors, “SMRs”) and manufacturer of advanced nuclear fuels. We believe these scalable, power generation technologies help satisfy historically unprecedented electricity demand growth, driven by the development of AI and associated data center infrastructure. Total demand for new electricity generation is expected to increase globally by 7,626 TWh from 2023 to 2030 and the challenges associated with meeting this demand have led policymakers and industry leaders to recognize nuclear energy, particularly advanced nuclear, as a key component to address this need.

Founded in 2009 by Dr. Kamal “Kam” Ghaffarian to bring clean, safe, secure and affordable technology to market, X-energy is seeking to redefine the energy industry through its flagship product, the Xe-100, an advanced small modular HTGR, in development for nearly a decade. The Xe-100 reactor is designed to generate 80 megawatts of electric power or 200 megawatts of thermal output (heat), or a combination thereof. This reactor technology builds on more than 50 years of research and development by the global nuclear industry and the operating experience of previous HTGRs including those at Peach Bottom in the U.S., and Dragon in the U.K. in the 1960s-1970s, and more recently with China’s ongoing deployments of HTGRs in the 21st century.

The Xe-100 has several technological attributes that we believe make it advantaged compared to other sources of baseload generation. These include advanced safety features, virtually no direct GHG emissions during generation, high thermal output, load-following capabilities and modularity, all of which allow X-energy to more specifically meet a customer’s power and/or industrial heat needs. X-energy’s simple Xe-100 design directly translates into simplicity of project delivery through reduced supply chain complexity and labor intensity during construction, which we believe will lead to lower cost and faster deployment timelines when compared with conventional nuclear energy sources. X-energy has optimized the deployment of its Xe-100 into a four-reactor format that outputs 320 MWe (or 800 MWt). By deploying four independent reactor modules instead of a single unit, this optimized four-reactor configuration inherently delivers the high levels of reliability and redundancy required for both AI and industrial heat applications.

X-energy’s reactors use a TRISO coated particle fuel in the form of a spherical ‘pebble’, called TRISO-X fuel. This pebble fuel consists of HALEU fuel kernels individually encapsulated in layers of silicon carbide and pyrolytic carbon, forming miniature containment systems that trap fission products. These particles are then embedded in a graphite matrix to make fuel pebbles that possess exceptional safety margins and compacts, enabling operations at very high temperatures. The HALEU fuel used in our TRISO-X pebble fuel is enriched to 15.5%, a higher energy density form than the less than 5% LEU fuel used in conventional nuclear reactors. TRISO-X fuel will be produced at our fuel fabrication facility in Oak Ridge, Tennessee. The first facility, known as TX-1, began construction in October 2024 and is expected to be completed by the first half of 2028. Upon completion, it is expected to be North America’s first purpose-built commercial advanced nuclear fuel fabrication facility. The TX-1 facility will have sufficient production capacity to support the fuel needs of the first 11 Xe-100 reactors at steady state operations.

In addition to its technology leadership, X-energy has three high-quality customers in Dow, Amazon, and Centrica, who we expect will underpin the deployment of the initial fleets of Xe-100 reactors. Taken together, assuming each customer exercises its contingent rights in full, these three customers provide us with a more than 11 gigawatts electric (“GWe”), 144 reactor pipeline across the U.S. and the U.K. with advanced development efforts already underway on the first Dow project at its Seadrift Operations site in Texas and the first Amazon project in connection with Energy Northwest.

X-energy maintains a strong relationship with the DOE and in December 2020 was awarded an initial \$1.2 billion as part of its selection as one of two awardees in the ARDP, the most substantial federal

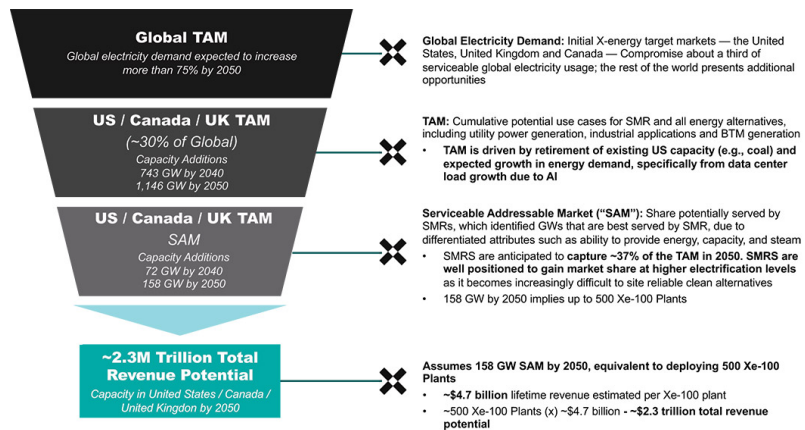
commitment to deploying advanced nuclear technology. The cooperative agreement for the program, signed in February 2021 (the “ARDP Agreement”), provides 50/50 cost share of \$2.4 billion of eligible costs (\$1.2 billion reimbursement) through 2027, allowing X-energy to continue work toward design, licensing, commercialization and construction of its first-of-a-kind commercial advanced nuclear plant and commercial TRISO-X fuel fabrication facility, while benefiting from decades of nuclear experience and knowledge within the DOE.

As of December 31, 2025, X-energy has been reimbursed approximately \$438 million in funding under the ARDP Agreement. We submit our budgets through an ongoing “budget period” basis tied to project milestones under the ARDP Agreement, and our current budget covers a budget period that began in March of 2025 and extends through August 2026. We submit a Continuation Application to the DOE to extend funding into subsequent periods. Extensions beyond the current budget period are subject to DOE discretion and approval. Under the terms of the ARDP Agreement that rely on the Office of Management and Budget (OMB) guidance, the total extension of the award may not exceed three years (for a total period of performance of 10 years). Any additional extension would require an approval within DOE above the level of the Contracting Officer. If we are unable to obtain extensions and incur eligible costs beyond the currently approved period of performance, we would forgo reimbursement for such costs and may face de-obligation of unobligated funds at closeout. There can be no assurance that we will receive additional ARDP funding beyond the current budget period or that extensions will be granted.

Our Market Opportunity

Load growth is accelerating globally with the IEA estimating electricity consumption to grow by more than 25% from approximately 30,000 TWh in 2023 to approximately 37,000 TWh by 2030. In the U.S., power demand is being driven by the increasing data center buildout from cloud computing providers, industrial growth and reshoring of manufacturing, and broader electrification (e.g., electric vehicle installed base). Other sources (BNEF New Energy Outlook 2025) also indicate that power demand is being driven by growing load growth demand from AI and industrial use. Policymakers and industry leaders recognize that nuclear, particularly advanced nuclear, will be a key contributor to meeting this load growth and securing America’s energy independence, with the stated goal of the current federal administration to expand U.S. nuclear capacity to 400 GWe by 2050 (from approximately 97 GWe at present).

We believe the market for SMRs is vast and that X-energy is well positioned to capture this opportunity. According to a 2024 report from PA Consulting, the U.S., the U.K. and Canada, X-energy’s planned core markets, comprise approximately one-third of potentially serviceable global electricity usage. Across these three geographies, there is an estimated TAM of cumulative capacity additions of 743 GWe and 1,146 GWe by 2040 and 2050, respectively. Of this TAM, PA Consulting estimates 72 GWe in 2040 and 158 GWe in 2050 will be best served by SMRs based on needs, siting efficiencies, and demand for co-generation. These capacity additions, across a representative set of SMR use cases including powering data centers, utility power generation, industrial applications and BTM generation, implies a potential need for approximately around 1,975 Xe-100 reactors (the equivalent of 494 four-reactor deployments), or an estimated \$2.3 trillion market opportunity for X-energy in 2050.



We believe the following secular movements will continue to support the use cases and power needs for scalable, firm, clean baseload power that SMRs, particularly the Xe-100, can deliver.

- **Demand for AI is Prompting Investment in Nuclear Power Generation.** Cloud computing providers and AI companies are deploying capital across data center infrastructure to keep up with the growing computing demand required by AI. As part of this expansion, electricity demand in the U.S. from data centers is expected to grow from approximately 108 TWh in 2020 to approximately 426 TWh by 2030. Since data center facilities must be continuously powered, nuclear generation can provide a key solution for reliable supply. SMRs are particularly well suited to meet the average 300 MW to 1,000 MW power capacity that data centers require. SMRs have a smaller physical footprint to meet siting requirements, and have modular scalability which provides the flexibility to meet facility-specific capacity needs.
- **High Carbon-Intensity Industrials Require Replacement for Industrial Heat and Steam Production.** Industrial companies have historically relied on fossil fuel fired boilers to generate electricity and steam for their industrial processes. The current installed base of industrial boilers operates below capacity and is frequently offline for maintenance. The current fleet is facing a near-term replacement cycle due to age. For industrial processes requiring consistent steam availability, X-energy's HTGR solution can reliably provide industrial steam in addition to onsite power. With an expected capacity factor of 95%, X-energy's SMR presents a compelling replacement opportunity for aging infrastructure to both decarbonize and achieve greater reliability.
- **Current Alternatives Are Not Well-Suited to Deliver Reliable, Uninterrupted, Clean, and Co-Located Power.**
 - **Renewables with or without energy storage** — Solar and wind generation have relatively low-capacity factors (i.e., the actual energy output in a given period of time relative to its theoretical maximum output) of 23% and 33% (EIA) respectively, since they only produce power when the sun is shining or the wind is blowing. Addressing this inherent intermittency issue would require the integration of large-scale battery energy storage systems or supplementary dispatchable generators for the production capacity of these renewables to even be comparable with the anticipated 95% capacity factor of our reactor. Large-scale deployment of battery storage is complicated by global supply chain availability and incremental cost.
 - **Conventional fossil fuel generation with or without carbon capture** — Standalone fossil fuel fired generation can deliver capacity factors similar to those of nuclear power but often require backup generation when maintenance takes key assets offline. Conversely, the Xe-100 can deliver critical redundancy due to its modular nature which results in a reliability advantage without requiring

grid redundancy. Further, many consumers and governments have climate targets, giving SMRs (with virtually no direct GHG emissions from energy generation) a distinct advantage over carbon-intensive alternatives such as coal, oil, and natural gas generation, which would require pairing them with expensive carbon capture solutions to try to meet climate targets.

- **Traditional Nuclear Power** — Large-scale nuclear, while typically operating around-the-clock (other than planned outage maintenance and refueling cycles, as compared to the Xe-100's online refueling), requires a large footprint and has consistently suffered from historical project delays and cost overruns. By contrast, advanced nuclear requires a much smaller operating footprint, on average about 1/4th to 1/10th that of a traditional nuclear plant. Additionally, HTGR sites in the U.S. will require a significantly smaller safety zone radius (400 meters versus 16 kilometers) because of built-in passive safety features. These safety characteristics enable lower costs and more compact designs due to a reduction in the quantity of concrete and steel safety infrastructure. The smaller overall footprint of SMRs allows co-location with new power demand hubs, and the modular nature of the Xe-100 enables scalable power output through additional on-site reactors to match specific needs.
- **Ongoing Support from the U.S. Government Beyond the ARDP.** Support for nuclear power has been increasing over the past decade with billions of additional dollars being allocated to nuclear energy through recent energy-related legislation. For instance, the OBBBA, signed in July 2025, maintained tax credits that were first introduced as part of the Energy Policy Act of 2005 and later expanded under the Inflation Reduction Act for nuclear projects. Additionally, the U.S. President issued four Executive Orders in May 2025, including support for the acceleration of regulatory review for advanced nuclear reactors and promotion of investment in a domestic nuclear supply chain. We believe these broader initiatives, building from U.S. nuclear policy precedent, will provide long-term support for advanced nuclear reactors like the Xe-100.
- **Investing in a Domestic HALEU Supply.** Establishing a domestic HALEU supply for the growing advanced nuclear reactor market in the U.S. is a top priority for the U.S. Government. Through the Energy Act of 2020 Congress established the HALEU Availability Program and has authorized the DOE to support the availability of HALEU available for civilian use (e.g., initial ARDP core loads) until commercial supply chains are in place. The program provides market support through a revolving fund structure that supports offtake commitments and is intended to help jump-start enrichment services and HALEU production, stimulate private investment, and support the development of a commercial-scale U.S. domestic fuel supply chain encompassing uranium mining, conversion, enrichment, fuel fabrication, and transportation. Congress has appropriated approximately \$3.4 billion in funding authority for these activities.

Key public-private partnerships established under the HALEU Availability Program include enrichment services with companies Centrus Energy, Urenco, Orano and General Matter. DOE will place orders through Indefinite Delivery / Indefinite Quantity contracts under a 10-year framework to provide enrichment services for the DOE. Centrus is already producing approximately 1 MTU of HALEU per year through its pilot cascade at Piketon, Ohio, and has indicated that it has the capability to add additional cascades over time, enabling scalable increases in HALEU production as demand and funding allow. By the first quarter of 2029, Centrus has stated its objective to increase production to up to 6 MTU of HALEU annually. The DOE has recently announced the initial allocation of HALEU to select SMR developers, with X-energy receiving the first tranche equivalent of 4 MTU. The HALEU Availability Program is expected to provide X-energy a total supply of around 7.6 MTU, enough for X-energy's first Xe-100 plant with Dow. Consistent with these objectives, in January 2026, the DOE announced an additional \$2.7 billion in awards to strengthen domestic uranium enrichment services over a ten-year period, subject to contractual milestones and continued appropriations. These awards are intended to expand U.S. capacity for low-enriched uranium ("LEU") and to accelerate the development of new HALEU supply chains, with funding distributed through milestone-based task orders. The DOE awarded enrichment task orders with an estimated worth of \$900 million each to Centrus Energy's American Centrifuge Operating, General Matter, and Orano Federal Services to support the creation or expansion of domestic LEU and HALEU enrichment capacity, as well as additional funding to advance next-generation enrichment technologies. DOE also issued a smaller award of \$28 million Global Laser Enrichment ("GLE") to continue advancing next-generation

uranium enrichment technology. GLE is currently undergoing licensing review with the NRC for an enrichment facility to be located in Kentucky, Centrus intends to expand out its American Centrifuge Plant for commercial operations, and General Matter and Orano Federal Services plan to build new enrichment plants in Kentucky and Tennessee, respectively.

Urenco USA is currently the only commercial enrichment plant operating in the United States, but has not yet expanded its operations to include HALEU production. Urenco USA has indicated that it is working with the NRC to amend its license for HALEU enrichment, with expansion and production targeted for the early 2030s. In parallel, Urenco Ltd., headquartered in the UK and the parent company of Urenco USA, is advancing HALEU enrichment capabilities in the UK with support from the UK government. In May 2024, the UK government announced funding of approximately GBP196 million to support the construction of a HALEU-capable enrichment facility at Urenco's Capenhurst site in northwest England. Urenco has indicated that this facility is intended to have the capacity to produce up to approximately 10 metric tons of HALEU per year and to be commercially available by approximately 2031, subject to regulatory approvals, project execution, and continued government support. If successfully developed, these efforts could contribute to diversifying global HALEU supply and reducing reliance on foreign sources, although availability, timing, and eligibility for specific projects will depend on applicable regulatory, commercial, and policy considerations.

The DOE is also researching advanced fuel cycle and spent fuel recycling technologies to support long-term energy security and advanced reactors, although the United States does not currently recycle commercial spent fuel and any future deployment would require significant policy, regulatory, and technological developments.

- **Advanced Reactors Can Provide Supplemental Power to the Grid.** Several utilities have identified value-add opportunities to use SMRs, like the Xe-100, for power generation to meet the growing electricity demand from their customers. A few examples in North America include the following: the Tennessee Valley Authority and Canadian Ontario Power Generation have each advanced regulatory proceedings for SMR projects within their respective jurisdictions, with Ontario Power Generation receiving a nuclear power reactor construction license from the Canadian Nuclear Safety Commission in April 2025; Dominion Energy is evaluating potential scenarios for SMR development, including publicly discussed concepts involving multiple units beginning in the mid-2030s; Constellation Energy is engaging with customers regarding potential SMR deployments at certain existing sites, increasing deployment speed and efficiency by avoiding certain grid connections, security infrastructure, and other incremental requirements for nuclear deployments; and in late-2025, Duke Energy filed an early site permit (ESP) application with the NRC for a potential SMR project in North Carolina to replace aging coal-fired units at the existing power generation facility.

SMRs like the Xe-100 are attractive to utilities for several reasons including:

- i. **Targeted Incremental Load Growth.** Load growth in many areas of the U.S. does not support the need for very large, centralized capacity additions that traditional nuclear LWRs provide, but rather, requires more incremental, distributed capacity that SMRs are able to provide. SMRs, because of their smaller, configurable capacities, allow for better matching of incremental load needs to more rapidly supplement existing facilities and benefit from existing site infrastructure.
- ii. **Safety Case and Relatively Smaller Operational Footprint.** Due to the smaller operational footprint relative to alternatives, SMRs can be sited on existing, soon to be retired, or retired power plant locations. In doing so, utilities can benefit from existing approved siting and permitting, serving as a compelling option to deliver incremental, continuous baseload power more quickly and cheaply than greenfield sites.
- iii. **Financing Accessibility and Reduced Project Risk.** SMRs, given their size, carry a lower capital investment burden than do traditional LWRs, making SMRs more accessible to customers including utilities. The costs to deploy traditional LWRs can reach \$20.0 billion or more, representing a significant undertaking and financial pressure, even for larger utilities. SMRs, on the other hand, can be financed and built in phases, thereby offering smaller capital outlays that can be spread over several years while delivering power to the grid sooner than LWRs. This phased, repeated deployment

also represents lower risk due to simpler, smaller construction projects with less capital at risk as compared to LWR projects, which have traditionally suffered from significant cost and schedule overruns.

- iv. **Proximity to Load Centers and Transmission Efficiency.** SMRs' small land requirements and superior safety case enable siting near existing load centers. By locating generation closer to demand, utilities can reduce or avoid the need for long, new transmission laterals that are often required for remote wind or solar resources, lowering interconnection costs, shortening schedules, and mitigating right-of-way, permitting, and community opposition risks. Closer siting also curtails line losses and congestion, improving delivered-cost economics and grid reliability while easing pressure on constrained transmission corridors. Repowering existing sites with SMRs may allow utilities to leverage established infrastructure, substation capacity, and prior environmental reviews, further accelerating deployment timelines and reducing execution risk.

Competitive Strengths

As pioneers of next generation nuclear reactor and fuel technologies, we believe that our collective expertise can allow us to capitalize on our competitive strengths. We believe we will establish a leadership position in the evolving market, including by leveraging the strengths of our early customer relationships to give us a differentiated path to success.

Existing Customer Base Provides Initial Momentum and Support. Both Dow and Amazon have supported our initial projects, and we expect will serve as offtake customers in the future. These initial projects also enable X-energy's goal of scaling its design to two different offtake customer applications: Industrial Heat Applications and Data Center Projects. Dow and Amazon also provide project development insight through their own operations portfolios. X-energy expects to learn from and engage with these and other customers as it builds the pipeline. This repeatable project schedule, which is also anticipated for the recently announced Centrica partnership, is expected to enable X-energy to scale from First-of-a-Kind to an Nth-of-a-Kind model that we believe will reduce our project cost and significantly derisk future projects.

Differentiated Design that Provides Attractive Solution for Customers. The characteristics of the Xe-100 provide several advantages over many other energy production alternatives. First, traditional renewables like wind and solar cannot provide reliable baseload power without being paired with longer-term storage technologies. They are also dependent on exogenous factors, which make them incapable of quickly ramping up to address increases in demand. Second, the Xe-100 has a versatile design that can be applied to several end markets, including industrial heat and conventional power generation. In addition, other emerging SMR technologies, many of which are based on conventional LWR technology, may not be designed to efficiently load-follow or operate at temperatures high enough to provide industrial heat, and are further constrained by the availability of large amounts of water, a constraint that the Xe-100 does not have.

Improved Proven Technology. Unlike some other advanced reactor technologies, X-energy is leveraging HTGR technology that has been previously deployed across the globe, including in the U.S. at Peach Bottom and in the U.K. at Dorset (Dragon), and building on more than 50 years of research and development by the global nuclear industry. Both of these reactors served as proof-of-concept for the HTGR technology in the U.S. and, along with other HTGRs in Europe and Asia, provide valuable experience and data that X-energy has used to improve its design, leading to a more efficient, commercially deployable technology.

Intrinsically Safer Based on Physics without Needing Active Safety Systems. Our simplified Xe-100 reactor design is not dependent upon active safety systems, which are susceptible to failure and therefore necessitate the redundancy found in a typical LWR reactor design. Our design relies on physics and intrinsic safety features, such that in the event of a total loss of power to a Xe-100 reactor, the reactor does not require any operator or computer actions, grid connections, emergency backup power or additional water to cool the reactor. The reactor has a strong negative temperature coefficient, which means that increased temperature (such as from the loss of coolant circulation) slows the fission reaction, causing the reactor to shut down. Finally, due to the relatively low power density of the core, the remaining heat load is naturally dissipated through passive cooling.

Superior Fuel Based on Decades of Research & Development. We expect our TRISO-X fuel to demonstrate technical quality and a streamlined fuel qualification pathway, providing us a competitive edge in

the commercial fabrication of TRISO fuel forms. The TRISO-X fuel used in the Xe-100 is a containment vessel itself and designed not to melt, enabling the technological and safety advantages of the HTGR. Due to decades of research, development and testing, including the DOE's Advanced Gas Reactor (AGR) Fuel Development and Qualification Program, the TRISO-X particle fuel is relatively well understood. This historical data has established the parameters for TRISO-X fuel testing and qualification. Our TRISO-X pebble fuel qualification methodology is approved by the NRC, and we have a streamlined path towards final fuel qualification by the time of our first Xe-100 deployment.

Attractive Intellectual Property-Driven Business Model. X-energy serves as both a reactor technology provider and a fuel fabrication provider, offering customers an integrated solution. In our reactor business line, we expect to receive technology fees for licensing use of our proprietary Xe-100 technology, while also receiving fees for coordinating assembly and construction support with customers and anticipated blue-chip third-party vendors. We also intend to leverage our knowledge and expertise in regulatory licensing, construction, procurement, operations, maintenance and other processes to provide customers with a full suite of services from the development of a project, and ultimately for the operating life of the reactors. We do not construct the power plants and do not plan to own or operate the power plants once constructed and, as a result, do not incur capital expenditures relating to constructing, maintaining, owning or operating the facilities. However, we intend to remain involved with the EPC process throughout the project by providing strategic consulting related to the integration of the reactor technology. We believe this intellectual property-driven business model will position us to generate attractive free cash flow.

Leading TRISO Fuel Provider. From our TRISO-X fuel manufacturing facilities in Oak Ridge, Tennessee, X-energy plans to provide customers with initial reactor fuel loads of as well as ongoing delivery of TRISO-X fuel required to refuel plants over the lifetime of a plant. This provision of fuel to our customers would generate a strong, recurring, revenue stream. X-energy's fuel can also be fabricated for other advanced reactor technologies, making it a key enabler of the broader advancement of the SMR space. X-energy was selected to receive one of the first allocations of HALEU from the DOE. This HALEU is required to begin initial fuel production but X-energy does not, and does not intend to, bear any significant inventory risk associated with uranium or fuel feedstock. We intend to provide only fabrication supply services (e.g., transformation of HALEU into the final TRISO-X fuel form) for customers and assume limited risks associated with holding the uranium or enriched uranium fuel feedstock.

Visionary Management Team and Highly Expert Employee Base. We have an experienced and passionate team of leaders and innovators who have been directly involved in the development of advanced nuclear technology and who have led large-scale nuclear projects and operations. As of January 1, 2026, we have a highly educated workforce of 889 employees, of whom 312 have master's degrees and 107 have Ph.Ds. Our executive leadership team has experience in nuclear design, nuclear project delivery, nuclear fuel fabrication, operations, government relations and public companies in organizations such as OPG, GEH, the DOE, the Nuclear Regulatory Commission, Constellation Energy, Hunt Consolidated, BWXT, Westinghouse, Hartree Partners, and Emirates Nuclear Energy Corporation. The management team is led by our CEO, J. Clay Sell, who is one of the foremost leaders in the U.S. energy market. As the former Deputy Secretary of the DOE, he brings the perspective of the U.S. energy industry to X-energy. Further, his experience in renewables development after his time as Deputy Secretary has given him key experience in major project development and valuable insight into the limitations of intermittent renewable technologies, and in turn the value of nuclear generation.

Strength of Government Relationships. The ARDP significantly derisks the delivery of X-energy's First-of-a-Kind reactor deployments through the Dow Project. Because of the 50/50 cost share program, X-energy has had significant ongoing engagement with the DOE and benefits from the DOE's collective knowledge and support. Further, X-energy has developed high credibility with the Nuclear Regulatory Commission through our ongoing engagement for both our FOAK Fuel Fabrication facility and Dow projects, evidenced by the docketing of the first Construction Permit Application for an 18-month review schedule, one of the shortest CPA timelines ever given.

Our Business Model

We have an intellectual property-driven business model based on our reactor and fuel. We expect to derive revenues from technology licensing, services and fuel operations that span the development and operation of the reactors.

- **Reactors:** The revenue stream from reactors includes technology fees for the use of our intellectual property of the Xe-100 technology. We will not own and operate the facilities themselves, which we believe significantly reduces the amount of capital needed to operate our business.

We anticipate offering site-specific engineering and site characterization, project planning, assembly coordination, construction support, regulatory support, procurement support and long-term services to customers. Utilizing our knowledge and expertise in licensing, construction, procurement and other processes, we plan to provide customers with a full suite of value-added services during development of the nuclear power facilities. At the same time, we expect to generate long-term recurring revenue from services such as the ongoing maintenance and operator training through the anticipated 60-year life of a facility.

- **Fuel:** We intend to provide manufacturing services to customers, including producing an initial fuel load of both TRISO-X fuel and an LEU-based TRISO fuel at commissioning of a plant. We expect to generate additional long-term recurring revenue from our own proprietary TRISO-X fuel that is required to refuel plants during the anticipated 60-year life of each facility. We expect to bear limited inventory risks related to uranium or enriched uranium fuel feedstock. We intend to provide only fabrication supply services (e.g., transformation of HALEU into the final TRISO-X fuel form) for customers and assume limited risks associated with holding the uranium or enriched uranium fuel feedstock. Additionally, we will not have any responsibility for spent fuel management beyond the design of such facilities to adequately handle spent fuel during the life of the plant. During operations, spent fuel remains the responsibility of the plant operator. Thereafter, permanent spent fuel management remains the responsibility of the DOE.

Lifecycle unit economics

We expect each of the four reactor Xe-100 projects (each such optimized four-reactor configuration referred to as a “plant”) to generate between approximately \$2.4 and \$4.7 billion in aggregate revenue across both our reactor business line and our fuel business lines, beginning with the pre-development phase of the plant and continuing through the plant’s anticipated operational design life of 60 years after the COD of such plant.

Reactor. Revenues from our reactor business line are expected to be comprised of both our technology fee and fees from our services offerings. We expect to earn these fees beginning with the pre-COD development phase of the plant and continuing throughout the operational life of such plant. We expect approximately 15 – 35% of revenue generated in our reactor line of business to be realized prior to (and including) COD. Within that approximately 15-35% of pre-COD revenue, we expect to charge both a technology fee, which we expect to earn across various plant development milestones before COD, and services fees related to reactor development. The remaining approximately 65-85% of revenue from our reactor line of business is expected to be from the provision of long-term services offered post-COD. We expect to charge our services offerings to customers based on time and materials, and based on our anticipated pricing of our services fees, we expect to generate approximately 20 – 30% of gross margin on these services. Our technology fee is expected to be charged to customers for use of our intellectual property and has no associated cost.

Fuel. Revenues from our fuel pebble fabrication business line are expected to be comprised of fees generated from selling an initial fuel load at COD and from selling additional pebble fuel throughout the operational life of a plant. We intend to generate fuel revenue from fabrication fees that we can charge to customers throughout the plant’s expected operational life. We expect the initial fuel load at COD to be equivalent to approximately 5% of each plant’s lifetime fuel needs (approximately 3 years), which represents approximately 10% of the total revenue we expect to generate from the fuel business line for each plant. Following COD, we expect continuous online refueling to generate approximately 90% of our fuel revenue through the remainder of the plant’s anticipated operational design life of 60 years. Given our vertically integrated business model, we have flexibility in the fabrication fees we charge customers, and we anticipate that as our fuel manufacturing capabilities scale and efficiency and utilization increase, our unit operating costs for fuel fabrication will decrease.

The table below provides an illustration of the expected timing and nature of the cash flows that we anticipate being able to generate from a single plant, based on and subject to the assumptions set forth below.

Dollar figures below are in millions unless otherwise noted. Dollar figures are rounded to the nearest \$5.0 million, percentages are rounded to the nearest 5%:

	Total Plant Life*		
	Customer Fees	Cost to X-energy	Target Margin
Reactor (Technology fee)	\$50 – 300	\$ —	100%
Reactor (Services)	\$800 – 1,300	\$565 – 930	20% – 30%
Fuel	\$1,560 – 3,125	\$1,095 – 1,250	30% – 60%
Total	\$2,410 – 4,725	\$1,660 – 2,180	30% – 55%

* Total Plant Life includes up to eight years prior to COD, COD, and 60 years following COD.

Key Assumptions Underlying Unit Economics

General

The table above illustrates management's current expectations regarding the relative allocation of customer fees, our costs, and resulting margins across business lines for a single plant. The figures are illustrative and based on the assumptions summarized below; they are not forecasts, targets, or guidance. Our ability to achieve the illustrative customer fees, cost, revenue and margins are sensitive to a variety of factors further described below and under "Risk Factors" elsewhere in this prospectus. Actual outcomes will depend on variables including customer negotiations and fee structures, market conditions, supply-chain costs and dynamics, manufacturing efficiency and utilization, financing assumptions, and customer adoption of optional service packages, any of which could cause material differences from the figures presented above. The table above assumes the plant is fully supplied from both TX-1 and TX-2; future plants that require additional fuel facilities may differ in cash flow. This "Lifecycle unit economics" discussion should be read together with "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations of X-energy," "Business," and our consolidated financial statements.

Technology Fee Structure and Pricing Assumptions

We expect to charge a technology fee for customers' use of our Xe-100 technology intellectual property. For purposes of this section, the assumed fee reflects benchmarking of IP licensing and industrial technology fees across various similar industries and sectors, together with the experience of our team and ongoing customer discussions. The final fee will be negotiated on a case by case basis, reflecting project timing, customer profile and scope, and is expected to be paid over multiple development milestones, with the full amount paid by COD. Fees may change over time as plants come online, the technology matures, and competitors emerge.

The customer fee range reflects variability in the technology fee component, with lower fees assumed for initial plants and higher fees for later plants after scaling and validation. Because the technology fee relates to use of our intellectual property, the associated cost to us in the table above is assumed to be zero. We have not yet entered into technology, intellectual property or related agreements, and we can provide no assurances that customers will accept our anticipated fee structure or pricing.

Services Business Fee Structure and Pricing Assumptions

We plan to provide a full suite of services across all phases of project development, including site selection, permitting, engineering, training, and procurement support, and following COD, ongoing maintenance and operator training through the design life of a plant. These activities are organized around industry-standard front-end loading (FEL 0 – FEL 4) phases. For this section, services pricing is assumed on a cost-plus basis, comprising direct labor and overhead with a targeted margin informed by revenue generated to date from the provision of initial strategic business and other services we've provided to customers and potential customers, as well as from industry benchmarking and our team's collective experience. We expect limited pre-COD services revenue, as most services fees are expected to be generated post-COD. Additionally, we assume that post-COD reactor revenue is services-only revenue, as the technology fee is expected to be paid in full by COD. Lastly, for each plant, we assume that customers will continue to rely on us as a service provider throughout

the operational life of such plant. We do not construct, own, or operate plants and therefore do not incur related capital expenditures. As a result, the costs reflected above do not reflect the total cost required to build reactors, which cost is primarily borne by our customers and may be substantial.

Reactor costs to us reflect only services costs and consist of estimated direct costs, including labor, overhead, and other costs, which are subject to change with market dynamics and competition. Customer fees include a services component based on the targeted margin applied to these costs. To date, we have entered into limited services agreements and there is no assurance that customers will accept our overall proposed and anticipated fee structure or pricing or continue to contract solely with us in future periods. The presence of third-party service providers could introduce price competition, thereby reducing revenue and increasing costs.

Fuel Model and Assumptions

We intend to provide the initial fuel load at COD and to generate recurring revenue from our proprietary TRISO-X fuel required for refueling over the anticipated 60-year plant life. Each plant requires an initial core load (covering roughly the first three years of operation), followed by steady replenishment. We assume that we are the initial sole supplier of our proprietary fuel and that customers purchase all fuel from us. The emergence of third-party TRISO suppliers could introduce price competition, reduce revenue, and increase costs.

Fuel customer fees and revenue are based on an assumed price per pebble estimated from our fuel costs, including labor, materials, and overhead. Pricing is intended to recover operating, variable, and fixed costs and to provide a target margin sufficient to support financing of future fuel facilities, assuming a minimum utilization level. We expect to provide fabrication services only and do not anticipate bearing inventory risk for uranium or feedstock. We will not be responsible for spent fuel management beyond designing facilities to handle spent fuel during plant operations. Accordingly, the illustrative figures do not reflect inventory or spent fuel management costs.

The range of fuel customer fees primarily reflects the estimated price-per-pebble range, which may be affected by efficiency improvements, cost reductions, and external supplier dynamics. The range of fuel costs to us reflects operating, fixed, and variable costs, including labor, overhead, and other inputs, all of which may change with market conditions and competition. We have not yet entered into fuel supply agreements, and there is no assurance that customers will accept the anticipated fee structure or pricing or continue to purchase fuel solely from us.

Operating Lifetime Assumptions

Our economics are based on an anticipated 60-year operating life of a reactor, subject to applicable licensing approvals and renewals. All nuclear power plants in the country have been designed with substantial safety, operational, and component performance margins. While the Atomic Energy Act of 1954 limits initial licensing to 40 years, the current operating fleet was designed to operate beyond that limit. Similarly, the Xe-100 is designed with substantial margins to support operation beyond the initial 40-year licensing term, subject to future NRC approval. The NRC established a license renewal program that permits licensees to seek approval for subsequent 20-year operating periods. In license renewal, the NRC focuses on evaluating whether aging management programs adequately address the effects of aging on structures, systems, and components important to safety. For much of the current operating fleet, license renewal requirements were not in place at the time of initial licensing, and comprehensive aging management programs were therefore developed and reviewed as part of the license renewal process. Almost every U.S. commercial nuclear power plant operates under a renewed license, valid for years 40 – 60 of potential total operations, and the NRC is now reviewing applications for “subsequent license renewal,” valid for years 60 – 80 years of potential operations.

For the Xe-100, because the design contemplates long-term operations, X-energy is incorporating aging management considerations into the reactor design from the outset. With the establishment and implementation of these programs from initial commissioning, the Xe-100 is expected to be well positioned to support future license renewal applications, although NRC approval is not assured. It should also be noted that the NRC license renewal process is well established, and the NRC has approved the majority of license renewal applications to date; however, approvals are based on the specific facts and record of each application. For these reasons, X-energy believes that its approach to design and aging management should significantly

reduce the risk associated with future license renewal; however, it does not entirely eliminate this risk. While the NRC license renewal process is well established and the majority of applications have been approved, the NRC has, in limited circumstances, denied or reversed license renewal approvals where applications failed to satisfy applicable safety, environmental, or regulatory requirements. Accordingly, X-energy believes that its proactive approach to aging management and regulatory compliance meaningfully mitigates, but does not eliminate, license renewal risk.

Growth Strategies

We intend to grow our business by leveraging the competitive advantages of our differentiated and reliable Xe-100 technology and our strong customer and government relationships to achieve scale. We believe we have several avenues to achieve our growth objectives:

Continue to Develop our Next Generation Technology. We intend to continue developing our reactor and fuel technology with the goal of achieving commercial delivery of our first fleets of reactors by the early 2030s. We have substantially advanced detailed design for the Xe-100 and are working with our engineering and construction partners to complete that process. Furthermore, we will work with our initial Xe-100 customers to complete the site-specific environmental studies required for licensing and progress toward the submission of the construction permit application, including the preliminary safety analysis report. We have produced TRISO-X pebble fuel in kilogram batch quantities in our fuel fabrication pilot facility and have begun construction on North America's first purpose-built commercial advanced nuclear fuel fabrication facility in Oak Ridge, Tennessee.

Execute on Attractive Business Development Pipeline. We believe the market for our Xe-100 and TRISO-X fuel technologies is wherever non-intermittent, reliable power is needed. We are initially focused on deploying our advanced SMRs to both industrial (including large-scale chemical manufacturing) and cloud-based service provider customers (e.g. data centers) who have needs for both electric power and efficient production of high-temperature steam with high reliability needs. We also plan to serve traditional utilities and IPPs seeking to replace carbon-intensive fossil-fueled power plants in their jurisdictions.

Leverage Repeated Project Execution Learnings to Scale From FOAK to NOAK. Traditional nuclear has been plagued by cost and schedule overruns. Vogtle units 3 & 4 cost more than \$16.0 billion each and were seven years over schedule in part because they were the first and second AP1000 reactors deployed in the U.S. While the fourth unit was reportedly approximately 20% less expensive than the third as learnings were applied, achieving expected Nth-of-a-Kind scale with standard costs and schedule timelines is possible only through repeated project delivery over a large order book. The DOE and industry experts expect that Nth-of-a-Kind delivery can unlock potential savings of more than 30%. Starting with Dow and Amazon, X-energy is already working to deliver eight reactors across its first announced sites at Seadrift, Texas and Richland, Washington, respectively. With substantial potential for further targeted pipeline with Amazon and Centrica, we expect to be able to achieve reductions in costs and the acceleration of schedule timelines as we deliver more reactors in the future. We believe that NOAK will be achieved through repetitive project execution and financial de-risking, including early supply chain engagement, construction timeline compression, and regulatory streamlining. As we apply lessons learned from each deployment, we expect these steps will significantly reduce overall project execution costs and risks for subsequent Xe-100 projects.

Continue Geographic Expansion. Our initial core markets are the U.S., Canada and the U.K., which have sophisticated regulators that are capable of licensing our technology. Beyond these initial geographies, which together represent only one-third of the serviceable energy consumption, we anticipate expansion into new markets where we already have customer engagement, including countries in Eastern Europe, the Middle East and East Asia.

Drive Technology Advancements. Using our innovative technology platform, we believe that we are well-positioned to continue making technology advancements over time. These improvements include optimizing the Xe-100 for industrial heat applications and innovations in the design to support steam outlet temperatures greater than 800° C to support more efficient hydrogen production processes.

Develop New Products. We continue to explore the development of innovative new products based on our core technology and varied use cases for our proprietary Xe-100 reactor, TRISO-X fuel and other

microreactor technologies TRISO-X is currently performing fuel fabrication work for others whose reactor technologies also use TRISO-based fuel, including space applications. Similarly, our Emerging Technologies team is involved in U.S. government-funded studies (such as those from the DOD) for innovative remote powering and lunar applications that may involve our microreactor and related technologies.

Our Technology

X-energy was founded by Kam Ghaffarian. The technology used today was matured through the Pebble Bed Modular Reactor program, a South African public-private partnership which advanced high temperature gas-cooled reactor technology. X-energy initially focused on the conceptual design of the Xe-100, discussed below, with an emphasis on top-level requirements designed to meet the broadest set of use cases. The company has continued to mature the Xe-100 design and has expanded into the production of TRISO fuel. Finally, X-energy has developed the design for the XENITH microreactor and we continue to invest in other research and development efforts.

Xe-100 — Our Advanced Reactor Technology

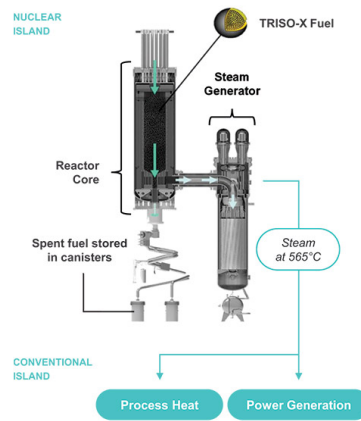


The Xe-100 is an HTGR designed to offer potential advantages in economics, reliability and safety over conventional LWRs and other advanced SMR designs. The Xe-100 is a Generation IV advanced nuclear technology intended to address certain limitations of LWR designs. The Xe-100 can efficiently produce electricity or process heat. When configured for electricity generation, each reactor is designed to support an approximately 80 MW turbine generator. Deployment of these reactors is scalable and is optimized in a four-reactor configuration, forming an approximately 320 MWe power plant.

After several years of development, the Xe-100 design has progressed into what is known as the preliminary design phase, the second of three typical engineering design phases. Design finalization is occurring in parallel with development of initial customer projects to ensure the design appropriately reflects customer needs and site-specific requirements. Once the standard reactor design reaches maturity, the development and licensing process is expected to be more streamlined for subsequent customer projects, although project-specific requirements will continue to apply.

The Xe-100 has made substantial progress in the NRC licensing process in the U.S. After several years of pre-application engagement, we supported Dow's subsidiary, Long Mott Energy, LLC, in submitting a construction permit application to NRC for the proposed advanced nuclear project utilizing the Xe-100 reactor design in Dow's Seadrift, Texas site. The pre-application engagement was intended to help reduce licensing risk, as regulatory challenges or delays can materially affect a project's timing, cost, design, or overall viability. Citing the completeness and quality of the application, and the effectiveness of pre-application engagements, the NRC established an 18-month review schedule to complete its safety and technical reviews for the Dow Construction Permit Application.

Xe-100 Schematic



One Xe-100 plant produces 320 MWe¹

Note: Figure is intended to represent an illustrative rendering and is for illustrative purposes only.

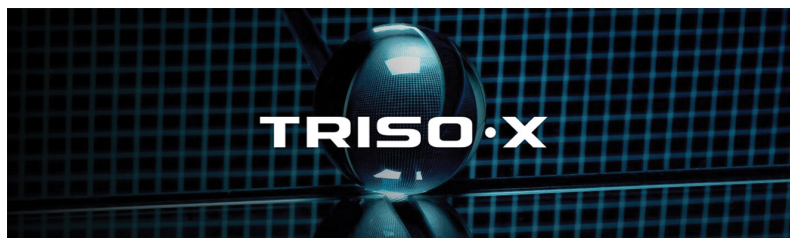
The Xe-100 has the following characteristics:

- **Cleaner and more reliable** — Like all nuclear reactors, HTGRs produce virtually zero direct GHG emissions during energy generation, are “always” on (at 95%+ availability), and provide firm, dispatchable power that is cleaner than most available firm alternatives.
 - Online refueling capabilities designed to enable the Xe-100 to meet a requirement of 95%+ plant availability, unlike conventional nuclear facilities, which require shutdown and refueling every 18–24 months.
 - Four individual reactors feeding into a common source allows for enhanced reliability so that even under downtime for a single reactor, customer electricity and steam requirements can be continuously met.
 - Nuclear power has no carbon emissions from the power production, offering a cleaner alternative for major cloud-based service providers and industrial customers with decarbonization targets.
 - Reactor is designed for the 60+ year operational life, longer than traditional natural gas burner alternatives and providing long-term certainty for customers.
 - High burn-up fuel cycle (165,000 megawatt-days per ton of uranium) means the Xe-100 utilizes its fuel around 4.0x more efficiently than conventional reactors.
- **Designed with Intrinsic Safety Features** — The Xe-100 HTGR is safer by design and because of the intrinsic physics of the reactor, requires fewer mechanical safety systems than traditional nuclear as well as fewer personnel for operations.
 - The Xe-100 leverages passive safety features and the inherent physics of its High Temperature Gas-cooled Reactor (HTGR) core, which is designed to shut down safely without operator intervention or external power in the event of an emergency.
 - The Xe-100 requires only about one-sixth the number of active mechanical safety systems typically found in traditional large-scale LWR nuclear plants, such as those used in the current U.S. commercial fleet.

- This reduction is achieved by eliminating the need for systems like emergency core cooling, large-scale backup power, and extensive active containment measures, which are standard in conventional nuclear designs.
- With only four operator-controlled variables (control rods, helium circulator, feedwater pump and turbine throttle valve), opportunities for operator error are drastically reduced, and automated operations allow for significantly lower operator workload.
- Because of the low source term, the Xe-100 plant design requires a significantly smaller emergency planning zone of 400 meters compared to 16-kilometer zone required for traditional LWR nuclear plants.
- This compact safety footprint enables the use of commercial-grade structures for most of the site, rather than the specialized nuclear safety-grade construction required for conventional reactors, and allows for greater flexibility in siting the plant closer to end users and industrial facilities.
- *More Secure* — The TRISO-X pebble fuel is a containment vessel in itself, supporting the secure nature of the Xe-100.
 - The TRISO-X fuel pebble is a containment vessel in itself, made of layers of encased in graphite, pyrolytic carbon and silicon carbide, and designed not to melt due to its ability to withstand extreme temperatures.
 - TRISO-X fuel retains 99.99% of all radionuclides during operation and severe accidents.
 - Each Xe-100 will use approximately 220,000 of our TRISO-X fuel pebbles, with approximately 18,000 uranium oxycarbide TRISO-X fuel particles in each pebble, which helps to contain fission products and aids in long term nuclear waste storage.
 - Pebbles remain in the reactor longer and burn off higher-risk byproducts compared to other advanced reactor concepts.
 - At full power approximately 175 pebbles are cycled into the reactor daily. Each pebble travels through the fuel handling system core on average 6 times before disposal.
 - After a pebble has cycled through the reactor, the spent reactor fuel is itself a containment vessel, with limited remaining fissile material, substantially limiting proliferation risks.
 - Spent fuel can then be transferred directly into dry storage, reducing risk for spent fuel management. Long-term fuel storage is the responsibility of DOE.
- *Scalable* — The Xe-100 is expected to be commonly deployed in its optimized four-reactor configuration of 320 MWe, referred to as the “Xe-100 plant,” with the opportunity to scale on site to additional reactors as needed.
 - We believe the 320 MWe power profile of the four-reactor deployment (and its highly scalable nature) is uniquely suited to meet data center demand.
 - The Xe-100 is expected to have lower overall construction costs compared to traditional large-scale nuclear reactors, due to its modular design, use of factory-fabricated components, and simplified safety systems.
 - These features are intended to reduce the complexity and duration of on-site construction, minimize labor requirements, and allow for more predictable project schedules.
 - As a result, historically significant challenges for conventional nuclear projects such as the risk of cost overruns and delays is substantially reduced.
 - This cost efficiency not only broadens the addressable market for advanced nuclear but also makes the Xe-100 an attractive option for customers seeking firm, clean power at a competitive price point.
- *Streamlined* — Due to its superior intrinsic safety attributes, the Xe-100 design needs fewer safety-related specialized materials and therefore utilizes substantially more off-the-shelf components than traditional nuclear reactors, allowing for scalability from commercial vendors.

- Our elegant and simple design maximizes the use of off-the-shelf and factory-built components that are expected to be shipped to site using existing road and rail networks.
- A simpler reactor concept also minimizes complexity of the nuclear island development and construction.
- Strategic supply chain partners enable more off-site constructability and integration of key components and drastically reduces on-site construction costs, personnel, and time.
- We expect approximately 1/10th the number of people needed to construct compared to traditional nuclear.
- **Versatile** — In addition to electricity, the Xe-100 plant can be configured to deliver high temperature steam at 565°C, providing a solution for difficult-to-decarbonize industrial heat applications such as oil sands operations, mining, chemical production and petroleum refining and other industrial processes.
 - By using helium as a coolant, the Xe-100 is configured to withstand higher pressure that enables the reactor to deliver heat at higher temperatures (750°C helium outlet temperature and 565°C steam from the steam generator) than conventional light water reactors (around 300°C), which are impacted by a phase change (i.e., higher temperatures would require higher pressures in LWRs).
 - The Xe-100 provides necessary reliability of industrial heat applications in its commonly expected multiple-reactor deployment configuration, opening the market for industrial replacements and expanding TAM to behind-the-meter applications.
- **Load-following** — The Xe-100 is designed to ramp down from full power to 40% power in minutes and ramp back up in a similar short time span.
 - This capability allows for faster ramp for load-following than existing Generation III+ SMR and conventional large-scale nuclear technologies, providing near-immediate responsiveness to energy needs.
 - Allows the Xe-100 to be relevant in both restructured wholesale markets and regulated energy markets, as well as supporting intermittent wind and solar generation.

TRISO-X Pebble Fuel — Our Proprietary TRISO Fuel



Our reactors use TRISO particle fuel, a technology first developed in conjunction with the U.K.'s Dragon reactor in the 1960s. The DOE describes TRISO particles as “the most robust nuclear fuel on Earth.” We manufacture our own TRISO fuel using proprietary methods, through our wholly owned subsidiary, TRISO-X, LLC, to ensure supply and quality control. Further, many of the advanced nuclear reactor designs in development are expected to be powered by TRISO fuel or other coated-particle fuels. As part of our business model, we intend to not only fabricate and sell TRISO-X fuel to our customers but to also fabricate and sell TRISO-X fuel and other encapsulated fuels to other advanced nuclear reactor customers, including governmental and private entities.

We do not intend to hold significant inventory of uranium feedstock (i.e., HALEU and LEU) as we expect our customers to procure this feedstock. Our business will be responsible for manufacturing the final

fuel form using this feedstock and other components such as graphite at our TRISO-X facility. This final fuel form, in particular the TRISO-X pebble, will be delivered to customers for use in the reactor.

To be able to use this fuel in operating reactors, the fuel must first be qualified by the NRC. The TRISO-X pebble fuel qualification methodology has already been approved by the NRC. Following this methodology, X-energy is now undergoing irradiation testing on the TRISO-X pebbles at Idaho National Lab. This process began in 2025 and the campaign has an expected end date in the fourth quarter of 2026. Data from this campaign is then used in the subsequent testing, evaluation, and ultimate qualification of our fuel form by the NRC.

At commissioning, the initial fuel load for the reactor core of the Xe-100 will include both ‘blank’ graphite pebbles, LEU-based TRISO pebbles and HALEU-based TRISO-X fuel. This configuration enables the reactor core to transition to an equilibrium condition after core power density is established.

Using the reactor’s fuel handling system, the Xe-100 reactor will first cycle out the graphite ‘blanks’ for the LEU-based pebbles to establish full power and temperature. The LEU-based TRISO-X fuel will then cycle out of the reactor for the HALEU-based TRISO-X fuel pebbles until the reactor operates on continuous refueling of TRISO-X fuel. This initial core load is expected to support the first approximately 5% of the plant’s life, but the initial core load is expected to generate approximately 10% of lifetime fuel revenues, with ongoing needs for additional refueling being sold through additional contracts.

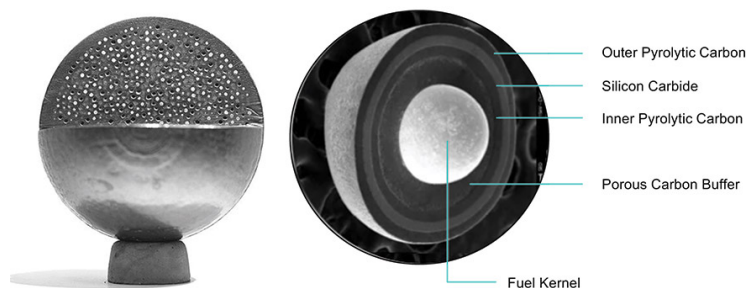
Safe, established fuel form: While TRISO fuel is already an established fuel after decades of research and development, we expect our proprietary fabrication method to further differentiate our TRISO-X fuel and deliver a competitive edge in the commercial fabrication of TRISO fuel forms. We anticipate our patented and novel process will demonstrate superior quality characteristics as well as economic performance compared to historical TRISO and potential future TRISO competitors. The TRISO-X pebble fuel is a containment vessel in itself, encased in graphite, pyrolytic carbon and silicon carbide and designed not to melt due to its ability to withstand extreme temperatures. After HALEU has been encased in a TRISO pebble form, security and proliferation risks are substantially reduced. Its robust nature allows for passive safety and, we expect a small emergency planning zone for our reactors, providing additional flexibility in site design and access to non-traditional nuclear markets and customers.

Robust integrity: Our TRISO-X pebble fuel is designed not to melt due to its robust construction. This structure minimizes the requirement for the extensive use of expensive and large concrete and steel containment structures typically required in conventional reactors. TRISO-X fuel’s unique characteristics:

- At the heart of the TRISO-X fuel particle is the uranium oxycarbide kernel, which utilizes HALEU for higher energy content than the low-enriched uranium (LEU) used in conventional LWRs.
- Each fuel kernel is surrounded by four barrier layers that act in concert to support the uranium-containing kernel, moderate nuclear reactions, ensure passive safety and contain fission products.
- These particles are designed to retain their integrity during most foreseeable adverse conditions.
- The set of boundary layers act as functional containment for the radioactive fission products in the fuel kernel.
- The robust graphite pebble, about the size of a billiard ball, contains approximately 18,000 of these TRISO particles.

TRISO-X Fuel

X-energy's Proprietary TRISO Fuel



Integrated fuel fabrication business: We currently manufacture TRISO-X fuel in our TRISO-X Pilot Facility in Oak Ridge, Tennessee, which has operated since 2016. In February 2026, we received a Special Nuclear Material License from the NRC that establishes TX-1 as the first-ever Category II nuclear fuel facility licensed in the United States. TX-1 will be a state-of-the-art Category II nuclear facility designed specifically for handling and processing HALEU feedstock for the fabrication of TRISO-X pebble fuel. We anticipate constructing TX-2 on the same site, which will allow for the license to extend to both facilities. We do not expect to hold significant inventory of the fuel feedstock, which we expect to be procured by our customers. Our business will be fabricating the pebble fuels into their final fuel form for customers to purchase for operation of the Xe-100 reactor and its refueling needs. There are currently no commercial-scale facilities in the U.S. capable of fabricating HALEU fuel, allowing us the opportunity to address a key gap in the advanced nuclear fuel supply chain through TX-1. Planning for TX-2 is already underway, which will further expand our TRISO-X fuel production.

Path to qualification due to extensive R&D: The ability to leverage decades of prior TRISO research and development, particularly the DOE's Advanced Gas Reactor (AGR) Fuel Development Program, provides X-energy with a well-defined pathway for fuel qualification. X-energy's TRISO-X Pebble Fuel Qualification Methodology has been approved by the NRC and references the AGR test results as a basis for qualification. This established framework provides X-energy a streamlined path towards obtaining qualified TRISO-X fuel by the time of its first Xe-100 deployment. Based on the approved fuel qualification methodology, we are currently in the irradiation test phase and in the final stages of qualifying our TRISO-X pebble fuel.

Long-term revenues derisked: We plan to provide our Xe-100 customers with their initial fuel loads while generating additional long-term and recurring revenue streams by refueling Xe-100 reactors throughout their anticipated 60-plus year lives. We further assume that we will be the initial sole supplier of proprietary TRISO-X fuel. Our business model is structured so that customers retain ownership and responsibility for procuring uranium and fuel feedstock, which is intended to insulate X-energy from commodity price volatility and supply chain disruptions. Further, we have no responsibility for management of spent fuel as that function is the responsibility of plant owner and operators, which roles we do not intend to participate in. We believe that our ability to achieve economies of scale through dedicated fuel fabrication facilities and our vertically integrated business model will enable us to be a low-cost provider of TRISO-X fuel, which we believe will be a key driver of customer retention and market competitiveness.

Research and Development

In addition to our core Xe-100 reactor, we continue to innovate and develop new products with our Emerging Technologies team. We are expanding our portfolio to address a broader range of energy needs and use cases beyond utility-scale power generation.

Our design team brings decades of experience from HTGR pebble-bed design programs in Germany and South Africa, combined with veterans of the DOE National Laboratories.

XENITH Microreactor



We have developed the XENITH microreactor, a compact solution designed to deliver reliable energy in locations where traditional power infrastructure is unavailable, impractical or vulnerable. XENITH is designed to be deployed in months and operate continuously for 20 years, delivering 3-10 MW of electricity with minimal maintenance requirements.

XENITH is not yet operational but is currently exploring commercialization opportunities. The development of the microreactor began in the Pele program through the U.S. Department of Defense, for which X-energy was awarded approximately \$60 million in various contracts. Conceptual design was progressed during Pele Phase 1 and 2, and design work has continued into what is now the XENITH microreactor. The microreactor is likely to be deployed in a 5 MWe format, or as dual reactors in a 10 MWe electric format.

Like the Xe-100, XENITH is also a High Temperature Gas-cooled reactor that runs on TRISO fuel. The required fuel is expected to be in the form of compacts rather than pebbles. The expected operating temperature is 750 degrees Celsius. The value proposition is expected to be as follows:

- Scalable Power. Factory-built, transportable nuclear energy solution that prioritizes rapid site readiness and compatibility with existing infrastructure to support deployment in a wide range of locations.
- Resilient & Reliable. Provides reliable, long-term power with no required refueling over the 20-year lifetime, eliminating vulnerability to supply chain disruptions while providing 24/7 reliability.
- Tailored to the Target Market. Military, defense, and remote applications, including potential for black-starts, and remote communities that require secure, independent power.

Space Applications

Our innovative HTGR design and high-temperature-resistant fuel make a unique and compelling combination for nuclear electric propulsion, nuclear thermal propulsion and lunar surface power.

Our use of robust TRISO fuel in combination with innovative reactor designs and advanced moderator materials, all work together to increase the efficiency of the fission reaction while minimizing bulk and weight, keeping the reactor light enough for spaceflight. These characteristics have allowed us to develop viable concepts for a Fission Surface Power (FSP) reactor. This concept was studied through a joint venture award from the DOE and the U.S. National Aeronautics and Space Administration (NASA) in June 2022 to advance the design of a FSP solution.

OUR PROJECT DEVELOPMENT APPROACH

X-energy works closely with our customers throughout the project lifecycle to help avoid unexpected cost overruns in the future. In some cases, our experienced team has been able to identify equipment or design solutions to help reduce costs. We also expect to use learnings on the initial projects to bring down future costs.

We believe the ability to identify cost-reduction solutions, particularly compared to traditional nuclear, gives us an advantage over other competitors who may face cost overruns or other project delays.

Traditional nuclear has consistently suffered from historical project delays and cost overruns. Vogtle units 3 & 4 were \$16.0 billion+ and seven years over schedule in part because they were the first and second AP1000 reactors deployed in the U.S. While numerous factors contributed to the overruns at Vogtle units 3 & 4, core causes included an incomplete design and a fixed price agreement that led to a change in contractor after the original EPC contractor, Westinghouse, filed for bankruptcy after construction had already begun. The project subsequently was taken over by Southern Company who acted as project manager and hired Bechtel as the prime construction contractor to bring Vogtle units 3 & 4 to completion.

We are currently focused on delivering our first two projects with Dow and Energy Northwest/Amazon. We believe achieving Nth-of-a-kind scale with standard costs and schedule timelines is possible only through repeated project delivery over a large orderbook. As part of our commercialization strategy to deliver at scale, X-energy intends to support delivery of its own projects. We believe our success is dependent on leveraging economies of learning and replication, and overseeing the full development cycle of projects enables customer-centric support.

X-energy intends to partner with customers and EPC contractors to finance, build, and repeat projects. We expect to oversee projects from origination to delivery and coordinate project development. As part of our business model, in addition to fuel fabrication services, we intend to offer customers a suite of value-added services during development of the reactor given our expertise on regulatory, construction, procurement and other processes. Additionally, we may deploy development capital to fund early stages of future projects and to invest alongside future customers to drive an accelerated path for Xe-100 deployments.

Similar to the “design one, build many” approach that has been utilized in the oil & gas industry to deliver large-scale projects like offshore oil platforms and liquefied natural gas terminals, X-energy intends leverage its repeated order book learnings to accelerate construction timelines and reduce costs with successive deployments. Along with our project development platform, our supply chain and EPC partners are crucial to our strategy. We intend to optimize our supply chain around the modular nature of the Xe-100 to drive construction timeline acceleration. Additionally, we intend to partner with experienced EPC partners to ensure repeatable project delivery, bringing together the policy, finance and company support to help deliver our projects.

Early in the construction process, we will work with our customers to obtain the permits necessary to build and operate the projects. In determining what permits are required, we intend to engage local counsel to help us understand the requirements of state and local authorities applicable to each project. We typically intend to commence the permitting or licensing process during the early stages of development due to the length of time it typically takes to complete. For the Dow project, the CPA was docketed with the NRC in May 2025 with an 18 month review schedule. X-energy maintains a strong relationship with the NRC and works closely with customers on submitting the necessary permits. Getting an early start on permitting and licensing is important in helping to de-risk our projects, because permitting and licensing challenges or delays can have significant impacts on a project’s timeline or design, or in some cases its viability. During the permitting and licensing process, we will also seek to promote long-term community support for our projects.

As part of the permitting and licensing processes, we not only intend to support our customers in securing the permits and licenses necessary to construct and operate projects, but we also plan to work with our and our customers’ EPC and O&M contractors and partners to ensure they have plans in place to monitor permit compliance during construction and operational phases.

OUR CUSTOMERS

Dow

Dow is X-energy’s first customer to receive a reactor and is a global leader in the specialty chemicals industry, involved in the manufacturing and distribution of a wide range of chemical and plastic products. In the course of its annual operations, Dow produces over 12 million MWh of electricity and is committed to the ongoing decarbonization of its operations.

X-energy has partnered through an MPDA and CCA with Dow to provide our services in support of a FOAK deployment of four Xe-100 reactors to provide power with virtually zero direct GHG emissions and industrial steam at Dow's UCC Seadrift site in Texas. The CCA establishes governance and commercial frameworks to advance the ARDP-supported deployment of Xe-100 reactors at Dow's Seadrift site and guide future cooperation, including a joint steering committee with core principles of mutual cooperation and shared FOAK risk and benefit. With the support and assistance of X-energy, Long Mott Energy, LLC, a wholly owned subsidiary of Dow, filed a CPA with the NRC in March 2025 which was docketed in May 2025 for an 18-month review period with an expected review completion by late 2026 and receipt of the CPA expected in the first quarter of 2027. Initial construction can commence after receipt of the CPA.

Dow provides expertise in plant design and industrial heat as well as in the development of the Xe-100's first plant, which will be a first-of-its-kind co-generation facility with unique heat capabilities not available in other technologies. Under the CCA, as between the parties, X-energy will own the IP related to the reactor systems, controls, software, and related nuclear plant technologies, as well as fuel technology-related IP, created by the parties for this project. As between the parties, Dow will own all of the IP related to the non-nuclear systems that turn reactor steam into electricity and run steam and water for the facility, as well as IP for equipment and processes that sit outside both the nuclear and conventional plant areas, created by the parties for this project.

Amazon

After an extensive evaluation of potential carbon free generation solutions for its extensive data center footprint, Amazon made an equity investment in X-energy in 2024 and announced options to bring more than 5 GWe of new Xe-100 projects online across the U.S. by 2039, which assuming full exercise of these options, will represent the largest commercial deployment target of SMRs to date as of August 2025.

The first deployment under this 5 GWe total potential target is a project with Energy Northwest in central Washington. Amazon and Energy Northwest entered into a Carbon Free Development and Funding Agreement for an initial deployment of four reactors representing 320 MWe, with the potential to upsize the power capacity to 960 MWe.

X-energy has entered into commercial arrangements with Amazon, which provide for, among other things, a deployment and financing model that X-energy plans to pursue more broadly through infrastructure and utility partners. The arrangements also grant Amazon options and allocation rights intended to facilitate project development. For more information regarding our agreements with Amazon, see "Risk Factors — Our sales and profitability may be impacted by, and we may incur liabilities as a result of, terms to certain customers, our failure to meet performance guarantees under customer contracts or customer safety standards."

Centrica

Centrica is a major provider of energy services across the U.K. and owns a 20% stake in the full fleet of operating nuclear reactors in the country. In September 2025, X-energy and Centrica signed a JDA dedicated to building and operating Xe-100 reactors in the U.K. The JDA identifies initial activities including U.K.-specific planning model translation, and execution of de-risking work packages in licensing, technology, and commercial domains, largely on a non-binding basis. Under the JDA, Centrica and the Company have the opportunity to consider options to collaborate on other Xe-100 deployments, subject to further diligence and negotiation. The announcement followed a pledge from President Donald Trump and Prime Minister Keir Starmer to work together on nuclear power and constitutes a new strategic commercial alliance to accelerate the deployment of SMRs, bringing together a leading player in delivering the U.K.'s clean energy future and the developer of the world's most advanced nuclear technology.

The Xe-100 was selected after a significant review period by Centrica of advanced Gen IV nuclear technologies. Centrica prioritized partnership with X-energy because of the reactor's safety and capabilities for industrial heat that Centrica sees as key to expansion in the U.K. market. The U.K. government is currently pursuing a "three-legged" approach to nuclear development, designed to ensure a diverse and resilient nuclear energy sector. Under this strategy, the first "leg" focuses on large-scale nuclear projects, such as those being developed in partnership with EDF, to provide substantial baseload power. The second "leg" supports the

deployment of Gen III+ light water SMRs, with Rolls Royce's SMR technology selected as the leading solution in this category. The third "leg" is dedicated to other small and advanced modular reactors, including HTGRs like Xe-100, which are prioritized for their potential to deliver both electricity and high-grade industrial heat, supporting decarbonization across a range of sectors.

X-energy and Centrica have identified Hartlepool as the preferred site for the first of a planned U.K. fleet of approximately six GWe (representative of 76 reactors likely deployed as 19 four-reactor configurations). A project at Hartlepool will be comprised of up to twelve 80 MWe reactors, each with the capability to provide high temperature steam for industrial decarbonization. Subject to securing appropriate permissions and licenses, the first electricity generation is expected to be in the mid-2030s.

OTHER KEY PARTNERSHIPS

Department of Energy

Through the ARDP, we are partnering with DOE and others to build the world's first commercial scale advanced nuclear reactor. In December 2020, X-energy, initially in collaboration with Energy Northwest, was selected for an award, initially in the amount of \$1.2 billion to deliver a first-of-a-kind commercial advanced nuclear plant and TRISO-X fuel fabrication facility. This project is now being developed with Dow with continued financial support from the DOE on a 50/50 cost share basis. As one of only two parties selected out of many applicants for the ARDP, X-energy was recognized as having an advanced reactor technology of choice.

The cooperative agreement for the program, signed in February 2021 (the "ARDP Agreement"), provides 50/50 cost share of \$2.4 billion of eligible costs (\$1.2 billion reimbursement) through 2027, allowing X-energy to continue work toward design, licensing, commercialization and construction of its first-of-a-kind commercial advanced nuclear plant and commercial TRISO-X fuel fabrication facility, while benefiting from decades of nuclear experience and knowledge within the DOE.

The Company is constructing and will own the fuel facility subject to the government's rights in property set forth in 2 CFR § 200.311 and 2 CFR § 910.360, and insure it in accordance with 2 CFR 200.310-16. The DOE will obtain rights to the intellectual property ("IP") developed under ARDP Agreement consistent with typical government retained IP rights under the Bayh-Dole Act, under the Small Business Patent Waiver, and DOE regulations. The federal government retains a nonexclusive, nontransferable, irrevocable, paid-up license for its own benefit. The DOE also retains march-in rights under the ARDP Agreement which allow the government, in specified circumstances, to require the contractor or successors in title to the patent to grant a nonexclusive, partially exclusive, or exclusive license to a responsible applicant or applicants. If the patent owner refuses to do so, the government may grant the license itself. The DOE will fund a portion of the direct and indirect costs incurred for the research and development costs to develop the IP and the costs of developing and constructing both the TRISO-X fuel facility and Xe-100 demonstrator reactor. The funding is subject to future government appropriations which may not occur, and the government is able to cancel the contract at any time without incurring a substantive penalty.

As of December 31, 2025, we have been reimbursed approximately \$438 million in funding under the ARDP. We submit our budgets through an ongoing "budget period" basis tied to project milestones under the ARDP Agreement, and our current budget covers a budget period that began in March of 2025 and extends through August 2026. We submit a Continuation Application to the DOE to extend funding into subsequent periods. Extensions beyond the current budget period are subject to DOE discretion and approval. Under the terms of the ARDP Agreement that rely on the Office of Management and Budget (OMB) guidance, the total extension of the award may not exceed three years (for a total period of performance of 10 years). Any additional extension would require an approval within DOE above the level of the Contracting Officer. Based on the original February 2021 award date, the maximum outside date for funding under the ARDP Agreement, assuming all extensions are granted, is expected to be in or around 2030. If we are unable to obtain extensions and incur eligible costs beyond the currently approved period of performance, we would forgo reimbursement for such costs and may face de-obligation of unobligated funds at closeout. There can be no assurance that we will receive additional ARDP funding beyond the current budget period or that extensions of the award will be granted. Dow, as our sub-awardee under the ARDP, is similarly subject to the budget period and extension

requirements, but does not need to separately seek or be included in any DOE-approved extensions in order for us to continue receiving reimbursement from the DOE for eligible costs.

If our award is not extended, we would expect a lapse in our ability to receive ARDP funding absent an approved extension, and any unobligated or unneeded DOE funds at closeout would not be available to us. Extensions under the ARDP Agreement are at the DOE's discretion and are subject to criteria including: (1) availability of appropriations; (2) availability of future-year budget authority; (3) substantial progress toward meeting project objectives; (4) submittal of required reports; and (5) compliance with the terms and conditions of the award. We continue to engage with the DOE to extend funding with additional funds that have been allocated to X-energy by the Office of Nuclear Energy, including through applications for additional budget periods to cover subsequent design activities as part of the overall ARDP program. Dow has been named a sub-awardee under the ARDP in connection with their involvement with the development and construction of the demonstrator reactor. The Dow project's construction permit is anticipated to be received in the first quarter of 2027, after which initial construction can commence, with a target commercial operations date in the early 2030s. The Dow project timeline extends beyond our current budget period and may extend beyond the maximum period of performance under the ARDP Agreement, depending on whether extensions are granted and the pace of project development. If the ARDP funding period expires or is not extended before the Dow project reaches completion, Dow would then be requested to fund the remaining project costs without the benefit of ARDP reimbursement, which could affect Dow's willingness to proceed with the project and our ability to complete the ARDP demonstrator reactor.

Ontario Power Generation

In 2022, X-energy and OPG entered into a framework agreement to work exclusively with one another with respect to advanced nuclear power industrial applications in Ontario, Canada, and to co-market and advance the Xe-100 as the nuclear technology of choice for industrial applications throughout Canada. OPG will be the operator of any Xe-100 facilities that are deployed under this agreement. OPG is also an equity investor in X-energy.

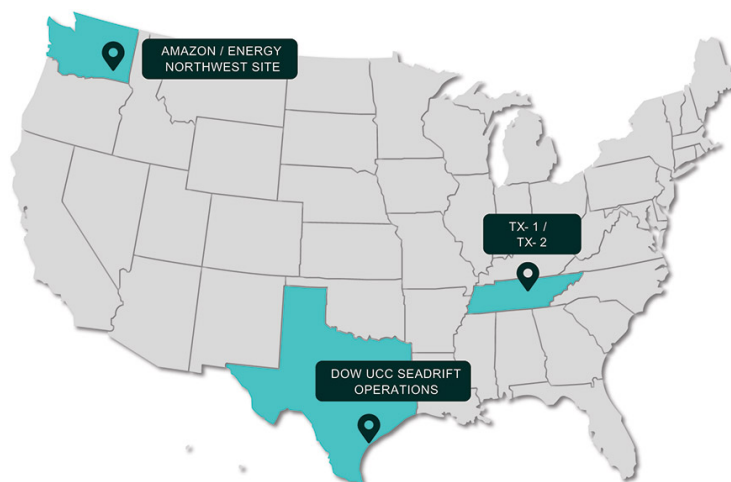
Department of Defense

We have an agreement with the U.S. DOD Defense Innovation Unit ("DIU") and the U.S. Department of the Air Force to advance the development of X-energy's commercial microreactor in alignment with the President's executive order to deploy advanced nuclear technologies at DOD installations to support U.S. national security. The agreement supports continued design and development for the X-energy XENITH microreactor under the Advanced Nuclear Power for Installations program, an initiative led by DIU in partnership with the Department of the Air Force. X-energy was also part of the 2019 initial selection for Project Pele to develop a prototype mobile nuclear reactor. Through these contracts, X-energy has been awarded over \$60.0 million on microreactor activities including engagement with the NRC on licensing. While the period of performance for the XENITH microreactor has expired, the DOD has continued to announce initiatives that maintain interest in the microreactor program.

Under the Project Pele Agreement, the Company leads the design, analysis, testing and systems engineering needed to develop a prototype mobile nuclear reactor and works with the DOD to help it achieve its objectives under Project Pele. The Company is paid a fixed amount for each milestone accomplished in accordance with the key objectives and milestones set out in the agreement, in addition to reimbursement of certain costs incurred. The DOD has certain rights in patents and data pursuant to the Project Pele Agreement, and may terminate the Project Pele Agreement if such termination is in the DOD's best interest.

OUR KEY PROJECTS

Below is a geographic overview of our three current projects, which is followed by a detailed description of each project.

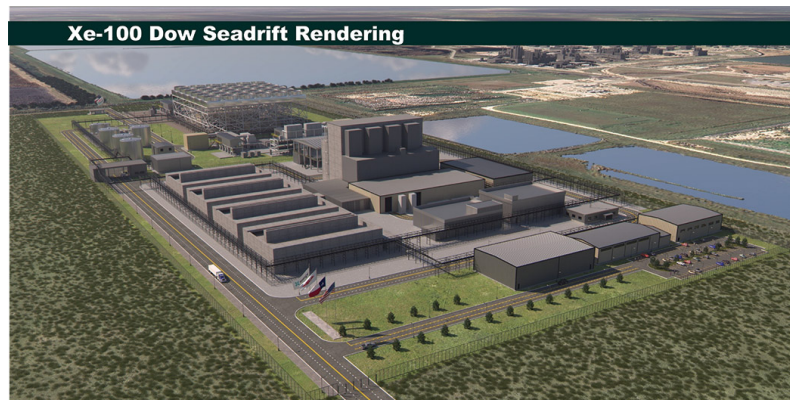


Reactor Projects

Dow's UCC Seadrift

Dow and X-energy have entered into an MPDA to deliver the inaugural X-energy advanced nuclear reactor at Dow's UCC Seadrift manufacturing site ("Seadrift") in Texas. The project will be the first grid-scale advanced nuclear reactor deployment for an industrial site in North America and will help to decarbonize the operation by providing both process heat and electric power. Seadrift site production includes consumer products used every day in homes, schools, offices, hospitals, vehicles and by other industries, producing more than 4 billion pounds of materials per year across a wide variety of applications including food packaging and preservation, footwear, wire and cable insulation, solar cell membranes, and packaging for medical and pharmaceutical products.

The plant will be comprised of four reactors (320 MWe) and supply all of the site's electricity and steam demand. Dow's UCC Seadrift site spans around 4,700 acres and is Dow's second largest facility in Texas. This project supports Dow's corporate sustainability goals and is expected to reduce the site's emissions by 440,000 MT CO₂e/year.

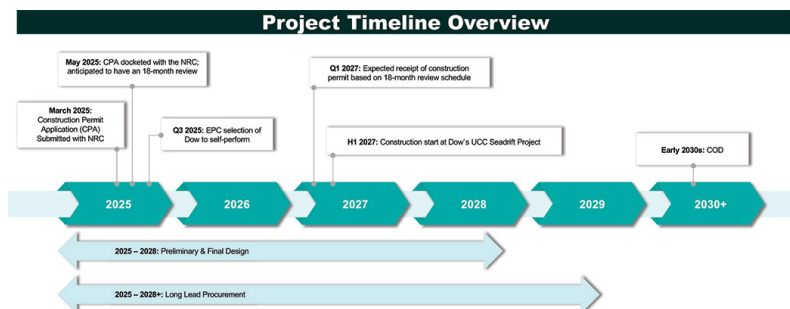


Note: Figure is intended to represent a proposed rendering and is for illustrative purposes only.

The project benefits from the ARDP cooperative agreement with the DOE. This includes 50/50 cost share in the project. The project also includes substantial production and investment tax incentives from the Inflation Reduction Act. Through the ARDP, X-energy receives from the DOE 50% of the cost of designing the Xe-100. X-energy also receives 50% of the cost of TX-1, its first fuel fabrication facility. Finally, X-energy's first customer to construct a reactor, Dow, is eligible to receive 50% of the cost to build the first four-pack of Xe-100s, at Seadrift, Texas, which significantly mitigates the risks of building a first of its kind advanced reactor project.

We continuously update the DOE throughout the year regarding our spending against our milestones and are currently funded through at least August 2026 through a Continuation Application. As part of the Continuation Application process, we submit updated budgets to the DOE for each budget period, including cost estimates and supporting justification. These updated estimates are subject to DOE review and approval and may differ materially from prior estimates.

Key Timeline Highlights of our Dow Project



Development of project milestones:

— Preliminary & Final Design:

- Once Dow became our customer, our engineering design process was done in conjunction with them. The Xe-100 is in the second of three engineering design phases. Ongoing engineering and design work includes adapting to the commercial expectations of the customer, including specific seismic requirements and customer use cases. In the case of Dow, we expect some of the output of the four Xe-100 reactors to be for industrial steam for Dow's chemical plant.
- We expect to enter into the final design phase (phase 3) according to Dow's development process in 2027. The final design phase would culminate in a final investment decision that would lead to the beginning of major nuclear construction, though preliminary construction is expected to begin before this time. These stage gates are designed to unlock key funding tied to milestones.

— Licensing:

- March and May 2025: With the support and assistance of X-energy, Long Mott Energy, LLC, a wholly owned subsidiary of Dow submitted a CPA to the Nuclear Regulatory Commission ("NRC") in March 2025. The NRC docketed the application in May 2025 and established an 18-month review schedule, with completion of the review currently expected by late 2026 and issuance of the CPA anticipated in the first quarter of 2027. The NRC's review process includes environmental, geological, and geotechnical work intended to evaluate site characteristics to help ensure that the Xe-100 plant is designed and constructed based on the site's unique characteristics. Subject to receipt of the CPA and other required approvals, construction is expected to begin in 2027, with a target commercial operations date in the early 2030s.
- At the appropriate time we expect our customers would submit an operating license agreement (OLA) to the NRC to be able to operate the reactor.

— Construction & readiness:

- Site construction is expected to begin in the first half of 2027 after receipt of the construction permit application from the NRC.
- Dow and X-energy have been coordinating on the financing and strategy for long lead procurement items, beginning in 2025, that are required to support the construction, commissioning and commencement of operations of the reactor expected in the early 2030s.

The agreement supports Dow's sustainability targets. The project is set to create thousands of jobs during peak construction and hundreds of full-time, family-wage jobs during operation.

The Dow project's Construction Permit Application is anticipated to be received in the first quarter of 2027, following which construction can commence, and its commercial operations date is expected to be in the early 2030s. This timeline extends beyond our current ARDP budget period, which runs through August 2026, and beyond the maximum period of performance under the ARDP Agreement, even assuming all extensions are obtained. Based on the original February 2021 award date, the outside date for ARDP funding is expected to be in or around 2030 (assuming the maximum three-year extension is granted). Accordingly, construction activities scheduled to occur after 2030 would not be eligible for ARDP reimbursement without a modification or change in the ARDP award, which would require approval within the DOE at a level above the Contracting Officer.

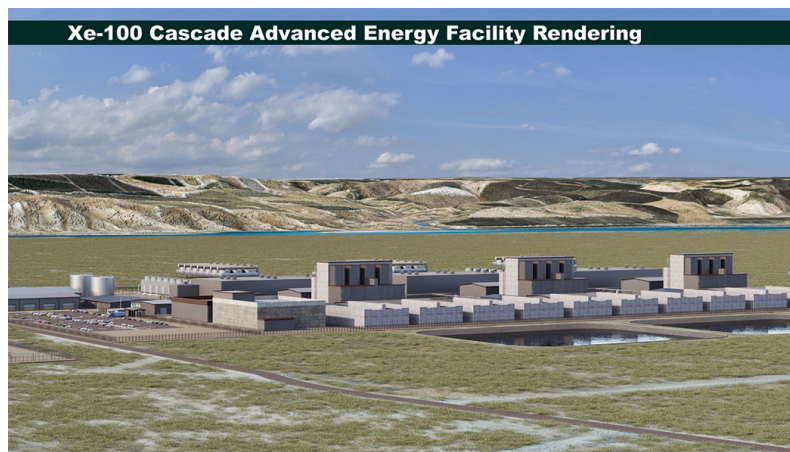
For activities occurring beyond the ARDP funding period, Dow would be requested to fund the entirety of remaining project costs without the benefit of 50% ARDP reimbursement if they continue to fund the project. The precise funding requirement that would need to be borne by Dow absent ARDP reimbursement depends on the stage of project completion at the time ARDP funding expires, the scope of remaining construction activities, and market conditions at that time.

As of December 31, 2025, we have been reimbursed approximately \$438 million in funding under the ARDP. We submit our budgets through an ongoing "budget period" basis under the ARDP Agreement, and our current budget covers a budget period that began in March of 2025 and extends through August 2026. If extensions are not granted or if the project timeline extends further than currently anticipated, the incremental funding requirement that Dow would need to bear could increase materially. Any such increase could affect Dow's final investment decision, cause delays or modifications to the project scope or timeline, or lead Dow to

terminate its participation in the project. If Dow does not proceed with the project, X-energy is under no obligation to continue funding to the Dow project or construction on the plant itself; however, we would need to identify an alternative partner under the ARDP Agreement. See “*Risk Factors — The Dow project timeline extends beyond the ARDP funding period, which could result in significant incremental funding requirements for Dow and adversely affect the project.*”

Amazon / Energy Northwest — Cascade Advanced Energy Facility

Energy Northwest is a Washington state public power joint operating agency and a premier provider of carbon-free electricity through its existing ownership of the Columbia Generating station, a 1.2 GWe nuclear power plant in Richland, WA. In 2024 Energy Northwest and Amazon entered into the Carbon Free Development and Funding Agreement for an initial deployment of four reactors representing 320 MWe at the Columbia site, with the potential to upsize the power capacity to 960 MWe enough to power the equivalent of 770,000+ U.S. homes.

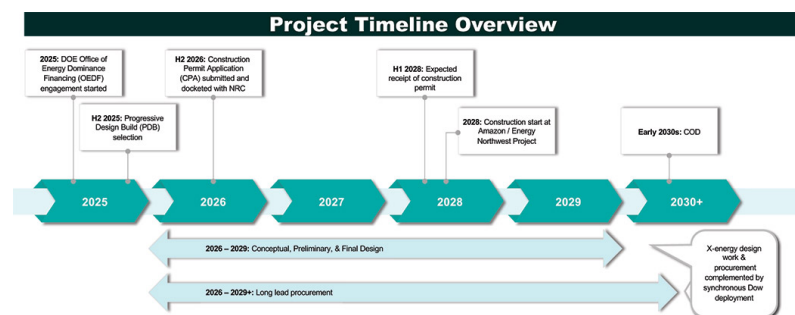


Note: Figure is intended to represent a proposed rendering and is for illustrative purposes only.

As part of the agreement Amazon also made a direct investment in the project and the power will be available to Amazon and northwest utilities to power homes and businesses. Public power utilities will have the opportunity to purchase up to 50% of the power from the full 960 MW project. Initial site engineering work is underway. CPA is targeted for submission to the NRC by the end of 2026.

The agreement supports Amazon’s Climate Pledge commitment to reach net-zero carbon across their operation by 2040. The project is set to create 1,000-2,000 jobs during peak construction and 100-200 full-time, family-wage jobs during operation.

Key Timeline Highlights of our Amazon Project



Development of project milestones:

— Conceptual, Preliminary & Final Design:

- As we finalize our design as part of the Dow project, we will integrate the site-specific design requirements at the Energy Northwest project, which is expected to generate electricity from all four reactors. As of the date of this prospectus, we are in the Conceptual Site Design stage.
- The Energy Northwest project utilizes a progressive design build process, so the EPC was brought on board in 2025.

— Licensing:

- The Amazon / Energy Northwest CPA is targeted for submission to the NRC by the end of 2026. The construction permit is anticipated to be received in 2028, with construction commencing shortly thereafter.
- By the start of construction, engagement with the Office of Energy Dominance Financing is expected to be underway, and engineering work is expected to have commenced. The project is targeting Commercial Operations in the early 2030s.
- At the appropriate time we expect our customer (Energy Northwest) would submit an operating license agreement (OLA) to the NRC to be able to operate the reactor.

— Construction & readiness:

- Site construction is expected to begin in the first half of 2028 after receipt of the construction permit application from the NRC.
- Energy Northwest, Amazon, and X-energy have been coordinating on the financing and strategy for long lead procurement items, beginning in 2026, that are required to support the construction, commissioning and commencement of operations of the reactor expected in the early 2030s.

Fuel Projects

Fuel Fabrication Pilot Facility

X-energy has a TRISO-X fuel fabrication pilot facility at Oak Ridge National Laboratory. The pilot plant has been operational since 2016 and is currently producing kilogram batch quantities of TRISO-X fuel for development purposes. The Pilot Facility is planned to be temporarily shut down and relocated from Oak Ridge National Laboratory to property in Oak Ridge, TN for "TX-L", which will be adjacent to the TX-1 site. The proposed TX-L will then serve as the 'laboratory' for future TRISO-X fuel development.



TX-1

TX-1, located in Oak Ridge, Tennessee, will be the first-in-the-nation commercial advanced nuclear fuel fabrication facility. The facility will manufacture X-energy's TRISO fuel using proprietary methods. Once complete, TX-1 will be the first Category II Fuel Fabrication Facility licensed by the NRC in the U.S. with an estimated throughput of 5 metric tons of uranium ("MTU") per year or approximately 700,000 TRISO-X pebbles per year, enough fuel for up to 11 Xe-100 reactors.

Part of X-energy's participation in the DOE ARDP award encompasses the Phase 2A of the TX-1 facility construction, including the completion of the core and shell of the 214 thousand square foot facility. In parallel, X-energy has received approval from the DOE to authorize an additional approximately \$30.0 million for early procurement of critical long-lead equipment and materials to support the successful delivery of subsequent construction phases and ensure adherence to the overall project schedule. Lastly, TX-1 was granted an approximately \$150.0 million tax credit by the DOE in recognition of its status as a U.S. FOAK advanced nuclear fuel fabrication facility, subject to the project successfully reaching certain milestones.

X-energy has completed an internal 60% Design Review and is planning for internal 90% Design Reviews to begin in May 2026. In February 2026, we received a Special Nuclear Material License from the NRC that establishes TX-1 as the first-ever Category II nuclear fuel facility licensed in the United States, enabling TRISO-X to commercially manufacture fuel using HALEU at its TX-1 site under an initial 40-year license. We anticipate constructing TX-2 on the same site, which will allow for the license to extend to both facilities. This NRC license approval formally establishes TX-1 and TX-2 as the first new fuel facilities licensed by the NRC in approximately 50 years, with TX-1 set to become the first-ever Category II nuclear fuel facility licensed in the United States. X-energy is using Geiger Brothers for the site development phase of the TX-1 site. Site preparation is substantially complete. Clark Construction Group has been selected to conduct the vertical construction phase (2A), which began in September 2025. Facility construction / equipment installation Phase 2B construction is set to commence mid-2026 with expected completion in 2027 for target operations beginning in the first half of 2028.



Note: Figure is intended to represent a proposed rendering and is for illustrative purposes only.

TX-2

Planning is also underway for a subsequent advanced nuclear fuel fabrication facility, which may utilize available space on the same site at TX-1 (as seen in the graphic above as “TX-2”). Future facilities modelled after TX-2 would be expected to have larger production output than TX-1 and support fuel for up to 44 Xe-100 reactors annually. The expected capacity would be 25 MTU with an anticipated 20 MTU throughput. This equates to about 2,800,000 TRISO-X pebbles per year. An NRC license would be required for these facilities. X-energy anticipates building TX-2 adjacent to and on the same property as TX-1, in which case a new license for TX-2 would not be required. If TX-2 is built on a different property than currently contemplated, a separate NRC operating license would be required; in that case, however, X-energy expects that elements of the TX-1 licensing basis, programs and regulatory approvals could be leveraged or referenced, as appropriate, to support the license application for the TX-2 facility.



Note: Placement of proposed TX-1 and TX-2 sites are not to scale and should be considered illustrative

Other

Existing Frederick Operator Training Facility

Funded partially through the ARDP, our existing Operator Training Facility in Frederick, Maryland opened in March 2023. This facility encompasses 10,447 square feet and supports several key activities related to the Xe-100 reactor program. One of the primary functions at this site is the development of a full-scale ANSI 3.5 Xe-100 simulator, which is intended to serve as a true representation of the Xe-100 plant. The simulator will incorporate all process models of Xe-100 reactors, instrumentation and control sensors and other essential elements to create an environment suitable for training and licensing Xe-100 operators prior to the initial fuel loading of the first Xe-100 reactor. This facility supports designing the Xe-100 control room and constructing a replica control room where operators will receive their training. A single Xe-100 control room is expected to be capable of managing up to twelve Xe-100 reactors.

In addition to simulator development, the Operator Training Facility is responsible for creating the operational procedures required to control the Xe-100 plant. These procedures will be developed and displayed on a computerized procedure system that we are developing, and will serve as the foundation for training materials used by Xe-100 operators. Operator training itself is conducted in a classroom environment, where our customers will be able to utilize both the simulator and our training materials to gain practical experience.

The Operator Training Facility supports elements of human factors engineering, including the task analysis consistent with NRC guidance such as NUREG-0711, which is used to inform the design of the Xe-100 control room and simulator. This analysis also helps determine the workload on Xe-100 operators, which is necessary for calculating the appropriate number of operators required in the control room.

Expanded Frederick Testing and Training Facility—XTAC

For its long-term ambitions, X-energy is developing a state-of-the-art 90,000 square foot non-nuclear test and training facility in Frederick, MD. This facility will ensure key components of the Xe-100 perform safely and reliably under real-world conditions before full-scale manufacturing and deployment. The building is anticipated to accommodate a helium test facility designed for full-scale integrated systems testing within a

pressurized helium environment. Additionally, it will feature an experimental test facility dedicated to the testing and prototyping of essential reactor components and materials.

X-energy had received conditional approval from the DOE to proceed with building procurement, which has now been completed, with a 50% cost share arrangement with the DOE through the ARDP. X-energy also has the potential to receive up to \$6.15 million in state and local support through job creation tax credits, conditional loans, and grants. X-energy has secured a DOE National Environmental Policy Act (NEPA) Categorical Exclusion for the building, meaning no Environmental Impact Statement or Assessment is required.

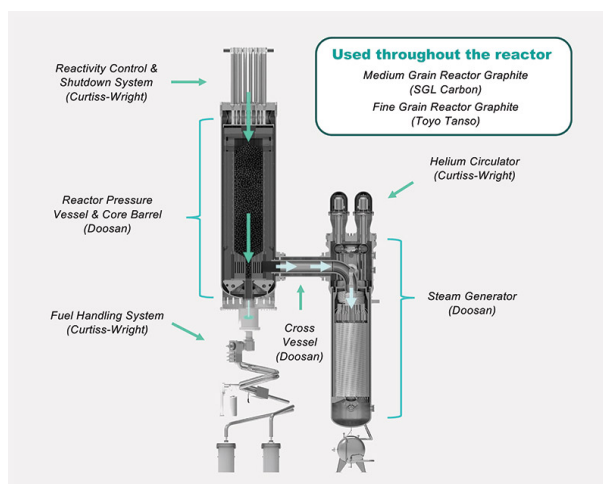
For a description of our other facilities and properties, see “Facilities Overview” included elsewhere in this prospectus.

SUPPLY CHAIN

X-energy has established an extensive, global supply chain ecosystem for the Xe-100. We have strategic and commercial partnerships that allow X-energy to leverage established players in the nuclear industry to manufacture key components, including the reactor pressure vessel & core barrel, fuel handling system, burnup measurement block, helium circulator, steam generator, fine grain reactor graphite, medium grain reactor graphite, and reactivity control & shutdown system. X-energy has signed Preferred Strategic Supplier Agreements (“PSSAs”) with key suppliers for critical Xe-100 components and systems and has built partnerships with key component providers. Throughout the process, X-energy has been working closely with suppliers in all phases of design, equipment supply, fabrication, and construction.

X-energy is differentiated in its vertically integrated fuel supply model with in-house fuel fabrication capabilities. The U.S. Government, through the DOE and HALEU Availability Program, are creating pathways toward a U.S.-based commercial enrichment supply chain with capabilities to produce HALEU domestically. X-energy received a granting of initial allocation of HALEU in April 2025. The DOE is actively working to provide surety of offtake to establish a domestic commercial supply of enriched uranium. Through partnerships with companies like Centrus Energy, which has already produced approximately 1 MT of HALEU to date for the DOE through its pilot cascade, the DOE is focused on creating domestic avenues for HALEU procurement.

Key components of the reactor with planned suppliers



Note: Figure is intended to represent an illustrative rendering and is for illustrative purposes only.

Our Key Supply Chain Partners

We have a network of partners that enable our growth and success. These partners include:

- **Curtiss-Wright.** Curtiss-Wright is a leading U.S. designer and supplier of critical nuclear power plant systems, equipment, services, and spare parts to the U.S. domestic and global nuclear power industry. Following several competitive bid processes, X-energy selected Curtiss-Wright as the successful bidder for multiple Xe-100 systems. Curtiss-Wright was selected as a preferred strategic supplier to X-energy for the ARDP and subsequent Xe-100 projects in the U.S. Curtiss-Wright is an equity investor in X-energy.
- **Doosan Enerbility.** Doosan is a preferred strategic supplier to X-energy. Doosan is a major global manufacturer and supplier of core components of nuclear power plants, such as reactor pressure vessels, steam generators, and steam turbines. Doosan has a vertically integrated manufacturing facility in Changwon, Korea, which is capable of raw material production to final assembly of nuclear components. Doosan has manufactured and supplied 34 reactor pressure vessels and 124 steam generators globally. Doosan is an equity investor in X-energy. In December 2025, Doosan signed a Reservation Agreement with X-energy, committing to the construction of a new SMR fabrication facility to support the execution of X-energy's more than 11 GWe commercial pipeline. Under the Reservation Agreement, Doosan will reserve forging capacity for 16 sets of key pressure-boundary components for the Xe-100 program in exchange for a non-refundable \$12 million reservation fee payable in two \$6 million installments and creditable against future purchase orders, with a \$1.5 million commitment fee per set if purchase orders are not placed on the agreed timeline. Doosan will reserve forging slots upon receipt of the reservation fee, and such fees may be creditable as down payments if orders are placed within specified windows, in connection with Doosan's proposed SMR fabrication facility. The Reservation Agreement provides for termination for convenience or cause, with customary notice and cure mechanics.
- **DL E&C.** DL E&C will work with X-energy to identify opportunities around the world to employ best practices to support the development and deployment of Xe-100 plants on a global scale. Founded in 1939, DL E&C has the longest business history among construction companies in Korea and has maintained a top ten Korean engineering and construction company ranking for the past 50+ years. DL E&C is the flagship company of DL Group, and has a broad range of experience in global mid/downstream energy sector engineering, procurement and construction, providing total services and solutions in more than 35 nations, focusing on a more sustainable and better future. DL E&C is an equity investor in X-energy.
- **Korea Hydro & Nuclear Power.** KHNP is the Korean entity that operates its nuclear and hydroelectric sector as a subsidiary of *KEPCO*, the majority state-owned utility. Since 1971, KHNP has successfully constructed and operated 30 nuclear power plants still in operation today, 26 in South Korea and four in the UAE. KHNP provides significant expertise in the construction of nuclear reactors. In August 2025, KHNP signed a joint compact with X-energy, Amazon, and Doosan outlining the intention to collaborate on the deployment of the Amazon order book in the U.S.
- **SGL Carbon LLC.** SGL is a developer and manufacturer of advanced carbon materials. X-energy and SGL have collaborated since 2015 on the qualification of NBG-18 graphite for use in the Xe-100, leveraging SGL's experience manufacturing graphite for high-temperature gas-cooled reactors. In January 2026, SGL announced a 10-year graphite supply agreement for reactor components of X-energy's Xe-100 SMRs, and has commenced production for the Dow Seadrift plant site as part of an initial three-year award valued at over \$100 million. The graphite supply agreement contains standard terms including a ten-year initial term with automatic renewals, purchase order-based releases with firm-fixed pricing and milestone payments secured by a corporate guarantee, delivery, packaging and shipping requirements with liquidated damages for delay and ASME-compliant quality assurance and audit rights. The graphite supply agreement provides for termination for convenience or cause, with customary notice and cure mechanics. It also includes intellectual property protections customary for

nuclear-grade materials supply arrangements, including an intellectual property escrow and a right of first refusal for the Company related to the NBG-18 intellectual property.

COMPETITION

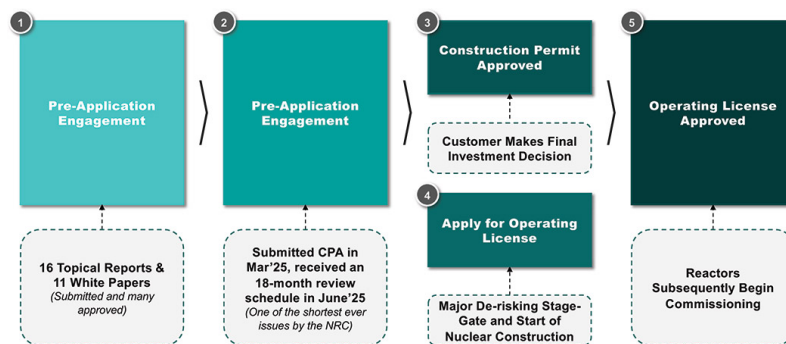
Our competitors include other power generation technologies, including traditional baseload power producers, other advanced nuclear technologies, renewables with or without storage, advanced energy storage, fossil fuels with carbon capture, and combinations of these technologies.

- *Traditional baseload* — Traditional baseload power includes natural gas, coal, oil and large-scale nuclear.
- *Fossil fuels with carbon capture* — Fossil fuel sources provide firm, baseload power, but require carbon capture technology to provide clean power. Carbon capture has not yet been demonstrated to be scalable to meet the market need.
- *Renewables with or without energy storage* — Wind and solar provide clean energy but cannot provide firm, baseload energy due to their intermittency. When paired with energy storage, they can provide a more dispatchable energy supply, but battery storage technology has not been demonstrated to be scalable or cost-effective to meet the growing market need, which demands reliability, particularly in energy-intensive applications.
- *Other advanced nuclear reactors* — There are several advanced reactor and SMR technologies in various stages of development, including high temperature gas-cooled reactors, molten salt reactors, fusion technologies, and advanced light water reactor designs.

REGULATORY OVERVIEW

Licensing

The regulatory pathway with the NRC for the FOAK reactor project is as follows:



X-energy has pursued a Part 50 two-step licensing process timeline, whereby the company first seeks the Construction Permit (up to 18 months) and then seeks an Operating License (up to 18 months). This process gives the company flexibility to modify reactor design if warranted to achieve better economics or performance without needing to restart the licensing process. The alternative, Part 52 combined licensing process, provides a streamlined combined Construction and Operating License Application (“COLA”). However, recent submissions under Part 52 have resulted in application re-submissions caused by changes in design on NRC findings or insufficient initial applications.

X-energy expects the regulatory review timeline to shrink materially as the NRC’s familiarity with the Xe-100 design increases. Additionally, the current U.S. government is focused on legislation to streamline

permitting, and the current Administration has issued several Executive Orders to streamline licensing at the NRC, accelerate advanced reactor deployment at the DOE and DOD sites for national security and AI/data-center needs, overhaul the domestic nuclear fuel cycle, and strengthen the U.S. nuclear industrial base. Further, once X-energy achieves NOAK status and is no longer concerned with design changes impacting the regulatory design, a COLA process would further abbreviate the regulatory approval timeline. X-energy is developing novel strategies that are anticipated to enable the NRC regulatory review process to become as short as 6 months.

Potential Tax Credits per Standard Configuration of Xe-100 Reactors for Customers

The One Big Beautiful Bill Act (OBBBA) was signed into law in July 2025, maintaining the Clean Electricity Production Tax Credit (§45Y) and Clean Electricity Investment Tax Credit (§48E). These credits remain available to certain nuclear facilities that begin construction prior to 2033 before being phased out over four years. The OBBBA also expanded the 10% Production Tax Credit (§45Y) adder for nuclear facilities that are located in “energy communities” which includes certain designated metropolitan statistical areas with significant direct employment related to the advancement of nuclear power. Additionally, the FY26 appropriations bill, the “Commerce, Justice, Science; Energy and Water Development; and Interior and Environment Appropriations Act, 2026,” signed into law on January 23, 2026, in addition to the ongoing budget for nuclear energy, includes additional funding of \$3.1 billion to repurpose previously appropriated funds towards the DOE’s advanced nuclear programs including the Advanced Reactor Demonstration programs, some portion of which we expect will be allocated to X-energy. This financial support demonstrates the U.S. federal government’s focus on accelerating the nuclear, particularly SMR, sector and will fundamentally enhance economics and solidify advanced nuclear reactors as an attractive power alternative.

Clean Electricity Production Tax Credit (§ 45Y)^{(1), (2), (3)}

Up to around \$83.0 million of potential tax credits to a customer per four 80 MWe reactors (used to produce electricity) per year for 10 years, adjusting each year for inflation



How it works:

Assuming certain labor requirements are met or an exception applies, a tax credit of 1.5¢/kWh adjusted annually for inflation (3.00¢/kWh in 2025) of electricity produced and sold for up to 10 years after the facility is placed in service.

- + 10% additional credit if the facility is located in either a designated “nuclear energy community or “energy community” (e.g., certain metropolitan statistical areas with historic fossil fuel employment, certain census tracts where a coal mine has closed (or adjoining tracts), or brownfield sites)
- + 10% additional credit if the facility is constructed solely with domestic iron and steel and a minimum of 40% (minimums increase over time) domestic manufactured products

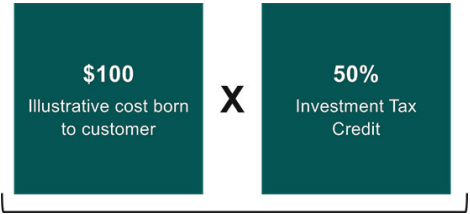
= up to around 3.60¢/kWh total credit

(1) Eligibility requirements: Only certain facilities used for the generation of electricity placed in service after December 31, 2024. Also, facilities whose “greenhouse gas emission rate” do not exceed zero, whose electricity is produced in the U.S. and sold to “unrelated persons,” and that meet “prevailing wage” and “apprenticeship” requirements are eligible to claim these tax credits.

- a. The amount of the tax credit determined with respect to a project is subject to a four-year phase-out for projects that begin construction in 2033 and later.
 - b. Projects that begin construction after December 31, 2025, may not receive material assistance from certain prohibited foreign entities in constructing such facilities.
 - c. A taxpayer claiming a tax credit in any tax year beginning after December 31, 2025, may not be a prohibited foreign entity and may not make certain payments to specified foreign entities which would give the specified foreign entity effective control over the project.
- (2) Hours in a year multiplied by 1,000.
- (3) Rates as of 2026. Tax credit is adjusted annually based on inflation.

U.S. Clean Electricity Investment Tax Credit (§ 48E)^{(1), (2)}

Up to around \$50 of potential illustrative tax credits to a customer for every \$100 of cost born per four 80 MWe reactors purchased, claimed in the year when the plant is put in service



How it works:

Assuming certain labor requirements are met or an exception applies, a tax credit of 30% of the initial capital cost in a facility with respect to certain eligible costs,

- + 10% additional credit if the facility is in an “energy community” (e.g., certain metropolitan statistical areas with historic fossil fuel employment, certain census tracts where a coal mine has closed (or adjoining tracts), or brownfield sites)
- + 10% additional credit if the facility is constructed solely with domestic iron and steel and a minimum of 40% domestic manufactured product

= up to 50% tax credit on certain upfront capital costs

- (1) Eligibility requirements: The credit is available only to certain facilities used for the generation of electricity placed in service after December 31, 2024. The facility’s “greenhouse gas emission rate” cannot exceed zero and must meet “prevailing wage” and “apprenticeship” requirements. Credits may be subject to recapture if eligibility requirements are not maintained or if the facility (or an ownership interest therein) is sold.
- a. The amount of the tax credit determined with respect to a project is subject to a four-year phase-out for projects that begin construction in 2033 and later.
 - b. Projects that begin construction after December 31, 2025, may not receive material assistance from certain prohibited foreign entities in constructing such facilities.
 - c. A taxpayer claiming a tax credit in any tax year beginning after December 31, 2025, may not be a prohibited foreign entity, and may not make certain payments to specified foreign entities which would give the specified foreign entity effective control over the project.

- (2) Subject to diligence and IRS rulemaking process on expense eligibility for investment tax credit. X-energy assumption not explicitly included in IRA; similar provisions have been included in prior renewables tax credit programs.

Potential Tax Credits Related to Construction of Fuel Fabrication Facility TX-1

Qualifying Advanced Energy Project Credit (§ 48C)

The Qualifying Advanced Energy Project Credit (§ 48C) was initially created under the American Recovery and Reinvestment Act (2009) and later expanded by the Inflation Reduction Act (“IRA”) of 2022. The program creates a qualifying investment tax credit for facilities that manufacture clean energy equipment, nuclear fuel or related supply chain technologies. In March of 2024, TRISO-X was awarded around \$150.0 million investment tax credit for the construction of its first purpose-built commercial-scale fuel fabrication facility, TX-1, in Oak Ridge, TN. Upon meeting certification and ‘placement in service’ qualifications, the credit will be applied against the company’s federal income tax liability or is eligible to be transferred to an unrelated 3rd party per IRC § 6418 that equals 30% of the eligible capital investment costs, up to allocated award, in construction and equipping of the TX-1 facility.

GOVERNMENT AND REGULATION

Policymakers and industry leaders increasingly recognize that nuclear, and particularly advanced nuclear, will be a key component of the clean energy transition. Growing energy demand, paired with enduring considerations around managing longer-term carbon risk, creates a clear need for what nuclear can offer: carbon-free, consistent baseload energy generation. According to the IEA, fossil fuels currently supply around 60% of global electricity generation, and the IEA projects that, under the most likely scenario, global electricity demand could increase by more than 50% by 2050. As such, nuclear is expected to play a significant role in virtually every credible pathway to achieving net-zero.

While renewables have made and continue to make a meaningful contribution to this transition, they lack several key advantages that advanced nuclear offers; specifically, the ability to deliver land-efficient and readily dispatchable energy. Further, advanced nuclear offers expanded use cases, such as industrial heat, while having lower capital costs, geographic flexibility, simplified operations and substantial safety improvements over legacy nuclear plants. We believe these factors uniquely position advanced nuclear as a central component of the global energy system moving forward.

Nuclear energy has received significant federal- and state-level support in the U.S. in recent years. Currently, about half of U.S. states have, or are considering, policies to support advanced nuclear. Several have also adopted binding deadlines — via legislation, executive orders, or administrative actions — to mandate decarbonization of energy purchased, sold or generated within their borders.

At the U.S. federal level, support for advanced nuclear power has been steady since the adoption of the Nuclear Energy Innovation Capabilities Act in 2018. Since that time, billions of dollars have been authorized and appropriated to support nuclear energy in recent significant energy-related legislation, including in the Nuclear Energy Innovation and Modernization Act of 2019, the Infrastructure Investment and Jobs Act of 2021, the Inflation Reduction Act in 2022, and the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act in 2024, all passed with strong bipartisan and bicameral support.

Similarly, U.K. and Canada policymakers have also expanded support of advanced nuclear. In December 2021, the U.K. government designated HTGRs as the technology focus for its Advanced Modular Reactor (“AMR”) demonstration program, citing their potential to contribute to net-zero goals, ability to produce high-temperature industrial heat, relatively high technical maturity, and the proven safety record of the U.K.’s second-generation Advanced Gas-cooled Reactors.

United States

- ***Nuclear Energy Innovation Capabilities Act (“NEICA”)***. Signed into law in September 2018, NEICA directs the DOE to prioritize research, development, and demonstration of advanced nuclear reactor technologies, authorizes the creation of a National Reactor Innovation Center to facilitate private

sector access to DOE facilities for testing and demonstration, and promotes public-private partnerships to accelerate the commercialization of innovative nuclear energy solutions.

- **Nuclear Energy Innovation and Modernization Act (“NEIMA”).** Signed into law in January 2019, NEIMA directs the NRC to modernize its licensing processes for advanced nuclear technologies, establishes a new fee structure to ensure more predictable and transparent costs for applicants, and requires the NRC to develop a framework for licensing advanced reactors.
- **Infrastructure Investment and Jobs Act (“IIJA”).** Signed into law in November 2021, the IIJA provides \$65.0 billion for power and grid investments, including grid reliability, resiliency, and clean energy technologies such as carbon capture, hydrogen and advanced nuclear. The IIJA appropriated \$2.47 billion funding for the two ARDP demonstration projects (of which X-energy is one), following its creation in the Energy Act of 2020.
- **Inflation Reduction Act.** Signed into law in August 2022, the IRA appropriated \$700.0 million to support the transportation and availability of HALEU fuel and increased DOE’s loan guarantee authority to \$250.0 billion, both measures that will support the acceleration of reactor deployment and improve projects economics.
- **Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act (ADVANCE ACT).** Signed into law in 2024, this historic nuclear energy package brings the U.S. closer to its goals of energy independence and international market leadership. The Act includes NRC licensing reform, opens the door to foreign investment, and directs the NRC to develop a program to enhance the agency’s preparedness and coordination in qualifying and licensing advanced nuclear fuels.
- **Recent Executive Orders.** The current Administration unveiled four Executive Orders on May 23, 2025 directing federal agencies to streamline licensing at the NRC, accelerate advanced reactor deployment at the DOE and DOD sites for national security and AI/data-center needs, overhaul the domestic nuclear fuel cycle, and strengthen the U.S. nuclear industrial base.
 - “*Reforming the Nuclear Regulatory Commission*” which directed a reorganization of the current Nuclear Regulatory Commission structure to promote faster processing of license applications and mandated an 18-month review period for a decision on an application to construct and operate new reactors (including advanced nuclear reactors).
 - “*Reinvigorating the Nuclear Industrial Base*” seeks to reduce U.S. dependence on foreign sources of nuclear fuel by funding a buildout of domestic supply chains to support the current nuclear fleet and an expansion of production by four times by 2050 with an emphasis on establishing a domestic nuclear fuel cycle — including uranium enrichment, restart, completion, uprates, or construction of reactors; and expanding the nuclear energy workforce.
 - “*Deploying Advanced Nuclear Reactor Technologies for National Security*” defines AI as a national security objective and the order sets a priority for the DOE and the DOD to work with private industry to accelerate deployments of advanced nuclear technology to power AI. Key goals include designating DOE sites appropriate for advanced nuclear reactors within 30 months, deploying an advanced nuclear reactor within three years at a domestic military installation and releasing 20 MTU of HALEU for advanced reactor design use at DOE sites.
 - “*Reforming Nuclear Reactor Testing at the Department of Energy*” finds the design, construction and operation of test reactors for research purposes and that do not produce commercial power to fall under the purview of the DOE and directs DOE to streamline environmental reviews and expedite qualified test reactors for operation at DOE-owned or controlled facilities within two years of an application.
- **One Big Beautiful Bill Act.** Signed into law in July 2025, the OBBBA is a comprehensive tax and spending package that makes permanent many provisions of the 2017 Tax Cuts and Jobs Act, while introducing new tax policies and restructuring others. The OBBBA generally maintains the Clean Electricity Production Tax Credit and Clean Electricity Investment Tax Credit for nuclear power that were added by the IRA but subjects it to a phase-down schedule that begins for projects that commence construction after 2033. Projects beginning construction in 2034 and 2035 will still qualify for tax credits but with a 75% and 50% credit value, respectively. These projects must meet the traditional

continuity test, which requires placement in service by the end of the fourth year after the end of the year in which construction starts, or else demonstrate that construction was continuous based on the facts. The OBBBA also provides an expanded 10% tax credit adder definition for the PTC for nuclear facilities located in designated “energy communities” and authorizes additional credit subsidies and loan guarantee authority to support the deployment of advanced nuclear technologies.

- Additionally, through the OBBBA, the U.S. Congress reinforced earlier legislation focused on the acceleration of environmental review requirements under NEPA for project proponents that pay certain fees. Further, DOE amended its NEPA guidelines further to set page limits, foster greater collaboration between the agencies, and expand the scope of cases that qualify for a shorter and streamlined review process because the projects have a limited environmental impact (such as siting new small-scale projects on existing brownfield or DOE sites). On February 2, 2026, DOE announced a new categorical exclusion that covers the authorization, siting, construction, operation, reauthorization and decommissioning of advanced nuclear reactors, including SMRs. The categorical exclusion is effective immediately and is expected to reduce environmental review barriers for qualifying projects. NRC has also begun the process of updating its NEPA guidelines, which are anticipated to similarly streamline project reviews.
- **Other Legislative Support Provisions under Consideration in the U.S. Congress.** Additionally, the FY26 appropriations bill, the “Commerce, Justice, Science; Energy and Water Development; and Interior and Environment Appropriations Act, 2026,” signed into law on January 23, 2026, in addition to the ongoing budget for nuclear energy, includes additional funding of \$3.1 billion to repurpose previously appropriated funds towards the DOE’s advanced nuclear programs including the Advanced Reactor Demonstration program, some portion of which we expect will be allocated to X-energy. This financial support demonstrates the U.S. federal government’s focus on accelerating the nuclear, particularly SMR, sector and will fundamentally enhance economics and solidify advanced nuclear reactors as an attractive power alternative.
- **Several States Showing Strong Commitment to SMR Development.** With increasing electricity demand and a desire to attract AI & data centers, there has been significant movement at the state level to incentivize the deployment of nuclear across U.S. states. Many have shown strong commitment towards developing advanced nuclear technologies, including SMRs, and putting in place the necessary legislation to facilitate nuclear power build-out in their states. For example:
 - **Texas:** Enacted House Bill 14 to create the Texas Advanced Nuclear Deployment Office and established the Texas Advanced Nuclear Development Fund, which provided an initial \$350.0 million to support both development and construction of advanced nuclear reactors.
 - **Tennessee:** Created the Tennessee Nuclear Energy Fund to expand nuclear development and manufacturing ecosystem for the state of Tennessee, which included an initial \$50.0 million which has increased to \$70.0 million by additional \$10.0 million installments in FY25 and FY26.
 - **Washington:** Enacted a clean electricity standard in 2019 which would eliminate coal generation by 2025 and mandate 100% clean energy by 2045, including nuclear; provided \$25.0 million to Energy Northwest in support of the utility’s application to the DOE’s Loan Programs Office.
 - **Maryland:** Established greenhouse gas emissions reduction targets and formally recognized the critical role that nuclear energy plays in the state’s clean energy generation profile in 2022; in 2025, the state passed the Next Generation Energy Act which establishes a framework that includes incentives aimed at advancing nuclear energy generation across the state.
 - **Indiana:** Signed a new law in 2025 that supported the development of small modular reactors in Indiana, including a 20% Investment Tax Credit for SMR manufacturing and allowing utilities to seek preapproval and timely recovery for project development costs related to nuclear energy.
 - **Virginia:** Established the Virginia Nuclear Energy Consortium (VNEC) to sustain the state’s leadership in nuclear energy through interdisciplinary business development, research, and training related to nuclear energy; passed legislation allowing investor-owned electric utilities to accelerate cost recovery for project development of SMRs.

- **Louisiana:** Established the Louisiana Advanced Nuclear Competitive Edge (LANCE) Strategic Framework, authorized by the Public Service Commission, to position the state as a leader in advanced nuclear reactors, particularly SMRs.
- **West Virginia:** Repealed its ban on construction of nuclear power plants, removing legal constraints that previously blocked new nuclear capacity, including SMRs.
- **Illinois:** Lifted or partially eased its moratorium on new nuclear plants to allow SMRs (specifically reactors up to around 300 MW) beginning in 2026, while putting in place needed regulatory and safety frameworks.
- **New York:** Launched a Master Plan for Responsible Advanced Nuclear Development, backed by a blueprint from NYSERDA. The plan includes efforts to deploy advanced nuclear technology as well as development of early site permits for advanced reactors at locations like Nine Mile Point.

Canada

- **Clean Technology Investment Tax Credit.** The clean technology investment tax credit (“CT ITC”) is a 30% refundable investment tax credit applicable to the capital cost of clean technology property in Canada including certain small modular reactor equipment. The CT ITC is applicable in respect of the cost of eligible property that was acquired and became available for use on or after March 28, 2023. The CT ITC rate is reduced to 15% for eligible property that becomes available for use in 2034, and the CT ITC is not available for property that becomes available for use after 2034. If certain labor conditions are not satisfied then the tax credit rate is reduced to 20%. The CT ITC, as proposed to be amended pursuant to the Budget Implementation Act, No. 1 tabled in Parliament on November 4, 2025, is available in respect of certain small nuclear energy properties that are part of a fixed location system that is used all or substantially all to generate electrical or heat energy (or a combination of electrical energy and heat energy) from nuclear fission as determined on an annual basis and that is located at a nuclear facility where, at the time the property becomes available for use, the total combined gross-rated thermal generating capacity of all planned and existing nuclear fission reactors at the facility is reasonably expected not to exceed 1,400 MWt.

United Kingdom

- In 2025, the U.K. government announced its intent to create a new ‘Golden Age of Nuclear’ in the U.K. and encourage private sector investment in next-generation nuclear technologies. It implemented significant reforms to accelerate the deployment of small modular reactors (SMRs) and Generation IV advanced modular reactors (AMRs) including High Temperature Gas-cooled Reactors (HTGRs). Planning reforms were launched to expand eligible sites for SMRs beyond the previous eight locations to cover all of England and Wales, supporting growing energy demand from data centers and heavy industry. The Government declared it would offer value-for-money project equity and debt provision from the National Wealth Fund, and financial risk mitigation and revenue support mechanisms, negotiated with the DOE Security and Net Zero. A regulatory task force was set up to shorten nuclear licensing and consenting timelines, and the U.S. and U.K. Governments adopted the Atlantic Partnership for Advanced Nuclear Energy, including a regulatory co-operation agreement designed to achieve efficiencies through collaboration on assessment data.

Nuclear Safety Regulation

The commercial nuclear industry is heavily regulated worldwide. In general, regulatory approval is required for the design, construction and operation of every nuclear plant, as well as the nuclear fuel facilities that supply them. Regulations are designed to ensure protection of people and the environment and typically address: (1) design safety and robustness against internal hazards (*e.g.*, component failures, fires) and external hazards (*e.g.*, earthquakes and extreme weather), (2) environmental impacts of construction and operations (*e.g.*, water use, preservation of historical sites, animal and plant species), and (3) civil liability and insurance. Although regulations are country-specific, regulators often collaborate when a design is deployed in multiple jurisdictions.

X-energy's licensing strategy has two goals: (1) obtain approval of a reactor project deploying X-energy's technology within the shortest possible time, through early regulatory engagement and high-quality applications; and (2) maintain a common Xe-100 design across markets.

After several years of pre-application engagement, in March 2025, Long Mott Energy, LLC, a wholly owned subsidiary of Dow, submitted a construction permit application to the NRC for a proposed advanced nuclear project deploying four Xe-100 reactors at a Dow plant in Seadrift, Texas. The application was docketed by the NRC in May 2025. Citing the completeness and quality of the application, and the effectiveness of pre-application engagements, the NRC published an 18-month review timeline for the project and began a concurrent environmental assessment. All current pre-licensing work is conducted and submitted by X-energy in order to de-risk future construction permit and operating license applications to the NRC, whether ARDP funded or not, that will be submitted by our customers, the plant owners.

Environmental review under the National Environmental Policy Act is required for federal actions, including approval of the construction permit application. During the environmental review, the NRC consults with collaborating federal agencies, as well as state, local, and tribal authorities, to ensure the relevant parties are aware of and acknowledge the licensing actions being considered. The public is also granted opportunities for comment. In certain cases, individual states may have additional environmental review requirements related to the construction and operation of a nuclear power plant. The environmental review requires the NRC to consider any state, local and tribal stakeholders. In addition to NRC approvals, other federal and state government permits and authorizations will be required to construct and operate the Long Mott Generating Station facility, including those discussed below.

Environmental, Occupational Health and Safety, and Other Regulations

X-energy is also subject to regulations regarding nuclear material safeguards, non-proliferation restrictions, liability insurance regimes, and various other matters. Both we, for our production facilities, and customers purchasing our reactors must obtain a variety of permits, licenses, and insurance for the jurisdiction where the facility will be located. We and customers purchasing our reactors are subject to stringent and complex federal, state, local and international laws and regulations governing the discharge of materials into the environment or otherwise relating to protection of worker health, safety and the environment. Compliance with all of these laws and regulations may expose us to significant costs and liabilities and cause us to incur significant capital expenditures in our operations. Any failure to comply with these laws and regulations may result in the assessment of administrative, civil and criminal penalties, imposition of remedial obligations, and the issuance of injunctions delaying or prohibiting operations. Private parties may also have the right to pursue legal actions to enforce compliance as well as to seek damages for non-compliance with environmental laws and regulations or for personal injury or property damage. In addition, the trend in environmental regulation is to place more restrictions on activities that may affect the environment, and thus, any changes in, or more stringent enforcement of, these laws and regulations that result in more stringent and costly pollution control equipment, the occurrence of delays in the permitting or performance of projects, or waste handling, storage, transport, disposal or remediation requirements could have a material adverse effect on our operations and financial position.

Our business and the business of customers purchasing our SMRs must obtain required permits, licenses and insurance for the jurisdiction where the facility will be located. In the U.S., we and our customers are subject to NRC regulation and licensing as well as other federal and state radioactive materials licensing. For example, we recently received a Special Nuclear Material License from the NRC for the possession and use of enriched uranium and will be required to receive a Specific and General Radioactive Material License from the State of Tennessee for our TX-1 facility.

Development and operation of our TX-1 facility, the Long Mott Generating Station, our other facilities and our customers' other facilities are also subject to federal, state and local regulation, including under the Clean Water Act, Clean Air Act and Occupational Health and Safety Act, and required to obtain and maintain permits such as National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from Construction Activities and local construction permits. Furthermore, some environmental laws impose substantial penalties for noncompliance, and others, such as the federal Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), the Resource Conservation and Recovery Act ("RCRA"), or similar state laws, may impose strict, retroactive and joint and several liabilities

for the remediation of releases of hazardous substances. Stated differently, liability under CERCLA, RCRA or similar state and local laws, may be imposed as a result of conduct that was lawful at the time it occurred or for the conduct of, or conditions caused by, prior operators or other third parties. Failure to properly handle, transport, store or dispose of hazardous materials or otherwise conduct our operations in compliance with RCRA and other EHS laws or similar state and local laws could expose us to liability for governmental penalties, cleanup costs and civil or criminal liability associated with releases of such materials into the environment, damages to property, natural resources and other damages, as well as potentially impair our or our customers' ability to conduct our operations.

Finally, siting, cost recovery, interconnection and other state and federal issues for power plants of any type are also often subject to occasionally lengthy approval processes by state utility regulators, independent transmission system operators, and FERC approvals.

Our compliance with these and other laws, regulations, and contractual commitments may be onerous and could, individually or in the aggregate, increase our cost of doing business, impact the financial viability of our business model, limit our ability to pursue certain business practices or offer certain products and services, cause us to change our business models and operations, affect our competitive position relative to our peers, and/or otherwise harm our business, reputation, financial condition, and operating results.

We also cannot be assured that future events, such as changes in existing laws or enforcement policies, the promulgation of new laws or regulations or the development or discovery of new facts or conditions adverse to our operations will not cause us to incur significant costs. While we are confident in our compliance with current environmental regulations, we acknowledge the potential for policy shifts that could impact our operations. On January 20, 2025, President Trump issued a series of executive orders and memoranda signaling a shift in environmental and energy policy in the U.S., including the revocation of approximately 80 Biden-era executive orders related to public health, the environment, climate change and climate-related financial risks. President Trump also declared a "national energy emergency," directing agencies to expedite conventional and nuclear energy projects. While the extent of the current Administration's changes to the environmental regulatory landscape in the U.S. is unknown at this time, it is possible that additional changes in the future could impact our results of operation and those of our customers.

Additional information regarding certain risks related to government regulations is included in "*Risk Factors — Risks Relating to Compliance with Law, Government Regulation and Litigation.*"

Export Controls

Our business is subject to and must comply with stringent U.S. import and export control laws, including DOE regulations under 10 CFR Part 810 (governing the export of nuclear technology and technical assistance by U.S. persons); NRC regulations under 10 CFR Part 110 (governing import and export of nuclear hardware, equipment, and materials); and Export Administration Regulations issued by the Bureau of Industry and Security within the U.S. Department of Commerce (covering "dual-use" items and associated foreign assistance).

Export control regulations safeguard U.S. national security, support foreign policy objectives, and uphold nonproliferation commitments. Governmental authorizations (e.g., DOE Part 810 approval) may be required before we export technology, equipment, materials, or services, or collaborate with foreign entities. X-energy maintains an extensive export control program to ensure compliance.

The U.S. government agencies responsible for administering the nuclear export control regulations have a degree of discretion in interpreting and enforcing these rules, and in approving, denying, or conditioning authorizations. Their decisions are also shaped by multilateral export control regimes and geopolitical developments.

FACILITIES OVERVIEW

We own or lease facilities and property in the following geographic locations:

- Rockville, Maryland — The following facilities are located in Rockville, Maryland:

- X-energy’s corporate headquarters consists of 39,000 square feet and houses the Xe-100 engineering teams performing engineering, design, operations, testing, code development, quality assurance, licensing and project management. In addition, the Rockville facility houses the executive management team as well as accounting, marketing, human resources, procurement and legal staffs.
- X-energy also holds a lease with a third-party for offices consisting of 49,000 square feet in Rockville, Maryland that is expected to house the teams named above beginning in 2026.
- Frederick, Maryland — The following facilities are located in Frederick, Maryland:
 - *The Operator Training Facility* — This facility became operational in October 2023 and consists of 10,447 square feet and houses the following activities:
 - *Xe-100 Simulator Development* — This activity includes the development of a full-scale ANSI 3.5 Xe-100 simulator that is a true representation of the Xe-100 plant. The simulator model will include all process models of Xe-100 reactors, instrumentation and control sensors and other elements to provide an environment to train and license Xe-100 operators before the first Xe-100 reactor’s fuel is loaded. This activity also includes the design of the Xe-100 control room and the construction of a replica control room where the operators will be trained. It is expected that a single Xe-100 control room will be sufficient to control up to twelve Xe-100 reactors.
 - *Xe-100 Operator Procedure Development* — This activity includes the development of the operational procedures needed to control the Xe-100 plant. The procedures will be developed then displayed on a “computerized procedure system” that X-energy will be developing, and will be used to create training material for Xe-100 operators.
 - *Xe-100 Operator Training* — This activity includes training Xe-100 operators in a classroom environment. Students will use the simulator and X-energy training materials.
 - *Human Factors Engineering Analysis* — This activity includes the task analysis in NRC’s NUREG-0711 needed for the Xe-100 control room and simulator design, among other analyses. This activity is also necessary to determine the workload on Xe-100 operators to calculate the necessary number of operators in the control room.
 - *The Frederick Testing Facility (to be known as “XTAC” or “X-energy Technology Advancement Center”)* — This facility was purchased in July 2025 and consists of 90,000 square feet which will be used for office space, major component testing, machining and manufacturing studies, and training collateral, including the following:
 - *eXperimental Test Facility (“XTF”)* — The XTF is expected to begin testing in 2026. It will allow for bench-scale and fractional scale testing of our first-of-a-kind components and technologies, allowing for rapid refinement of designs. Specifically, the XTF will be testing the steam generator interfaces, the reactor cavity cooling system, components for the fuel handling system and mechanical properties of the fuel pebbles, among other systems.
 - *Machine Shop* — The machine shop is expected to begin testing in 2026. It will allow for rapid prototyping of critical components in the reactor. Specifically, the machine shop will be manufacturing fuel handling system components and main system components and machining graphite blocks, among other systems.
 - *Helium Test Facility (“HTF”)* — This testing facility is expected to begin tests in mid-2027. It will allow for testing of our first-of-a-kind technologies in a reactor-simulating high-pressure, high temperature helium environment. The HTF will test the fuel handling system, the helium circulator, and the RODS, among other systems.
 - *Training Facility* — The facility will house training facilities for operators, simulators, chemistry, security and other reactor support staff. The location will also allow for curriculum design. The facility will begin construction in 2026 and be built over to support Operational Readiness.

- *Office space* — The facility will feature 22,000 square feet of office space, used as offices and conference rooms for facility staff and visiting employees and guests.
- **Oak Ridge, Tennessee** — The following facilities and sites are located in Oak Ridge, Tennessee:
 - *Oak Ridge National Lab (“ORNL”)* — This space located within ORNL is called the TRISO-X Pilot Facility, which houses a single commercial scale TRISO-X fuel fabrication line and can produce HALEU-bearing fuel. It has been used to test new fabrication processes, leading to 13 issued U.S. patents, and five provisional U.S. patent applications. We anticipate winding down operations at this space through first half of 2026.
 - *Lafayette Road Facility* — The facility began operations in January 2023. It consists of approximately 42,000 square feet and houses TRISO-X staff, performing primarily NRC licensing engagement, support for the deployment of the TF3 and process equipment design.
 - *Commercial Fuel Fabrication Facility (TX-1)* — Our first fuel facility began vertical construction in September 2025. Once operational, the facility is expected to be North America’s first purpose-built commercial advanced nuclear fuel fabrication facility. This site is 110 acres, and is part of a former DOE site known as Horizon Center Industrial Park.
 - *Apollo Emory Valley Site* — Leased for storage space that we anticipate moving in Spring 2026.
 - *Planned TX-L site* — Known as ‘Area 7’, this site is on adjacent land to our planned TX-1 location.
- **Toronto, Canada** — X-energy’s Toronto office space houses staff and is the headquarters of the wholly owned subsidiary, X-Energy Canada, Inc.
- **Warrington, England** — X-energy’s Warrington office space houses staff and is the headquarters of the wholly owned subsidiary, X-Energy UK.

The company believes the locations of its facilities provide it with unique access to the NRC, U.S. government partners and customers, and the DOE’s extensive ORNL lab facilities and personnel, along with being attractive locations within some of the most well-educated metropolitan corridors in North America.

The existing facilities accommodate current operating needs, and the company will expand current facilities as needed to accommodate a growing workforce as it moves closer to deploying the Xe-100 and associated services.

INTELLECTUAL PROPERTY

We rely on a combination of patent and trade secret protection laws, as well as contractual restrictions in our agreements with our employees, contractors, consultants and third parties with whom we have relationships, to protect and enhance the proprietary technology, inventions and improvements that are commercially important to our business. We also rely on trademark laws to protect our brands.

Our policy is to protect our competitive position by, among other methods, filing patent applications in the U.S. and other jurisdictions, related to our proprietary technology, inventions, improvements and products that are material to our business. We also rely on our trade secrets and know-how relating to proprietary technology, inventions, improvements and products as well as certain innovation and licensing opportunities to develop, strengthen and maintain our competitive position in the field; however, such rights can be difficult to protect and provide us with limited protection. We take steps to protect and preserve our trade secrets and know-how by employing various methods, including entering into confidentiality, non-disclosure and non-compete agreements with certain of our employees and third parties, including our vendors, contractors and potential business partners, to protect our intellectual property and proprietary information.

As of the date of this prospectus, we own approximately 13 issued U.S. patents, 14 pending U.S. patent applications, two U.S. trademark registrations and two U.S. trademark applications. The issued U.S. patents have expiration dates between 2036 and 2045. Of those approximately 13 issued U.S. patents, all 13 of them cover certain aspects of our reactor and fuel technology. We also own 15 issued foreign patents, including in Canada, Japan and South Korea, and 48 pending patent applications. The issued foreign patents have expected expiration dates between 2038 and 2045.

EMPLOYEES AND HUMAN CAPITAL

As of March 17, 2026, we have a highly educated workforce of 916 employees, of whom 317 have master's degrees and 104 have Ph.Ds. Our employees are located across 40 different states and two countries. We are dedicated to our corporate goal of changing the world through innovative and implementable energy solutions.

Due to the highly specialized nature of our business, we need to hire and train skilled and qualified personnel to design, build and operate our state-of-the-art equipment, and to perform a broad range of services to support our company and our customers. Our success as a company depends on our ability to attract, develop and retain people with highly technical and specialized expertise who are dedicated to consistently performing quality work and, for some of our positions, can obtain a security clearance. We are dedicated to promoting the health, welfare and safety of our employees. We strive to treat all employees with dignity and respect and provide them with fair, market-based, competitive and equitable compensation. We aim to recognize and reward the performance of our employees in line with our pay-for-performance philosophy and provide a comprehensive suite of benefit options that enables our employees and their dependents to live healthy and productive lives. Moreover, we aim to foster an environment where individuals feel a sense of belonging and can achieve their highest potential, regardless of personal background. We are an equal opportunity employer and work to create an inclusive environment, built on a foundation of compliance with applicable civil rights laws.

Safety in our workplaces is paramount. We take measures to prevent workplace hazards, encourage safe behaviors and enforce a culture of continuous improvement to foster processes that help us eliminate incidents and injuries and comply with applicable health and safety laws.

LEGAL PROCEEDINGS

From time to time, we may be subject to various claims, lawsuits and other legal and administrative proceedings that may arise in the ordinary course of business. Some of these claims, lawsuits and other proceedings may range in complexity and result in substantial uncertainty; it is possible that they may result in damages, fines, penalties, non-monetary sanctions or relief. We currently do not have any claims, lawsuits or proceedings against X-energy that, individually or in the aggregate, would be considered material to our business or likely to result in a material adverse effect on our future operating results, financial condition or cash flows.

BOARD OF DIRECTORS AND MANAGEMENT OF X-ENERGY

The table below sets forth information about the executive officers and directors that are expected to be in place upon consummation of this offering. With respect to our directors, each biography contains information regarding the person's service as a director, business experience, director positions held currently or at any time during the past five years, information regarding involvement in certain legal or administrative proceedings and the experience, qualifications, attributes or skills that caused our board of directors to determine that the person should serve as a director of the Company.

The initial Class I directors shall serve for a term expiring at the first annual meeting of stockholders. The initial Class II directors shall serve for a term expiring at the second annual meeting of stockholders; and the initial Class III directors shall serve for a term expiring at the third annual meeting of stockholders. At each annual meeting of stockholders beginning with the first annual meeting of stockholders, the successors of the class of directors whose term expires at that meeting shall be elected to hold office for a term expiring at the third annual meeting of stockholders to be held following their election. Each director in each such class shall hold office until such director's successor is duly elected and qualified, subject to such director's earlier death, resignation or removal.

Name	Age	Position
J. Clay Sell	58	Chief Executive Officer and Director
Daniel Gross	55	Executive Vice President and Chief Financial Officer
Dragan Popovic	53	Executive Vice President and Chief of Global Operations
Kamal Ghaffarian	67	Chairman
Edward Sonnenschein	71	Director
Michael J. Wallace ⁽³⁾	78	Director
Kathleen W. Hyle ⁽¹⁾⁽²⁾	67	Director
Christopher F. Ginther ⁽³⁾	64	Director
Gregory J. Goff ⁽¹⁾⁽³⁾	69	Director
David B. Kaplan	58	Director
Allyson Satin ⁽¹⁾⁽²⁾	40	Director

- (1) Member of the audit and risk committee
 (2) Member of the compensation and culture committee
 (3) Member of the nominating and corporate governance committee

The officers and members of the Board of Directors of the Company (the "Board") are well qualified as leaders. In their prior positions, they have gained experience in core management skills, such as strategic and financial planning, financial reporting, compliance, risk management, and leadership development. Several of Company's officers and directors also have experience serving on boards of directors and board committees of other public companies and private companies, and have an understanding of corporate governance practices and trends, which provides an understanding of different business processes, challenges, and strategies. Further, certain officers and directors have other experience that makes them valuable, such as prior experience in mergers and acquisitions, in financial services, managing and investing in assets.

We believe that the above-mentioned attributes, along with the leadership skills and other experiences of the officers and board members described below, will provide the Company with a diverse range of perspectives and judgment necessary to facilitate our goals and be good stewards of capital.

Executive Officers and Directors

J. Clay Sell. Mr. Sell will serve as Chief Executive Officer (CEO) of the Company and as a member of Board. Mr. Sell has served as Chief Executive Officer of the Company since January 2019 and as a member of the Board since July 2021. Over the last seven years, Mr. Sell has led the company through a period of dramatic transformation and growth in product development investment, U.S. government funding awards, private

capital investments, customer commitments, regulatory achievements and executive talent recruitment. From 2008–2018, Mr. Sell was the president of Hunt Energy Horizons, LLC, the renewable energy subsidiary of Hunt Consolidated, Inc., a multinational energy, real estate, and investment corporation controlled by the Ray L. Hunt family of Dallas. Previously, he held positions for 14 years in the U.S. government, as Deputy Secretary of Energy in the George W. Bush Administration from 2005–2008, as a Special Assistant to the President from 2003–2005, and in senior staff positions in the U.S. Senate and House of Representatives. Mr. Sell holds a J.D. from the University of Texas School of Law and a B.B.A. in Accounting from Texas Tech University. We believe Mr. Sell is qualified to serve on the Board because of his experience and leadership in the nuclear energy industry.

Daniel Gross. Mr. Gross will serve as Chief Financial Officer of the Company. Mr. Gross has served as Chief Financial Officer of the Company since December 2025 and was an Amazon designee on the Board from October 2024 to December 2025. From August 2021 to December 2025, Mr. Gross was a Director of Corporate Development at Amazon with a principal focus on the Climate Pledge Fund, a corporate venture capital fund dedicated to low-carbon and other sustainability technologies. Prior to Amazon, he served as Chief Investment Officer at Climate Real Impact Solutions from July 2020 to July 2021. Previously, he served as Managing Director at Oaktree Capital Management from 2013 to 2015, a Partner at Hudson Clean Energy from 2007 to 2013 and a Vice President at Goldman Sachs from 2005 to 2007. Mr. Gross holds masters degrees in business administration and environmental management, as well as a bachelors degree from Yale University, where he has also served as a renewable energy finance lecturer since 2016.

Dragan Popovic. Mr. Popovic will serve as Chief of Global Operations of X-energy Canada, Inc. Mr. Popovic previously was at Ontario Power Generation (“OPG”), where he served as Senior Vice President of SMR Project Execution from February 2002 to October 2025. During his tenure, he successfully guided integrated project teams through critical milestones including site preparation licensing, construction approval, and final investment decisions for the development of first small modular reactor project in G7 countries. Prior to this role, Popovic held several leadership positions at OPG at Pickering and Darlington Nuclear Stations, with experience spanning the entire nuclear power lifecycle including financing, licensing, construction, operations, maintenance, and decommissioning of nuclear facilities including key leadership roles at several major projects such as successful refurbishment of OPG’s Darlington Nuclear Station. Mr. Popovic holds a degree in electrical engineering from Conestoga College.

Kamal Ghaffarian. Dr. Ghaffarian will serve as a member of the Board. Throughout his more than 35-year career, Dr. Ghaffarian has created multiple successful companies and has gained extensive experience working at the intersection of government contracting and technological innovation.

Dr. Ghaffarian started his entrepreneurial career in 1994 by founding Stinger Ghaffarian Technologies, Inc. (acquired by KBR, Inc. (NYSE: KBR)), a government services company focusing on IT, engineering, and science applications. Dr. Ghaffarian also held numerous technical and management positions at Lockheed Martin, Ford Aerospace and Loral. Dr. Ghaffarian holds a B.S. in Computer Science in Engineering from Catholic University of America, a B.S. in Electronics Engineering from Capital College, an M.S. in Science in Information Management from George Washington University, a Ph.D. in Management Information System from Kennedy Western University and a Ph.D. in Technology from Capital Technology University.

Dr. Ghaffarian is the co-founder and chairman of several companies including Intuitive Machines, LLC (NASDAQ: LUNR), a space services and technologies company, since December 2012, Axiom Space, Inc., a private space infrastructure company, since August 2016, Quantum Space, LLC, a space infrastructure company, since May 2021, and IBX, LLC, an innovation and investment firm, since October 2018. We believe Dr. Ghaffarian is qualified to serve on the Board because of his role as the executive chairman of X-energy, extensive experience in the field and deep understanding of company leadership.

Edward Sonnenschein. Mr. Sonnenschein will serve as a member of the Board. Mr. Sonnenschein has served on the Board since December 2021 and on the board of directors of Quantum Space, LLC, a private space infrastructure company, since September 2022, and on the board of directors of Axiom Space, Inc., a private space infrastructure company, since March 2026. He serves as Vice Chairman of IBX, LLC, where he provides leadership on governance and major transactions, as well as strategic guidance on financings, M&A, and new initiatives, and leads the legal function. Previously, Mr. Sonnenschein was an attorney at the leading global law firm Latham & Watkins, LLP from November 1979 to June 2021, where he was a widely

respected deal maker and counselor for numerous public and private companies, private equity firms, sovereign wealth funds and family offices in hundreds of cutting-edge matters. Mr. Sonnenschein also held numerous leadership positions at Latham, including as the firm's Global Chair of the Corporate Department, Chair of the Strategic Initiatives Committee, Chair of the Business Development and Investment Committees and member of the Executive Committee. He was also a member of Coastview Capital LLC, a biotechnology venture capital firm, from July 2001 to October 2003. Mr. Sonnenschein holds an A.B. in Social Studies from Harvard College and a Juris Doctorate from Harvard Law School. We believe Mr. Sonnenschein is qualified to serve on the Board because of his experience and leadership in the legal, strategic transactions, financing and venture capital fields.

Michael J. Wallace. Mr. Wallace will serve as a member of the Board. Mr. Wallace has served on the Board since December 2021. In addition, he served as a member of the board of directors of Emirates Nuclear Energy Corporation from February 2013 to November 2025, and the boards of Nawah Energy Company, and Barakah One Holding Company from October 2017 to , and the U.S. Naval Historical Foundation. Since October 2017, Mr. Wallace has also served as a Senior Advisor at the North American Electric Reliability Council, where he advised stakeholders on matters related to assuring the reliability and security of the electricity grid. He was a member of the National Infrastructure Advisory Council from October 2017 to April 2022, where he advised the President of the United States on matters related to security of the country's infrastructure. Mr. Wallace served as the senior-most nuclear industry executive at both Exelon (then known as ComEd) and Constellation Energy, where he also served as President and Vice Chairman of the Company. Mr. Wallace holds a B.S. in Electrical Engineering from Marquette University and an M.B.A. from the University of Chicago. We believe Mr. Wallace is qualified to serve on the Board because of his experience and leadership in the nuclear energy industry.

Kathleen W. Hyle. Ms. Hyle will serve as a member of the Board. Ms. Hyle was appointed to serve on the Board in January 2023. She served as Senior Vice President of Constellation Energy Corp (NASDAQ: CEG) and Chief Operating Officer of Constellation Energy Resources from November 2008 to March 2012. From June 2007 to November 2008, she served as Chief Financial Officer for Constellation Energy Nuclear Group and for UniStar Nuclear Energy, LLC. Prior to joining Constellation Energy in 2003, Ms. Hyle served as the Chief Financial Officer of ANC Rental Corporation, Vice President and Treasurer of AutoNation, Inc. (NYSE: AN), and Vice President and Treasurer of Stanley Black & Decker, Inc. (NYSE: SWK). Ms. Hyle previously served on the board of Cencora, Inc. (NYSE: COR), formerly known as AmerisourceBergen Corporation (NYSE: ABC) from May 2010 to March 2025. From July 2012 to May 2023, Ms. Hyle served on the board of Bunge Ltd (NYSE: BG), during which she held the role of Board Chair from 2018 to 2023. Ms. Hyle holds a B.A. in Accounting from Loyola College. She is also a Certified Public Accountant. We believe Ms. Hyle is qualified to serve on the Board because of her experience and leadership in the energy industry.

Christopher E. Ginther. Mr. Ginther will serve as a member of the Board. Mr. Ginther has served on the Board since January 2023. He also served as Executive Vice President Enterprise Strategy, New Nuclear, Business Development and Commercial Management at OPG, a globally recognized leader in the development and production of clean energy and nuclear energy projects, from July 2012 until his retirement in May 2024, where he oversaw the company's business strategy, development, commercial structuring, negotiations and commercial positioning in support of OPG's growth strategy. Prior to OPG, he served as Vice President and General Counsel at Bell Canada Enterprises Inc. (NYSE: BCE) and as Senior Vice President, General Counsel and Corporate Secretary at Ontario Lottery and Gaming Corporation. Mr. Ginther began his legal career at the law firm Torys LLP in Toronto. Mr. Ginther holds a B.A. in History and Political Science from the University of Western Ontario and an L.L.B and L.L.M from Osgoode Hall Law School. We believe Mr. Ginther is qualified to serve on the Board because of his experience and leadership in the energy industry.

Gregory J. Goff. Mr. Goff will serve as a member of the Board. Mr. Goff has served on Board since July 2023. He currently serves on the board of directors of Avient Corporation (NYSE: AVNT) and was a member of the boards of directors of Enbridge Inc (NYSE: ENB) from February 2020 to June 2021 and Exxon Mobil Corporation (NYSE: XOM) from June 2021 to October 2024. Mr. Goff is the Chief Executive Officer of Claire Technologies, Inc., a technology company developing solutions to de-carbonize heavy modes of transportation using hydrogen, and the founder of GJG Energy, LLC, a company developing opportunities in the refining, marketing and logistics business. Mr. Goff was the Vice Chairman of Marathon Petroleum

Corporation (NYSE: MPC), an integrated downstream energy company, from October 2018 to December 2019. He also served on the board of directors of MPLX L.P. (NYSE: MPLX) from October 2018 to December 2019. Prior to Marathon's acquisition of Andeavor Corp. ("Andeavor") (NYSE: ANDV), Mr. Goff served as Chairman, President and Chief Executive Officer of Andeavor, a leading petroleum refining and marketing company, from May 2010 to September 2018. He also served as Chairman and Chief Executive Officer of Andeavor Logistics, LP (NYSE: ANDX), an NYSE-listed master limited partnership that owned, operated and developed crude oil and refined products and logistics assets, from June 2011 to September 2018. Prior to that, Mr. Goff worked for ConocoPhillips Corporation, an integrated energy company, where he held a number of senior leadership positions, most recently Senior Vice President Commercial from 2008 to 2010. Mr. Goff holds a B.S. in Management and an M.B.A. from the University of Utah. We believe Mr. Goff is qualified to serve on the Board because of his experience and leadership in the energy industry.

David B. Kaplan. Mr. Kaplan will serve as a member of the Board. Mr. Kaplan has served on the Board since December 2023. Mr. Kaplan is a Co-Founder, Director and Partner of Ares Management Corporation. Mr. Kaplan serves on several Ares Investment Committees including, among others, the Ares Private Equity Group's Corporate Opportunities, Energy Opportunities and Extended Value Investment Committees. Additionally, Mr. Kaplan served as Chief Executive Officer and Co-Chairman of the board of directors of Ares Acquisition Corporation II from March 2021 to September 2025. Mr. Kaplan joined Ares in 2003 from Shelter Capital Partners, LLC, where he was a Senior Principal from June 2000 to April 2003. From 1991 through 2000, Mr. Kaplan was a Senior Partner of Apollo Management, L.P. and its affiliates. Prior to Apollo, Mr. Kaplan was a member of the Investment Banking Department at Donaldson, Lufkin & Jenrette Securities Corp. Mr. Kaplan currently serves on the supervisory board of directors of LuxExperience B.V., formerly known as MYT Netherlands Parent B.V. Mr. Kaplan also serves as the Chairman of the board of directors of the parent entity of Cooper's Hawk Winery & Restaurants. Mr. Kaplan's previous public company board experience includes Floor & Decor Holdings, Inc., Maidenform Brands, Inc., where he served as the company's Chairman, GNC Holdings, Inc., Dominick's Supermarkets, Inc., Stream Global Services, Inc., Orchard Supply Hardware Stores Corporation, Smart & Final Stores, Inc. and Allied Waste Industries Inc. Mr. Kaplan also currently serves as Chairman of the Board of Directors of Cedars-Sinai Medical Center and is on the Board of Trustees at the Los Angeles County Museum of Art (LACMA). Mr. Kaplan sits on the President's Advisory Group of the University of Michigan, where he graduated with High Distinction, Beta Gamma Sigma, with a Bachelor of Business Administration degree, concentrating in Finance. We believe Mr. Kaplan is well qualified to serve on the Board due to his knowledge of and extensive experience with leveraged finance, acquisitions and private equity investments, in addition to his service as a director of other public and private companies.

Allyson Satin. Ms. Satin will serve as a member of the Board. Ms. Satin has served on the Board since December 2025 and previously served on the Board from December 2023 to July 2025. Ms. Satin is a Partner in the Ares Corporate Strategy Group of Ares Management Corporation, where she focuses on the firm's SPAC Business. Ms. Satin previously served as the Chief Operating Officer of Ares Acquisition Corporation I from January 2021 through November 2023 and Chief Operating Officer of Ares Acquisition Corporation II from March 2023 through September 2025, and has served as a member of the board of directors of its successor, Kodiak AI, Inc. (NASDAQ: KDK) since September 2025. From 2009 to 2020, Ms. Satin was an investment professional in the Ares Private Equity Group where she participated in various leveraged buyouts, growth equity and distressed debt transactions. Prior to joining Ares in 2009, Ms. Satin was an investment banking analyst in the Global Financial Sponsors Group at Barclays Capital (formerly Lehman Brothers). Ms. Satin holds a B.S. from the University of California, Berkeley Haas School of Business in Business Administration. We believe Ms. Satin is well qualified to serve on the Board due to her knowledge of and extensive experience with leveraged finance, acquisitions and private equity investments, in addition to her service as a director of other companies.

Corporate Governance

Composition of the Board

Our business and affairs will be managed under the direction of the Board. The Board will include J. Clay Sell, Kamal Ghaffarian, Edward Sonnenschein, Michael J. Wallace, Kathleen W. Hyle, Christopher F. Ginther,

Gregory J. Goff, David B. Kaplan and Allyson Satin as members. The Board is expected to determine whether Michael J. Wallace, Kathleen W. Hyle, Christopher F. Ginther, Gregory J. Goff, David B. Kaplan and Allyson Satin qualify as independent in accordance with applicable Nasdaq rules. Subject to the terms of the Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, the number of directors will be fixed by the Board.

When considering whether directors and director nominees have the experience, qualifications, attributes and skills, taken as a whole, to enable the Board to satisfy its oversight responsibilities effectively in light of its business and structure, the Board expects to focus primarily on each person's background and experience as reflected in the information discussed in each of the directors' individual biographies set forth above in order to provide an appropriate mix of experience and skills relevant to the size and nature of its business.

Director Independence

Nasdaq listing standards require that a majority of the board of directors be independent. An "independent director" is defined generally as a person other than an officer or employee of the company or its subsidiaries or any other individual having a relationship which in the opinion of the board of directors, would interfere with the director's exercise of independent judgment in carrying out the responsibilities of a director.

The Board will undertake a review of its composition, the composition of its committees and the independence of its directors and consider whether any director has a material relationship with the Company that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities.

We anticipate that the Company will have a majority of "independent directors" as defined in Nasdaq listing standards and applicable SEC rules.

Classified Board of Directors

Pursuant to the Certificate of Incorporation, the Company's directors will be divided into three classes, with each class serving staggered three-year terms. The Board will initially consist of nine members. The Board will be divided among the three classes as follows:

- The Class I directors are _____, _____ and _____;
- The Class II directors are _____, _____ and _____; and
- The Class III directors are _____, _____ and _____.

Committees of the Board

The Board will direct the management of its business and affairs, as provided by Delaware law, and conduct its business through meetings of the Board and standing committees. The Board will have a standing audit and risk committee, compensation and culture committee and nominating and corporate governance committee, each of which will operate under a written charter that will be posted on the Investors Relations page of the Company's website at <https://x-energy.com/investors> as required by applicable Nasdaq rules.

From time to time, special committees may be established under the direction of the Board when the Board deems it necessary or advisable to address specific issues.

Audit and Risk Committee

The Board's audit and risk committee will be responsible for, among other things:

- appointing, compensating, retaining and overseeing the work of our independent registered public accounting firm and any other registered public accounting firm engaged for the purpose of preparing or issuing an audit report or related work or performing other audit, review or attest services for us;
- assessing the independence of our independent registered public accounting firm;

- pre-approving all audit and non-audit services provided to us by our independent registered public accounting firm (other than those provided pursuant to appropriate preapproval policies established by the audit committee or exempt from such requirement under the rules of the SEC);
- discussing with our independent registered public accounting firm any audit problems or difficulties and management's response;
- reviewing and discussing our annual and quarterly financial statements with management and our independent registered public accounting firm;
- reviewing, discussing and evaluating our policies with respect to risk assessment and risk management;
- reviewing and approving or ratifying any related person transactions;
- reviewing and discussing our internal control over financial reporting and code of business conduct and ethics;
- setting clear hiring policies for employees or former employees of our independent registered public accounting firm;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls or auditing matters, and for the confidential and anonymous submission by our employees of concerns regarding questionable accounting or auditing matters; and
- preparing the audit committee report for inclusion in our annual proxy statements.

Our audit and risk committee is expected to consist of Kathleen W. Hyle, Gregory J. Goff and Allyson Satin with Kathleen W. Hyle serving as chair. All members of our audit and risk committee will meet the requirements for financial literacy under the applicable Nasdaq rules and regulations. The Board expects to affirmatively determine that each member of the audit and risk committee qualifies as "independent" under the Nasdaq's additional standards applicable to audit committee members and Rule 10A-3 of the Exchange Act applicable to audit committee members. The Board expects to determine that Kathleen W. Hyle qualifies as an "audit committee financial expert," as such term is defined in Item 407(d)(5) of Regulation S-K.

Compensation and Culture Committee

The Board's compensation and culture committee will be responsible for, among other things:

- reviewing and approving corporate goals and objectives with respect to the compensation of our Chief Executive Officer, evaluating our Chief Executive Officer's performance in light of these goals and objectives and setting our Chief Executive Officer's compensation;
- reviewing and setting or making recommendations to the Board regarding the compensation of our other executive officers;
- reviewing and making recommendations to the Board regarding director compensation;
- reviewing and approving or making recommendations to the Board regarding our incentive compensation and equity-based plans, policies and programs and administering the plans;
- reviewing and approving all employment and severance arrangements for our executive officers;
- reviewing and discussing annually with management our "*Compensation Discussion and Analysis*," to the extent it is required to be included in our annual report on Form 10-K or annual proxy statement;
- periodically reviewing our compensation policies and practices and assessing the risk associated with such policies and practices;
- administering and overseeing our compliance with our clawback policies;
- overseeing and reviewing with management our strategies, policies and practices regarding human capital management and talent development;
- preparing the annual compensation committee report required by SEC rules, to the extent required; and

- reviewing and discussing the results of our stockholder advisory votes on executive compensation and reviewing and recommending to the Board the frequency of such votes.

Our compensation and culture committee is expected to consist of Kathleen W. Hyle, Allyson Satin and _____ with _____ serving as chair. The Board expects to determine that Kathleen W. Hyle, Allyson Satin and _____ qualify as “independent” under the Nasdaq’s additional standards applicable to compensation committee members.

Nominating and Corporate Governance Committee

The Board’s nominating and corporate governance committee will be responsible for, among other things:

- identifying individuals qualified to become members of the Board and ensuring that the Board has the requisite expertise and consists of persons with sufficiently diverse and independent backgrounds;
- recommending to the Board the persons to be nominated for election as directors and to each committee of the Board;
- developing and recommending to the Board corporate governance guidelines, and reviewing, reassessing the adequacy of such corporate governance guidelines and recommending any proposed changes to the Board for approval from time to time; and
- overseeing the annual self-evaluations of the Board and its committees.

Our nominating and corporate governance committee is expected to consist of Gregory J. Goff, Christopher F. Ginther and Michael J. Wallace, with Gregory J. Goff serving as chair. The Board expects to determine that Gregory J. Goff and Michael J. Wallace qualify as “independent” under Nasdaq rules applicable to nominating and corporate governance committee members.

Code of Ethics

The Company will adopt a Code of Business Conduct and Ethics that applies to all of our executive officers, directors and employees, including our principal executive officer, principal financial officer or principal accounting officer or persons performing similar functions, which will be available on our website. Our Code of Business Conduct and Ethics will be a “code of ethics,” as defined in Item 406(b) of Regulation S-K.

We intend to make any legally required disclosures regarding amendments to, or waivers of, provisions of our code of ethics on our website.

Compensation Committee Interlocks and Insider Participation

No anticipated member of the Board’s compensation committee was at any time during fiscal year 2024 and 2025, or at any other time, one of our officers or employees. None of our executive officers has served as a director or member of a compensation committee (or other committee serving an equivalent function) of any entity, one of whose executive officers is anticipated to serve as a member of the Board or of its compensation committee.

EXECUTIVE AND DIRECTOR COMPENSATION

This section discusses the material components of the executive compensation program for our executive officers who are named in the “2025 Summary Compensation Table” below. With respect to the year ended December 31, 2025, our “named executive officers” or “NEOs” were as follows:

- J. Clay Sell, Chief Executive Officer;
- Daniel Gross, Executive Vice President and Chief Financial Officer; and
- Dragan Popovic, Executive Vice President and Global Chief Operating Officer.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt may differ materially from the currently planned programs summarized in this discussion.

2025 Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the year ended December 31, 2025.

Name and Principal Position	Salary (\$) ⁽¹⁾	Bonus (\$)	Stock Awards (\$) ⁽²⁾	All Other Compensation (\$) ⁽³⁾	Total (\$)
J. Clay Sell Chief Executive Officer	612,000	583,848	9,188,142	113,692	10,497,682
Daniel Gross ⁽⁴⁾ Executive Vice President and Chief Financial Officer	36,264		6,339,673	1,058	6,376,994
Dragan Popovic ⁽⁵⁾⁽⁶⁾ Executive Vice President and Global Chief Operating Officer	83,673	134,375	4,437,768		4,655,816

- (1) Amounts reflect base salary earned during 2025.
- (2) Amounts reflect the aggregate grant date fair value of profits interests in Management LLC granted during the year ended December 31, 2025 computed in accordance with FASB ASC Topic 718, Compensation — Stock Compensation and does not correspond to the actual economic value that may be received by the named executive officers from these awards. We provide information regarding the assumptions used to calculate the value of all profits interests made to named executive officers in Note 12 — Unit-Based Compensation Expense to the financial statements included in this prospectus.
- (3) Amounts reflect (i) \$19,701 and \$1,058 in employer matching contributions made to the X-energy defined contribution plan, for Messrs. Sell and Gross, respectively; and (ii) \$93,991 in reimbursements to Mr. Sell for expenses incurred in connection with travel to and from his primary residence.
- (4) Mr. Gross commenced employment as our Executive Vice President and Chief Financial Officer in November 2025.
- (5) Mr. Popovic commenced employment as our Executive Vice President and Global Chief Operating Officer in October 2025.
- (6) During his period of employment prior to December 22, 2025, Mr. Popovic was employed by our subsidiary, X-Energy Canada, Inc., and was paid in local currency (CAD). The amounts for Mr. Popovic earned in local currency have been converted to USD using an exchange rate for December 31, 2025 of 1 USD to 1.37 CAD.

Narrative to Summary Compensation Table***2025 Salaries***

Each of our named executive officers receives an annual base salary to compensate the executive for services rendered to us. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's duties and authorities, contributions, prior experience and sustained performance.

The 2025 annual base salaries for our named executive officers were \$612,000 for Mr. Sell, \$550,000 for Mr. Gross, and \$450,000 for Mr. Popovic.

The "Salary" column of the 2025 Summary Compensation Table above shows the actual base salaries earned by each named executive officer in 2025.

Cash Incentive Compensation

Annual cash bonuses are determined by our Compensation and Culture Committee and set at a level that is commensurate with the executive's duties and authorities, contributions, prior experiences and sustained performance. The discretionary cash bonus earned by Mr. Sell for fiscal year 2025 was \$583,848. Mr. Gross was not eligible for an annual bonus for fiscal year 2025, and Mr. Popovic received a guaranteed annual cash bonus of \$134,375 for fiscal year 2025, as described in the section entitled "Executive Compensation Arrangements" below.

Equity Compensation***2025 Equity Awards***

Prior to the closing, Management LLC typically granted Class B-2 Common Units under the Management LLC Profits Interest Plan (the "Profits Interest Plan"). We refer to these Management LLC Class B-2 Common Units as "Incentive Units." We granted equity awards in the form of Class B Common Units of Management LLC intended to qualify as profits interests within the meaning of applicable tax guidance. The grant of Class B Units is implemented through an "upstairs-downstairs" structure, such that our employees, including our named executive officers, receive Class B Units of Management LLC that mirror the economics (including vesting schedules) of corresponding units that X-energy issues to Management LLC.

In June 2025, we granted 2,576,000 Incentive Units to Mr. Sell and, in December 2025, we granted the following Incentive Units to our named executive officers: 1,147,800 Incentive Units to Mr. Sell, 2,051,674 Incentive Units to Mr. Gross and 1,436,171 Incentive Units to Mr. Popovic.

The Incentive Unit awards each vest in substantially equal annual installments on each of the first, second, third and fourth anniversaries of the applicable vesting commencement date, subject to the named executive officer's continuous employment through the applicable vesting date. The vesting commencement date for the Incentive Unit awards granted to Mr. Sell in June 2025 is January 1, 2024, and the vesting commencement date for the Incentive Unit awards granted to Messrs. Sell, Gross and Popovic in December 2025 is December 23, 2025.

In connection with this initial public offering, both XERC and Management LLC will effectuate a recapitalization, pursuant to which all outstanding units in XERC and Management LLC will be recapitalized into common units in accordance with the applicable operating agreement (on a "value-for-value" basis based on the fair market value of the equity interests, including the Incentive Units, at the time of the offering and the common stock price in the offering). Following this recapitalization, the resulting common units will continue to be subject to any applicable vesting conditions of the corresponding Incentive Units before the applicable recapitalization. Thereafter, Management LLC will contribute all of its Common Units of XERC to X-energy in exchange for an equal number of shares of X-energy Class A common stock, which Class A common stock shall be subject to the same vesting conditions of the corresponding Common Units of XERC before the exchange. In addition, in connection with this offering we expect the Profits Interests Plan will terminate and we will not make further awards under the Profits Interest Plan.

2026 Equity Incentive Plan

In connection with this offering, we intend to adopt the 2026 Equity Incentive Plan, or the 2026 Plan, in order to facilitate the grant of cash and equity incentives to directors, employees (including our named executive officers) and consultants of our company and employees and consultants or certain of our affiliates and to enable our company and certain of our affiliates to obtain and retain services of these individuals, which is essential to our long-term success. For additional information about the 2026 Plan, please see the section titled “2026 Equity Incentive Plan” below.

IPO Equity Awards

Our Board intends to approve the grant of restricted stock unit awards and stock options pursuant to the 2026 Plan to certain of our employees, including Messrs. Sell, Gross and Popovic, and non-employee directors, which grants will become effective in connection with the consummation of this offering (“IPO Equity Awards”), subject to continued service through the grant date. Stock options will be granted only to employees and non-employee directors who hold Incentive Units.

The IPO Equity Awards that will be granted to each of Messrs. Sell, Gross and Popovic will be comprised of stock options and are expected to have a cumulative value of \$, \$, and \$, respectively, as of the closing of this offering. In addition, certain of our directors who hold Incentive Units will receive stock options, which are expected to have a cumulative value of \$ in the aggregate.

Each stock option granted to our named executive officers and directors will vest and become exercisable in substantially equal annual installments pursuant to the same vesting schedule as the grantee’s Incentive Units.

The IPO Equity Awards that will be granted to our non-employee directors will be comprised of restricted stock unit awards, which are further described under the section titled “Executive and Director Compensation — Director Compensation — Non-Employee Director Compensation Program” below.

The aggregate value of restricted stock unit awards to be granted to our employees and non-employee directors in connection with the offering will equal approximately \$. The aggregate value of stock options and restricted stock unit awards to be granted to our employees in connection with the offering will equal approximately \$.

Other Elements of Compensation and Compensation Policies

We provide benefits to our named executive officers on the same basis as provided to all of our employees, including health, dental and vision insurance; critical illness insurance; life insurance; accident insurance; hospital indemnity insurance; short-and long-term disability insurance; and a tax-qualified Section 401(k) plan for which we make safe harbor contributions on behalf of our employees. In 2025, we also provided Mr. Sell with compensation to cover expenses incurred by him in connection with travel to and from his primary residence (including commuting, lodging and dining expenses).

In addition to the health and welfare benefits described above, prior to his relocation to the United States in December 2025, Mr. Popovic was eligible to receive similar health and welfare benefits in connection with his employment in Canada.

We believe the employee benefits and perquisites described above are necessary and appropriate to provide a competitive compensation package to our named executive officers.

No Tax Gross-Ups

We do not make gross-up payments to cover our named executive officers’ personal income taxes that may pertain to any of the compensation or perquisites we pay or provide.

Clawback Policy

In connection with this offering, our Board intends to adopt a compensation recovery policy that complies with the listing standards of Nasdaq, as required by the Dodd-Frank Act.

Outstanding Equity Awards at Fiscal Year-End

The following table summarizes the number of outstanding unvested Incentive Units held by each named executive officer as of December 31, 2025.

Name	Grant Date	Number of Incentive Units That Have Not Vested (#)	Market Value of Incentive Units That Have Not Vested (\$) ⁽¹⁾
J. Clay Sell	June 13, 2025	1,932,000 ⁽²⁾	16,151,520
	December 23, 2025	1,147,800 ⁽³⁾	3,546,702
Daniel Gross	December 23, 2025	2,051,674 ⁽³⁾	6,339,673
Dragan Popovic	December 23, 2025	1,436,171 ⁽³⁾	4,437,768

- (1) The Incentive Units are not publicly traded and, therefore, there was no ascertainable public market value for the Incentive Units as of December 31, 2025. The value of the Incentive Units is estimated as of December 31, 2025 based on the number of outstanding unvested Incentive Units as of such date and taking into account applicable distribution thresholds, and was estimated to be \$3.09 (for Incentive Units granted in December 2025) and \$8.36 (for Incentive Units granted in June 2025).
- (2) Represents unvested Incentive Units that will vest in substantially equal annual installments on each of the first, second, third and fourth anniversaries of January 1, 2024, subject to Mr. Sell's continuous service through the applicable vesting date. The distribution threshold is \$1,729,728,630.
- (3) Represents unvested Incentive Units that will vest in substantially equal annual installments on each of the first, second, third and fourth anniversaries of the grant date, subject to the named executive officer's continuous service through the applicable vesting date. The distribution threshold is \$5,000,000,000.

Executive Compensation Arrangements

Each of Messrs. Sell, Gross and Popovic is party to an offer letter with X Energy, LLC that provides for at-will employment that will continue until terminated at any time by either party. Pursuant to the terms of his offer letter, Mr. Gross is eligible for an annual cash incentive bonus (targeted at 75% of his base salary) commencing in the 2026 performance year, and is entitled to receive a monthly stipend covering reasonable expenses related to executive housing, travel and other expenses associated with commuting to the company's Maryland headquarters, and reimbursement of up to \$175,000 in relocation expense reimbursements. Pursuant to the terms of his offer letter, Mr. Popovic is eligible for an annual cash incentive bonus (targeted at 75% of his base salary), with a guaranteed bonus of \$134,375 for 2025, and is entitled to receive reimbursement of travel expenses for commuting, lodging, and house-hunting trips, and up to an additional \$135,000 in relocation expense reimbursements. As of the end of 2025, Mr. Gross had not received any commuting expense reimbursements, and neither Mr. Gross nor Mr. Popovic had received any relocation expense reimbursements. Pursuant to their offer letters, each of our named executive officers is eligible to participate in the benefit plan and programs maintained by us for the benefit of our employees. None of the offer letters provide for severance payments on termination of employment.

Each of Messrs. Sell, Gross and Popovic also entered into the Company's standard form of non-disclosure and non-solicitation agreement, which includes a company information non-disclosure covenant that lasts during employment and for five years thereafter, a perpetual government data non-disclosure covenant, and an employee and client non-solicitation covenant that lasts during employment and for two years thereafter. In addition, as a condition to their receipt of Incentive Units, they each entered into a restrictive covenant letter, which includes non-competition and employee and business relationship non-solicitation covenants that apply during employment and for one year following termination of employment, a company information non-disclosure covenant and non-disparagement covenant that each apply during the period they provide services to X-energy and thereafter, and an assignment of intellectual property covenant.

2026 Equity Incentive Plan

In connection with this offering, we intend to adopt the 2026 Plan, under which we may grant equity and cash incentive awards in order to attract, motivate and retain the talent for which we compete, subject to stockholder approval. The material terms of the 2026 Plan are summarized below.

Eligibility and Administration. Our employees, consultants and directors, and employees and consultants of our affiliates, will be eligible to receive awards under the 2026 Plan. Following the completion of this offering, the 2026 Plan will be administered by our board of directors with respect to awards to non-employee directors and by our compensation committee with respect to other participants, each of which may delegate its duties and responsibilities to committees of our directors and/or officers (referred to collectively as the plan administrator), subject to the limitations imposed under the 2026 Plan, Section 16 of the Exchange Act, stock exchange rules and other applicable laws. The plan administrator will have the authority to take all actions and make all determinations under the 2026 Plan, to interpret the 2026 Plan and award agreements and to adopt, amend and repeal rules for the administration of the 2026 Plan as it deems advisable. The plan administrator will also have the authority to determine which eligible service providers receive awards, grant awards and set the terms and conditions of all awards under the 2026 Plan, including any vesting and vesting acceleration provisions, subject to the conditions and limitations in the 2026 Plan.

Limitation on Awards and Shares Available. The initial aggregate number of shares of our common stock that will be available for issuance under the 2026 Plan will be equal to 10% of the number of shares of our Class A common stock and Class B common stock outstanding (assuming all shares of Class A common stock reserved under the 2026 Plan have been issued) as of immediately following the completion of this offering (which is expected to be _____ shares, assuming an initial public offering price of \$ _____ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus). In addition, the number of shares of our common stock available for issuance under the 2026 Plan will be subject to an annual increase on the first day of each calendar year beginning on and including January 1, 2027 and ending on and including January 1, 2036, equal to the lesser of (A) 5% of the aggregate number of shares of our Class A common stock and Class B common stock outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares as is determined by our board of directors. The maximum number of shares that may be issued pursuant to the exercise of incentive stock options, or ISOs, granted under the 2026 Plan, will be 100,000,000. Any shares issued pursuant to the 2026 Plan will be Class A common stock and may consist, in whole or in part, of authorized and unissued common stock, treasury common stock or common stock purchased on the open market.

If an award under the 2026 Plan expires, lapses or is terminated, exchanged for or settled in cash, any shares subject to such award (or portion thereof) may, to the extent of such expiration, lapse, termination or cash settlement, be used again for new grants under the 2026 Plan. Shares tendered or withheld to satisfy the exercise price or tax withholding obligation for any award will not reduce the shares available for grant under the 2026 Plan. Further, the payment of dividend equivalents in cash in conjunction with any awards under the 2026 Plan will not reduce the shares available for grant under the 2026 Plan. However, the following shares may not be used again for grant under the 2026 Plan: (i) shares subject to stock appreciation rights, or SARs, that are not issued in connection with the stock settlement of the SAR on exercise, and (ii) shares purchased on the open market with the cash proceeds from the exercise of options.

Awards granted under the 2026 Plan upon the assumption of, or in substitution for, awards authorized or outstanding under a qualifying equity plan maintained by an entity with which we enter into a merger or similar corporate transaction will not reduce the shares available for grant under the 2026 Plan but will count against the maximum number of shares that may be issued upon the exercise of ISOs.

The 2026 Plan provides that, commencing with calendar year 2027, the sum of any cash compensation and the aggregate grant date fair value (determined as of the date of the grant under Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of all awards granted to a non-employee director as compensation for services as a non-employee director during any fiscal year, or director limit, may not exceed an amount equal to \$750,000 (increased to \$1,000,000 in the calendar year of a non-employee director's initial service as a non-employee director or any calendar year during which a non-employee director serves as chair of our Board or lead independent director), which limits shall not apply to the compensation for any non-employee director who serves in any capacity in addition to that of a

non-employee director for which he or she receives additional compensation or any compensation paid prior to the calendar year following the calendar year in which the 2026 Plan becomes effective.

Awards. The 2026 Plan provides for the grant of stock options, including ISOs and nonqualified stock options, or NSOs, SARs, restricted stock, dividend equivalents, restricted stock units, or RSUs, and other stock or cash-based awards. Certain awards under the 2026 Plan may constitute or provide for payment of “nonqualified deferred compensation” under Section 409A of the Code, which may impose additional requirements on the terms and conditions of such awards. All awards under the 2026 Plan will be evidenced by award agreements, which will detail the terms and conditions of the awards, including any applicable vesting and payment terms and post-termination exercise limitations. Awards other than cash awards generally will be settled in shares of our common stock, but the applicable award agreement may provide for cash settlement of any award. A brief description of each award type follows.

- *Stock Options and SARs.* Stock options provide for the purchase of shares of our common stock in the future at an exercise price set on the grant date. ISOs, in contrast to NSOs, may provide tax deferral beyond exercise and favorable capital gains tax treatment to their holders if certain holding period and other requirements of the Code are satisfied. SARs entitle their holder, upon exercise, to receive from us an amount equal to the appreciation of the shares subject to the award between the grant date and the exercise date. Unless otherwise determined by our board, the exercise price of a stock option or SAR may not be less than 100% of the fair market value of the underlying share on the grant date (or 110% in the case of ISOs granted to certain significant stockholders), except with respect to certain substitute awards granted in connection with a corporate transaction. The term of a stock option or SAR may not be longer than ten years (or five years in the case of ISOs granted to certain significant stockholders). Conditions applicable to stock options and/or SARs may be based on continuing service, the attainment of performance goals and/or such other conditions as the plan administrator may determine.
- *Restricted Stock and RSUs.* Restricted stock is an award of nontransferable shares of our common stock that are subject to certain vesting conditions and other restrictions. RSUs are contractual promises to deliver shares of our common stock in the future, which may also remain forfeitable unless and until specified conditions are met and may be accompanied by the right to receive the equivalent value of dividends paid on shares of our common stock prior to the delivery of the underlying shares (i.e., dividend equivalent rights). The plan administrator may provide that the delivery of the shares underlying RSUs will be deferred on a mandatory basis or at the election of the participant. The terms and conditions applicable to RSUs will be determined by the plan administrator, subject to the conditions and limitations contained in the 2026 Plan. Conditions applicable to restricted stock and RSUs may be based on continuing service, the attainment of performance goals and/or such other conditions as the plan administrator may determine.
- *Other Stock or Cash-Based Awards.* Other stock or cash-based awards are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock. Other stock or cash-based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of compensation to which a participant is otherwise entitled.
- *Dividend Equivalents.* Dividend equivalents represent the right to receive the equivalent value of dividends paid on shares of our common stock and may be granted alone or in tandem with awards other than stock options or SARs. Dividend equivalents are credited as of the dividend record dates during the period between the date an award is granted and the date such award vests, is exercised, is distributed or expires, as determined by the plan administrator. Dividend equivalents payable with respect to an award prior to the vesting of such award instead will be paid out to the participant only to the extent that the vesting conditions are subsequently satisfied and the award vests.

Certain Transactions. The plan administrator has broad discretion to take action under the 2026 Plan, as well as make adjustments to the terms and conditions of existing and future awards, to prevent the dilution or enlargement of intended benefits and facilitate necessary or desirable changes in the event of certain transactions and events affecting our common stock, such as stock dividends, stock splits, mergers,

acquisitions, consolidations and other corporate transactions. In addition, in the event of certain non-reciprocal transactions with our stockholders known as “equity restructurings,” the plan administrator will make equitable adjustments to the 2026 Plan and outstanding awards. In the event of a change in control (as defined in the 2026 Plan), to the extent that the surviving entity declines to continue, convert, assume or replace outstanding awards, then all such awards will become fully vested and exercisable in connection with the transaction. Upon or in anticipation of a change in control, the plan administrator may cause any outstanding awards to terminate at a specified time in the future and give the participant the right to exercise such awards during a period of time determined by the plan administrator in its sole discretion. Individual award agreements may provide for additional accelerated vesting and payment provisions.

Repricing. Our board of directors may, without approval of the stockholders, reduce the exercise price of any stock option or SAR, or cancel any stock option or SAR in exchange for cash, other awards or stock options or SARs with an exercise price per share that is less than the exercise price per share of the original stock options or SARs.

Plan Amendment and Termination. Our board of directors may amend or terminate the 2026 Plan at any time; however, no amendment, other than an amendment that increases the number of shares available under the 2026 Plan, may materially and adversely affect an award outstanding under the 2026 Plan without the consent of the affected participant, and stockholder approval will be obtained for any amendment to the extent necessary to comply with applicable laws. The 2026 Plan will remain in effect until the tenth anniversary of the effective date of the 2026 Plan, unless earlier terminated. No awards may be granted under the 2026 Plan after its termination.

Foreign Participants, Claw-back Provisions, Transferability and Participant Payments. The plan administrator may modify award terms, establish subplans and/or adjust other terms and conditions of awards, subject to the share limits described above, in order to facilitate grants of awards subject to the laws and/or stock exchange rules of countries outside of the U.S. All awards will be subject to any Company clawback policy as set forth in such clawback policy or the applicable award agreement. Awards under the 2026 Plan are generally non-transferrable, except by will or the laws of descent and distribution, or, subject to the plan administrator’s consent, pursuant to a domestic relations order, and are generally exercisable only by the participant. With regard to tax withholding, exercise price and purchase price obligations arising in connection with awards under the 2026 Plan, the plan administrator may, in its discretion, accept cash or check, shares of our common stock that meet specified conditions, a “market sell order” or such other consideration as it deems suitable.

Employee Stock Purchase Plan

In connection with this offering, we intend to adopt, and our stockholders will approve, the X-Energy, Inc. Employee Stock Purchase Plan, or the ESPP. The material terms of the ESPP are summarized below.

The ESPP is comprised of two distinct components in order to provide increased flexibility to grant options to purchase shares under the ESPP. Specifically, the ESPP authorizes (i) the grant of options to U.S. employees that are intended to qualify for favorable U.S. federal tax treatment under Section 423 of the Code, if eligible under applicable law (the “Section 423 Component”), and (ii) the grant of options that are not intended to be tax-qualified under Section 423 of the Code to facilitate participation for employees located within and outside of the U.S. who are not eligible for or otherwise do not benefit from favorable U.S. federal tax treatment and to provide flexibility to comply with non-U.S. law and other considerations (the “Non-Section 423 Component”). Where permitted under applicable law, we expect that the Non-Section 423 Component will generally be operated and administered on terms and conditions similar to the Section 423 Component.

Shares Available; Administration

The initial share reserve under the ESPP will equal 2% of the number of fully-diluted shares of our Class A and Class B common stock outstanding (assuming all shares reserved under the ESPP have been issued) as of immediately following the completion of this offering (which is expected to be shares, assuming an initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus).

In addition, the number of shares available for issuance under the ESPP will be annually increased on the first day of each calendar year beginning January 1, 2027 and ending on and including January 1, 2036, equal to the lesser of (i) 0.5% of the aggregate number of shares of our Class A and Class B common stock outstanding on the final day of the immediately preceding calendar year and (ii) such smaller number of shares as is determined by our board of directors. In no event will more than 50,000,000 shares of our Class A common stock be available for issuance under the ESPP.

Our board of directors or a committee designated by our board of directors will have authority to interpret the terms of the ESPP and determine eligibility of participants. The compensation committee will be the administrator of the ESPP.

Eligibility

The plan administrator may designate certain of our subsidiaries as participating “designated subsidiaries” in the ESPP and may change these designations from time to time. Employees of our Company and our designated subsidiaries are eligible to participate in the ESPP if they meet the eligibility requirements under the ESPP established from time to time by the plan administrator. However, an employee participating in the Section 423 Component may not be granted rights to purchase stock under the ESPP if such employee, immediately after the grant, would own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of our common or other class of stock. Eligible employees become participants in the ESPP by enrolling and authorizing payroll deductions by the deadline established by the plan administrator prior to the relevant offering date. Directors who are not employees, as well as consultants, are not eligible to participate. Employees who choose to not participate, or are not eligible to participate at the start of an offering period but who become eligible thereafter, may enroll in any subsequent offering period.

Participation in an Offering

Stock will be offered under the ESPP during offering periods. The length of offering periods under the ESPP will be determined by the plan administrator and may be up to 27 months long. Employee payroll deductions will be used to purchase shares on each purchase date during an offering period. The number of purchase periods within, and purchase dates during, each offering period will be established by the plan administrator. Offering periods under the ESPP will commence when determined by the plan administrator. The plan administrator may, in its discretion, modify the terms of future offering periods. In non-U.S. jurisdictions where participation in the ESPP through payroll deductions is prohibited, the plan administrator may provide that an eligible employee may elect to participate through contributions to the participant’s account under the ESPP in a form acceptable to the plan administrator in lieu of or in addition to payroll deductions.

The ESPP will permit participants to purchase our common stock through payroll deductions of up to 15% of their eligible compensation, which will include a participant’s gross base salary for services to us, excluding one-time bonuses, periodic bonuses, sales commissions, expense reimbursements, fringe benefits and other special payments. However, the plan administrator may change the definition of eligible compensation and the maximum amount of possible payroll deductions, with respect to any offering under the ESPP. The plan administrator will establish a maximum number of shares that may be purchased by a participant during any offering period or purchase period, which, in the absence of a contrary designation, will be 10,000 shares for an offering period and/or a purchase period. In addition, no employee will be permitted to accrue the right to purchase stock under the Section 423 Component at a rate in excess of \$25,000 worth of shares during any calendar year during which such a purchase right is outstanding (based on the fair market value per share of our common stock as of the first day of the offering period).

On the first trading day of each offering period, each participant automatically will be granted an option to purchase shares of our common stock. The option will be exercised on the applicable purchase date(s) during the offering period, to the extent of the payroll deductions accumulated during the applicable purchase period. The purchase price of the shares, in the absence of a contrary determination by the plan administrator, will be 85% of the lower of the fair market value of our common stock on the first trading day of the offering period or on the applicable purchase date, which will be the final trading day of the applicable purchase period.

Participants may voluntarily end their participation in the ESPP at any time at least two weeks prior to the end of the applicable offering period or, if earlier, purchase period (or such longer or shorter period specified by the plan administrator), and will be paid their accrued payroll deductions that have not yet been used to purchase shares of common stock. Participation ends automatically upon a participant's termination of employment.

Transferability

A participant may not transfer rights granted under the ESPP other than by will, the laws of descent and distribution or as otherwise provided in the ESPP.

Certain Transactions

In the event of certain transactions or events affecting our common stock, such as any stock dividend or other distribution, change in control, reorganization, merger, consolidation or other corporate transaction, the plan administrator will make equitable adjustments to the ESPP and outstanding rights. In addition, in the event of the foregoing transactions or events or certain significant transactions, including a change in control, the plan administrator may provide for (i) either the replacement of outstanding rights with other rights or property or termination of outstanding rights in exchange for cash, (ii) the assumption or substitution of outstanding rights by the successor or survivor corporation or parent or subsidiary thereof, (iii) the adjustment in the number and type of shares of stock subject to outstanding rights, (iv) the use of participants' accumulated payroll deductions to purchase stock on a new purchase date prior to the next scheduled purchase date and termination of any rights under ongoing offering periods or (v) the termination of all outstanding rights. Under the ESPP, a change in control has the same definition as given to such term in the 2026 Plan.

Plan Amendment; Termination

The plan administrator may amend, suspend or terminate the ESPP at any time. However, stockholder approval of any amendment to the ESPP must be obtained for any amendment which increases the aggregate number or changes the type of shares that may be sold pursuant to rights under the ESPP, changes the corporations or classes of corporations whose employees are eligible to participate in the ESPP, or as required to comply with applicable law.

Director Compensation

During the fiscal year ended December 31, 2025, our non-employee directors who received compensation were Dr. Kam Ghaffarian, Christopher F. Ginther, Gregory J. Goff, Kathleen W. Hyle and Michael J. Wallace, who we refer to as our non-employee directors in this section.

2025 Director Compensation Table

The following table sets forth information for 2025 regarding the compensation awarded to, earned by or paid to the non-employee directors.

Name	Fees Earned or Paid in Cash (\$) ⁽¹⁾	Stock Awards (\$) ⁽¹⁾	Total (\$)
Dr. Kam Ghaffarian	400,000		400,000
Christopher F. Ginther ⁽²⁾	80,212	465,690	545,902
Gregory J. Goff	95,000	465,690	560,690
Kathleen W. Hyle	100,000	384,440	484,440
Michael J. Wallace	80,000	242,090	322,090

- (1) Amounts reflect the aggregate grant date fair value of profits interests granted during the year ended December 31, 2025 computed in accordance with FASB ASC Topic 718, Compensation — Stock Compensation and does not correspond to the actual economic value that may be received by the non-employee directors from these awards. We provide information regarding the assumptions used to

calculate the value of all profits interests made to non-employee directors in Note 12 — Unit-Based Compensation Expense to the financial statements included in this prospectus.

- (2) The amounts for Mr. Ginther originally denoted in local currency (CAD) have been converted to USD using an average exchange rate for December 31, 2025 of 1 USD to 1.37 CAD.

The following table summarizes the number of outstanding unvested Incentive Units held by each non-employee director, as of December 31, 2025.

Name	Stock Awards
Dr. Kam Ghaffarian	—
Christopher F. Ginther	75,250
Gregory J. Goff	75,250
Kathleen W. Hyle	107,250
Michael J. Wallace	75,250

Non-Employee Director Compensation Program

In connection with this offering, we intend to approve and implement a compensation program for our non-employee directors (each, an “Eligible Director”). The Director Compensation Program will provide for annual cash retainer fees and long-term equity awards. The material terms of the Director Compensation Program are described below.

The Director Compensation Program consists of the following components:

Cash Compensation:

- Annual Retainer: \$80,000
- Annual Committee Chair Retainer:
 - Audit and Risk: \$25,000
 - Compensation: \$20,000
 - Nominating and Governance: \$15,000
- Non-Executive Chair: \$50,000

The annual cash retainers will be paid in quarterly installments in arrears. Annual cash retainers will be pro-rated for any partial calendar quarter of service.

Equity Compensation:

- **2026 Awards:** Our board intends to approve the grant of RSU awards pursuant to the 2026 Plan to our non-employee directors, which grants will become effective in connection with the completion of this offering (the “2026 Awards”). The dollar-denominated value of each award will be \$150,000 (or, solely with respect to the Non-Executive Chair of the Board as of such Annual Meeting, \$200,000) and the aggregate dollar-denominated value of these awards will be \$. The aggregate number of shares of our Class A common stock that will be subject to the 2026 Awards will be determined based on the initial public offering price per share of our common stock in this offering.

The 2026 Awards will vest in full on the date of the annual meeting of stockholders to be held in 2027, or, if earlier, the first anniversary of the closing of this offering, subject to continued service through the applicable vesting date.

- **Annual Award:** An Eligible Director who is serving on our board of directors as of the date of an annual meeting of stockholders (beginning with calendar year 2027) automatically shall be granted, on the date of such annual meeting, an RSU award with an aggregate value of \$150,000 (or, solely with respect to the Non-Executive Chair of the Board as of such Annual Meeting, \$200,000). The number of RSUs subject to the award will be determined by dividing the value of the award by the price per share of our Class A common stock on the applicable grant date.

Each Annual Award will vest in full on the earlier to occur of the first anniversary of the grant date and the date of the next annual meeting following the grant date, subject to continued service.

In addition, each equity award granted to an Eligible Director under the Director Compensation Program will vest in full immediately prior to the occurrence of a “change in control” (as defined in the 2026 Plan). Compensation under the Director Compensation Program will be subject to the annual limits on non-employee director compensation set forth in the 2026 Plan.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2024 and any currently proposed transactions, to which we were or are to be a participant, in which (i) the amount involved exceeded or will exceed \$120,000; and (ii) any of our directors, executive officers, or holders of more than 5% of our capital stock, or any affiliate or member of the immediate family of the foregoing persons or entities, had or will have a direct or indirect material interest, other than compensation and other arrangements that are described under “Executive and Director Compensation.”

We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that we would pay or receive, as applicable, in arm’s-length transactions.

Transactions

In connection with the Transactions, we will engage in certain transactions with certain of our directors, executive officers and other persons and entities which are or will become holders of 5% or more of our voting securities upon the consummation of the Transactions. These transactions are described in “Organizational Structure.”

XERC LLC Agreement

In connection with the closing of this offering, XERC will amend and restate its limited liability company agreement by adopting the XERC LLC Agreement. The XERC LLC Agreement will (i) permit the issuance and ownership of the post-offering equity of XERC and (ii) admit X-energy as the managing member of XERC.

Appointment as Managing Member. Under the XERC LLC Agreement, X-Energy, Inc. is a member and the managing member of XERC. As the managing member, X-Energy, Inc. is able to control all of the day-to-day business affairs and decision-making of XERC without the approval of any other member. As such, X-Energy, Inc., through its officers and directors, will be responsible for all operational and administrative decisions of XERC and the day-to-day management of XERC’s business. Pursuant to the terms of the XERC LLC Agreement, X-Energy, Inc. cannot be removed as the managing member of XERC by other members.

Compensation. X-Energy, Inc. is not entitled to compensation for its services as managing member. X-Energy, Inc. is entitled to reimbursement by XERC for fees and expenses incurred on behalf of XERC, including all expenses associated with the Transactions and maintaining its corporate existence.

Capitalization. The XERC LLC Agreement provides for a single class of Common Units. All Common Units shall have identical rights and privileges in all respects. Each Common Unit entitles the holder to a pro rata share of the net profits and net losses and distributions of XERC.

Distributions. The XERC LLC Agreement requires “Tax Distributions,” as that term is defined in the XERC LLC Agreement, to be made by XERC to X-Energy, Inc. and to its “Members,” as that term is defined in the XERC LLC Agreement. Tax Distributions shall be made quarterly to X-Energy, Inc. and each Member based on the greater of (i) their allocable share of the taxable income of XERC multiplied by a tax rate that will be determined by X-Energy, Inc. and (ii) the pro rata amount of tax distributions paid to other Members holding the same class of equity. The tax rate used to determine tax distributions will apply regardless of the actual final tax liability of any such member. The XERC LLC Agreement also allows for distributions to be made by XERC to its members on a pro rata basis out of “distributable cash,” which is the amount of cash that may be distributed by XERC to its Members in accordance with existing credit agreements.

Common Unit Redemption Right. The XERC LLC Agreement provides a redemption right to the Members (other than X-Energy, Inc. and its subsidiaries) and option holders (in connection with the exercise of an XERC Option, as such term is defined in the XERC LLC Agreement), which entitles them to have their Common Unit redeemed, in whole or in part, at the election of each such person, for newly-issued shares of X-Energy, Inc. Class A common stock on a one-to-one basis or, to the extent there is cash available from a contemporaneous public offering or private sale of X-Energy, Inc. Class A common stock by X-Energy, Inc.,

cash (in each case, subject to the terms and restrictions set forth in the XERC LLC Agreement). Alternatively, X-Energy, Inc. may instead authorize a cash payment equal to a volume weighted average market prices of one share of X-Energy, Inc. Class A common stock for each unit redeemed (subject to customary adjustments, including for stock splits, stock dividends and similar events affecting the X-Energy, Inc. Class A common stock). If X-Energy, Inc. decides to make a cash payment, the Member has the option to rescind its redemption request within a specified time period. Upon the exercise of the redemption right, the redeeming member will surrender its units for cancellation. The XERC LLC Agreement requires that X-Energy, Inc. contribute cash or shares of X-Energy, Inc. Class A common stock to XERC in exchange for an amount of units that will be issued to us equal to the number of units redeemed from the Member. XERC will then distribute the cash or shares of X-Energy, Inc. Class A common stock to such Member to complete the redemption. In the event of such election by a Member, X-Energy, Inc. may, at its option, effect a direct exchange of cash or X-Energy, Inc. Class A common stock for such units in lieu of such a redemption. Whether by redemption or exchange, we are obligated to ensure that at all times the number of Common Units that X-Energy, Inc. own equals the number of shares of X-Energy, Inc. Class A common stock issued by X-Energy, Inc. (subject to certain exceptions for treasury shares and shares underlying certain convertible or exchangeable securities). Shares of X-Energy, Inc. Class B common stock will be cancelled on a one-to-one basis if we, at the election of a Member, redeem or exchange units of such Member pursuant to the terms of the XERC LLC Agreement.

Issuance of Equity-based Compensation. X-Energy, Inc. may implement equity compensation plans and any actions taken under such equity compensation plans (such as the grant or exercise of options to acquire shares of X-Energy, Inc. Class A common stock), whether taken with respect to or by an employee or other service provider of X-Energy, Inc., XERC or its subsidiaries, in a manner determined by X-Energy, Inc., in accordance with the initial implementation guidelines attached to the XERC LLC Agreement, which may be amended from time to time. X-Energy, Inc. may amend the XERC LLC Agreement (including the initial implementation guidelines attached thereto) as necessary or advisable in its sole discretion in connection with the adoption, implementation, modification or termination of an equity compensation plan. In the event of such an amendment, XERC will provide notice of such amendment to the Members. XERC is expressly authorized to issue units (i) in accordance with the terms of any equity compensation plans or (ii) in an amount equal to the number of shares of Class A common stock issued pursuant to any such equity compensation plans, without any further act, approval or vote of any Member or any other Persons.

Maintenance of One-to-One Ratios. X-Energy, Inc.'s Amended and Restated Certificate of Incorporation and the XERC LLC Agreement will require that X-Energy, Inc. and XERC, respectively, at all times maintain (i) a one-to-one ratio between the number of Common Units owned by X-Energy, Inc., directly or indirectly, and the aggregate number of outstanding shares of X-Energy, Inc. Class A common stock, and (ii) a one-to-one ratio between the number of Common Units owned by each Member (other than X-Energy, Inc. and its subsidiaries), directly or indirectly, and the aggregate number of outstanding shares of X-Energy, Inc. Class B common stock owned by such Member.

Transfer Restrictions. The XERC LLC Agreement generally does not permit transfers of Common Units, by Members, subject to limited exceptions. Any transferee of Common Units must execute the XERC LLC Agreement and any other agreements executed by the holders of Common Units and relating to such Common Units.

Dissolution. The XERC LLC Agreement provides that the decision of X-Energy, Inc. with the approval of a majority of the equity interests (including, but not limited to, Common Units) then outstanding (excluding all units held directly or indirectly by X-Energy, Inc.) will be required to voluntarily dissolve XERC. In addition to a voluntary dissolution, XERC will be dissolved under Section 18-801(4) of the DGCL because all members withdraw/resign (unless XERC is continued without dissolution pursuant thereto) or pursuant to Section 18-802 of the DGCL by operation of law, including entry of a decree of judicial dissolution.

Confidentiality. Each Member (other than X-Energy, Inc.) agrees to hold confidential information in confidence and may not disclose or use such information except as otherwise authorized separately in writing by X-Energy, Inc. This obligation excludes information that (i) is, or becomes, generally available to the public other than as a direct or indirect result of a disclosure by such Member or its affiliates or representatives; (ii) is, or becomes, available to such Member from a source other than X-Energy, Inc., XERC or their respective representatives; (iii) is approved for release by written authorization of the chief executive officer, chief financial officer or general counsel of X-Energy, Inc. or any other officer designated by X-Energy, Inc.; or

(iv) is or becomes independently developed by such Member or its respective representatives without use of or reference to the confidential information.

Indemnification and Exculpation. The XERC LLC Agreement provides for indemnification for all expenses, liabilities and losses (including attorneys' fees, judgments, fines, excise taxes or penalties) reasonably incurred or suffered by reason of the fact that such person is or was a Member or an affiliate thereof or is or was serving as manager or a director, officer, employee, advisor, attorney, accountant or other agent or representative of the manager, the Company Representative (as such term is defined in the XERC LLC Agreement), or a director, manager, officer, employee, advisor, attorney, accountant or other agent or representative of XERC or is or was serving at the request of XERC as a manager, officer, director, principal, member, employee, advisor, attorney, accountant or other agent or representative of another person; *provided, however*, that no indemnified person shall be indemnified for any expenses, liabilities and losses suffered that are attributable to such indemnified person's or its affiliates' fraud, willful misconduct or knowing violation of law or for any present or future breaches of any representations, warranties or covenants by such indemnified person or its affiliates contained in the XERC LLC Agreement or in other agreements with XERC.

Amendments. The XERC LLC Agreement may be amended or modified (including by means of merger, consolidation or other business combination to which XERC is a party) upon the prior written consent of X-Energy, Inc. together with the prior written consent of the holders of a majority of the equity interests (including, but not limited to, Common Units) then outstanding (excluding all units held directly or indirectly by X-Energy, Inc.); provided, that no alteration, modification or amendment shall be effective until written notice has been provided to the Members. Notwithstanding the foregoing, no amendment to any of the terms and conditions of the XERC LLC Agreement that expressly require the approval or action of certain persons may be made without obtaining the consent of the requisite number or specified percentage of such persons who are entitled to approve or take action on such matter. Additionally, no alteration, modification or amendment may be made to any of the terms and conditions of the XERC LLC Agreement that would (A) reduce the amounts distributable to a Member in a manner that is not pro rata with respect to all Members, (B) modify the limited liability of any Member or increase the liabilities of such Member hereunder, (C) otherwise materially and adversely affect a holder of units in a manner materially disproportionate to any other holder of units or remove a right or privilege granted to a Member (other than amendments, modifications and waivers necessary to implement the provisions permitting substitution or admission of Members) or (D) alter or change any rights, preferences or privileges of any units in a manner that is different or prejudicial relative to any other units in the same class of unit or materially and adversely affect the rights of any Member, in each case without the prior written consent of such Member or holder of units.

Tax Receivable Agreement

As a result of our organizational structure, we expect to obtain:

- Existing Basis;
- Basis Adjustments;
- Blocker Tax Attributes; and
- Interest Deductions.

The parties intend to treat each redemption or exchange of Common Units pursuant to the XERC LLC Agreement as our direct purchase of Common Units from a Continuing Equity Owner for U.S. federal income and other applicable tax purposes, regardless of whether such Common Units are surrendered by a Continuing Equity Owner to XERC for redemption, or, to the extent there is cash available from a contemporaneous public offering or private sale of our Common Stock by us and we so authorize, sold directly to us. Any Existing Basis, Basis Adjustments, Blocker Tax Attributes and Interest Deductions may have the effect of reducing the amount of taxes that we would otherwise pay in the future to various tax authorities. The Existing Basis, Basis Adjustments, Blocker Tax Attributes and Interest Deductions may also decrease gains (or increase losses) on future dispositions of certain assets to the extent tax basis is allocated to those assets.

In connection with the closing of this offering, we will enter into a Tax Receivable Agreement with XERC and the TRA Holders. The Tax Receivable Agreement will provide for the payment by us to the TRA Holders of 85% of the amount of cash tax savings, if any, that we actually realize (or in some circumstances are deemed

to realize) as a result of the Basis Adjustments, Existing Basis Blocker Tax Attributes and Interest Deductions, including those resulting from payments pursuant to the Tax Receivable Agreement. XERC and its applicable subsidiaries will have an election under Section 754 of the U.S. Internal Revenue Code of 1986, as amended (the “Code”), in effect for each taxable year in which a redemption or exchange of Common Units for our Class A common stock or cash occurs. Assuming no material changes in the relevant tax law and that we earn sufficient taxable income to realize all tax benefits that are subject to the Tax Receivable Agreement, we expect that the tax savings associated with the (i) Basis Adjustments, (ii) Existing Basis, (iii) Blocker Tax Attributes and (iv) Interest Deductions would aggregate to approximately \$ _____ million over _____ years from the date of this offering based on a \$ _____ per share trading price of our Class A common stock and assuming all future redemptions or exchanges would occur on the date of this offering at the same assumed price per share. Under such scenario, assuming future payments are made on the due date (with extension) of each relevant U.S. federal income tax return, we would be required to pay approximately 85% of such amount, or approximately \$ _____ million, over the _____-year period from the date of this offering, and we would benefit from the remaining 15% of the tax benefits. These Tax Receivable Agreement payments are not conditioned upon any continued ownership interest in either XERC or us by any TRA Holder. The rights of each TRA Holder under the Tax Receivable Agreement are assignable regardless of whether the underlying Common Units are also assigned. In general, the TRA Holders’ rights under the Tax Receivable Agreement may not be assigned, sold, pledged or otherwise alienated to any person, other than certain permitted transferees, without our consent and such person becoming a party to the Tax Receivable Agreement and agreeing to succeed to the applicable TRA Holder’s interest therein.

The actual Basis Adjustments, Existing Basis, Blocker Tax Attributes and Interest Deductions, as well as any amounts paid to the TRA Holders under the Tax Receivable Agreement, will vary depending on a number of factors, including:

- the price of our Class A common stock at the time of redemptions or exchanges — the Basis Adjustments and Blocker Tax Attributes, as well as any related increase in any tax deductions, are directly related to the price of our Class A common stock at the time of each redemption or exchange
- the timing of any subsequent redemptions or exchanges — for instance, the increase in any tax deductions will vary depending on the fair value, which may fluctuate over time, of the depreciable or amortizable assets of XERC and certain of its direct and indirect subsidiaries at the time of each redemption, exchange or distribution (or deemed distribution) as well as the amount of remaining existing tax basis at the time of such redemption, exchange or distribution (or deemed distribution);
- the extent to which such redemptions or exchanges are taxable — if a redemption or exchange is not taxable for any reason, certain of the increased tax deductions will not be available;
- the extent to which such Basis Adjustments and Blocker Tax Attributes are immediately deductible — we may be permitted to immediately expense a portion of the Basis Adjustments and Blocker Tax Attributes attributable to a redemption or exchange, which could significantly accelerate the timing of our realization of the associated tax benefits. Under the XERC LLC Agreement, the determination of whether to immediately expense such Basis Adjustments and Blocker Tax Attributes will be made in our sole discretion; and
- the amount and timing of our income — the Tax Receivable Agreement generally will require us to pay _____ % of the amount of cash tax savings as and when such cash tax savings are treated as realized under the terms of the Tax Receivable Agreement. If we do not have sufficient taxable income to realize any of the applicable tax benefits, we generally will not be required (absent circumstances requiring an early termination payment or in the event of a change of control or Material Breach requiring the use of certain calculation assumptions) to make payments under the Tax Receivable Agreement for that taxable year because no tax benefits will have been actually realized. However, any tax benefits that do not result in realized tax benefits in a given taxable year may generate tax attributes that may be used to generate tax benefits in previous or future taxable years. The use of any such tax attributes will result in payments under the Tax Receivable Agreement.

For purposes of the Tax Receivable Agreement, cash savings in income taxes will be computed by comparing our actual income tax liability to the amount of such taxes that we would have been required to pay had there been no Basis Adjustments, Existing Basis, Blocker Tax Attributes and Interest Deductions;

provided that, for purposes of determining cash savings with respect to state and local income taxes an assumed tax rate will be used. The Tax Receivable Agreement will generally apply to each of our taxable years, beginning with the first taxable year ending after the completion of this offering. There is no maximum term for the Tax Receivable Agreement, although, as discussed further below, the Tax Receivable Agreement may be terminated by us pursuant to an early termination procedure that requires us, if we so elect, to pay the TRA Holders an agreed upon amount equal to the estimated present value of the remaining payments to be made under the agreement (calculated based on certain assumptions, including regarding tax rates and use of the Basis Adjustments, Existing Basis, Blocker Tax Attributes and Interest Deductions).

The payment obligations under the Tax Receivable Agreement are obligations of us and not XERC. Although the actual timing and amount of any payments that may be made under the Tax Receivable Agreement will vary, it is expected that the payments that we may be required to make to the TRA Holders could be substantial. Any payments made by us to the TRA Holders under the Tax Receivable Agreement will generally reduce the amount of overall cash flow that might have otherwise been available to us and, to the extent that we are unable to make payments under the Tax Receivable Agreement for any reason, the unpaid amounts generally will be deferred and will accrue interest until paid by us; provided, however, that nonpayment for a specified period may constitute a Material Breach under the Tax Receivable Agreement and, therefore, the future payments under the Tax Receivable Agreement for each taxable year after any such Material Breach would be calculated utilizing certain deemed exchanges and valuation assumptions, which future payment could be substantial and in excess of the tax benefits we realize. We anticipate funding ordinary course payments under the Tax Receivable Agreement from cash flow from operations of our subsidiaries, available cash or available borrowings under our existing credit facilities or any future debt agreements.

Decisions made by us in the course of running our business, such as with respect to mergers, asset sales, other forms of business combinations or other changes in control, may influence the timing and amount of payments that we are required to make to a TRA Holder under the Tax Receivable Agreement. For example, the earlier disposition of assets following an exchange or acquisition transaction will generally accelerate payments under the Tax Receivable Agreement and increase the present value of such payments.

The Tax Receivable Agreement provides that if we elect an early termination of the Tax Receivable Agreement and if we further elect to make a single, lump sum payment, then our obligations, or our successor's obligations, under the Tax Receivable Agreement would accelerate and become due and payable, based on certain assumptions, including an assumption that we would have sufficient taxable income to fully use all potential future tax benefits that are subject to the Tax Receivable Agreement. In those circumstances, TRA Holders would be deemed to exchange any remaining outstanding Common Units for our Class A common stock and the TRA Holders generally would be entitled to payments under the Tax Receivable Agreement resulting from such deemed exchanges. We may elect to completely terminate the Tax Receivable Agreement early only with the written approval of a majority of our "independent directors" (within the meaning of the rules of the Nasdaq). The amount due and payable in those circumstances (i.e., the single lump sum payment option) is based on the present value (at a discount rate of SOFR plus 100 basis points) of projected future tax benefits that are based on certain assumptions, including an assumption that we would have sufficient taxable income to fully use all potential future tax benefits that are subject to the Tax Receivable Agreement.

Based on such assumptions, if we were to exercise our termination right immediately following the consummation of this offering and elect to make a single lump sum payment, the aggregate amount of the termination payments would be approximately \$ million. Importantly, upon a change of control or Material Breach, the Tax Receivable Agreement will not terminate nor will a single, accelerated lump sum payment be due. If we commit a Material Breach under the Tax Receivable Agreement, experience a change of control (as defined in the Tax Receivable Agreement) or elect an early termination of the Tax Receivable Agreement and do not elect the single, lump sum payment obligation, our (or our successor's) future payments under the Tax Receivable Agreement for each taxable year after any such event would be calculated utilizing certain valuation assumptions, including that (i) any Common Units that have not been exchanged are deemed exchanged for the market value of the shares of our Class A common stock at the time of the change of control and (ii) X-Energy, Inc. will have sufficient taxable income to fully utilize the tax attributes covered by the Tax Receivable Agreement. These future payments will be paid over time and due in the taxable year in which the underlying tax attributes are deemed utilized by us (or our successor) according to the valuation assumptions.

As a result of the foregoing, we could, in the case of an early termination, be required to make an immediate cash payment, and in each case, any cash payments may possibly be significantly in advance of the actual realization, if any, of such future cash tax savings. We also could be required to make cash payments to the TRA Holders that are greater than 85% of the actual cash tax savings we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement. In these situations, our obligations under the Tax Receivable Agreement could have a substantial negative impact on our liquidity and could have the effect of deferring or preventing certain mergers, asset sales, other forms of business combinations, or other changes of control. There can be no assurance that we will be able to finance our obligations under the Tax Receivable Agreement.

Payments under the Tax Receivable Agreement will be based on the tax reporting positions that we determine, which are complex and factual in nature, and the IRS or another taxing authority may challenge all or any part of the Basis Adjustments, Existing Basis Blocker Tax Attributes or Interest Deductions, as well as other tax positions that we take, and a court may sustain such a challenge. We will not be reimbursed for any cash payments previously made to the TRA Holders pursuant to the Tax Receivable Agreement if any tax benefits initially claimed by us are subsequently challenged by a taxing authority and ultimately disallowed. Instead, any excess cash payments made by us to a TRA Holder will be netted against future cash payments, if any, we might otherwise be required to make under the terms of the Tax Receivable Agreement to such TRA Holders. However, a challenge to any tax benefits initially claimed by us may not arise for a number of years following the initial time of such payment or, even if challenged early, such excess cash payment may be greater than the amount of future cash payments, if any, we might otherwise be required to make under the terms of the Tax Receivable Agreement and, as a result, there might not be future cash payments from which to net against. As a result, it is possible that we could make cash payments under the Tax Receivable Agreement that are substantially greater than % of our actual cash tax savings.

We will have full responsibility for, and sole discretion over, all our and XERC's tax matters, including the filing and amendment of all tax returns and claims for refund and defense of all tax contests, subject to certain participation and approval rights held by certain TRA Holders. If the outcome of any challenge to all or part of the Basis Adjustments, Existing Basis, Blocker Tax Attributes, Interest Deductions or other tax benefits we claim would reasonably be expected to materially affect a TRA Holder's rights and obligations under the Tax Receivable Agreement, then we will not be permitted to settle such challenge without the consent (not to be unreasonably withheld or delayed) of certain TRA Holders. The interests of such TRA Holders in any such challenge may differ from or conflict with our and our investors' interests, and such TRA Holders may exercise their consent rights relating to any such challenge in a manner adverse to our and our investors' interests.

Under the Tax Receivable Agreement, we are required to provide each TRA Holder that holds an interest in the Tax Receivable Agreement and to which a tax benefit or detriment is attributable with a schedule showing the calculation of payments that are due under the Tax Receivable Agreement with respect to each taxable year with respect to which a payment obligation to such holder arises within one hundred and fifty (150) days after filing our U.S. federal income tax return for such taxable year. This calculation will be based upon the advice of our tax advisors. Payments are generally due under the Tax Receivable Agreement within a specified period of time following the filing of our tax return for the taxable year with respect to which the payment obligation arises, although interest on such payments will begin to accrue at a rate of SOFR plus 100 basis points from the due date (without extensions) of such tax return. Some late payments that may be made under the Tax Receivable Agreement will continue to accrue interest at a rate of SOFR plus 500 basis points until such payments are made, including any late payments that we may subsequently make because we did not have enough available cash to satisfy our payment obligations at the time at which they originally arose.

Registration Rights Agreement

We intend to enter into a registration rights agreement with certain X-energy Members (the “Registration Rights Agreement”) in connection with this offering. The Registration Rights Agreement will provide certain X-energy Members and certain of their affiliates with certain demand registration rights, including shelf registration rights, in respect of any shares of our Class A common stock held by them, subject to certain conditions. In addition, in the event that we register additional shares of Class A common stock for sale to the public following the completion of this offering, we will be required to give notice of such registration to certain X-energy Members and certain of their affiliates, and, subject to certain limitations, include shares of Class A common stock held by them in such registration. The agreement will include customary indemnification provisions in favor of certain X-energy Members and certain of their affiliates and related parties against certain losses and liabilities (including reasonable costs of investigation and legal expenses) arising out of or based upon any filing or other disclosure made by us under the securities laws relating to any such registration.

Historical Transactions with Affiliates

In the normal course of business, we enter into transactions with related parties in which certain of our affiliates hold financial interests, which are described in more detail below.

Our Relationship with Intuitive Machines

Kamal Ghaffarian, the founder and executive chairman of X-energy, is a co-founder and executive chairman of Intuitive Machines, Inc. (“Intuitive Machines”). In 2021, X-energy and Intuitive Machines formed a joint venture, IX, LLC, to pursue nuclear space propulsion and surface power systems in support of future space exploration goals. Intuitive Machines currently holds 510 membership unit interests of IX, LLC, representing 51% of the issued and outstanding membership unit interests of IX, LLC. X-energy currently holds 490 membership unit interests of IX, LLC, representing 49% of the issued and outstanding membership unit interests of IX, LLC. During the years ended December 2025 and 2024, revenues associated with this joint venture were \$0.8 million and \$0.2 million, direct costs were \$0.6 million and \$0.1 million, and general and administrative expenses were \$0.2 million and \$0.1 million, respectively. As of the date of this prospectus, X-energy and Intuitive Machines are in the process of dissolving IX, LLC. The parties expect the dissolution of IX, LLC to be completed by June 30, 2026.

Our Relationship with IBX

Kamal Ghaffarian, the founder and executive chairman of X-energy, is a co-founder and current member of management of IBX, LLC (“IBX”), an investment firm. X-energy relies on IBX for the provision of general and administrative services in the day-to-day operation of its business. These expenses include, among others, fees for the provision of capital raise and proposal services. As such, expenses incurred in relation to IBX are incurred in the normal course of business and amounts are settled under normal business terms. For the fiscal years ended December 31, 2025 and 2024, these costs were \$0.2 million and \$0.8 million, respectively.

Our Relationship with IBX Thompson

Kamal Ghaffarian, the founder and executive chairman of X-energy, is a co-founder and current member of management of IBX 801 Thompson Realty, LLC (“IBX Thompson”). The Company engages with IBX Thompson for general and administrative services. For the fiscal years ended December 31, 2025 and 2024, these costs were \$0.4 million and \$1.2 million, respectively.

Our Professional Services Agreement with Kamal Ghaffarian

In January 2020, X-energy entered into a professional services agreement with Kamal Ghaffarian, its founder and executive chairman, pursuant to which Mr. Ghaffarian agreed to provide professional consulting and advising services to X-energy for a period of three years beginning January 1, 2020 for a fixed fee of \$0.08 million per quarter. Beginning January 2022, the fee was increased to \$0.10 million per quarter. The agreement shall continue in effect until the first of the following to occur: (a) X-energy notifies Mr. Ghaffarian that the services have been completed, (b) the sum of all awarded task orders has been reached and has not

been increased in accordance with the agreement or (c) the agreement has been terminated in accordance with its terms. X-energy extended this agreement for an additional one year terms on January 1, 2023, 2024 and 2025. For the fiscal years ended December 31, 2025 and 2024, the Company incurred \$0.4 million and \$0.4 million, respectively, of consulting fees in connection with this agreement. The Company and Dr. Ghaffarian plan to terminate this agreement after the offering.

Our Agreement with Aerotherm

Martin Van Staden, our Senior Vice President and Chief Technology Officer, is the president, founder and principal shareholder of Aerotherm, Inc. (“Aerotherm”). X-energy entered into a contract to receive consulting services from Aerotherm. During the years ended December 31, 2025 and 2024, the Company incurred subcontracting costs to Aerotherm, Inc. in the amount of \$0.4 million and \$0.6 million, respectively, for these services.

Our Agreement with Hatch

Hatch Associates Consultants, Inc (“Hatch”) is a unitholder of XERC. The Company entered into an agreement to receive support services related to its U.S. and international engineering and development activities, including services related to the DOE ARDP from Hatch. The services include, but are not limited to, project management, quality assurance management, cost control management and program risk management. During the years ended December 31, 2025, and 2024, the Company incurred costs to Hatch in the amount of \$4.4 million and \$7.4 million, respectively, for these services. As of December 31, 2024, \$4.5 million due to Hatch Associates Consultants, Inc. was included within our financial statements as due to related parties.

Our Agreement with Zachry Nuclear

Zachry Nuclear Engineering, Inc (“Zachry Nuclear”) is a unitholder of XERC. The Company entered into an agreement to receive support services related to the DOE ARDP from Zachry Nuclear. The services include, but are not limited to, site design and pre-construction activities, such as safety and licensing analysis support, engineering management and oversight, and system design services. During the years ended December 31, 2025 and 2024, the Company incurred costs to Zachry Nuclear of an immaterial amount and \$1.0 million, respectively, for these services. As of December 31, 2024, an immaterial amount due to Zachry Nuclear was included within our financial statements as due to related parties.

Our Agreement with Burns & McDonnell

Burns & McDonnell Engineering Company, Inc (“Burns & McDonnell”) is a unitholder of XERC. The Company entered into an agreement to receive support services related to the DOE ARDP from Burns & McDonnell. The services include, but are not limited to, preliminary design support and pre-construction support. During the years ended December 31, 2025 and 2024, the Company incurred costs to Burns & McDonnell in the amount of \$1.1 million and \$2.8 million, respectively, for these services. As of December 31, 2024, \$0.1 million due to Burns & McDonnell was included within our financial statements as due to related parties.

Our Relationship with Curtiss-Wright Corporation

Curtiss-Wright Corporation is a unitholder of XERC. During the years ended December 31, 2025 and 2024, the Company incurred subcontracting costs to Curtiss-Wright Corporation, Inc. in the amount of \$11.6 million and \$4.2 million, respectively, related to the DOE ARDP. As of December 31, 2024, \$0.5 million was due to Curtiss-Wright Corporation, Inc. and was included within our financial statements as due to related parties.

Our Relationship with The Dow Chemical Company

Dow is a unitholder and warrant holder of XERC. During 2022, the Company entered into a non-binding letter of intent with Dow to develop a small modular reactor at one of Dow’s U.S. Gulf Coast sites. In the first quarter of 2023, the Company entered into a joint development agreement with Dow. In the first quarter of

2025, the Company entered into a master project development agreement and a commercial cooperation agreement with Dow. During the years ended December 31, 2025 and 2024, the Company incurred costs to Dow in the amount of \$8.6 million and \$5.8 million, respectively. As of December 31, 2025 and 2024, \$6.2 million and \$2.3 million due to Dow was included within due to related parties. For the years ended December 31, 2025 and 2024, the revenues associated with these contracts are \$6.9 million and \$26.8 million, respectively. As of December 31, 2025 and 2024, \$4.6 million and \$15.8 million due from Dow was included within our financial statements as due from related parties, respectively.

Our Relationship with Amazon

Amazon.com NV Investment Holdings LLC (“Amazon”) is a unitholder and warrant holder of XERC. In 2024, the Company entered into a project with Amazon to provide design and engineering services. During the years ended December 31, 2025 and 2024, the Company recorded \$0.5 million and \$0.7 million within revenue associated with this project, respectively. As of December 31, 2025 and 2024, an immaterial amount and \$0.6 million associated with deferred revenue for this project was included within due to related parties, respectively.

Our Relationship with Centrica

Centrica is the largest provider of energy services across the U.K. and owns a 20% stake in the full fleet of operating nuclear reactors in the country. In September 2025, X-energy and Centrica signed a Joint Development Agreement (JDA) dedicated to building and operating Xe-100 reactors in the U.K. Subject to securing appropriate permissions and licenses, the first electricity generation is expected to be in the mid-2030s.

Our Agreement with Desbuild Construction

Nick Ghaffarian, the brother of Kam Ghaffarian, is the owner of Desbuild Construction, Inc. (“Desbuild Construction”). During 2022, X-energy engaged Desbuild Construction for construction-related services for X-energy’s training facility in Frederick, Maryland (the “Frederick Facility”). The services included, but were not limited to, demolition and design services for the build out of the Frederick Facility. In addition, in January 2023, X-energy entered into another agreement with Desbuild Construction, pursuant to which Desbuild Construction agreed to remodel the Frederick Facility for a fixed fee of \$1.4 million. X-energy makes payments in installments to Desbuild Construction upon completion of the milestones specified in the agreement. For the fiscal years ended December 31, 2025 and 2024, the Company recorded \$0.6 million and \$0.7 million, respectively, associated with these services as leasehold improvements within property and equipment, net. Refer to Note 5 — Government Grants for additional information regarding grants received for these costs.

Our Relationship with Chris Ginther

Christopher F. Ginther, a member of X-energy’s board of directors, was an Executive Vice President of OPG. In 2022, X-energy and OPG entered into a framework agreement to work exclusively with one another with respect to advanced nuclear power industrial applications in Ontario, Canada, and to co-market and advance the Xe-100 as the nuclear technology of choice for industrial applications throughout Canada. OPG will be the operator of any Xe-100 facilities that are deployed under this agreement. OPG is also an equity investor in X-energy.

We also have a project management consulting agreement with Outpost Consultants, in which Ginther is an owner.

Director and Officer Indemnification and Insurance

Prior to the consummation of this offering, we intend to enter into separate indemnification agreements with each of our directors and executive officers. We have also purchased directors’ and officers’ liability insurance. See “Description of Capital Stock — Limitations on Liability and Indemnification of Officers and Directors.”

Policies and Procedures for Related Persons Transactions

The Board of X-Energy, Inc. will adopt a formal written related person transaction policy that will be effective upon the Closing. Such policy will provide that X-energy's executive officers, directors, director nominees, any member of the immediate family of any of the foregoing persons, or a security holder known to be a beneficial owner of more than 5% of any class of X-energy's voting securities, are not permitted to enter into a "related person transaction" (as defined under Item 404 of Regulation S-K) with X-energy without the approval of X-energy's audit committee, subject to certain exceptions.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding the beneficial ownership of our Class A common stock and Class B common stock by (1) each person known to us to beneficially own more than 5% of our voting securities, (2) each of our directors, (3) each of our named executive officers and (4) all directors and executive officers as a group.

The number of shares of Class A common stock and Class B common stock outstanding and percentage of beneficial ownership before and after this offering are based on (i) the number of shares and Common Units to be issued and outstanding immediately prior to and after the consummation of this offering, after giving effect to the Transactions and (ii) an assumed initial public offering price of \$ per share (the midpoint of the estimated price range set forth on the cover page of this prospectus). See “Organizational Structure.”

Beneficial ownership of Class A common stock and Class B common stock is determined in accordance with the rules of the SEC. In accordance with the rules of the SEC, beneficial ownership includes voting or investment power with respect to securities and includes shares issuable pursuant to exchange or conversion rights that are exercisable within 60 days of the date of this prospectus.

To our knowledge, except as indicated in the footnotes to this table and pursuant to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock.

Name of Beneficial Owner ⁽¹⁾	Class A common stock Beneficially Owned						Class B common stock Beneficially Owned					
	Beneficially Owned Prior to the Offering		After the Offering Assuming Underwriters’ Option is Not Exercised		After the Offering Assuming Underwriters’ Option is Exercised in Full		Beneficially Owned Prior to the Offering		After the Offering Assuming Underwriters’ Option is Not Exercised		After the Offering Assuming Underwriters’ Option is Exercised in Full	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Greater than 5% Stockholders				%		%				%		%
Named Executive Officers:												
J. Clay Sell												
Directors:												
Dr. Kamal Ghaffarian												
Christopher F. Ginther												
Gregory J. Goff												
Kathleen W. Hyle												
David Kaplan												
Allyson Satin												
Edward Sonnenschein												
Michael J. Wallace												
Directors and executive officers as a group (14 persons)				%		%				%		%

* Less than 1% of common stock outstanding.

(1) Unless otherwise indicated in the below, the address of each of the individuals named above is:

DESCRIPTION OF CAPITAL STOCK

The following is a description of the material terms of, and is qualified in its entirety by, our amended and restated certificate of incorporation and amended and restated bylaws, each of which will be in effect upon the consummation of this offering, the forms of which are filed as exhibits to the registration statement of which this prospectus is a part.

Our purpose is to engage in any lawful act or activity for which corporations may now or hereafter be organized under the DGCL. Upon consummation of this offering, our authorized capital stock will consist of shares of common stock, par value \$0.0001 per share, and shares of preferred stock. Immediately following the completion of this offering, there are expected to be outstanding shares of common stock.

Common Stock

Class A common stock

Voting rights. Each holder of Class A common stock is entitled to one vote for each share of Class A common stock held of record in person, virtually or by proxy on all matters submitted to a vote of the holders of Class A common stock, whether voting separately as a class or otherwise.

Dividend rights. Subject to applicable law and the rights and preferences of any holders of any outstanding series of Preferred Stock or any class or series of stock having a preference over or the right to participate with the Class A common stock with respect to the payment of dividends, holders of Class A common stock, as such, shall be entitled to the payment of dividends on the Class A common stock when, as and if declared by the Board in accordance with applicable law.

The payment of future dividends on the shares of Class A common stock will depend on the financial condition of after the completion of this offering, and subject to the discretion of the Board. There can be no guarantee that cash dividends will be declared. The ability of to declare dividends may be limited by the terms and conditions of other financing and other agreements entered into by or any of its subsidiaries from time to time.

Rights upon liquidation. In the event of liquidation, dissolution or winding up of the affairs of, whether voluntary or involuntary, after payment or provision for payment of the debts and other liabilities of and after making provisions for preferential and other amounts, if any, to which the holders of Preferred Stock or any class or series of stock having a preference over or the right to participate with the Class A common stock with respect to payments in liquidation shall be entitled, the remaining assets and funds of available for distribution shall be divided among and paid ratably to the holders of all outstanding shares of Common Stock in proportion to the number of shares held by each such stockholder.

Other rights. The holders of Class A common stock have no pre-emptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the Class A common stock. The rights, preferences and privileges of holders of the Class A common stock will be subject to those of the holders of any shares of the Preferred Stock that may issue in the future.

Class B common stock

Voting rights. Each holder of Class B common stock is entitled to one vote for each share of Class B common stock held of record in person, virtually or by proxy on all matters submitted to a vote of the holders of Class B common stock, whether voting separately as a class or otherwise.

Dividend rights. Other than in connection with a dividend declared by the Board in connection with a “poison pill” or similar stockholder rights plan, dividends shall not be declared or paid on the Class B common stock and the holders of shares of Class B common stock shall have no right to receive dividends in respect of such shares of Class B common stock.

Rights upon liquidation. Each holder of shares of Class B common stock shall be entitled to receive \$0.0001 per share of Class B common stock owned of record by such holder on the record date for such distribution, and upon receiving such amount, the holders of shares of Class B common stock, in their capacity as such, shall not be entitled to receive any other assets or funds of.

Permitted Transfers. From and after the effectiveness of the Proposed Certificate of Incorporation (the “Charter Effective Time”), shares of Class B common stock may be issued only to, and registered only in the name of, the X-energy Members, their respective successors and assigns and their respective permitted transferees (the X-energy Members, together with all such subsequent successors, assigns and permitted transferees, collectively, the “Permitted Class B Owners”), and the aggregate number of shares of Class B common stock at any time registered in the name of each such Permitted Class B Owner must be equal to the aggregate number of X-energy Common Units held of record at such time by such Permitted Class B Owner under the XERC LLC Agreement. A Permitted Class B Owner may transfer or assign shares of Class B common stock (or any legal or beneficial interest in such shares) (directly or indirectly, including by operation of law) only to a permitted transferee of such holder or to a non-permitted transferee with the approval in advance and in writing by X-energy, and only if such holder also simultaneously transfers, in each case, an equal number of such holder’s X-energy Common Units to such permitted transferee or such non-permitted transferee, as applicable, in compliance with the XERC LLC Agreement. Permitted transfers include transfers pursuant to certain redemption or direct exchange scenarios, a transfer by a Permitted Class B Holder to the Company or any of its subsidiaries, or to an affiliate of such Permitted Class B Holder, in each case subject to and in compliance with the XERC LLC Agreement.

Cancellation of Class B Common Stock. A holder of Class B common stock may surrender shares of Class B common stock to X-energy for cancellation for no consideration at any time. Shares of Class B common stock are automatically transferred to X-Energy, Inc. upon the redemption or exchange of their Common Units pursuant to the terms of the XERC LLC Agreement and will be canceled and may not be reissued. Following the surrender or other acquisition of any shares of Class B common stock to X-energy or by X-energy, X-energy will take all actions necessary to cancel and retire such shares and such shares shall not be re-issued by X-energy.

Permitted Transfers. The Board (including a majority of the directors who are disinterested with respect to the relevant transaction serving on the Board at such time) may, to the extent permitted by law, from time to time establish, modify, amend or rescind, by bylaw or otherwise, regulations and procedures not inconsistent with the provisions described for determining whether any transfer or acquisition of shares of Class B common stock would violate the restrictions described and for the orderly application, administration and implementation of the provisions of the Proposed Certificate of Incorporation.

Preferred Stock

The Proposed Certificate of Incorporation will authorize the board of directors of to establish one or more series of Preferred Stock. Unless required by law or any stock exchange, the authorized shares of Preferred Stock will be available for issuance without further action by the holders of Common Stock.

The Board has the discretion to determine the powers, preferences and relative, participating, optional and other special rights, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of Preferred Stock. The issuance of Preferred Stock may have the effect of delaying, deferring or preventing a change in control of without further action by the stockholders. Additionally, the issuance of Preferred Stock may adversely affect the holders of the Common Stock by restricting dividends on the Common Stock, diluting the voting power of the Common Stock or subordinating the liquidation rights of the Common Stock. As a result of these or other factors, the issuance of Preferred Stock could have an adverse impact on the market price of the Common Stock.

Anti-Takeover Effects of Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws and Certain Provisions of Delaware Law

The provisions of the Proposed Certificate of Incorporation, the Proposed Bylaws and the DGCL summarized below may have an anti-takeover effect and may delay, defer or prevent a tender offer or takeover

attempt that you might consider in your best interest, including an attempt that might result in your receipt of a premium over the market price for your shares of Class A common stock.

The Proposed Certificate of Incorporation and Proposed Bylaws contain certain provisions that are intended to enhance the likelihood of continuity and stability in the composition of the Board and that may have the effect of delaying, deferring or preventing a future takeover or change in control unless such takeover or change in control is approved by such board of directors.

These provisions include:

- *Authorized but Unissued Capital Stock.* Our authorized but unissued shares of Common Stock and Preferred Stock will be available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of Common Stock and Preferred Stock could render more difficult or discourage an attempt to obtain control of a majority of common stock by means of a proxy contest, tender offer, merger or otherwise.
- *Director Designees; Classes of Directors.* Pursuant to the Proposed Certificate of Incorporation, the directors of X-energy will be divided into three classes, with each class serving staggered three year terms. The existence of a classified board of directors could discourage a third party from making a tender offer or otherwise attempting to obtain control of us as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors.
- *No Cumulative Voting for Directors.* The DGCL provides that stockholders are not entitled to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. The Proposed Certificate of Incorporation does not provide for cumulative voting. As a result, the holders of shares of Common Stock representing a majority of the voting power of all of the outstanding shares of our capital stock of will be able to elect all of the directors then standing for election.
- *Quorum.* The Proposed Bylaws will provide that at any meeting of the Board, a majority of the total number of directors then in office constitutes a quorum for the transaction of business.
- *Action by Written Consent.* The Proposed Certificate of Incorporation provides that any action required or permitted to be taken by the stockholders of must be effected at a duly called annual or special meeting of the stockholders of (and may not be taken by consent of the stockholders in lieu of a meeting). In addition to the foregoing, any action required or permitted to be taken by the holders of any series of Preferred Stock, voting separately as a series or separately as a class with one or more other such series, may be taken without a meeting, without prior notice and without a vote, to the extent expressly so provided by the applicable certificate of designation relating to such series of Preferred Stock, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding shares of the relevant series of Preferred Stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to in accordance with the applicable provisions of the DGCL.
- *Special Meetings of Stockholders.* Subject to the special rights of the holders of one or more series of Preferred Stock, special meetings of the stockholders of may be called, for any purpose or purposes, at any time only by or at the direction of (i) the board of directors, the chairperson of the board of directors, the chief executive officer or president, and (ii) special meetings of the stockholders of X-energy may not be called by the stockholders of X-energy or any other person.
- *Advance Notice Procedures.* The Proposed Bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, and for stockholder nominations of persons for election to the board of directors of X-energy to be brought before an annual or special meeting of stockholders. Stockholders at an annual meeting will only be able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors of or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given the secretary

of X-energy timely written notice, in proper form, of the stockholder's intention to bring that business or nomination before the meeting. Although the Proposed Bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, as applicable, the Proposed Bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of X-energy.

Limitations on Liability and Indemnification of Officers and Directors

The DGCL authorizes corporations to limit or eliminate the personal liability of directors and officers to corporations and their stockholders for monetary damages for breaches of directors' and officers' fiduciary duties, subject to certain exceptions. The Proposed Certificate of Incorporation includes a provision that eliminates the personal liability of directors and officers for monetary damages for any breach of fiduciary duty as a director or officer, except to the extent such exemption from liability or limitation thereof is not permitted under the DGCL. The effect of these provisions is to eliminate the rights of X-energy and its stockholders, through stockholders' derivative suits on X-energy's behalf, to recover monetary damages from a director or officer for breach of fiduciary duty as a director or officer, including breaches resulting from grossly negligent behavior. However, exculpation does not apply to any director or officer if the director or officer has acted in bad faith, knowingly or intentionally violated the law, authorized illegal dividends or Redemptions or derived an improper benefit from such person's actions as a director or officer.

The Proposed Bylaws provide that X-energy must indemnify and advance expenses to directors and officers to the fullest extent authorized by the DGCL. X-energy is also expressly authorized to carry directors' and officers' liability insurance providing indemnification for directors, officers and certain employees for some liabilities. X-energy believes that these indemnification and advancement provisions and insurance are useful to attract and retain qualified directors and executive officers.

The limitation of liability, indemnification and advancement provisions in the Proposed Certificate of Incorporation and the Proposed Bylaws may discourage stockholders from bringing a lawsuit against directors and officers for breach of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit X-energy and its stockholders. Your investment may be adversely affected to the extent X-energy pays the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. X-energy believes that these provisions, liability insurance and any indemnity agreements that may be entered into are necessary to attract and retain talented and experienced directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

There is currently no pending material litigation or proceeding involving any of our respective directors, officers or employees for which indemnification is sought.

Transfer Agent and Registrar

The Transfer Agent and registrar for the shares of Common Stock will be .

Listing

We intend to apply to have our common stock listed on Nasdaq under the symbol "XE."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for shares of our Class A common stock. We cannot predict the effect, if any, future sales of shares of Class A common stock, or the availability for future sale of shares of Class A common stock, will have on the market price of shares of our Class A common stock prevailing from time to time. Future sales of substantial amounts of our Class A common stock in the public market (including shares of Class A common stock issuable upon redemption or exchange of Common Units of our Continuing Equity Owners) or the perception that such sales might occur may adversely affect market prices of our Class A common stock prevailing from time to time and could impair our future ability to raise capital through the sale of our equity or equity-related securities at a time and price that we deem appropriate. Furthermore, there may be sales of substantial amounts of our Class A common stock in the public market after the existing legal and contractual restrictions lapse. This may adversely affect the prevailing market price and our ability to raise equity capital in the future. See “*Risk Factors—Risks Related to the Offering and Ownership of our Class A common stock—Sales, directly or indirectly, of a substantial amount of our Class A common stock in the public markets by our existing security holders may cause the price of our Class A common stock to decline.*”

Upon completion of this offering, we will have a total of _____ shares of our Class A common stock outstanding. Of the outstanding shares, the shares sold in this offering (or shares if the underwriters exercise in full their over-allotment option) will be freely tradable without restriction or further registration under the Securities Act, except that any shares held by our affiliates, as that term is defined under Rule 144, including our directors, executive officers and other affiliates (including our existing owners), may be sold only in compliance with the limitations described below.

In addition, each Common Unit held by our Continuing Equity Owners will be redeemable, at the election of each Continuing Equity Owner, for, at our election (determined solely by our independent directors (within the meaning of Nasdaq rules) who are disinterested), newly issued shares of our Class A common stock on a one-for-one basis or a cash payment equal to a volume weighted average market price of one share of Class A common stock for each Common Unit so redeemed, in each case, in accordance with the terms of the XERC LLC Agreement; provided that, at our election (determined solely by our independent directors (within the meaning of Nasdaq rules) who are disinterested), we may effect a direct exchange by X-Energy, Inc. of such Class A common stock or such cash, as applicable, for such Common Units. The Continuing Equity Owners may, subject to certain exceptions, exercise such redemption right for as long as their Common Units remain outstanding. See “*Certain Relationships and Related Party Transactions—XERC LLC Agreement.*” Upon consummation of the Transactions, our Continuing Equity Owners will hold _____ Common Units, all of which will be exchangeable for shares of our Class A common stock. The shares of Class A common stock we issue upon such exchanges would be “restricted securities” as defined in Rule 144 unless we register such issuances.

Lock-up Agreements

We, our officers, and directors, and holders of substantially all of our shares of capital stock or other securities convertible into or exchangeable for shares of our capital stock outstanding upon consummation of this offering have agreed or will agree that, without the prior written consent of J.P. Morgan Securities LLC, we and they will not, subject to certain exceptions, during the period ending 180 days after the date of this prospectus:

- (i) offer, sell, contract to sell, pledge, grant any option to purchase, lend or otherwise dispose of any shares of our Class A common stock, or any options or warrants to purchase any shares of our Class A common stock, or any securities convertible into, or exchangeable for, or that represent the right to receive, shares of our Class A common stock; or
- (ii) engage in any hedging or other transaction or arrangement (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) which is designed to, or which reasonably could be expected to lead to, or result in, a sale, loan, pledge or other disposition of shares of our Class A common stock or any securities convertible into or exercisable or exchangeable

for shares of our Class A common stock, whether any transaction described above is to be settled by delivery of our Class A common stock or such other securities, in cash or otherwise.

Upon the expiration of the applicable lock-up periods, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above. See “Underwriting” for additional information.

In addition to the restrictions contained in the lock-up agreements described above, we have entered into agreements with certain security holders that contain market standoff provisions imposing restrictions on the ability of such security holders to offer, sell, or transfer our equity securities for a period of 180 days following the date of this prospectus.

Rule 144

In general, under Rule 144, as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person (or persons whose shares are aggregated) who is not deemed to be or have been one of our affiliates for purposes of the Securities Act at any time during 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than an affiliate, is entitled to sell such shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of a prior owner other than an affiliate, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares of our Class A common stock on behalf of our affiliates, who have met the six month holding period for beneficial ownership of “restricted shares” of our Class A common stock, are entitled to sell upon the expiration of the lock-up agreements described above, within any three-month period beginning 90 days after the date of this prospectus, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our Class A common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average reported weekly trading volume of our Class A common stock on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us. The sale of these shares, or the perception that sales will be made, could adversely affect the price of our Class A common stock after this offering because a great supply of shares would be, or would be perceived to be, available for sale in the public market.

We are unable to estimate the number of shares that will be sold under Rule 144 since this will depend on the market price for our Class A common stock, the personal circumstances of the stockholder and other factors.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who received shares of our Class A common stock from us in connection with a compensatory stock or option plan or other written agreement before the effective date of this offering are entitled to sell such shares 90 days after the effective date of this offering in reliance on Rule 144, in the case of affiliates, without having to comply with the holding period requirements of Rule 144 and, in the case of non-affiliates, without having to comply with the public information, holding period, volume limitation or notice filing requirements of Rule 144.

Registration Rights

See “Certain Relationships and Related Party Transactions — Registration Rights Agreement in effect upon the consummation of the Transactions” for a description of these registration rights. If the offer and sale

of these shares is registered, the shares will be freely tradable without restriction under the Securities Act, and a large number of shares may be sold into the public market.

Registration Statements on Form S-8

We intend to file with the SEC a registration statement on Form S-8 under the Securities Act to register the offer and sale of all shares of Class A common stock reserved for issuance under our 2026 Plan and ESPP.

Such registration statement is expected to be filed and become effective as soon as practicable after the completion of this offering. Accordingly, shares registered under such registration statement will be available for sale in the open market following its effective date, subject to certain Rule 144 limitations applicable to affiliates, vesting restrictions, and the lock-up agreements and market standoff restrictions described above, if applicable.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS OF THE CLASS A COMMON STOCK

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership, and disposition of our Class A common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local, or non-U.S. tax laws are not discussed. This discussion is based on the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership, and disposition of our Class A common stock.

This discussion is limited to Non-U.S. Holders that hold our Class A common stock as a “capital asset” within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder’s particular circumstances, including the impact of the Medicare contribution tax on net investment income and the alternative minimum tax. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the U.S.;
- persons holding our Class A common stock as part of a hedge, straddle, or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- holders of our X-energy Warrants, or any other types of our warrants;
- banks, insurance companies, and other financial institutions;
- brokers, dealers, or traders in securities;
- “controlled foreign corporations,” “foreign controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our Class A common stock under the constructive sale provisions of the Code;
- persons who hold or receive our Class A common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans;
- “qualified foreign pension funds” as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds; and
- persons subject to special tax accounting rules as a result of any item of gross income with respect to the stock being taken into account in an applicable financial statement.

If an entity or arrangement treated as a partnership for U.S. federal income tax purposes holds our Class A common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership, and certain determinations made at the partner level. Accordingly, partnerships holding our Class A common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP, AND

DISPOSITION OF OUR CLASS A COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL, OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a “Non-U.S. Holder” is any beneficial owner of our Class A common stock that is neither a “U.S. person” nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the U.S.;
- a corporation created or organized under the laws of the U.S., any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more “United States persons” (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a U.S. person for U.S. federal income tax purposes.

Distributions

As described in the section entitled “Dividend Policy,” we do not anticipate declaring or paying dividends to holders of our Class A common stock in the foreseeable future. However, if we do make distributions of cash or property on our Class A common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder’s adjusted tax basis in its Class A common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under “— Sale or Other Taxable Disposition.”

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the U.S. to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the U.S.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

A Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our Class A common stock unless:

- the gain is effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the U.S. to which such gain is attributable);

- the Non-U.S. Holder is a nonresident alien individual present in the U.S. for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our Class A common stock constitutes a U.S. real property interest (“USRPI”) by reason of our status as a U.S. real property holding corporation (“USRPHC”) for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on gain realized upon the sale or other taxable disposition of our Class A common stock, which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the U.S.), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition of our Class A common stock by a Non-U.S. Holder will not be subject to U.S. federal income tax if our Class A common stock is “regularly traded,” as defined by applicable Treasury Regulations, on an established securities market and such Non-U.S. Holder owned, actually and constructively, 5% or less of our Class A common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder’s holding period.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our Class A common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a U.S. person and the holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E, or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our Class A common stock paid to the Non-U.S. Holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our Class A common stock within the U.S. or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a U.S. person or the holder otherwise establishes an exemption. Proceeds of a disposition of our Class A common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder’s U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act, or “FATCA”) on certain types of payments made to

non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, our Class A common stock paid to a “foreign financial institution” or a “non-financial foreign entity” (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any “substantial United States owners” (as defined in the Code) or furnishes identifying information regarding each substantial U.S. owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain “specified United States persons” or “United States owned foreign entities” (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the U.S. governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our Class A common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our Class A common stock.

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares of Class A common stock described in this prospectus. J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC, Jefferies LLC, and Moelis & Company LLC are acting as the representatives of the underwriters. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of Class A common stock indicated in the following table.

Name	Number of Shares
J.P. Morgan Securities LLC	
Morgan Stanley & Co. LLC	
Jefferies LLC	
Moelis & Company LLC	
Cantor Fitzgerald & Co.	
Guggenheim Securities, LLC	
Nomura Securities International, Inc. ⁽¹⁾	
TD Securities (USA) LLC	
UBS Securities LLC	
WR Securities, LLC ⁽¹⁾	
Total	

(1) “Wolfe | Nomura Alliance” is the marketing name used by Wolfe Research Securities and Nomura Securities International, Inc. in connection with certain equity capital markets activities conducted jointly by the firms. Both Nomura Securities International, Inc. and WR Securities, LLC are serving as underwriters in the offering described herein. In addition, WR Securities, LLC and certain of its affiliates may provide sales support services, investor feedback, investor education, and/or other independent equity research services in connection with this offering.

The underwriters are committed to purchase all the shares of Class A common stock offered by us if they purchase any shares of Class A common stock. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

Shares of Class A common stock sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares of Class A common stock sold by the underwriters to securities dealers may be sold at a discount of up to \$ _____ per share of Class A common stock from the initial public offering price. After the initial offering of the shares of Class A common stock, the representatives may change the offering price and the other selling terms. The offering of the shares of Class A common stock by the underwriters is subject to receipt and acceptance and subject to the underwriters’ right to reject any order in whole or in part. Sales of any shares of Class A common stock made outside of the U.S. may be made by affiliates of the underwriters.

To the extent that the underwriters sell more than _____ shares of Class A common stock in this offering, the underwriters have the option to purchase, exercisable within 30 days from the date of this prospectus, up to an additional _____ shares of Class A common stock from us at the public offering price less the underwriting discounts and commissions. If any shares of Class A common stock are purchased with this option to purchase additional shares of Class A common stock, the underwriters will severally purchase shares of Class A common stock in approximately the same proportion as shown in the table above. If any additional shares of Class A common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share less the amount paid by the underwriters to us per share. The following table shows the per-share and total underwriting discounts and

commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares of Class A common stock.

	Issuer	
	Without option to purchase additional shares exercise	With full option to purchase additional shares exercise
Per Share	\$	\$
Total	<u>\$</u>	<u>\$</u>

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately \$. We have agreed to reimburse the underwriters for certain out-of-pocket expenses in connection with this offering in amount not to exceed \$.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares of Class A common stock to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the Securities and Exchange Commission a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exercisable or exchangeable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, loan, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC for a period of 180 days after the date of this prospectus, other than the shares of our common stock to be sold in this offering.

The restrictions on our actions, as described above, do not apply to certain transactions, including (i) the issuance of shares of common stock or securities convertible into or exercisable for shares of our common stock pursuant to the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise) or the settlement of restricted stock units ("RSUs") (including net settlement), in each case outstanding on the date of the underwriting agreement and described in this prospectus; (ii) grants of stock options, stock awards, restricted stock, RSUs, or other equity awards and the issuance of shares of our common stock or securities convertible into or exercisable or exchangeable for shares of our common stock (whether upon the exercise of stock options or otherwise) to our employees, officers, directors, advisors, or consultants pursuant to the terms of an equity compensation plan in effect as of the closing of this offering and described in this prospectus, provided that such recipients enter into a lock-up agreement with the underwriters; or (iii) our filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to any plan in effect on the date of the underwriting agreement and described in this prospectus or any assumed benefit plan pursuant to an acquisition or similar strategic transaction.

Our directors, officers, and certain of our stockholders (such persons, the "lock-up parties") have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each lock-up party, with limited exceptions, for a period of 180 days after the date of this prospectus (such period, the "restricted period"), may not (and may not cause any of their direct or indirect affiliates to), without the prior written consent of J.P. Morgan Securities LLC, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without

limitation, common stock or such other securities which may be deemed to be beneficially owned by such lock-up parties in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant (collectively with the common stock, the “lock-up securities”)), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the lock-up securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of lock-up securities, in cash or otherwise, (3) make any demand for, or exercise any right with respect to, the registration of any lock-up securities, or (4) publicly disclose the intention to do any of the foregoing. Such persons or entities have further acknowledged that these undertakings preclude them from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (by any person or entity, whether or not a signatory to such agreement) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any lock-up securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of lock-up securities, in cash or otherwise.

The restrictions described in the immediately preceding paragraph and contained in the lock-up agreements between the underwriters and the lock-up parties do not apply, subject in certain cases to various conditions, to certain transactions, including (a) transfers of lock-up securities: (i) as bona fide gifts, or for bona fide estate planning purposes, (ii) by will or intestacy, (iii) to any trust for the direct or indirect benefit of the lock-up party or any immediate family member, (iv) to a partnership, limited liability company or other entity of which the lock-up party and its immediate family members are the legal and beneficial owner of all of the outstanding equity securities or similar interests, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv), (vi) in the case of a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the lock-up party, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the lock-up party or its affiliates or (B) as part of a distribution to members or shareholders of the lock-up party; (vii) by operation of law, (viii) to us from an employee upon death, disability or termination of employment of such employee, (ix) as part of a sale of lock-up securities acquired in open market transactions after the completion of this offering, (x) to us in connection with the vesting, settlement or exercise of restricted stock units, options, warrants or other rights to purchase shares of our common stock (including “net” or “cashless” exercise), including for the payment of exercise price and tax and remittance payments, or (xi) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction approved by our board of directors and made to all shareholders involving a change in control, provided that if such transaction is not completed, all such lock-up securities would remain subject to the restrictions in the immediately preceding paragraph; (b) exercise of the options, settlement of RSUs or other equity awards, or the exercise of warrants granted pursuant to plans described in this prospectus, provided that any lock-up securities received upon such exercise, vesting or settlement would be subject to restrictions similar to those in the immediately preceding paragraph; (c) the conversion of outstanding preferred stock, warrants to acquire preferred stock, or convertible securities into shares of our common stock or warrants to acquire shares of our common stock, provided that any common stock or warrant received upon such conversion would be subject to restrictions similar to those in the immediately preceding paragraph; and (d) the establishment by lock-up parties of trading plans under Rule 10b5-1 under the Exchange Act, provided that such plan does not provide for the transfer of lock-up securities during the restricted period.

J.P. Morgan Securities LLC, in its sole discretion, may release the securities subject to any of the lock-up agreements with the underwriters described above, in whole or in part at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

We intend to apply to list our Class A common stock on Nasdaq under the symbol “XE.”

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of Class A common stock in the open market for the purpose of preventing or retarding a decline in the market price of the Class A common stock while this offering is in

progress. These stabilizing transactions may include making short sales of Class A common stock, which involves the sale by the underwriters of a greater number of shares of Class A common stock than they are required to purchase in this offering, and purchasing shares of Class A common stock on the open market to cover positions created by short sales. Short sales may be “covered” shorts, which are short positions in an amount not greater than the underwriters’ option to purchase additional shares of Class A common stock referred to above, or may be “naked” shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares of Class A common stock, in whole or in part, or by purchasing shares of Class A common stock in the open market. In making this determination, the underwriters will consider, among other things, the price of shares of Class A common stock available for purchase in the open market compared to the price at which the underwriters may purchase shares of Class A common stock through the option to purchase additional shares of Class A common stock. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the Class A common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares of Class A common stock in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act of 1933, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the Class A common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase Class A common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares of Class A common stock as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the Class A common stock or preventing or retarding a decline in the market price of the Class A common stock, and, as a result, the price of the Class A common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on Nasdaq, in the over the counter market or otherwise.

Prior to this offering, there has been no public market for our Class A common stock. The initial public offering price will be determined by negotiations between us and the representatives. In determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors including:

- the information set forth in this prospectus and otherwise available to the representatives;
- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our shares of Class A common stock, or that the shares of Class A common stock will trade in the public market at or above the initial public offering price.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their

own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Other than in the U.S., no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

NOTICE TO PROSPECTIVE INVESTORS IN THE EUROPEAN ECONOMIC AREA

In relation to each Member State of the European Economic Area (each a “Relevant State”), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- (a) to any legal entity which is a qualified investor as defined under Article 2 of the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation), subject to obtaining the prior consent of the underwriters; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation, and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and the Company that it is a “qualified investor” within the meaning of Article 2(c) of the Prospectus Regulation. In the case of any shares being offered to a financial intermediary as that term is used in the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant State to qualified investors as so defined or in circumstances in which the prior consent of the underwriters have been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an “offer to the public” in relation to shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM

No shares have been offered or will be offered pursuant to the offering to the public in the U.K. prior to the publication of a prospectus in relation to the shares which has been approved by the Financial Conduct Authority, except that the shares may be offered to the public in the U.K. at any time:

- (a) to any legal entity which is a qualified investor as defined under Article 2 of the U.K. Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the U.K. Prospectus Regulation), subject to obtaining the prior consent of underwriters for any such offer; or
- (c) in any other circumstances falling within Section 86 of the Financial Services and Markets Act 2000 (“FSMA”);

provided that no such offer of the shares shall require the Company or any underwriter to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the U.K. Prospectus Regulation. For the purposes of this provision, the expression an “offer to the public” in relation to the shares in the U.K. means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares and the expression “U.K. Prospectus Regulation” means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

In addition, in the U.K., this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are “qualified investors” (as defined in the Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the “Order”) and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”) or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the U.K. within the meaning of the FSMA.

Any person in the U.K. that is not a relevant person should not act or rely on the information included in this document or use it as a basis for taking any action. In the U.K., any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

NOTICE TO PROSPECTIVE INVESTORS IN CANADA

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

NOTICE TO PROSPECTIVE INVESTORS IN SWITZERLAND

This prospectus does not constitute an offer to the public or a solicitation to purchase or invest in any shares. No shares have been offered or will be offered to the public in Switzerland, except that offers of shares may be made to the public in Switzerland at any time under the following exemptions under the Swiss Financial Services Act (“FinSA”):

- (a) to any person which is a professional client as defined under the FinSA;
- (b) to fewer than 500 persons (other than professional clients as defined under the FinSA), subject to obtaining the prior consent of J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC, Jefferies LLC and Moelis & Company LLC for any such offer; or
- (c) in any other circumstances falling within Article 36 FinSA in connection with Article 44 of the Swiss Financial Services Ordinance,

provided that no such offer of shares shall require the Company or any investment bank to publish a prospectus pursuant to Article 35 FinSA.

The shares have not been and will not be listed or admitted to trading on a trading venue in Switzerland.

Neither this document nor any other offering or marketing material relating to the shares constitutes a prospectus as such term is understood pursuant to the FinSA and neither this document nor any other offering or marketing material relating to the shares may be publicly distributed or otherwise made publicly available in Switzerland.

NOTICE TO PROSPECTIVE INVESTORS IN THE DUBAI INTERNATIONAL FINANCIAL CENTRE ("DIFC")

This document relates to an Exempt Offer in accordance with the Markets Law, DIFC Law No. 1 of 2012, as amended. This document is intended for distribution only to persons of a type specified in the Markets Law, DIFC Law No. 1 of 2012, as amended. It must not be delivered to, or relied on by, any other person. The Dubai Financial Services Authority (DFSA) has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for this document. The securities to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED ARAB EMIRATES

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority, Financial Services Regulatory Authority (FSRA) or the Dubai Financial Services Authority (DFSA).

NOTICE TO PROSPECTIVE INVESTORS IN AUSTRALIA

This prospectus:

- does not constitute a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (the "Corporations Act");
- has not been, and will not be, lodged with the Australian Securities and Investments Commission ("ASIC"), as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document for the purposes of the Corporations Act; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, available under section 708 of the Corporations Act ("Exempt Investors").

The shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares, you represent and warrant to us that you are an Exempt Investor.

As any offer of shares under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares, you undertake to us that you will not, for a period of 12 months from the date of issue of the shares, offer, transfer, assign or otherwise alienate those shares to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

NOTICE TO PROSPECTIVE INVESTORS IN JAPAN

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any “resident” of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

NOTICE TO PROSPECTIVE INVESTORS IN HONG KONG

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (the “SFO”) of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the “CO”) or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the SFO and any rules made thereunder.

NOTICE TO PROSPECTIVE INVESTORS IN SINGAPORE

Each of J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC, Jefferies LLC and Moelis & Company LLC and the Company has acknowledged that this prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each of J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC, Jefferies LLC and Moelis & Company LLC, and the Company has represented and agreed that it has not offered or sold any shares or caused the shares to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares or cause the shares to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, whether directly or indirectly, to any person in Singapore other than:

- (a) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the “SFA”)) pursuant to Section 274 of the SFA;
- (b) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or
- (c) otherwise, pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (howsoever described) in that trust shall not be transferred

within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- (i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(c)(ii) of the SFA;
- (ii) where no consideration is or will be given for the transfer;
- (iii) where the transfer is by operation of law;
- (iv) as specified in Section 276(7) of the SFA; or
- (v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

LEGAL MATTERS

Latham & Watkins LLP, New York, New York, which has acted as our counsel in connection with this offering, will pass upon the validity of the issuance of the shares of our Class A common stock offered by this prospectus. Certain legal matters in connection with this offering will be passed upon for the underwriters by Skadden, Arps, Slate, Meagher & Flom LLP.

EXPERTS

The consolidated financial statements of X-Energy Reactor Company, LLC at December 31, 2025 and 2024, and for the two years in the period ended December 31, 2025, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

The financial statements of X-Energy, Inc. as of December 31, 2025 appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and is included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

CHANGE IN AUDITOR

On May 2, 2025, the Company notified Grant Thornton LLP (“GT”) of its intent to change the Company’s certifying accountant. On June 9, 2025, the Company appointed Ernst & Young LLP (“EY”) as its new independent registered public accounting firm. The reports of GT on the Company’s consolidated financial statements for the fiscal years ended December 31, 2024 and 2023 did not contain an adverse opinion or a disclaimer of opinion, and were not qualified or modified as to uncertainty, audit scope or accounting principles. During the years ended December 31, 2024 and 2023, and the subsequent interim period through May 2, 2025, there were (i) no disagreements between the Company and GT on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedure, which, if not resolved to GT’s satisfaction, would have caused GT to make reference to the subject matter of the disagreement in connection with its report for such years, and (ii) no “reportable events” as defined in Item 304(a)(1)(v) of Regulation S-K for such years and subsequent interim period through May 2, 2025, except for GT’s communication of the material weakness discussed in the Risk Factors section. The Company discussed such reportable events with GT, and the Company has authorized GT to respond fully to the inquiries of EY concerning such reportable events. In connection with the filing of this Registration Statement, EY reaudited the Company’s financial statements for the year ended December 31, 2024 under the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), and EY’s report for the fiscal year ended December 31, 2024 is included herein. Accordingly, GT’s previously issued report on the fiscal year ended December 31, 2024 is not included in this Registration Statement. During the years ended December 31, 2024 and 2023, and the subsequent interim period through May 2, 2025, neither the Company nor anyone on its behalf has consulted EY with respect to either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on the Company’s consolidated financial statements or the effectiveness of internal control over financial reporting, where either a written report or oral advice was provided to the Company that EY concluded was an important factor considered by the Company in reaching a decision as to any accounting, auditing or financial reporting issue; or (ii) any matter that was either the subject of a disagreement (as defined in Item 304(a)(1)(iv) of Regulation S-K and related instructions) or a reportable event (as defined in Item 304(a)(1)(v) of Regulation S-K). The Company has provided GT with a copy of this Current Report.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 (including the exhibits, schedules and amendments thereto) under the Securities Act, with respect to our Class A common stock offered hereby. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to the Class A common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed therewith. Statements contained in this prospectus as to the contents of any contract, agreement or other document are summaries of the material terms of such contract, agreement or other document and are not necessarily complete. With respect to each of these contracts, agreements or other documents filed as an exhibit to the registration statement, reference is made to the exhibits for a more complete description of the matter involved. The SEC maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC's website is www.sec.gov. A copy of the registration statement, of which this prospectus forms a part, and the exhibits and schedules thereto may be downloaded from the SEC's website.

As a result of this offering, we will become subject to full information reporting requirements of the Exchange Act and will file with or furnish to the SEC periodic reports and other information. We intend to furnish our shareholders with annual reports containing our audited financial statements prepared in accordance with GAAP and certified by an independent public accounting firm. We also intend to furnish or make available to our shareholders quarterly reports containing our unaudited interim financial information, for the first three fiscal quarters of each fiscal year. Our website is located at www.x-energy.com. Following the completion of this offering, we intend to make our periodic reports and other information filed with or furnished to the SEC available, free of charge, through our website, as soon as reasonably practicable after those reports and other information are electronically filed with or furnished to the SEC. Information contained on our website or linked therein or otherwise connected thereto does not constitute part of nor is it incorporated by reference into this prospectus or the registration statement of which this prospectus forms a part.

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X-Energy Reactor Company, LLC

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Report of Independent Registered Public Accounting Firm

To the Board of Directors of X-Energy, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheet of X-Energy, Inc. (the “Company”) as of December 31, 2025, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2025, in accordance with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2025.

Tysons, Virginia
March 20, 2026

X-ENERGY, INC.
BALANCE SHEET

	December 31, 2025
Assets	
Current assets	
Cash and cash equivalents	—
Total assets	—
Shareholder's Equity	
Common stock, par value \$0.0001 per share, 1,000 authorized and 0 issued or outstanding	—
Additional paid-in capital	—
Total shareholder's equity	—
Total liabilities, and shareholder's equity	—

X-ENERGY, INC.**NOTES TO FINANCIAL STATEMENTS****NOTE 1 — ORGANIZATION****Company Overview**

X-Energy, Inc. (the “Company”) was incorporated in Delaware on September 18, 2025. In connection with its incorporation, the Company authorized 1,000 shares of common stock for \$0.0001 per share and issued 0 shares. The Company was formed for the purpose of completing a public offering and related transactions (the “Reorganization”) in order to conduct the business of the X-Energy Reactor Company, LLC, which is a related party, as a publicly-traded entity. The Company had no operations prior to incorporation on September 18, 2025, and had no activities since the date of incorporation and therefore, has omitted presenting statements of operations, changes in shareholder’s equity and cash flows.

Following the successful completion of the Reorganization and this offering, the Company will be a public holding company and its sole asset will be equity interests in X-Energy Reactor Company, LLC and will be the general partner of X-Energy Reactor Company, LLC.

NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”).

NOTE 3 — SHAREHOLDER’S EQUITY

The Company is authorized to issue 1,000 shares of common stock (par value \$0.0001 per share).

NOTE 4 — COMMITMENTS AND CONTINGENCIES

In the ordinary course of business, the Company may be subject to various legal, regulatory and/or administrative proceedings. There are currently no such proceedings to which the Company is a party.

In the normal course of business, the Company may enter into contracts that contain a variety of indemnification clauses. The Company’s maximum exposure under these arrangements cannot be determined as these indemnities relate to future claims that may be made against the Company, but which have not yet occurred. However, the Company has not had prior claims or losses pursuant to these contracts and expects the risk of loss to be remote.

Report of Independent Registered Public Accounting Firm

To the Members and the Board of Directors of X-Energy Reactor Company, LLC

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of X-Energy Reactor Company, LLC (the Company) as of December 31, 2025 and 2024, the related consolidated statements of operations and comprehensive loss, changes in members' deficit and mezzanine equity and cash flows for each of the two years in the period ended December 31, 2025, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2025 and 2024, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2025, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2025.

Tysons, Virginia
March 20, 2026

X-ENERGY REACTOR COMPANY, LLC
CONSOLIDATED BALANCE SHEETS
(in thousands, except units)

	December 31, 2025	December 31, 2024
ASSETS		
Current assets		
Cash and cash equivalents	\$ 458,932	\$ 514,600
Short-term investments	304,908	—
Accounts receivable	32,940	1,212
Unbilled receivables and contract assets	41,529	27,211
Prepaid and other current assets	11,491	2,894
Due from related parties	4,580	15,973
Total current assets	854,380	561,890
Long-term investments	261,458	—
Restricted cash	3,698	—
Property and equipment, net	50,105	5,828
Operating lease right-of-use assets	22,696	11,003
Other long-term assets	18,934	789
Total assets	\$ 1,211,271	\$ 579,510
LIABILITIES, MEZZANINE EQUITY, AND MEMBERS' DEFICIT		
Current liabilities		
Accounts payable	\$ 3,363	\$ 2,327
Accrued liabilities	51,217	35,379
Due to related parties	4,225	8,480
Short-term borrowings	—	18,537
Total current liabilities	58,805	64,723
Long-term deferred revenue	15,153	—
Long-term operating lease liabilities	20,887	10,338
Warrant liabilities	274,166	50,634
Total liabilities	369,011	125,695
Mezzanine equity		
Class A Common Units: 367,055,779 units authorized, 3,128,026 units issued and outstanding as of December 31, 2025, and 328,688,824 units authorized, 3,128,026 units issued and outstanding as of and December 31, 2024	1,800	1,800
Class B Common Units: 41,149,242 units authorized, 16,838,205 units issued and outstanding as of December 31, 2025, and 34,043,242 units authorized, 13,960,705 units issued and outstanding as of December 31, 2024	93,353	90,859
Series A redeemable convertible preferred units: 90,625,588 units authorized, issued and outstanding as of December 31, 2025, and 2024; liquidation preference of \$52,146 as of December 31, 2025 and 2024	218,408	218,408
Series A-1 redeemable convertible preferred units: 8,808,351 units authorized, issued and outstanding as of December 31, 2025, and 2024; liquidation preference of \$67,250 as of December 31, 2025 and 2024	21,477	21,477
Series B redeemable convertible preferred units: 11,643,171 units authorized, issued and outstanding as of December 31, 2025, and 2024; liquidation preference of \$120,214 as of December 31, 2025 and \$117,030 as of December 31, 2024	101,382	101,382
Series C redeemable convertible preferred units: 41,418,916 units authorized; 39,963,592 units issued and outstanding as of December 31, 2025, and 65,185,243 units authorized; 37,093,420 units issued and outstanding as of December 31, 2024; liquidation preference of \$305,114 as of December 31, 2025 and \$283,201 as of December 31, 2024	265,797	230,987
Series C-1 redeemable convertible preferred units: 162,246,180 units authorized; 107,908,114 units issued and outstanding as of December 31, 2025, and 148,122,321 units authorized, 99,672,593 units issued and outstanding as of December 31, 2024; liquidation preference of \$874,999 as of December 31, 2025 and \$808,220 as of December 31, 2024	686,715	635,463
Series D redeemable convertible preferred units: 48,154,955 units authorized, issued and outstanding as of December 31, 2025, and zero units authorized, issued and outstanding as of December 31, 2024; liquidation preference of \$700,000 as of December 31, 2025 and \$0 as of December 31, 2024	677,623	—
Total mezzanine equity	2,066,555	1,300,376
Accumulated deficit	(1,236,345)	(846,567)
Accumulated other comprehensive income (loss)	(117)	6
Additional paid-in capital	12,167	—
Total members' deficit	(1,224,295)	(846,561)
Total liabilities, mezzanine equity, and members' deficit	\$ 1,211,271	\$ 579,510

X-ENERGY REACTOR COMPANY, LLC
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31,	
	2025	2024
Services revenue ⁽¹⁾	\$ 94,260	\$ 83,986
Grant income	14,838	36,166
Total revenues and grant income	\$ 109,098	\$ 120,152
Operating expenses		
Direct costs	161,367	130,115
Selling, general and administrative	116,318	111,887
Research and development	1,708	1,662
Total operating expenses	279,393	243,664
Operating loss	(170,295)	(123,512)
Other income (expense)		
Interest expense	(475)	(16,190)
Interest income	20,293	2,833
Other income (expense), net	(239,301)	10,909
Total other expense, net	(219,483)	(2,448)
Net loss	\$(389,778)	\$(125,960)
Other comprehensive loss		
Foreign currency translation adjustment	(888)	474
Reclassification of OCI for conversion of C-1 and C-2 Notes	—	4,873
Changes in fair value of liabilities under fair value option attributable to changes in instrument-specific credit risk	765	(6,220)
Other comprehensive loss	(123)	(873)
Comprehensive loss	\$(389,901)	\$(126,833)

(1) Includes related party revenue of \$6,943 and \$27,555 for the years ended December 31, 2025 and 2024, respectively.

X-ENERGY REACTOR COMPANY, LLC
CONSOLIDATED STATEMENTS OF CHANGES IN MEMBERS' DEFICIT AND MEZZANINE EQUITY
(in thousands, except units)

	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Additional Paid-In Capital	Total Members' Deficit	Class A Common Units		Class B Common Units		Series A Preferred Units		Series A-1 Preferred Units		Series B Preferred Units		Series C Preferred Units		Series C-1 Preferred Units		Series D Preferred Units		Total Mezzanine Equity
					Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	
Balance, January 1, 2024	\$ (716,769)	\$ 879	\$ —	\$ (715,890)	3,128,026	\$1,800	10,139,818	\$74,250	90,625,588	\$218,408	8,808,351	\$21,477	11,643,171	\$101,382	16,340,900	\$ 99,458	—	—	—	—	\$ 516,775
Unit-based compensation	(3,838)	—	—	(3,838)	—	—	694,000	4,988	—	—	—	—	—	—	—	—	—	—	—	—	4,988
Issuance of Class B Units in conjunction with the issuance and modification of debt	—	—	—	—	—	—	2,369,752	9,061	—	—	—	—	—	—	—	—	—	—	—	—	9,061
Issuance of Class B Units in conjunction with the conversion of C-1 Notes to Series C Preferred Units	—	—	—	—	—	—	757,135	2,560	—	—	—	—	—	—	—	—	—	—	—	—	2,560
Conversion of Series C-1 Notes into Series C Preferred Units	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,210,405	27,138	—	—	—	—	27,138
Exercise of the October 2022 Warrants	—	—	—	—	—	—	—	—	—	—	—	—	—	—	582,094	5,175	—	—	—	—	5,175
Conversion of C-2 Notes into Series C Preferred Units	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16,960,021	99,216	—	—	—	—	99,216
Issuance of Series C-1 Preferred Units, net of issuance costs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	96,575,116	615,715	—	—	615,715
Conversion of debt into Series C-1 Preferred Units, net of issuance costs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,097,477	19,748	—	—	19,748
Net Loss	(125,960)	—	—	(125,960)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Foreign Currency Translation Adjustment	—	474	—	474	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Changes in fair value of liabilities under fair value option attributable to changes in instrument specific credit risk	—	(6,220)	—	(6,220)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Reclassification of OCI for conversion of C-1 and C-2 Notes	—	4,873	—	4,873	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Balance, December 31, 2024	\$ (846,567)	\$ 6	—	\$ (846,561)	3,128,026	\$1,800	13,960,705	\$90,859	90,625,588	\$218,408	8,808,351	\$21,477	11,643,171	\$101,382	37,093,420	\$230,987	99,672,593	\$635,463	—	—	\$1,300,376
Unit-based compensation	—	—	12,167	12,167	—	—	2,877,500	2,494	—	—	—	—	—	—	—	—	—	—	—	—	2,494
Issuance of Series C-1 Preferred Units, net of issuance costs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8,235,521	51,252	—	—	51,252
Conversion of C-2 Notes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,870,172	34,810	—	—	—	—	34,810
Issuance of Series D Preferred Units, net of issuance costs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48,154,955	677,623	677,623
Net Loss	(389,778)	—	—	(389,778)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Foreign Currency Translation Adjustment	—	(888)	—	(888)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Changes in fair value of liabilities under fair value option attributable to changes in instrument specific credit risk	—	765	—	765	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Balance, December 31, 2025	<u>\$ (1,236,345)</u>	<u>\$ (117)</u>	<u>\$ 12,167</u>	<u>\$ (1,224,295)</u>	<u>3,128,026</u>	<u>\$1,800</u>	<u>16,838,205</u>	<u>\$93,353</u>	<u>90,625,588</u>	<u>\$218,408</u>	<u>8,808,351</u>	<u>\$21,477</u>	<u>11,643,171</u>	<u>\$101,382</u>	<u>39,963,592</u>	<u>\$265,797</u>	<u>107,908,114</u>	<u>\$686,715</u>	<u>48,154,955</u>	<u>\$677,623</u>	<u>\$2,066,555</u>

X-ENERGY REACTOR COMPANY, LLC
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,	
	2025	2024
Cash flows from operating activities:		
Net loss	\$(389,778)	\$(125,960)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,390	913
Unit-based compensation	14,137	1,150
Loss on extinguishment of debt	—	7,380
(Gain) loss on conversion of C-1 & C-2 Notes	4,023	(2,757)
Non-cash selling, general, and administrative expenses	—	55,252
Payable in-kind interest	—	3,792
Mark-to-market loss (gain) on warrant liabilities	223,532	(7,887)
Mark-to-market loss on C-1 & C-2 Notes	13,015	9,113
Mark-to-market gain on derivative liabilities	—	(10,065)
Mark-to-market gain on 2024 Financial Instrument	—	(12,266)
Reclassification of OCI for conversion of C-1 & C-2 Notes	—	4,873
Amortization of deferred financing costs, debt discount, and other	975	11,857
Accretion and amortization on investments	(277)	—
Changes in operating assets and liabilities:		
Accounts receivable and unbilled receivables	(24,804)	16,044
Prepaid and other current assets	(4,026)	(1,416)
Due from related parties	11,394	(12,466)
Operating lease right-of use assets	2,439	2,636
Accounts payable and accrued liabilities	8,736	(21,301)
Long-term deferred revenue	15,153	—
Payment of payable-in-kind interest	—	(4,147)
Other long-term assets	(18,180)	206
Due to related parties	(4,255)	(9,668)
Operating lease liabilities	(3,334)	(1,442)
Net cash used in operating activities	\$(149,860)	\$ (96,159)
Cash flows from investing activities:		
Capital expenditures	(117,236)	(4,162)
Reimbursement of capital expenditures under government grant	54,838	2,297
Purchase of investments	(565,946)	—
Net cash used in investing activities	\$(628,344)	\$ (1,865)
Cash flows from financing activities:		
Repayments on bridge loans	—	(53,800)
Borrowings on bridge loans	—	49,598
Repayments on lines of credit	—	(98,843)
Borrowings from lines of credit	—	89,455
Payments of mezzanine equity issuance costs	(25,274)	(10,760)
Payment of debt issuance costs	(504)	(3,793)
Payment of deferred transaction costs	(1,016)	—
Proceeds from issuance of Preferred Units	752,924	626,483
Net cash provided by financing activities	\$ 726,130	\$ 598,340
Net effect of exchange rate	104	(114)
Net increase (decrease) in cash, cash equivalents, and restricted cash	(51,970)	500,202
Cash, cash equivalents and restricted cash at beginning of period	514,600	14,398
Cash, cash equivalents and restricted cash at end of period	\$ 462,630	\$ 514,600

X-ENERGY REACTOR COMPANY, LLC
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 — ORGANIZATION AND NATURE OF BUSINESS

Company Overview

X-Energy Reactor Company, LLC (“X-energy” or the “Company” or “its”) is a Delaware limited liability company formed on December 14, 2018, and is the successor for financial reporting purposes of X-energy, LLC, a Maryland limited liability company founded in 2009. The Company is headquartered in Rockville, Maryland. The Company is a developer of advanced small modular nuclear reactors and fuel technology for clean energy generation.

NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND RECENT ACCOUNTING PRONOUNCEMENTS

Basis of Presentation

The consolidated financial statements for X-Energy Reactor Company, LLC as of and for the years ended December 31, 2025 and 2024, include the accounts of the Company’s wholly owned and consolidated subsidiaries. The consolidated financial statements have been prepared pursuant to the accounting principles generally accepted in the United States of America (“U.S. GAAP”). All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of the Company’s financial statements in conformity with U.S. GAAP requires estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosures of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses for the reporting period. Some of the more significant estimates include the valuation of unit-based compensation, preferred units, profits interests units (“PIUs”), and warrants. Due to the inherent uncertainty involved in making estimates, actual results could differ from those estimates which could have a material effect on the financial condition and results of operations in future periods.

The Company bases its estimates and assumptions on historical experience and other factors, including the current economic environment and various other judgments that it believes to be reasonable under the circumstances. The Company adjusts such estimates and assumptions when facts and circumstances dictate. Changes in those estimates resulting from continuing changes in the economic environment will be reflected in the financial statements in future periods.

Certain Significant Risks and Uncertainties

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents, accounts receivable, and short and long-term investments. By their nature, all such financial instruments involve risks, including the credit risk of nonperformance by counterparties. The Company generally does not require collateral to support the obligations of the counterparties and cash levels held at banks may be in excess of federally insured limits. The Company limits its exposure to credit loss by maintaining its cash and cash equivalents and investments at highly rated financial institutions and investing in US Government securities and high credit quality issuers. Further, the Company’s revenue and credit relationships are primarily concentrated within the United States Government which represents a concentration risk but a low credit risk.

For the years ended December 31, 2025 and 2024, two customers, the United States Government and The Dow Chemical Company (“Dow”) accounted for 87% and 6%, and 74% and 22%, respectively, of the Company’s total revenue and grant income. Refer to Note 3 — Revenue Recognition for further disaggregation of revenue and grant income by customer for the years ended December 31, 2025 and 2024.

As of December 31, 2025 and 2024, the Company's receivable balances related to services revenue and government grants with the United States Department of Energy ("DoE") and United States Department of Defense ("DoD") are as follows (in thousands). Refer to Note 14 — Related Party Transactions for further information on receivable balances with Dow.

	December 31, 2025	December 31, 2024
Accounts Receivable		
DoE	\$23,628	\$ —
Unbilled Receivables and Contract Assets		
DoE	\$39,644	\$23,794
DoD	1,091	2,690

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of cash deposits, cash held in financial institutions and short-term investments purchased with an original maturity of three months or less. The carrying value of cash equivalents approximates fair value because of the short-term nature of these investments. The Company maintains its cash in bank deposit accounts with high credit quality financial institutions which, at times, may exceed the federally insured limit. The Company does not believe it is exposed to any significant credit risk regarding these deposits.

The components of cash, cash equivalents, and restricted cash as of December 31, 2025 and 2024 are as follows (in thousands):

	December 31, 2025	December 31, 2024
Cash and cash equivalents	\$458,932	\$514,600
Restricted cash	3,698	—
Cash, cash equivalents, and restricted cash as presented in the Statement of Cash Flows	\$462,630	\$514,600

Investments

The Company classifies all debt investments as held to maturity and are reported at amortized cost, net of any allowance for credit losses. The Company does not intend to sell the investments and it is not more likely than not that the Company will be required to sell the investments before their maturity. The related interest income, including amortization of premiums and accretion of discounts, is included in Interest income in the consolidated statements of operations.

Held to maturity investments are classified within Level 1 of the fair value hierarchy for those investments that are valued using inputs at quoted prices for identical assets in active markets and Level 2 for those investments that are valued using inputs other than quoted prices in active markets for identical assets that are observable either directly or indirectly.

Accounts Receivable

Accounts receivable are presented at the invoiced receivable amounts, less any allowance for any potential expected uncollectible amounts, and do not bear interest. The Company estimates allowance for credit losses based on the credit worthiness of each customer, historical collections experience, forward-looking information, adverse situations that may affect a customer's ability to pay, and both microeconomic and macroeconomic factors. The Company grants uncollateralized credit in the form of accounts receivable to its customers. The Company's receivables are heavily concentrated from the United States Government, specifically the DoE. Historically, the Company has not experienced any significant credit-related losses, and management does not believe that any government agencies represent a significant credit risk. Accordingly, historical write-offs of accounts receivable have not occurred and as of December 31, 2025 and 2024, no reserve was recorded.

Customer payments on contracts are typically due within 30 days of billing, depending on the contract.

Prepaid Costs

Prepaid costs, primarily consisting of prepaid service fees, software and other general prepayments, amounted to \$7.5 million and \$2.9 million as of December 31, 2025 and 2024, respectively. We also make deposits to vendors for long-lead materials. As of December 31, 2025, the Company made \$17.0 million in deposits related to long-lead materials, which is included in other long-term assets on the consolidated balance sheets.

Transaction and Financing Costs

The Company has recorded deferred financing costs incurred in conjunction with its debt obligations that are held at amortized cost. The Company amortizes deferred financing costs over the remaining life of the related debt and records the amortization within interest expense in the consolidated statements of operations.

In connection with the issuance and amendment of debt, the Company incurred third-party debt issuance costs in the amount of \$0.5 million and \$2.9 million during the years ended December 31, 2025 and 2024, respectively. The debt issuance costs are treated as a debt discount and are amortized over the term of the related loan. During the years ended December 31, 2025 and 2024, \$0.5 million and \$4.8 million, respectively, of amortization expense related to the discount created from the deferred financing costs was recorded to Interest expense in the consolidated statements of operations.

The Company records transaction costs incurred in conjunction with the issuance of preferred units as a reduction of mezzanine equity on the consolidated balance sheets. For the years ended December 31, 2025 and 2024, the Company incurred \$2.2 million and \$11.1 million, respectively, in issuance costs associated with the issuance of the Series C-1 Preferred Units. Additionally, during the year ended December 31, 2025, the Company incurred \$22.4 million in issuance costs associated with the issuance of the Series D Preferred Units.

The Company capitalizes qualified legal, accounting, and other direct and incremental costs related to the potential public offering transaction and began incurring such costs in 2025. These costs were \$3.9 million as of December 31, 2025 and are included in Prepaid and other current assets on the consolidated balance sheet.

Property and Equipment, Net

Property and equipment, net is stated at cost, less accumulated depreciation and amortization and any accumulated impairments. Depreciation and amortization is recognized using the straight-line method over the following estimated useful lives of assets and is recorded within selling, general, and administrative expenses on the consolidated statements of operations and comprehensive loss:

Asset	Useful Life
Equipment and materials	5 – 35 years
Computer equipment and software	3 – 5 years
Office furniture and fixtures	2 – 7 years
Leasehold improvements	Shorter of lease term or 10 years

The costs of maintenance and repairs that do not materially prolong the useful life of an asset are expensed as incurred. Asset betterments are capitalized. Costs for property and equipment not yet placed into service, including advance payments for materials and equipment and payments made in accordance with contractual progress milestones, are capitalized as construction-in-progress and will be depreciated in accordance with the above guidelines once placed into service.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or group of assets may not be recoverable. Such events or circumstances may

include significant decreases in the market price of the asset, significant adverse changes in the business climate or legal factors, accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of the asset, current period cash flow or operating losses combined with a history of losses or a forecast of continuing losses associated with the use of the asset, or a current expectation that the asset will more likely than not be sold or disposed of significantly before the end of its estimated useful life. If an impairment indicator is present, the Company evaluates recoverability by comparing the carrying amount of the asset to its future undiscounted net cash flows. If the carrying value of a long-lived asset is not recoverable, it is impaired, and the impairment loss is measured as the difference between the carrying value of the asset and its fair value. No impairment losses were recognized for the years ended December 31, 2025 and 2024.

Leases

The Company leases facilities including office space under non-cancelable lease contracts with terms greater than 12 months and the Company has classified these leases as operating leases. The Company does not have any material finance leases. When determining lease term, the Company considers any options to extend or terminate the lease when it is reasonably certain the Company will exercise such options.

The Company elected to account for lease and non-lease components related to office space as a single lease component. Leases with an initial term of 12 months or less are not included within the lease right-of-use ("ROU") assets and lease liabilities recognized on the consolidated balance sheets, and instead the lease payments for those short-term leases are recognized on a straight-line basis over the lease term.

Lease ROU assets are calculated as the net present value of future payments plus any capitalized initial direct costs less any tenant improvements or lease incentives. Lease liabilities are calculated as the net present value of future payments. For leases that do not provide an implicit interest rate, the Company uses the incremental borrowing rate to calculate the lease liability. Upon lease modification, the Company remeasures the ROU asset and lease liability as of the modification date.

Lease expense for minimum operating lease payments is recognized on a straight-line basis over the lease term. Any variable non-lease components are not included within the lease ROU asset and lease liability on the consolidated balance sheets and instead are reflected as an expense in the period incurred.

Deferred Revenue

The Company recognizes a contract liability, referred to as deferred revenue in its consolidated financial statements, when the Company receives a payment from customers, or has an unconditional right to consideration, for services that have yet to be performed. Refer to Note 3 — Revenue Recognition for further discussion on deferred revenue balances.

Financial Instruments and Fair Value Measurements

The Company estimates fair value based on assumptions that active market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs. Fair value measurements are categorized according to the criteria below based on the lowest level of input that is significant to the overall fair value measurement of the instrument:

- Level 1 inputs: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date;
- Level 2 inputs: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs: Unobservable inputs for the asset or liability. These are used to measure fair value to the extent those observable inputs are not available, thereby allowing for situations in which there is minimal, if any, market activity for the asset or liability at the measurement date.

The carrying amount reflected in the Company's consolidated balance sheets for accounts receivable and accounts payable approximate fair value due to the short-term maturities of these instruments. Refer to

Note 13 — Fair Value Measurements for the financial assets and liabilities that are recorded at fair value on a recurring basis within the consolidated balance sheets.

Loss Contingencies

The Company accrues liabilities for loss contingencies when it is probable that a loss has been incurred on account of investigations, litigation, disputes, or claims related to its business activities and the amount of loss is reasonably estimable. When the amount of loss cannot be reasonably estimated, the Company will disclose contingent liabilities when there is a reasonable possibility that a loss or additional loss may have been incurred. The Company's future earnings could be affected by changes in the assessments of the probability of a loss or changes in the estimates related to such matters.

Revenue and Cost Recognition

For the years ended December 31, 2025 and 2024, the Company generated all of its services revenue from contracts with customers, a substantial portion of which was generated from contracts with the U.S. Government. A majority of the Company's contracts with the U.S. Government are generally subject to the Federal Acquisition Regulation and are priced based on estimated costs of providing the contractual services.

The Company accounts for a contract when the parties have approved the contract and are committed to perform on it, the rights of each party and the payment terms are identified, the contract has commercial substance, and collection of substantially all of the consideration is probable.

The Company evaluates if its contracts are in the scope of Accounting Standards Codification ("ASC") 606, Revenue from Contracts with Customers, or other guidance or a combination. For contracts partially in the scope of other guidance, the Company separates and allocates the arrangement consideration to those components in accordance with ASC 606 unless the other guidance provides its own separation and allocation guidance.

At contract inception, the Company determines whether the services to be provided are to be accounted for as a single performance obligation or as multiple performance obligations. This evaluation requires professional judgment and may impact the timing and pattern of revenue recognition.

The Company's contracts may include variable consideration, such as adjustments to pricing based on performance or other contractual terms. Variable consideration is estimated at contract inception and updated throughout the contract term as additional information becomes available. The Company includes variable consideration in the transaction price only to the extent that it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

The Company generally recognizes revenue over time throughout the performance period as the customer simultaneously receives and consumes the benefits provided on services-type revenue arrangements. The Company satisfies its performance obligation as services are rendered. An input method is used for cost-based contracts, based on the cost of services which correspond directly with the value of the Company's performance completed to date. For fixed-fee contracts, the Company applies an input method — specifically the cost-to-cost approach — where revenue is recognized in proportion to costs incurred, reflecting progress towards complete satisfaction of the performance obligation.

Contract modifications are reviewed to determine whether they should be accounted for as part of the original performance obligation or as a separate contract. When a contract modification changes the scope or price and the additional performance obligations are at their standalone selling price, the original contract is terminated and the Company accounts for the change prospectively when the new services to be transferred are distinct from those already provided. When the contract modification includes services that are not distinct from those already provided, the Company records a cumulative adjustment to revenue based on a remeasurement of progress towards the complete satisfaction of the not yet fully delivered performance obligation.

The Company utilizes other parties in the performance of some services. Based on the Company's evaluation using a control model, the Company determined that in all of its performance obligations, it serves

as a principal rather than an agent within its revenue arrangements. Revenue and the associated expenses are both reported on a gross basis within the consolidated statements of operations and comprehensive loss.

Government Grants

Under the Company's accounting policy for government grants, which is consistent with the International Accounting Standard 20 ("IAS 20") Accounting for Government Grants and Disclosure of Government Assistance, the Company recognizes government grants when there is reasonable assurance that the Company will comply with the conditions attached to the grant arrangement and the grant will be received. This assessment is performed for each grant as of each reporting period. Amounts received in advance of the Company incurring eligible expenses are recorded as deferred grant income within long-term deferred revenue until the eligible expense is incurred.

For grants related to assets, the Company has elected to record such grants as a deduction in the carrying value of the asset. For grants related to income, the Company has elected to record such grants as income separately from revenues on the Consolidated Statements of Operations and Comprehensive Loss as the goods and services provided for under the grant are consistent with the operating activities of the Company. The expenses related to grant income are recorded on a gross basis as direct costs.

Grant income and direct costs related to activities of third parties including subcontractors and sub-awardees are recorded on a gross basis when the Company has the power to redirect the funds from grantor to a different party, or retain those funds itself, in order to meet the conditions of the grant. Factors considered include, but are not limited to, whether the Company is responsible for and has discretion over whether to engage third parties, which third parties to engage and on what terms.

Direct Costs

Direct costs on the consolidated statements of operations and comprehensive loss include all costs directly attributable to providing services under contracts with customers and grants related to income, such as direct labor, direct materials and subcontracting costs. Indirect costs are allocated to direct costs in the same manner as such costs are defined in disclosure statements under U.S. Government Cost Accounting Standards.

Selling, General and Administrative Expense

Selling, general and administrative expenses consist of human capital related expenses for employees involved in general corporate functions; rent relating to the Company's office space; professional fees; and other general corporate costs.

Unit-Based Compensation

Unit-based compensation represents costs related to unit-based awards granted to employees and members of the Board of Directors. The Company recognizes unit-based compensation, utilizing the accelerated attribution method, based upon the estimated fair value of awards on the grant date for equity classified awards. Forfeitures are accounted for as they occur. The recognition period for these costs begins at either the applicable service inception date or grant date and continues throughout the requisite service period. Due to the contingently redeemable nature of Class B Common Units (inclusive of the Class B-1 Common Units and Class B-2 Common Units, as discussed in Note 11 — Member Units and Preferred Units and Note 12 — Unit-Based Compensation Expense), the Company classifies these units as mezzanine equity and records the redemption value as of the grant date for vested awards within mezzanine equity on the consolidated balance sheets.

Research and Development

The Company conducts research and development activities related to the development and improvement of technologies pertaining to nuclear reactor and fuel design engineering. The costs incurred for conducting the research and development primarily include equipment, material, and labor hours. Such costs of research and development are expensed in the period incurred.

Other Income (Expense), Net

Other income (expense), net for the years ended December 31, 2025 and 2024 consists of the following (in thousands):

	Year Ended December 31,	
	2025	2024
Foreign currency transaction gain (loss)	\$ 924	\$ (685)
Mark-to-market loss on C-1 & C-2 Notes ⁽¹⁾	(13,015)	(9,113)
Gain (loss) on conversion of C-1 & C-2 Notes ⁽¹⁾	(4,023)	2,757
Mark-to-market gain (loss) on warrant liabilities ⁽¹⁾	(223,532)	7,887
Mark-to-market gain on embedded derivatives ⁽¹⁾	—	10,065
Mark-to-market gain on 2024 Financial Instrument ⁽¹⁾	—	12,266
Reclassification of OCI for conversion of C-1 & C-2 Notes ⁽¹⁾	—	(4,873)
Loss on extinguishment of debt ⁽¹⁾	—	(7,380)
Other income (expense)	345	(15)
Total other income (expense), net	<u>\$(239,301)</u>	<u>\$10,909</u>

(1) Refer to Note 7 — Debt

Foreign Currency Translation

The functional currency of the Company's foreign operations is the reported local currency. Translation adjustments result from translating the Company's foreign subsidiaries' financial statements into United States dollars. The balance sheet accounts of the Company's foreign subsidiaries are translated into United States dollars using the exchange rate in effect at the balance sheet date. Revenue and expenses are translated using average exchange rates for each month during the fiscal year. The resulting translation gains or losses are recorded as a component of accumulated other comprehensive income (loss) in members' deficit. The foreign currency gains and losses are not material for the periods presented.

Income Taxes

The Company is a limited liability company which is classified as a partnership for U.S. federal and state income tax purposes. Accordingly, the Company's U.S. operations are not subject to income taxes in the U.S. The Company's owners separately account for their pro rata share of the Company's income, deductions, losses and credits annually. The Company's foreign operations are subject to income taxes in the foreign jurisdictions in which they operate. Income tax expense and benefit were immaterial for the years ending December 31, 2025 and 2024.

On July 4, 2025, the One Big Beautiful Bill Act ("OBBBA") was signed into law. The legislation was a sweeping tax and spending law which makes permanent many provisions of the 2017 Tax Cuts and Jobs Act, while introducing new tax policies and restructuring others. OBBBA does not currently have a material impact to the Company.

Other Comprehensive Income (Loss)

Other comprehensive income (loss) refers to revenues, expenses, gains, and losses that under U.S. GAAP are included in comprehensive income but excluded from net income. The components of the Company's other comprehensive income (loss) consist of foreign currency translation adjustments, the reclassification of other comprehensive income for the conversion of the C-1 and C-2 Notes, and the change in fair value of financial liabilities accounted for pursuant to the fair value option attributable to changes in instrument-specific credit risk.

The components of accumulated other comprehensive income for the years ended December 31, 2025 and 2024 are as follows (in thousands):

	Changes in fair value of liabilities under fair value option attributable to changes in instrument specific credit risk	Foreign currency translation adjustment	Total
Accumulated other comprehensive income (loss), balance at January 1, 2024	\$ 582	\$ 297	\$ 879
Other comprehensive income (loss)	(6,220)	474	(5,746)
Reclassification of OCI for conversion of C-1 and C-2 Notes	4,873	—	4,873
Accumulated other comprehensive income (loss), balance at December 31, 2024	\$ (765)	\$ 771	\$ 6
Other comprehensive income (loss)	765	(888)	(123)
Accumulated other comprehensive income (loss), balance at December 31, 2025	\$ —	\$ (117)	\$ (117)

Accounting Standards Not Yet Adopted

In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* (“ASU 2023-09”), to enhance the transparency and decision usefulness of income tax disclosures. ASU 2023-09 is effective for annual periods beginning after December 15, 2025 on a prospective basis and early adoption is permitted. The Company is currently evaluating the impact of the adoption of this standard on its disclosures.

In March 2024, the FASB issued ASU No. 2024-01, *Compensation — Stock Compensation: Scope Application of Profits Interest and Similar Awards* (“ASU 2024-01”), which clarifies the scope application for profits interest awards and similar awards and provides illustrative examples intended to reduce diversity in practice in determining whether such awards should be accounted for under Topic 718. For public business entities, ASU 2024-01 is effective for annual reporting periods, including interim periods within those annual periods, beginning after December 15, 2024; for all other entities, the ASU is effective for annual reporting periods, including interim periods within those annual periods, beginning after December 15, 2025; early adoption is permitted for all entities. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements and related disclosures.

In November 2024, the FASB issued ASU No. 2024-03, *Income Statement — Reporting Comprehensive Income — Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses* (“ASU 2024-03”), and in January 2025, the FASB issued ASU No. 2025-01, *Income Statement — Reporting Comprehensive Income — Expense Disaggregation Disclosures (Subtopic 220-40): Clarifying the Effective Date*, which clarified the effective date of ASU 2024-03. ASU 2024-03 requires public business entities to provide enhanced disclosures about certain categories of expenses in the notes to the financial statements. The guidance is intended to improve the transparency and decision usefulness of expense information provided to financial statement users. The ASU is effective for fiscal years beginning after December 15, 2026, and interim periods within fiscal years beginning after December 15, 2027. Early adoption is permitted. The Company is currently evaluating the impact of this standard on its disclosures.

In November 2024, the FASB issued ASU No. 2024-04, *Debt with Conversion and Other Options (Subtopic 470-20): Induced Conversions of Convertible Debt Instruments* (“ASU 2024-04”), which clarifies the assessment of whether certain settlements of convertible debt instruments should be accounted for as an inducement conversion or extinguishment of convertible debt. ASU 2024-04 is effective for annual periods beginning after December 15, 2025 on either a prospective or retrospective basis and early adoption is permitted. The Company’s outstanding convertible debt matured in September 2025, prior to the Company’s planned adoption date. Therefore, the Company does not expect the adoption of this standard to have an impact on its consolidated financial statements and related disclosures.

In May 2025, the FASB issued ASU No. 2025-04, *Compensation—Stock Compensation (Topic 718) and Revenue from Contracts with Customers (Topic 606): Clarifications to Share-Based Consideration Payable to a Customer* (“ASU 2025-04”). ASU 2025-04 refines key aspects of the guidance, including the definition of performance condition as well as the measurement requirements and the treatment of forfeitures. ASU 2025-04 is effective for annual periods beginning after December 15, 2026 on either a modified retrospective or a retrospective basis and early adoption is permitted. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements and related disclosures.

In July 2025, the FASB issued ASU No. 2025-05, *CECL Practical Expedient for Accounts Receivable and Contract Assets* (“ASU 2025-05”), which provides an optional practical expedient for estimating expected credit losses on certain current accounts receivable and contract assets arising from revenue transactions accounted for under Topic 606. ASU 2025-05 is effective for annual reporting periods beginning after December 15, 2025, and interim reporting periods within those annual periods. The Company is currently evaluating whether it will elect the practical expedient and the impact of adoption on its consolidated financial statements and related disclosures.

In December 2025, the FASB issued ASU No. 2025-10, *Government Grants (Topic 832): Accounting for Government Grants Received by Business Entities* (“ASU 2025-10”), which establishes comprehensive guidance for the recognition, measurement, and disclosure of government grants received by business entities. The ASU addresses both monetary and certain nonmonetary government grants and introduces new annual disclosure requirements regarding the nature, terms, and accounting policies related to such grants. ASU 2025-10 is effective for annual periods beginning after December 15, 2029 on either a modified prospective approach, modified retrospective approach, or retrospective approach and early adoption is permitted. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements and related disclosures.

NOTE 3—REVENUE AND GRANT INCOME RECOGNITION

The Company recognizes revenue under contracts with customers to provide nuclear reactor and fuel design engineering services in the areas of research and development, systems engineering, and technology development. The Company’s revenues are generally derived from contract services predominantly performed for the U.S. Government and commercial entities. All revenues for the years ended December 31, 2025 and 2024 were recognized over time.

There are two main types of contracts: cost-based contracts and cost-plus fixed fee contracts. The total consideration in the Company’s contracts is paid in the form of incremental incurred cost reimbursements over time upon the delivery of the Company’s invoices.

The allowability of certain costs under government contracts is subject to audit by the government. Certain indirect costs are charged to contracts using provisional or estimated indirect rates, which are subject to later revision based on actual costs incurred and subject to government audits of those costs. The government has performed audits of the Company’s costs. Refer to Note 15—Commitments and Contingencies, for further discussion of these cost audits.

Advanced Reactor Demonstrator Program

During the year ended December 31, 2021, the Company was named an awardee under the Department of Energy’s Advanced Reactor Demonstrator Program (“ARDP”). The objective of the ARDP is to accelerate the development and demonstration of advanced nuclear reactor technologies, focusing on designs that improve safety, efficiency, and economic viability for commercial deployment. Under the agreement, the Company will develop the Xe-100 demonstrator reactor and the TRISO-X commercial fuel fabrication facility through a public-private cost-share partnership. The DoE will obtain rights to the intellectual property (“IP”) developed under ARDP but will not obtain ownership of the demonstrator reactor or fuel facility. The DoE will fund a portion of the direct and indirect costs incurred for the research and development costs to develop the IP and the costs of developing and constructing both the TRISO-X fuel facility and Xe-100 demonstrator reactor. The program provides for an approximately 50% reimbursement of up to \$2.4 billion of eligible costs (\$1.2 billion reimbursement) through 2027. The funding is subject to future government appropriations which may not occur, and the government is able to cancel the contract at any time without incurring a substantive

penalty. Dow has been named a subawardee under the ARDP in connection with their involvement with the development and construction of the demonstrator reactor. The Company is constructing and will own the fuel facility.

The Company determined that the ARDP is partially in the scope of ASC 606 and partially in the scope of other guidance as the DoE only receives benefit from the development of the IP and does not receive benefit from construction of the demonstrator reactor or the fuel facility. The Company has allocated consideration between revenue and grant components of the ARDP on the basis of the stand-alone selling price of each of the components. The Company has analogized to IAS 20 to account for the component of the ARDP that is not within the scope of ASC 606 and deemed to be a government grant. The grant components consist of an asset grant and an income grant. The Company recognizes grants under ARDP as the Company incurs the eligible costs. Refer to Note 2 — Summary of Significant Accounting Policies and Recent Accounting Pronouncements and Note 5 — Government Grants for Property and Equipment.

Under the Company's separate agreement with Dow, certain costs incurred by Dow related to the demonstrator reactor are funded by the Company using funds obtained through the ARDP. The Company has recognized the funds received from the DoE and the costs incurred by Dow on a gross basis as grant income and direct costs, respectively. The Company has recognized \$6.2 million and \$5.6 million as grant income and \$5.3 million and \$4.6 million as direct costs during the years ended December 31, 2025 and 2024, respectively related to costs incurred by Dow for the demonstrator reactor. The Company also earns revenue from Dow as a customer for certain site specific engineering, permitting, and other services related to the demonstrator reactor. Refer to Note 14 — Related Party Transactions.

Disaggregated Revenues and Grant Income

A summary of revenues and grant income by customer type is as follows for the years ended December 31 (in thousands):

	Year Ended December 31,	
	2025	2024
Customer type:		
DoE ⁽¹⁾	\$ 89,396	\$ 78,029
DoD	5,444	10,705
Commercial	14,258	31,418
Total revenues and grant income	\$109,098	\$120,152

- (1) For the year ended December 31, 2025, \$74.6 million is classified as services revenue and \$14.8 million is classified as grant income. For the year ended December 31, 2024, \$41.8 million is classified as services revenue and \$36.2 million is classified as grant income.

A summary of revenues and grant income by contract type is as follows for the years ended December 31 (in thousands):

	Year Ended December 31,	
	2025	2024
Contract type:		
Cost-based ⁽¹⁾	\$ 96,340	\$104,876
Fixed fee	2,358	2,674
Cost plus fixed fee	5,308	11,954
Time & materials	5,092	648
Total revenues and grant income	\$109,098	\$120,152

- (1) For the year ended December 31, 2025, \$81.5 million is classified as services revenue and \$14.8 million is classified as grant income. For the year ended December 31, 2024, \$68.7 million is classified as services revenue and \$36.2 million is classified as grant income.

Revenues and Grant Income by Geographic Location

The Company has revenues and grant income in the following countries for the years ended December 31 (in thousands):

	Year Ended December 31,	
	2025	2024
Customer Location:		
United States	\$108,584	\$118,803
Canada	69	645
United Kingdom	445	704
Total Revenues and Grant Income	<u>\$109,098</u>	<u>\$120,152</u>

Contract Balances

The timing of revenue recognition, billings, and cash collections results in billed accounts receivable, unbilled receivables (amounts billable where the right to consideration is unconditional), contract assets (for which certain conditions must be satisfied before the right to bill is obtained), and contract liabilities (customer advances and deposits) on the consolidated balance sheets. Amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., biweekly or monthly) or upon achievement of contractual milestones. Generally, billing occurs subsequent to revenue recognition, resulting in unbilled receivables. However, the Company sometimes receives advances or deposits from its customers, or bills customers where it has an unconditional right to consideration before revenue is recognized, resulting in contract liabilities. These liabilities are reported on the consolidated balance sheets on a contract-by-contract basis at the end of each reporting period.

Contract liabilities as of December 31, 2025 and 2024 include deferred revenue. As of December 31, 2025, the Company has deferred revenue of \$15.3 million, of which \$15.2 million is recorded within long-term deferred revenue and \$0.1 million is recorded in accrued liabilities. Long-term deferred revenue attributable to related parties is \$2.4 million. During the year ended December 31, 2025, \$1.1 million of revenue was recognized that had previously been deferred. As of December 31, 2024, the Company has deferred revenue of \$1.1 million, of which \$0.3 million is recorded within accrued liabilities and \$0.8 million is recorded within due to related parties, and long-term deferred revenue of zero.

Contract assets represent revenue recognized that exceeds the amount billed to the customer and excludes amounts billable where the right to consideration is solely subject to the passage of time. As of December 31, 2025, the Company has contract assets of \$7.5 million, which is recorded within unbilled receivables and contract assets and is not associated with related parties. As of December 31, 2024, the Company has contract assets of \$9.5 million, of which \$7.6 million is recorded within unbilled receivables and contract assets and \$1.9 million is recorded within due from related parties.

Remaining Performance Obligation

Remaining performance obligations represent non-cancelable contracted revenue that has not yet been recognized and will be recognized as revenue in future periods. The Company has elected to apply the exemption for the disclosure of remaining performance obligations as the Company's contracts are one year or less in duration.

NOTE 4 — PROPERTY AND EQUIPMENT, NET

Property and equipment, net consists of the following (in thousands):

	December 31,	
	2025	2024
Equipment and materials	\$ 2,335	\$ 2,335
Computer equipment and software	3,760	1,131
Office furniture and fixtures	355	302
Leasehold improvements	2,708	2,480
Land	1,697	—
Construction-in-progress	42,839	1,778
Property and equipment at cost ⁽¹⁾	53,694	8,026
Accumulated depreciation	(3,589)	(2,198)
Property and equipment, net	\$50,105	\$ 5,828

(1) Net of reimbursement from the United States Government.

All of the Company's property and equipment is located within the United States.

NOTE 5 — GOVERNMENT GRANTS FOR PROPERTY AND EQUIPMENT

During the years ended December 31, 2025 and 2024, the Company received reimbursements from the DoE under the ARDP related to construction of its nuclear fuel fabrication facility. During the year ended December 31, 2025, the Company also received reimbursements from the DoE under the ARDP related to the purchase of a building for its reactor testing facility. The Company recognizes the grant from the DoE at the time in which the costs are incurred in compliance with the conditions of the grant, which were \$75.5 million and \$7.7 million for the years ended December 31, 2025 and 2024, respectively.

NOTE 6 — ACCRUED LIABILITIES

The following table sets forth the components of accrued liabilities (in thousands):

	December 31,	
	2025	2024
Operating lease liabilities	\$ 2,344	\$ 2,486
Accrued payroll and related expenses	21,735	13,336
Accrued subcontractor costs	18,160	17,331
Accrued financing costs	—	354
Accrued transaction costs	2,926	—
Incurred cost audits reserve (Note 15)	1,068	—
Accrued professional fees	3,423	954
Accrued liabilities – other	1,561	918
Total accrued liabilities	\$51,217	\$35,379

NOTE 7 — DEBT

The Company's outstanding debt as of December 31, 2024 was attributable to the Company's C-2 Notes (defined below) and was classified as short-term. The fair value of the C-2 Notes outstanding as of December 31, 2024 equates to the carrying value as the Company elected to apply the fair value option to the measurement of the C-2 Notes. No debt was outstanding at December 31, 2025.

Live Oak Credit Facility

On June 14, 2021, the Company and one of its subsidiaries entered into a revolving credit facility with Live Oak Bank (the “Live Oak Credit Facility”) with maximum borrowings of up to \$15.0 million, subject to an asset-based borrowing base based on eligible accounts receivable, net of lender reserves. The Company incurred lender and third-party fees and a 0.25% commitment fee on the unused portion of the revolving commitment; such fees were immaterial for the years ended December 31, 2025 and 2024.

The obligations under the Live Oak Credit Facility were guaranteed by the Company and its wholly owned domestic subsidiaries and were secured by a first priority security interest in substantially all of the Company’s and such subsidiaries’ equipment, accounts receivable, investment property and general intangibles (and related proceeds), as well as 100% of the common equity interests of the Company’s domestic subsidiaries. The facility could be prepaid without premium or penalty, and mandatory prepayments were required in certain customary circumstances.

Borrowings under the Live Oak Credit Facility bore interest at a floating rate indexed to the Prime rate plus 1.0%, subject to a 4% floor. Interest expense associated with the facility was \$0.4 million for the year ended December 31, 2024.

The facility was amended during 2024 to extend its maturity to October 31, 2024, at which time it matured with no outstanding borrowings following repayment of the outstanding principal in October 2024. The Company reestablished the facility on May 9, 2025 with an expiration date of December 1, 2025; there were no draws during the year ended December 31, 2025, and the facility matured on December 1, 2025 with no outstanding borrowings.

C-1 Convertible Notes

In 2022, the Company issued convertible promissory notes (“C-1 Notes”) with aggregate principal of \$57.4 million and a 7.00% annual interest rate. The C-1 Notes contained embedded derivatives which, absent the election of the fair value option, would have been bifurcated and accounted for at fair value. Accordingly, the Company elected the fair value option and classified the C-1 Notes as a liability at fair value, remeasuring them at each reporting period with changes in fair value recorded in other expense, net (except for the portion attributable to instrument-specific credit risk, which was recorded in other comprehensive income).

On December 5, 2023, \$37.4 million principal was automatically converted into 5,957,402 Series C Preferred Units at a discounted price per unit of \$7.94 in connection with a qualified equity financing.

On March 29, 2024, the remaining \$20.0 million principal was converted into 3,210,405 Series C Preferred Units. In connection with this conversion, the Company issued 757,135 Class B Common Units and entered into a Letter Agreement with a related party investor creating a contingent reimbursement obligation (the “2024 Financial Instrument”) whereby the Company would reimburse the investor for payments made to former C-1 note holders if certain conditions related to a future financing were not met. The 2024 Financial Instrument was accounted for as a liability remeasured at each reporting date with changes in fair value recorded in other income (expense), net. The March 2024 conversion was accounted for as an induced conversion, resulting in recognition of an inducement expense of \$14.8 million in other expense, net which included the value of the Class B Common units and 2024 Financial Instrument. Additionally, warrants previously issued in connection with the C-1 Notes were exercised for 582,094 Series C Preferred Units.

C-2 Convertible Notes

In 2022 and 2023, the Company issued convertible notes payable in an aggregate principal amount of \$28.0 million and \$85.0 million (“C-2 Notes”), respectively, of which \$70.0 million of the C-2 Notes were issued to related parties. The C-2 Notes were due on September 30, 2025 and accrued 10.0% of payable-in-kind interest annually. The C-2 Notes provided holders with conversion rights into equity securities under certain conditions, including upon an IPO or at the holder’s election after August 4, 2023.

The Series C-2 Convertible Notes contained embedded derivatives which, absent the election of the fair value option, would have been bifurcated and accounted for at fair value. Accordingly, the fair value option was elected. The Company classified the C-2 Notes as a liability at fair value and remeasured the C-2 Notes to

their fair value at each reporting period, with the portion of the change in fair value attributable to instrument-specific credit risk recorded within other comprehensive income (loss), and the remaining change in fair value recorded within other income (expense), net. As the fair value option was elected, issuance costs associated with the C-2 Notes were expensed in the period incurred. Refer to Note 13 — Fair Value Measurements for further information on the remeasurement of the C-2 Notes.

On October 11, 2024, certain of the C-2 Notes with an aggregate principal balance of \$98.0 million converted into 16,960,021 Series C Preferred Units, which was accounted for as a debt extinguishment. Such extinguishment resulted in a gain on debt extinguishment of \$17.6 million for the year ended December 31, 2024, which was recorded in other income (expense), net in the consolidated statements of operations. Further, since the C-2 Notes were historically accounted for by applying the fair value option, in accordance with ASC 825-10, the Company included in net loss the \$6.1 million cumulative loss previously recorded in other comprehensive income (loss) for the extinguished C-2 Notes that resulted from changes in instrument-specific credit risk.

As of December 31, 2024, the outstanding principal, inclusive of payable-in-kind interest, on the C-2 Notes was \$18.4 million and the fair value was \$18.5 million, resulting in a cumulative loss of \$0.1 million.

On September 30, 2025, the outstanding principal and unpaid accrued interest on the C-2 Note were converted into 2,870,172 Series C Preferred Units, resulting in the extinguishment of the C-2 Note. Therefore, as of December 31, 2025, there was no outstanding principal on the C-2 Notes, and the cumulative loss recognized on the C-2 Notes was \$4.0 million for the year ended December 31, 2025, which was recorded in other income (expense), net in the consolidated statements of operations.

2023 Bridge Loan

On October 4, 2023, the Company entered into a credit agreement (the “2023 Bridge Loan”) with a related party, Ares Acquisition Holdings, LP for a \$10.0 million term loan. In addition, subject to the mutual agreement of Ares Acquisition Holdings, LP, additional draws of up to \$10.0 million per calendar month were available to the Company and the Company made additional draws of \$14.2 million in 2023.

The annual interest rate on the 2023 Bridge Loan was 12.0%. For the year ended December 31, 2024, interest expense of \$3.0 million with the 2023 Bridge Loan was recorded within interest expense on the consolidated statements of operations. The interest was payable in-kind and increased the outstanding principal amount of the 2023 Bridge Loan.

During 2024, the Company entered into a series of amendments to the 2023 Bridge Loan, which, among other things, extended the maturity date to March 26, 2025. The Company concluded that each of the amendments to the 2023 Bridge Loan constituted, for accounting purposes, debt extinguishments and recognized debt extinguishment losses of \$6.8 million. The Company drew a total of \$25.8 million on the 2023 Bridge Loan during 2024, including draws made in conjunction with amendments. In conjunction with the draws, the Company issued 1.7 million Class B Common Units to Ares Acquisition Holdings, LP. The Class B Common Units have the same rights as the Class B Profits Interests discussed in Note 12 — Unit-Based Compensation Expense. The Class B Common Units were recorded in the mezzanine equity section of the consolidated balance sheets either at fair value, for Class B Common Units issued in conjunction with the debt extinguishments, or at relative fair value, for Class B Common Units issued in conjunction with a draw.

On October 11, 2024, in accordance with the 2023 Bridge Loan’s stated terms, the Company paid the outstanding principal and interest on the 2023 Bridge Loan of \$53.5 million, and the 2023 Bridge Loan was settled. The settlement was accounted for as an extinguishment of the 2023 Bridge Loan. As a result, the Company recorded a loss on debt extinguishment of \$0.1 million for the year ended December 31, 2024 in other income (expense), net in the consolidated statements of operations and no balance was outstanding at December 31, 2024.

The Company assessed the terms of the 2023 Bridge Loan in order to identify embedded features and determine if any such features should be bifurcated and accounted for separately as derivative. The Company determined that the event of default interest rate adjustment feature, event of default redemption feature, and contingent additional interest feature required bifurcation and separate accounting as derivative liabilities. Accordingly, the bifurcated embedded derivatives were recorded at fair value upon issuance of each relevant

draw and were subsequently remeasured at the end of each reporting period. The bifurcated embedded derivatives that were created upon new draws resulted in a discount on the 2023 Bridge Loan which was subsequently amortized over the life of the 2023 Bridge Loan through periodic charges to interest expense.

During the year ended December 31, 2024, the Company recorded \$4.2 million in interest expense related to the amortization of the discount created by embedded derivatives. Additionally, the new embedded derivatives, with a total fair value of \$2.7 million, were recorded as a part of the amendments and included in the loss on extinguishment. The Company determined the fair value of the embedded derivatives by considering the probability of the settlement of the feature, its settlement value, and other assumptions. Refer to Note 13 — Fair Value Measurements for further information.

2024 Convertible Note

On September 26, 2024, the Company entered into a convertible note with Amazon.com NV Investment Holdings LLC in the principal amount of \$20.0 million (the “2024 Convertible Note”). While outstanding, the debt accrued paid-in-kind interest of 12% per annum, compounded quarterly. Interest expense recognized related to the 2024 Convertible Note was immaterial during the year ended December 31, 2024. The 2024 Convertible Note was convertible at the option of the creditor into Series C-1 Preferred Units from the issuance date until the occurrence of a Qualified Financing, which is defined under the 2024 Convertible Note’s terms as the Company’s completion of a financing round of Series C-1 Preferred Units with total proceeds of at least \$100.0 million on or before the maturity date. The maturity date of the 2024 Convertible Note was March 26, 2025, or upon the receipt of a third-party investment with aggregate net cash proceeds of at least \$100.0 million, if such an investment occurs prior to the maturity date.

On October 11, 2024, in conjunction with the Series C-1 Preferred Units financing discussed below and in accordance with the 2024 Convertible Note’s stated terms, the outstanding principal and interest of the 2024 Convertible Note of \$20.1 million was converted into 3,097,477 Series C-1 Preferred Units (“2024 Convertible Note Conversion”). Since the 2024 Convertible Note was converted via the creditor’s exercise of its unit-settled redemption right, the conversion was accounted for as a debt extinguishment and no balance remained outstanding at December 31, 2024. The fair value of the Series C-1 Preferred Units approximated the value of the extinguished debt plus interest, and therefore, no gain or loss was recorded during the year ended December 31, 2024.

2024 Bridge Loan

On September 26, 2024, the Company entered into a bridge loan with Escape2, LLC, an entity affiliated with an investor (the “2024 Bridge Loan”), in the amount of \$3.8 million. While outstanding, the 2024 Bridge Loan accrued paid-in-kind interest of 12% per annum, compounded quarterly, and had a maturity date of March 26, 2025, or upon the receipt of a third-party investment with aggregate net cash proceeds of at least \$100.0 million, if such an investment occurred prior to the maturity date. Concurrently with the issuance of this debt, the Company issued 124,430 Class B Common Units to Ghaffarian Enterprises, LLC, which is controlled by the same related party investor as Escape 2, LLC. The Class B Common Units have the same rights as the Class B Profits Interests discussed in Note 12 — Unit- Based Compensation Expense. The Class B Common Units were recorded in the mezzanine equity section of the consolidated balance sheets and included in the discount of the 2024 Bridge Loan.

On October 11, 2024, in accordance with its stated terms, the 2024 Bridge Loan was automatically redeemed, and the Company paid the outstanding principal and interest associated with the 2024 Bridge Loan of \$3.8 million. Since the 2024 Bridge Loan was initially recognized at its relative fair value (as a result of the concurrent issuance of the Class B Common Units to Ghaffarian Enterprises, LLC), its carrying amount at settlement was not equal to the cash paid by the Company. As a result, the debt was removed at its carrying value, the cash payment was credited, and a loss on extinguishment was recorded for the difference. The Company recorded an immaterial loss on debt extinguishment during the year ended December 31, 2024 in other income (expense), net in the consolidated statements of operations and no balance remained outstanding at December 31, 2024.

Bank of New York Credit Facility

On July 28, 2020, the Company executed a credit agreement with Pershing LLC, an affiliate of Bank of New York Mellon, in the form of a revolving credit facility (the “Bank of New York Credit Facility”), which was subject to the guarantee by Ghaffarian Enterprises, LLC and Ghaffarian Enterprises, who represented related party investors.

During the year ended December 31, 2024, the Company entered into Credit Support Fee and Subrogation Agreements (the “2024 Credit Support Fee Agreements”) with GM Enterprises LLC and Ghaffarian Enterprises, LLC, entities affiliated with an investor, which increased the availability under the Bank of New York Credit Facility to \$20.0 million and extended the maturity of the credit support to March 26, 2025. In conjunction with the 2024 Credit Support Fee Agreements, the Company agreed to pay GM Enterprises, LLC and Ghaffarian Enterprises, LLC a monthly 12% credit support fee to be paid in-kind. Pursuant to the terms of the 2024 Credit Support Fee Agreements, the Company paid credit support fees and issued 562,483 Class B Common Units to GM Enterprises LLC and Ghaffarian Enterprises, LLC. Refer to Note 14—Related Party Transactions for further information on the credit support fee. The Class B Common Units have the same rights as the Class B Profits Interests discussed in Note 12—Unit-Based Compensation Expense. The Class B Common Units were recorded in the mezzanine equity section of the consolidated balance sheets and included in the discount of the Bank of New York Credit Facility.

On October 11, 2024, in accordance with the facility’s stated terms, the Company settled the outstanding principal and interest associated with the Bank of New York Credit Facility with a payment of \$20.2 million, and the 2024 Credit Support Fee Agreements were terminated. The Bank of New York Credit Facility did not have an outstanding balance as of December 31, 2024, and the facility matured with no balance on March 26, 2025.

NOTE 8—LEASES

The Company leases office spaces, which have initial operating lease terms of three to twelve years. Some leases have options to extend the lease term, ranging from six months to six years. Certain leases have early termination options, which the Company is not reasonably certain to exercise.

During 2024, the Company modified certain existing leases to extend lease terms, with increases ranging from approximately six months to two years.

During the year ended December 31, 2025, the Company entered into a lease agreement for corporate office space, with a lease term of twelve years commencing in August 2025. The lease agreement includes a \$3.9 million refundable security deposit, of which \$3.5 million is classified as restricted cash on the consolidated balance sheets, which is not considered a lease payment and is excluded from the measurement of the right-of-use (“ROU”) asset and lease liability. The lease agreement also includes \$17.1 million in lease incentives, of which the lessor has provided a \$14.7 million tenant improvement allowance, which is treated as a lease incentive for lessee-owned improvements. The lease incentives reduce the right-of-use asset and lease liability recognized at lease commencement as the Company is reasonably certain to receive the lease incentives.

Additionally, during the year ended December 31, 2025, the Company amended existing operating leases to extend lease terms, increase the leased premises, and to exercise early termination options. During the year ended December 31, 2025, the Company paid early termination fees totaling \$2.8 million.

Lease balances as of December 31, 2025 and 2024 are as follows (in thousands):

	December 31,	
	2025	2024
Operating lease ROU assets	\$22,696	\$11,003
Current portion of operating lease liabilities	2,344	2,486
Long-term portion of operating lease liabilities	20,887	10,338
Total operating lease liabilities	\$23,231	\$12,824

The current portion of operating lease liabilities is reflected within accrued liabilities on the consolidated balance sheets.

Operating lease cost totaled \$6.5 million and \$4.4 million for the years ended December 31, 2025 and 2024, respectively, and was recognized on a straight-line basis over the lease term. Variable lease expenses and short-term lease expenses were immaterial for the years ended December 31, 2025 and 2024.

Future minimum lease payments under operating leases as of December 31, 2025 are as follows (in thousands):

	Operating Leases
2026	\$ 5,013
2027	4,479
2028	5,029
2029	6,378
2030	6,480
Thereafter	39,281
Total minimum lease payments	66,660
Less: lease incentives	(17,092)
Less: amounts representing interest or imputed interest	(26,337)
Present value of lease obligations	\$ 23,231

Supplemental cash flow information relating to the Company's leases is as follows (in thousands):

	December 31,	
	2025	2024
Operating cash flows used in operating leases	\$ 8,461	\$2,756
Non-cash items:		
Change to ROU asset and lease liability due to lease modifications and reassessments	(1,616)	1,450
ROU assets recorded under new operating leases	15,748	—

The weighted average remaining lease term and discount rates for operating leases are as follows:

	Year Ended December 31,	
	2025	2024
Weighted average remaining lease term	9.3 years	5.0 years
Weighted average discount rate	10.0%	10.0%

NOTE 9 — PROFIT SHARING PLAN

The Company maintains a defined contribution profit sharing plan (the "Plan"), which includes a salary deferral arrangement, under the provisions of Section 401(k) of the Internal Revenue Code. Employees are eligible to participate in the Plan on the date of employment. Company matches 100% of employees' contributions up to 5% of annual compensation. The Company contributed \$4.4 million and \$3.0 million to the Plan during the years ended December 31, 2025 and 2024, respectively.

NOTE 10 — INCOME TAX

X-energy is a limited liability company which is classified as a partnership for U.S. federal and state income tax purposes. Accordingly, the Company's U.S. operations are not subject to income taxes in the U.S. The Company's owners separately account for their pro rata share of the Company's income, deductions,

losses and credits annually. The Company's foreign operations are subject to income taxes in the foreign jurisdictions in which they operate.

The following table sets forth the components of income (loss) before income taxes recognized on the consolidated statements of operations and comprehensive loss (in thousands):

	Year Ended December 31,	
	2025	2024
U.S.	<u>\$ (389,611)</u>	<u>\$ (109,042)</u>
Foreign	<u>(167)</u>	<u>(16,918)</u>
Total	<u>\$ (389,778)</u>	<u>\$ (125,960)</u>

No income tax (expense) benefit was recorded for the years ended December 31, 2025 and 2024.

A reconciliation of income taxes computed at the U.S. federal statutory income tax rate of 21% to the Company's income tax (expense) benefit was as follows:

	December 31,	
	2025	2024
U.S. federal statutory tax rate	21.0%	21.0%
Domestic income not subject to income tax	(21.0)%	(18.2)%
Foreign rate differential	0.0%	0.0%
Prior year adjustments	0.0%	(1.4)%
Other	0.0%	0.3%
Valuation allowance	(0.0)%	(1.7)%
	<u>0.0%</u>	<u>0.0%</u>

The Company's effective tax rate for the years ended December 31, 2025 and 2024 was 0.0%.

The components of deferred tax assets and liabilities are as follows (in thousands):

	December 31,	
	2025	2024
Deferred tax assets:		
Property and equipment	\$ 0	\$ 2
Net operating losses	<u>4,053</u>	<u>3,866</u>
Total deferred tax assets	<u>4,053</u>	<u>3,868</u>
Valuation allowance	<u>(4,053)</u>	<u>(3,853)</u>
Total deferred tax assets net of valuation allowance	<u>0</u>	<u>15</u>
Deferred tax liabilities:		
Foreign exchange	0	(15)
Total deferred tax liabilities	<u>0</u>	<u>(15)</u>
Net deferred tax assets/(liabilities)	<u>\$ —</u>	<u>\$ —</u>

The Company's net deferred tax assets are comprised primarily of net operating loss carryforwards. The ultimate realization of the net deferred tax assets is dependent upon the generation of future taxable income sufficient to utilize the deferred tax assets on the Company's income tax returns. The Company determined that its net deferred tax assets are not more likely than not going to be realized due to the Company's three- year cumulative loss position and the generation of future taxable income is uncertain. The Company is subject to taxation in the United States and various foreign jurisdictions. Tax years 2022 and forward are open for examination in the United States, tax years 2023 and forward are open for examination in the United Kingdom, and all years are open in Canada. Considering this and other factors, the Company recognized a

full valuation allowance of \$4.1 million and \$3.9 million as of December 31, 2025 and 2024, respectively. The valuation allowance increased by \$0.2 million during the year ended December 31, 2025 and increased by \$2.1 million during the year ended December 31, 2024.

As of December 31, 2025 and 2024, the Company had unused Canadian net operating losses of \$7.5 million and \$7.3 million, respectively, which begin to expire in 2041. As of December 31, 2025 and 2024, the Company had unused United Kingdom net operating losses of \$8.2 million and \$7.7 million, respectively, which can be carried forward indefinitely.

The Company had no liability for uncertain tax positions and had no interest or penalties with respect to unrecognized tax benefits as of December 31, 2025 and 2024.

NOTE 11 — MEMBER UNITS AND PREFERRED UNITS

Common Units

The holders of Class A Common Units are entitled to one vote for each unit of Class A Common Units held at all meetings of stockholders. The voting, dividend, and liquidation rights of the holders of Class A Common Units are subject to and qualified by the rights, powers, and privileges of the holders of Preferred Units set forth in the original or amended Certificate of Incorporation. The Class A Common Units have been classified as mezzanine equity as they are redeemable for cash upon the occurrence of certain events that are considered outside of the Company's control.

The Class B Common Units have the same rights and preferences as the Class A Common Units; provided however, the Class B Common Units shall not have voting rights and are subject to a profits interest threshold as may be set forth in grant agreements under the Company's unit-based compensation plan discussed in Note 12 — Unit-Based Compensation Expense or certain credit agreements discussed in Note 7 — Debt.

During the year ended December 31, 2024, the Company issued 3,126,887 Class B-2 Common Units in conjunction with the issuance and modification of debt and in conjunction with the conversion of the C-1 Notes as discussed in Note 7 — Debt. The Class B-2 Common Units are classified as mezzanine equity as they are redeemable for cash upon the occurrence of certain events that are considered outside of the Company's control.

Series A Preferred Units

The Series A Preferred Units were issued to a related party in 2023 in conjunction with the Series A Preferred financing. The units were recognized at fair market value on the issuance date.

Series A-1 Preferred Units

The Series A-1 Preferred Units were issued in 2023 together with the Series C Preferred Units and Series B-2 Common Units in exchange for a cash investment of \$50.0 million. The Series A-1 Preferred Units have been initially recognized at their relative fair market value.

Series B Preferred Units

The Series B Preferred Units were issued prior to 2023. The Series B Preferred Units have been initially recognized at fair market value.

Series C Preferred Units

During 2023, the Company issued 16,340,900 Series C Preferred Units through a financing, a related-party investment (resulting in a loss on issuance), and the conversion of C-1 outstanding notes.

During the year ended December 31, 2024, 20,752,520 Series C Preferred Units were issued in connection with the C-1 Conversion, the C-2 Note Conversion, and the exercise of the October 2022 Warrants. The Series C Preferred Units issued as a result of these transactions were recognized at fair market value.

On September 30, 2025, the Company's C-2 Note was converted into 2,870,172 Series C Preferred Units. The Series C Preferred Units issued as a result of this transaction were recognized at fair market value.

Refer to Note 7 — Debt for further discussion on these convertible note conversions and the warrant exercise.

Series C-1 Preferred Units

During 2024, the Company completed a financing round of Series C-1 Preferred Units which resulted in the receipt of gross cash proceeds of approximately \$626.5 million from various investors. As a result of this financing round, the Company issued 99,672,593 Series C-1 Preferred Units. The Series C-1 Preferred Units issued through these transactions were recorded at fair value.

In connection with the issuance of the Series C-1 Preferred Units, one investor and potential future customer was issued a warrant on Series C-1 Preferred Units (the "2024 Warrant") for no additional consideration. The 2024 Warrant is required to be classified as a liability and measured at fair value on an ongoing basis pursuant to ASC 480 since the underlying Series C-1 Preferred Units are redeemable for cash upon the occurrence of certain events that are considered outside of the Company's control. The 2024 Warrant may be exercised by the holder at any time from the issuance date until the 18-month anniversary of the issuance date and entitles the holder to purchase up to 40,214,207 Series C-1 Preferred Units at an exercise price of approximately \$7.46 per unit. As the 2024 Warrant was issued for no additional consideration and did not meet the criteria for capitalization of a contract asset, the issuance date fair value of the 2024 Warrant of \$55.3 million was expensed upon its issuance. The expense is reflected within selling, general, and administrative expenses within the consolidated statement of operations for the year ended December 31, 2024.

On January 24, 2025, the Company completed additional financing rounds of Series C-1 Preferred Units, issuing 8,235,521 Series C-1 Preferred Units and receiving gross cash proceeds of approximately \$53.4 million from various investors. On October 3, 2025, the Company issued a warrant to a related party customer to purchase up to 14,123,859 Series C-1 Preferred Units at an exercise price of \$6.4870 per unit (the "2025 Warrant"). See Note 14 -Related Party Transactions for the details of the 2025 Warrant. The Series C-1 Preferred Units issued through these transactions were recorded at fair value.

Series D Preferred Units

On November 21, 2025, the Company completed a financing round of Series D Preferred Units, issuing 48,154,955 Series D Preferred Units and receiving gross cash proceeds of approximately \$700.0 million. The Series D Preferred Units issued through these transactions were recorded at fair market value.

Preferred Units

Together, the Series A Preferred Units, the Series A-1 Preferred Units, the Series B Preferred Units, the Series C Preferred Units, the Series C-1 Preferred Units, and the Series D Preferred Units shall be referred to as the "Preferred Units" for the purpose of this Note. Preferred Units have been issued in one or more series, each of such series consisting of such number of units and to have such terms, rights, powers and preferences, and the qualifications and limitation with respect thereto, as stated or expressed in the original or amended Certificate of Incorporation. Specifics regarding the conversion features and voting rights associated with, and the balance sheet classification of, the Preferred Units outstanding are as follows:

Optional Conversion Feature

Each Preferred Unit is convertible, at the option of the holder thereof, at any time, and without the payment of additional consideration by the holder thereof, into an equal number of Class A Common Units as is determined by dividing the Original Issue Price, initially (i) \$0.5754 per Unit for each Series A Preferred Unit, (ii) \$7.6348 for each Series A-1 Preferred Unit, (iii) \$9.1162 per Unit for each Series B Preferred Unit, (iv) \$7.6348 per Unit for each Series C Preferred Unit, (v) \$6.487 per Unit for each Series C-1 Preferred Unit, and (vi) \$14.53 per Unit for each Series D Preferred Unit, for the series of preferred units by the conversion price, initially equal to the applicable original issue price per unit, of such series of Preferred Units in effect at

the time of conversion. Outstanding Preferred Units are therefore convertible into the following quantities of Class A Common Units as of December 31, 2025: 90,625,588 relating to Series A Preferred Units, 8,808,351 relating to Series A-1 Preferred Units, 11,643,171 relating to Series B Preferred Units, 39,963,592 relating to Series C Preferred Units, 107,908,114 relating to Series C-1 Preferred Units, and 48,154,955 related to Series D Preferred Units. Conversion may be effected at any time at the sole discretion of the holder.

Automatic Conversion Feature

In the event of (i) a Qualified IPO, with the exception of the Series D Preferred Units as discussed below, or (ii) the approval of the requisite holders, the Preferred Units will automatically be converted into an equal number of Class A Common Units at the applicable conversion ratio.

For Series D Preferred Units specifically, if the Company undertakes a Qualified IPO, the conversion price of the Series D Preferred Units will be adjusted, if necessary, to be equal to the lesser of: (a) seventy-five percent (75%) of the price per Class A Common Unit, or the price per the equivalent common share of (i) the Company's corporate successor following a conversion of the Company to a C corporation or (ii) the Company's newly formed corporation member, in either scenario offered to the public in such Qualified IPO; or (b) the then-current conversion price of the Series D Preferred Units prior to such adjustment.

Voting Rights

Each of the holders of Class A Common Units, Series A Preferred Units, Series B Preferred Units, Series C Preferred Units, Series C-1 Preferred Units, and Series D Preferred Units are entitled to vote for members of the Board of Directors in whatever manner necessary to ensure that the size of the Board of Directors of the Company is set and remains at nine directors who serve as the managers of the Company. The Series A-1 Preferred Units and Class B Common units do not vote on the Board of Directors.

Cumulative Preferred Return

The Preferred Units have an annual 3% cumulative preferred return on the original issuance price, beginning on the date such Preferred Units were issued. As of December 31, 2025, the accumulated preferred return not reflected in the consolidated balance sheet for Series A, A-1, B, C, C-1, and D Preferred Units was \$7.0 million, \$4.2 million, \$14.1 million, \$14.2 million, \$24.4 million, and \$2.3 million, respectively. As of December 31, 2024, the accumulated preferred return not reflected in the consolidated balance sheet for Series A, A-1, B, C, and C-1 Preferred Units was \$5.4 million, \$2.2 million, \$10.9 million, \$5.5 million, and \$3.5 million, respectively. In the event of a deemed liquidation, the cumulative preferred return is payable solely for the Series B Preferred Units and therefore has been incorporated into the Series B Preferred Units liquidation preference amount presented on the balance sheet. The cumulative preferred return on the remaining units is subject to discretion of the Board of Directors.

Liquidation Preference

In the event of any liquidation, dissolution, or winding up of the Company, or a deemed liquidation event, including a merger or consolidation, or a sale or other disposition of all or substantially all of the Company's assets, the holders shall receive distributions in an amount up to their liquidation preference. See the consolidated balance sheet for the liquidation preference amounts. The preference of distributions is first to both Series D Preferred Unit and Series C-1 Preferred Unit holders *pari passu*, second to Series C Preferred Unit holders, third to Series B Preferred Units holders, fourth to Series A and Series A-1 Preferred Units holders, and fifth to Class B-1 Profits Interest Units, until members have received cumulative distributions equal to approximately \$9.5 million. After the payment of the full liquidation preference of the redeemable convertible preferred stock and profits interests, the Company's remaining assets legally available for distribution, if any, would be distributed ratably to the holders of Class A and Class B Common Units.

Classification

A redeemable equity security is to be classified as temporary or mezzanine equity if it is conditionally redeemable upon the occurrence of an event that is not solely within the control of the issuer.

The Preferred Units and Common Units are redeemable for cash upon the occurrence of a deemed liquidation event. As of December 31, 2025 and 2024, a deemed liquidation event is not considered probable, and the occurrence of such an event is considered to be outside of the Company's control. Accordingly, the Preferred Units and Common Units are considered conditionally redeemable upon the occurrence of an event that is not solely within the control of the issuer and, therefore, the Company has classified the Preferred Units and Common Units as mezzanine equity in the consolidated balance sheets as of December 31, 2025 and 2024. The mezzanine equity amount related to Common Units issued as unit-based compensation is the grant date redemption value, or the modification date redemption value, as applicable. The difference between the grant date fair value and the redemption value for vested awards is presented in permanent equity. As of December 31, 2025 and December 31, 2024, \$74.9 million and \$72.4 million, respectively, has been presented within mezzanine equity, and the excess of redemption value over grant date fair value for vested awards has been recorded within additional paid in capital and accumulated deficit for those years, respectively. Additionally, the Company does not believe that related contingent events and the redemption of the Class B Common Units is probable to occur.

NOTE 12 — UNIT-BASED COMPENSATION EXPENSE

Class B-1 Profits Interest Units

On September 12, 2022, the Company issued service-vesting Class B-1 PIUs in exchange for options previously granted as unit-based compensation. The Class B-1 PIUs contain a catch-up distribution provision payable upon a deemed liquidation event to compensate holders for the loss in appreciated value from the strike price of the options to the profits interest participation threshold. Generally, Class B-1 PIUs vest 25% on the first vesting date, and an additional 25% on each anniversary of the vesting date until the units are fully vested. The Company has the right to repurchase vested units at fair value upon termination, however the Company does not have plans to exercise this right.

The following table summarizes the activity related to the Company's Class B-1 Profits Interest awards for the years ended December 31, 2025 and 2024:

	Number of Units	Weighted Average Grant Date Fair Value
Unvested Class B-1 Units at January 1, 2024	231,250	\$3.19
Vested	(231,250)	3.19
Forfeited	—	—
Unvested Class B-1 Units at December 31, 2024	—	\$ —
Vested	—	—
Forfeited	—	—
Unvested Class B-1 Units at December 31, 2025	—	—

Issuance of Class B-2 Profits Interest Units

Also on September 12, 2022, the Company issued service-vesting Class B-2 PIUs to certain employees. The Class B-2 PIUs have identical rights and participations as the Class B-1 PIUs with the exception of the catch-up distribution. Class B-2 PIUs vest 25% on the first vesting date, and an additional 25% on each anniversary of the vesting date until the units are fully vested. The Company has the right to repurchase vested units at fair value upon termination, however the Company does not have plans to exercise this right.

In May and June of 2025, under the Company's 2022 long-term incentive plan, the Company granted 9,794,000 additional Class B-2 PIUs, with an aggregate fair value of \$21.4 million, with some of the awards vesting upon the grant, and the remaining vesting 25% on the first vesting date, and an additional 25% on each anniversary of the vesting date until the units are fully vested, and a two year sale restriction in addition to existing equity transfer restrictions in the Limited Liability Agreement. The fair value of the awards is based on a Black-Scholes model and requires significant judgements and use of estimates, particularly with regard to time to exit and volatility. Volatility is determined by reference to the actual volatility of several publicly

traded companies that are similar to the Company in its industry sector. The expected time to exit, as of the grant date, is 2.9 years. This period reflects the anticipated duration before the units can be freely traded or sold. The significant inputs into the valuation of these PIUs are:

Significant Inputs

Risk-free rate	3.8%
Equity volatility	91.4%

The risk-free rate utilized was based on term-matched U.S. Treasury Constant Maturity yields. The selected volatility rate reflected the expected variability in the value of the new Class B Common PIUs. This volatility estimate is derived from equity class volatilities derived from the option pricing model. No dividends are expected to be paid on the new Class B Common PIUs during the restriction period.

In July and August 2025, under the Company's 2022 long-term incentive plan, the Company granted an additional 471,000 Class B-2 PIUs, with an aggregate fair value of \$1.6 million, with some of the awards vesting upon the grant. Additionally, in December 2025, the Company granted 8,230,995 Class B-2 PIUs, with an aggregate fair value of \$25.2 million. These PIUs have a two year sale restriction in addition to existing equity transfer restrictions in the Limited Liability Agreement. The fair value of the awards is based on a Black-Scholes model and requires significant judgements and use of estimates, particularly with regard to time to exit and volatility. Volatility is determined by reference to the actual volatility of several publicly traded companies that are similar to the Company in its industry sector. The expected time to exit, as of the grant date, is 2.2 years. This period reflects the anticipated duration before the units can be freely traded or sold. The significant inputs into the valuation of these PIUs are:

Significant Inputs

Risk-free rate	3.5%
Equity volatility	142.7%

The risk-free rate utilized was based on term-matched U.S. Treasury Constant Maturity yields. The selected volatility rate reflected the expected variability in the value of the new Class B Common PIUs. This volatility estimate is derived from equity class volatilities derived from the option pricing model. No dividends are expected to be paid on the new Class B Common PIUs during the restriction period.

The following table summarizes the activity related to the Company's Class B-2 Profits Interest awards for the years ended December 31, 2025 and 2024:

	Number of Units	Weighted Average Grant Date Fair Value
Unvested Class B-2 Units at January 1, 2024	1,181,500	\$2.34
Vested	(464,000)	2.34
Forfeited	(34,500)	2.34
Unvested Class B-2 Units at December 31, 2024	683,000	\$2.34
Granted	18,495,995	2.62
Vested	(2,877,500)	2.34
Forfeited	(685,500)	2.31
Unvested Class B-2 Units at December 31, 2025	15,615,995	\$2.68

Unit-Based Compensation

For the year ended December 31, 2025, unit-based compensation expense of \$11.5 million was classified as selling, general, and administrative expense, \$2.6 million was classified as direct costs, and \$0.5 million was capitalized into property and equipment as a part of the Company's fuel facility construction project. For the year ended December 31, 2024, unit-based compensation expense of \$1.0 million was classified as selling, general, and administrative expense and \$0.1 million was classified as direct costs. The total fair value of units

that vested during the years ended December 31, 2025, and 2024 was \$6.7 million and \$1.8 million, respectively. As of December 31, 2025, the Company had \$32.7 million of unrecognized unit-based compensation that is expected to be recognized over a weighted average period of 2.3 years.

NOTE 13—FAIR VALUE MEASUREMENTS

The liabilities recorded at fair value and measured on a recurring basis are all Level 3 measurements as of December 31, 2025 and 2024.

Rollforward of Level 3 Measurements

A roll forward of the Level 3 measurements as of December 31, 2025 and 2024 is as follows:

	June 2022	October	December				2024	2024	
	Warrants	2022	2022	C-1 Notes	C-2 Notes	Warrants	Financial	Instrument	Embedded
		Warrants	Warrants						Derivatives
Beginning balance as of January 1, 2024	\$ 3,082	\$ 4,450	\$ 912	\$ 25,901	\$ 121,240	\$ —	\$ —	\$ —	\$ 6,153
Exercises/Settlements	—	(5,175)	—	—	—	—	—	—	—
Conversions	—	—	—	(27,138)	(116,800)	—	—	—	—
Issuances	—	—	—	—	—	55,252	12,266	3,912	—
Change in fair value recognized in other income (expense), net	554	725	482	1,237	7,877	(9,648)	(12,266)	(10,065)	—
Change in fair value attributable to instrument-specific credit risk recognized in other comprehensive income ⁽¹⁾	—	—	—	—	6,220	—	—	—	—
Ending balance as of December 31, 2024	\$ 3,636	\$ —	\$ 1,394	\$ —	\$ 18,537	\$ 45,604	\$ —	\$ —	\$ —
Beginning Balance as of January 1, 2025	3,636	—	1,394	—	18,537	45,604	—	—	—
Conversions	—	—	—	—	(30,787)	—	—	—	—
Change in fair value recognized in other income (expense), net	7,140	—	(1,394)	—	13,015	217,786	—	—	—
Change in fair value attributable to instrument-specific credit risk recognized in other comprehensive income ⁽¹⁾	—	—	—	—	(765)	—	—	—	—
Ending Balance as of December 31, 2025	\$10,776	\$ —	\$ —	\$ —	\$ —	\$263,390	\$ —	\$ —	\$ —

(1) As the fair value option was elected for the C-1 Notes and C-2 Notes, the change in fair value attributable to instrument-specific credit risk associated with each instrument is recorded within other comprehensive income (loss), and the remaining change in fair value is recorded within other income (expense), net on the consolidated statements of operations and comprehensive loss. The change in instrument specific credit risk is estimated based on the option adjusted spread of comparable companies and the option adjusted spread of the US high yield index for companies with similar credit ratings.

Valuation Techniques and Significant Unobservable Inputs

A significant increase or decrease in any of the significant unobservable inputs used in the fair value measurement of the warrant liabilities or C-2 Notes could result in a significantly higher or lower fair value measurement. The quantitative inputs and assumptions used for items categorized in Level 3 of the fair value hierarchy as of December 31, 2025 and December 31, 2024 are summarized below:

2024 Warrants

The fair value of the 2024 Warrants is based on an option pricing method of allocation. The significant inputs, including significant unobservable inputs, used in the recurring Level 3 fair value measurements of the 2024 Warrants as of December 31, 2025 and 2024 are as follows:

Significant Inputs	December 31	
	2025	2024
Expected term (years)	0.3	1.3
Equity volatility	80.6% – 94.0%	58.0%
Risk-free rate	3.6%	4.1%

June 2022 Warrants

In conjunction with a guarantee to the Bank of New York Credit Facility, the Company issued \$10.0 million of warrants (the “June 2022 Warrants”) to Ghaffarian Enterprises on June 30, 2022. The fair value of the June 2022 Warrants is based on an option pricing method of allocation. The significant inputs, including significant unobservable inputs, used in the recurring Level 3 fair value measurements of the June 2022 Warrants as of December 31, 2025 and 2024, are as follows:

Significant Inputs	December 31	
	2025	2024
Expected term (years)	0.3 – 2.2	3.2
Equity volatility	94.0 – 101.8%	63.0%
Risk-free rate	3.5 – 3.6%	4.2%

December 2022 Warrants

On December 5, 2022, the Company issued 444,444 warrants (the “December 2022 Warrants”) to purchase common units of the Company. The December 2022 Warrants have an exercise price of \$0.01 per unit and are not exercisable until 36 months following the issuance of the C-2 Notes, subject to the achievement of certain business requirements. The December 2022 Warrants are freestanding financial instruments and are liability classified as of December 31, 2024. As of December 31, 2025, the December 2022 Warrants expired as business requirements of the holder were not met.

The fair value is determined based on an option pricing method of allocation using the contractual strike price per the warrant agreement, and an estimate of the per unit value of the warrants. The significant inputs, including significant unobservable inputs, used in the recurring Level 3 fair value measurements of the December 2022 Warrants as of December 31, 2024 are as follows:

Significant Inputs	2024
Expected term (years)	3.2
Equity volatility	63.0%
Discount for lack of marketability	28.0%
Risk-free rate	4.2%

C-2 Notes

As of December 31, 2025, all C-2 Notes were converted into Series C Preferred Units. Refer to Note 7 — Debt for further information.

The fair value of the C-2 Notes is based on the binomial lattice model, which is considered to be a Level 3 fair value measurement. The significant inputs, including significant unobservable inputs, used in the recurring Level 3 fair value measurements of the C-2 Notes as of December 31, 2024 are as follows:

Significant Inputs	2024
Discount rate	14.2%
Credit spread	10.0%
Equity volatility	56.0%
Risk-free rate	4.2%

Held-to-Maturity Securities — Amortized Cost and Fair Value

The estimated fair values of the Company's financial instruments that are not measured at fair value on a recurring basis, categorized based upon the fair value hierarchy, at December 31, 2025 are as follows:

	Carrying Value	Fair Value	
		Level 1	Level 2
December 31, 2025			
Cash equivalents			
Money market fund	\$152,951	\$152,951	\$ —
Commercial paper and certificates of deposit	45,430	—	45,432
Corporate bonds	36,021	—	36,022
Foreign issuer debt securities	1,191	—	1,191
Total in cash and cash equivalents	\$235,593	\$152,951	\$ 82,645
Short term investments			
Corporate bonds	\$163,331	\$ —	\$163,335
Government treasury bills	88,154	88,206	—
Commercial paper and certificates of deposit	35,717	—	35,726
Foreign issuer debt securities	17,706	—	17,708
Total in short-term investments	\$304,908	\$ 88,206	\$216,769
Long term investments			
Corporate bonds	\$208,419	\$ —	\$208,482
Government treasury bills	43,468	43,540	—
Foreign issuer debt securities	9,571	—	9,573
Total in long-term investments	\$261,458	\$ 43,540	\$218,055

The following table summarizes the carrying values and fair values of the Company's financial instruments that were not carried at fair value on the consolidated balance sheets as of December 31, 2025 (in thousands):

	Amortized Cost Basis	Allowance for Credit Losses	Net carrying amount	Gross Unrealized Gains	Gross Unrealized Losses	Aggregate Fair Value
U.S. Government securities	\$131,623	\$ —	\$131,623	\$123	\$ —	\$131,746
Corporate securities	407,466	—	407,466	105	(28)	407,543
Foreign securities	27,277	—	27,277	5	(1)	27,281
Total held to maturity securities	\$566,366	\$ —	\$566,366	\$233	\$(29)	\$566,570

The Company did not hold held to maturity securities during the year ended December 31, 2024.

The amortized cost and estimated fair value of held to maturity securities at December 31, 2025 by contractual maturity are shown below (in thousands):

	Amortized Cost Basis	Fair Value
Due in less than one year	\$304,908	\$304,975
Due after one year through five years	261,458	261,595
Total	\$566,366	\$566,570

Expected maturities may differ from contractual maturities because borrowers have the right to call or prepay obligations with or without call or prepayment penalties.

NOTE 14—RELATED PARTY TRANSACTIONS

In the ordinary course of business, the Company enters into transactions with various related parties.

Related Party Warrants

On October 3, 2025, agreements with a related party customer were modified through the issuance of the 2025 Warrant and the Company accounted for such modification in accordance with ASC 606. The 2025 Warrant may be exercised by the holder when all of the Xe-100 units associated with the customer agreements are considered fully operational (the “Vesting Event”). The exercise period ends at the earlier of (i) one year from the Vesting Event, (ii) event of non-compliance and (iii) a consummation of a change of control or a listing event of the Company, to the extent it occurs after vesting. The Vesting Event is considered a performance condition in accordance with ASC 718, as the Vesting Event is a performance target defined solely by reference to the Company’s own operations. As the 2025 Warrant was issued to a customer and not in exchange for a distinct good or service that the customer transfers to the Company, the Company accounts for the 2025 Warrant as consideration payable to a customer under ASC 606, and will recognize the Warrant as a decrease to the transaction price, measured based on the grant date fair value when the performance condition is deemed probable. The grant date fair value was determined to be \$162.7 million.

Moreover, the Company determined that the 2025 Warrant will be classified as an equity award based on the criteria of ASC 480 and ASC 718. When the performance condition is deemed probable, the Company will recognize the 2025 Warrant as a temporary equity classified instrument on its balance sheet measured based on its grant date redemption value. Upon the performance condition becoming probable of occurring, any difference between the 2025 Warrant’s grant date fair value and its grant date redemption value shall be presented in permanent equity.

As of December 31, 2025, the 2025 Warrant was not deemed probable of vesting, and thus, the Company did not recognize any amount related to the 2025 Warrant. The Company will assess whether it is probable that the 2025 Warrant will vest at the end of every reporting period.

In connection with the issuance of the Series C-1 Preferred Units, one investor and potential future customer was issued a warrant on Series C-1 Preferred Units (the “2024 Warrant”) for no additional consideration. The 2024 Warrant is required to be classified as a liability and measured at fair value on an ongoing basis pursuant to ASC 480 since the underlying Series C-1 Preferred Units are redeemable for cash upon the occurrence of certain events that are considered outside of the Company’s control. The 2024 Warrant may be exercised by the holder at any time from the issuance date until the 18-month anniversary of the issuance date and entitles the holder to purchase up to 40,214,207 Series C-1 Preferred Units at an exercise price of approximately \$7.46 per unit. As the 2024 Warrant was issued for no additional consideration and did not meet the criteria for capitalization of a contract asset, the issuance date fair value of the 2024 Warrant of \$55.3 million was expensed upon its issuance. The expense is reflected within selling, general, and administrative expenses within the consolidated statement of operations for the year ended December 31, 2024.

Related Party Revenue

Dow is a unitholder and warrant holder of X-Energy. During the year ended December 31, 2025, the Company entered into the Master Project Development Agreement (“MPDA”) with Dow, which is a

continuation of the project under the previously existing joint development agreement with Dow entered into during the year ended December 31, 2023, whereby the MPDA and joint development agreement together are considered the “Dow Agreements.”

Additionally, during the year ended December 31, 2024, the Company entered into a project with a separate related party to provide design and engineering services.

The table below summarizes related party revenues that are reflected within revenue in the consolidated statement of operations and comprehensive loss for the years ended December 31, 2025 and 2024 (in thousands):

	Year Ended December 31,	
	2025	2024
Revenue associated with Dow	\$6,943	\$26,848
Revenue associated with design and engineering services	—	707
Total	\$6,943	\$27,555

Related Party Expenses

The Company enters into various arrangements with related party vendors. These arrangements primarily include subcontracting services with a related party investor, and general and administrative services, as well as credit support fees, with an affiliate of the Chairman of the Board of Directors of the Company.

The subcontracting services primarily pertain to support services related to ARDP, and the general and administrative services include rent for office space, consulting services, and other general and administrative services. The credit support fee relates to the Bank of New York Credit Facility described above in Note 7 — Debt. The table below summarizes the expenses with related parties that are reflected in the consolidated statements of operations and comprehensive loss the years ended December 31, 2025 and 2024 (in thousands):

	Year Ended December 31,	
	2025	2024
Subcontracting services ⁽¹⁾	\$29,982	\$21,813
General and administrative services ⁽²⁾	1,490	2,515
Credit support fee ⁽³⁾	—	903
Total	\$31,472	\$25,231

- (1) Expenses relating to subcontracting services are reflected within direct costs in the consolidated statements of operations and comprehensive loss.
- (2) Expenses related to general and administrative services are reflected within selling, general, and administrative expenses in the consolidated statements of operations and comprehensive loss.
- (3) Expenses related to credit support fee are reflected within interest expense in the consolidated statements of operations and comprehensive loss.

Due to/from Related Parties

As of December 31, 2025 and 2024, the following balances were recorded within due from and due to related parties (in thousands):

	December 31,	
	2025	2024
Due from related parties ⁽¹⁾	\$4,580	\$15,973
Due to related parties	4,225	7,911
Short-term deferred revenue	—	569
Total due to related parties	\$4,225	\$ 8,480
Long-term deferred revenue	\$2,353	\$ —

- (1) As of December 31, 2025 and 2024, \$4.5 million and \$15.8 million, respectively, is related to Dow, of which \$0.7 million and \$7.7 million, respectively, is unbilled.

Refer to Note 7 — Debt for disclosures related to debt from related parties.

Upon closing of Series D Preferred Units and resulting change in capital ownership, the Company reevaluated its related parties. Accordingly, certain entities were previously considered related party entities that the Company has historically conducted business with are no longer considered related parties as defined in ASC 850 beginning on November 21, 2025. The Company has disclosed transactions occurring prior to November 21, 2025 with these entities as related party transactions.

NOTE 15—COMMITMENTS AND CONTINGENCIES

Incurred Cost Audits

The Company predominantly performs contract services for the DoE. The Company's costs incurred on such contracts with the DoE are subject to final incurred cost audits prior to the close out of the award as specified in such contracts. Billings under this contract are based on provisional rates that permit recovery of allowable overhead, and general and administrative expenses not exceeding certain limits. These rates are subject to review by the government on an annual basis. When final determination and approval of the allowable rates have been made, billings may be adjusted.

The Company is currently undergoing audits of the costs incurred from January 1, 2020 through December 31, 2024. As of December 31, 2025, the Company has \$1.1 million in contract-related reserves for its estimate of potential refunds to customers recorded in accrued liabilities on the consolidated balance sheet. As of December 31, 2024, the impact of any cost audit findings were immaterial.

Investigations and Litigation

From time to time the Company may become involved in legal proceedings or be subject to claims arising in the ordinary course of its business. The Company is not, to the best of its knowledge, presently a party to any legal proceedings that, if determined adverse to the Company, would individually or taken together have a material adverse effect on its business, operating results, financial condition, or cash flows.

Unconditional Purchase Obligations

The Company has entered into certain agreements in which the Company is committed to purchase goods or services, primarily related to supply agreements for graphite components.

Year Ended December 31,	Unconditional Purchase Obligations
2026	\$27,000
2027	13,000
2028	9,500
2029	13,893
2030 and thereafter	—
Total	<u>\$63,393</u>

As of December 31, 2025, there were no unconditional purchase obligations required to be recognized.

NOTE 16—SUPPLEMENTAL CASH FLOW INFORMATION

Supplemental cash flow disclosures are as follows (in thousands):

	Year Ended December 31,	
	2025	2024
Cash paid for interest	\$ —	\$ 4,621
Non-cash Investing and Financing Activities:		
Conversion of C-1 and C-2 notes to Series C Preferred Units	30,787	126,354
Conversion of 2024 Convertible Note to Series C-1 Preferred Units	—	20,903
Valuation of derivative liability	—	3,912
Class B common units related to the issuance and conversion of debt	—	9,061
Deferred transaction costs	3,039	369
Government grant reimbursement receivable for purchase of property and equipment	20,631	5,359
Property and equipment included in accounts payable and accrued expenses	4,490	6,527

NOTE 17—SEGMENTS

Under the guidelines of ASC 280, which require companies to present financial information about their operating segments, products and services, geographic regions, and significant customers, the Company's Chief Executive Officer serves as the chief operating decision maker ("CODM"). The CODM evaluates financial performance, allocates resources, and makes strategic decisions based on the consolidated results of the Company, rather than evaluating discrete lines of business. Accordingly, management has determined that the Company comprises a single reportable segment.

In making resource allocation and assessing operational outcomes, the CODM relies on overall net income (loss) as the primary metric both during the annual planning process and for evaluating results on a quarterly basis. The primary expenses presented to the CODM and incorporated in segment performance are related to the operating expenses; direct costs, selling, general and administrative costs, and research and development costs—as well as the non-operating expenses; interest expense, interest income, and other income (expense). The consolidated statements of operations for the years ended December 31, 2025 and 2024 present these significant segment expenses for the Company's single operating segment. The consolidated balance sheets as of December 31, 2025 and 2024 likewise display the assets and liabilities attributable to this single segment.

NOTE 18—SUBSEQUENT EVENTS

In preparing these financial statements, the Company has evaluated subsequent events to determine if any require recognition or disclosure.

2024 Warrant

In March 2026, the Company amended the 2024 Warrant to permit the holder to elect a cashless exercise of the 2024 Warrant at an earlier date than provided by the 2024 Warrant's original terms. The warrant holder exercised the warrant on March 18, 2026 and received 19,576,222 Series C-1 Preferred Units.

Shares



X-Energy, Inc.
Class A Common Stock

PRELIMINARY PROSPECTUS

, 2026

Joint Bookrunning Managers

J.P. Morgan Morgan Stanley Jefferies Moelis & Company
Cantor UBS Investment Bank TD Securities Guggenheim Securities Wolfe | Nomura Alliance

Until , 2026 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

PART II
INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 13. Other expenses of issuance and distribution.

The following table sets forth all fees and expenses, other than the underwriting discounts and commissions payable solely by X-Energy Reactor Company, LLC in connection with the offer and sale of the securities being registered. All amounts shown are estimated except for the SEC registration fee, the FINRA fee and the stock exchange listing fee.

	Amount to be paid
SEC registration fee	\$ *
FINRA filing fee	\$ *
Stock exchange listing fee	\$ *
Printing expenses	\$ *
Accounting fees and expenses	\$ *
Transfer agent and registrar fees	\$ *
Legal fees and expenses	\$ *
Total	\$ *

* To be provided by amendment.

Item 14. Indemnification of directors and officers.

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation provides that no director of X-Energy, Inc. shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our certificate of incorporation and bylaws provides indemnification for our directors and officers to the fullest extent permitted by the General Corporation Law of the State of Delaware. We will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was,

or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our certificate of incorporation and bylaws provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

Item 15. Recent sales of unregistered securities.

C-2 Convertible Notes

In 2022 and 2023, XERC issued convertible notes payable in an aggregate principal amount of \$28.0 million and \$85.0 million ("C-2 Notes"), respectively, of which \$70.0 million of the C-2 Notes were issued to related parties. The C-2 Notes were scheduled to mature on September 30, 2025 and accrue 10.0% of payable-in-kind interest annually.

On October 11, 2024, certain of the C-2 Notes with an aggregate principal balance of \$98.0 million converted into 16,960,021 Series C Preferred Units, which was accounted for as a debt extinguishment. As of December 31, 2024, the outstanding principal, inclusive of payable-in-kind interest, on the C-2 Notes was \$18.4 million and the fair value was \$18.5 million, resulting in a cumulative loss of \$0.1 million.

In 2024, the C-2 Notes contained embedded derivatives which, absent the election of the fair value option, would have been bifurcated and accounted for at fair value. Accordingly, the fair value option was elected for the C-2 Notes.

On September 30, 2025, the outstanding principal and unpaid accrued interest on the C-2 Note were converted into 2,870,172 Series C Preferred Units, resulting in the extinguishment of the C-2 Note. Therefore, as of September 30, 2025, there was no outstanding principal on the C-2 Notes.

2024 Convertible Note

On September 26, 2024, the Company entered into a convertible note with Amazon.com NV Investment Holdings LLC in the principal amount of \$20.0 million (the "2024 Convertible Note"). While outstanding, the debt accrued paid-in-kind interest of 12% per annum, compounded quarterly. Interest expense recognized related to the 2024 Convertible Note was immaterial through September 30, 2024. On October 11, 2024, in conjunction with the Series C-1 Preferred Units financing discussed below and in accordance with the 2024 Convertible Note's stated terms, the outstanding principal and interest of the 2024 Convertible Note of \$20.1 million was converted into 3,097,477 Series C-1 Preferred Units ("2024 Convertible Note Conversion").

2024 Warrant Exercise

In March 2026, the Company amended the 2024 Warrant to permit the holder to elect a cashless exercise of the 2024 Warrant at an earlier date than provided by the 2024 Warrant's original terms. The warrant holder exercised the warrant on March 18, 2026 and received 19,576,222 Series C-1 Preferred Units.

2025 Warrant Issuance

On October 3, 2025, XERC issued the 2025 Warrant to a related party to purchase up to 14,123,859 Series C-1 Preferred Units at an exercise price of \$6.4870 per unit.

Series D Equity Issuance

On November 21, 2025 and November 25, 2025, XERC issued 48,134,320 and 20,635 Series D Preferred Units, respectively, and received gross cash proceeds of approximately \$700.0 million. For Series D Preferred Units specifically, if the Company undertakes a Qualified IPO, the conversion price of the Series D Preferred Units will be adjusted, if necessary, to be equal to the lesser of: (a) seventy-five percent (75%) of the price per Class A Common Unit, or the price per the equivalent common share of (i) the Company's corporate successor following a conversion of the Company to a C corporation or (ii) the Company's newly formed corporation member, in either scenario offered to the public in such Qualified IPO; or (b) the then-current conversion price of the Series D Preferred Units prior to such adjustment.

December Profits Interest Unit ("PIU") Issuance

In December 2025, XERC issued 8,230,995 additional Class B-2 PIUs to certain employees.

In connection with the formation transactions described herein and pursuant to the terms of the Reorganization Transactions that will be completed prior to the closing of this offering, we will issue shares of our Class B common stock, representing an aggregate % non-economic interest in us, to the Continuing Equity Owners. Such issuance will not involve any underwriters, underwriting discounts or commissions or a public offering, and such issuance will be exempt from registration requirements pursuant to Section 4(a)(2) of the Securities Act.

Item 16. Exhibits.

(a) Exhibits

The following documents are filed as exhibits to this registration statement:

Exhibit Number	Description
*1.1	Form of Underwriting Agreement.
3.1	Certificate of Incorporation of X-Energy, Inc.
3.2	Bylaws of X-Energy, Inc.
*3.3	Form of Amended and Restated Bylaws of X-Energy, Inc.
4.1	Specimen Common Stock Certificate of X-Energy, Inc.
*5.1	Form of Opinion of Latham & Watkins LLP as to the legality of the securities being registered.
10.1†	Form of X-Energy, Inc. 2026 Equity Incentive Plan.
10.2†	Form Restricted Stock Unit Award Agreement under X-Energy, Inc. 2026 Equity Incentive Plan.
10.3†	Form Option Agreement under X-Energy, Inc. 2026 Equity Incentive Plan.
10.4†	Form of X-Energy, Inc. 2026 Employee Stock Purchase Plan.
10.5†	Offer Letter, dated January 15, 2019, by and between X-Energy, LLC and J. Clay Sell.
10.6†	Offer Letter, dated November 20, 2025, by and between X-Energy, LLC and Daniel Gross.
10.7†	Offer Letter, dated September 22, 2025, by and between X-Energy Canada, Inc. and Dragan Popovic.
10.8†	X-Energy, Inc. Non-Employee Director Compensation Program
10.9	Form of Indemnification Agreement.

Exhibit Number	Description
*10.10	Form of Eighth Amended and Restated Limited Liability Company Agreement of X-Energy Reactor Company, LLC.
*10.11	Form of Lock-Up Agreement.
*10.12	Form of Master Reorganization Agreement.
*10.13	Form of Tax Receivable Agreement.
10.14	Assistance Agreement with the U.S. Department of Energy dated February 2, 2021 (portions of this agreement have been redacted).
*21.1	List of subsidiaries of X-Energy, Inc.
23.1	Consent of Ernst & Young LLP, independent registered public accounting firm to X-Energy Reactor Company, LLC.
23.2	Consent of Ernst & Young LLP, independent registered public accounting firm to X-Energy, Inc.
*23.3	Consent of Latham & Watkins LLP (included as part of Exhibit 5.1 hereto).
24.1	Power of Attorney (included on the signature page of the initial filing of this Registration Statement).
*99.1	Consent of Director Nominee
107	Calculation of Filing Fee Table.

* To be filed by amendment.

† Management contract or compensatory plan or arrangement.

Pursuant to Item 601(b)(10)(iv) of Regulation S-K, portions of this exhibit (indicated by “[**]”) have been omitted as the registrant has determined that (i) the omitted information is not material and (ii) the omitted information is the type that the registrant treats as private or confidential. The registrant hereby agrees to furnish supplementally an unredacted copy of the exhibit to the SEC upon its request.

(b) Financial Statement Schedules

See the index to the financial statements included on page F-1 for a list of the financial statements included in this registration statement.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Rockville, State of Maryland, on March 20, 2026.

X-Energy, Inc.

By: /s/ J. Clay Sell

Name: J. Clay Sell

Title: Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below appoints J. Clay Sell and Steven Miller and each of them, any of whom may act without the joinder of the other, as their true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for them and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement and any registration statement (including any amendment thereto) for this offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as they might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their substitute and substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated on March 20, 2026.

<u>Signature</u>	<u>Title</u>
<u>/s/ J. Clay Sell</u> J. Clay Sell	Chief Executive Officer (Principal Executive Officer)
<u>/s/ Daniel Gross</u> Daniel Gross	Chief Financial Officer (Principal Financial Officer)
<u>/s/ Laura Garcia</u> Laura Garcia	Chief Accounting Officer (Principal Accounting Officer)
<u>/s/ Kamal Ghaffarian</u> Kamal Ghaffarian	Director
<u>/s/ Edward Sonnenschein</u> Edward Sonnenschein	Director
<u>/s/ Michael J. Wallace</u> Michael J. Wallace	Director
<u>/s/ Kathleen W. Hyle</u> Kathleen W. Hyle	Director

Signature	Title
<u>/s/ Christopher F. Ginther</u> Christopher F. Ginther	Director
<u>/s/ David B. Kaplan</u> David B. Kaplan	Director
<u>/s/ Allyson Satin</u> Allyson Satin	Director
<u>/s/ Gregory Goff</u> Gregory Goff	Director

**CERTIFICATE OF INCORPORATION
OF
X-ENERGY, INC.**

FIRST: The name of the corporation is X-Energy, Inc. (the “Corporation”).

SECOND: The address of the Corporation’s registered office in the State of Delaware is 251 Little Falls Drive, County of New Castle, Wilmington, Delaware, 19808, and the name of its registered agent at such address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended (“DGCL”), or any successor statute.

FOURTH: The total number of shares of all classes of stock that the Corporation shall have authority to issue is 1000 shares of common stock, each with a par value of \$0.0001 per share. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the DGCL.

FIFTH: The name and mailing address of the sole incorporator is as follows:

NAME
Steven L. Miller

MAILING ADDRESS
530 Gaither Road, Suite 700
Rockville, Maryland 20850

SIXTH: In furtherance of and not in limitation of powers conferred by statute, it is further provided:

1. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.
2. Election of directors need not be by written ballot unless the bylaws of the Corporation shall so provide.
3. The Board of Directors is expressly authorized to adopt, amend, alter or repeal the bylaws of the Corporation.

SEVENTH: Except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty, no director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability. No amendment to or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

EIGHTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which applicable law permits the Corporation to provide indemnification) through bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise. Any repeal or modification of this provision shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification.

NINTH: Subject to such limitations as may be from time to time imposed by other provisions of this Certificate of Incorporation, by the bylaws of the Corporation, by the DGCL or other applicable law, or by any contract or agreement to which the Corporation is or may become a party, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute and this Certificate of Incorporation, and all rights conferred upon stockholders herein are granted subject to this express reservation.

TENTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the DGCL or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Tenth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Tenth (including, without limitation, each portion of any sentence of this Article Tenth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

ELEVENTH: Unless the Corporation consents in writing to the selection of an alternate forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended. Any person or entity purchasing or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to this Article Eleventh.

EXECUTED on September 16, 2025.

/s/ Steven L. Miller

Steven L. Miller, Sole Incorporator

BYLAWS
OF
X-ENERGY, INC.
As effective on September 16, 2025

BYLAWS
OF
X-ENERGY, INC.

ARTICLE I

Meetings of Stockholders

Section 1.1. Annual Meetings. If required by applicable law, an annual meeting of stockholders shall be held for the election of directors at such date, time and place, if any, either within or without the State of Delaware, as may be designated by resolution of the Board of Directors from time to time. Any other proper business may be transacted at the annual meeting. The Board of Directors may postpone, reschedule or cancel any annual meeting of stockholders previously scheduled by the Board of Directors.

Section 1.2. Special Meetings. Special meetings of stockholders for any purpose or purposes may be called at any time by the Board of Directors, but such special meetings may not be called by any other person or persons. Business transacted at any special meeting of stockholders shall be limited to the purposes stated in the notice. The Board of Directors may postpone, reschedule or cancel any special meeting of stockholders previously scheduled by the Board of Directors.

Section 1.3. Notice of Meetings. Whenever stockholders are required or permitted to take any action at a meeting, a notice of the meeting shall be given that shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to vote at the meeting (if such date is different from the record date for stockholders entitled to notice of the meeting) and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Unless otherwise provided by law, the certificate of incorporation or these bylaws, the notice of any meeting shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at the meeting as of the record date for determining the stockholders entitled to notice of the meeting. If mailed, such notice shall be deemed to be given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation.

Section 1.4. Adjournments. Any meeting of stockholders, annual or special, may adjourn from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board of Directors shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting, and shall give notice of the adjourned meeting to each stockholder of record as of the record date so fixed for notice of such adjourned meeting.

Section 1.5. Quorum. Except as otherwise provided by law, the certificate of incorporation or these bylaws, at each meeting of stockholders the presence in person or by proxy of the holders of a majority in voting power of the outstanding shares of stock entitled to vote at the meeting shall be necessary and sufficient to constitute a quorum. In the absence of a quorum, the stockholders so present may, by a majority in voting power thereof, adjourn the meeting from time to time in the manner provided in Section 1.4 of these bylaws until a quorum shall attend. Shares of its own stock belonging to the corporation or to another corporation, if a majority of the shares entitled to vote in the election of directors of such other corporation is held, directly or indirectly, by the corporation, shall neither be entitled to vote nor be counted for quorum purposes; provided, however, that the foregoing shall not limit the right of the corporation or any subsidiary of the corporation to vote stock, including but not limited to its own stock, held by it in a fiduciary capacity.

Section 1.6. Organization. Meetings of stockholders shall be presided over by the Chairperson of the Board, if any, or in his or her absence by the Vice Chairperson of the Board, if any, or in his or her absence by the President, or in his or her absence by a Vice President, or in the absence of the foregoing persons by a chairperson designated by the Board of Directors, or in the absence of such designation by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 1.7. Voting; Proxies. Except as otherwise provided by or pursuant to the provisions of the certificate of incorporation, each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of stock held by such stockholder which has voting power upon the matter in question. Each stockholder entitled to vote at a meeting of stockholders or to express consent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. A proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by delivering to the Secretary of the corporation a revocation of the proxy or a new proxy bearing a later date. Voting at meetings of stockholders need not be by written ballot. At all meetings of stockholders for the election of directors at which a quorum is present a plurality of the votes cast shall be sufficient to elect. All other elections and questions presented to the stockholders at a meeting at which a quorum is present shall, unless otherwise provided by the certificate of incorporation, these bylaws, the rules or regulations of any stock exchange applicable to the corporation, or applicable law or pursuant to any regulation applicable to the corporation or its securities, be decided by the affirmative vote of the holders of a majority in voting power of the shares of stock of the corporation which are present in person or by proxy and entitled to vote thereon.

Section 1.8. Fixing Date for Determination of Stockholders of Record.

(a) In order that the corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board of Directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board of Directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance herewith at the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix a record date, which shall not be more than sixty (60) days prior to such other action. If no such record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

(c) Unless otherwise restricted by the certificate of incorporation, in order that the corporation may determine the stockholders entitled to express consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date for determining stockholders entitled to express consent to corporate action in writing without a meeting is fixed by the Board of Directors, (i) when no prior action of the Board of Directors is required by law, the record date for such purpose shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the corporation in accordance with applicable law, and (ii) if prior action by the Board of Directors is required by law, the record date for such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

Section 1.9. List of Stockholders Entitled to Vote. The officer who has charge of the stock ledger shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting (provided, however, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date), arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting at least ten (10) days prior to the meeting (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of meeting or (ii) during ordinary business hours at the principal place of business of the corporation. If the meeting is to be held at a place, then a list of stockholders entitled to vote at the meeting shall be produced and kept at the time and place of the meeting during the whole time thereof and may be examined by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Except as otherwise provided by law, the stock ledger shall be the only evidence as to who are the stockholders entitled to examine the list of stockholders required by this Section 1.9 or to vote in person or by proxy at any meeting of stockholders.

Section 1.10. Action By Written Consent of Stockholders. Unless otherwise restricted by the certificate of incorporation, any action required or permitted to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which minutes of proceedings of stockholders are recorded. Delivery made to the corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall, to the extent required by law, be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for notice of such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the corporation.

Section 1.11. Inspectors of Election. The corporation may, and shall if required by law, in advance of any meeting of stockholders, appoint one or more inspectors of election, who may be employees of the corporation, to act at the meeting or any adjournment thereof and to make a written report thereof. The corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. In the event that no inspector so appointed or designated is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath to execute faithfully the duties of inspector with strict impartiality and according to the best of his or her ability. The inspector or inspectors so appointed or designated shall (i) ascertain the number of shares of capital stock of the corporation outstanding and the voting power of each such share, (ii) determine the shares of capital stock of the corporation represented at the meeting and the validity of proxies and ballots, (iii) count all votes and ballots, (iv) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors, and (v) certify their determination of the number of shares of capital stock of the corporation represented at the meeting and such inspectors' count of all votes and ballots. Such certification and report shall specify such other information as may be required by law. In determining the validity and counting of proxies and ballots cast at any meeting of stockholders of the corporation, the inspectors may consider such information as is permitted by applicable law. No person who is a candidate for an office at an election may serve as an inspector at such election.

Section 1.12. Conduct of Meetings. The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced at the meeting by the person presiding over the meeting. The Board of Directors may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the person presiding over any meeting of stockholders shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting, to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such presiding person, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the presiding person of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders entitled to vote at the meeting, their duly authorized and constituted proxies or such other persons as the presiding person of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. The presiding person at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall, if the facts warrant, determine and declare to the meeting that a matter or business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such matter or business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board of Directors or the person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

ARTICLE II

Board of Directors

Section 2.1. Number; Qualifications. The Board of Directors shall consist of one or more members, the number thereof to be determined from time to time by resolution of the Board of Directors. Directors need not be stockholders.

Section 2.2. Election; Resignation; Vacancies. The Board of Directors shall initially consist of the persons named as directors in the certificate of incorporation or elected by the incorporator of the corporation, and each director so elected shall hold office until the first annual meeting of stockholders or until his or her successor is duly elected and qualified. At the first annual meeting of stockholders and at each annual meeting thereafter, the stockholders shall elect directors each of whom shall hold office for a term of one year or until his or her successor is duly elected and qualified, subject to such director's earlier death, resignation, disqualification or removal. Any director may resign at any time upon notice to the corporation. Unless otherwise provided by law or the certificate of incorporation, any newly created directorship or any vacancy occurring in the Board of Directors for any cause may be filled by a majority of the remaining members of the Board of Directors, although such majority is less than a quorum, or by a plurality of the votes cast at a meeting of stockholders, and each director so elected shall hold office until the expiration of the term of office of the director whom he or she has replaced or until his or her successor is elected and qualified.

Section 2.3. Regular Meetings. Regular meetings of the Board of Directors may be held at such places within or without the State of Delaware and at such times as the Board of Directors may from time to time determine.

Section 2.4. Special Meetings. Special meetings of the Board of Directors may be held at any time or place within or without the State of Delaware whenever called by the President, any Vice President, the Secretary, or by any member of the Board of Directors. Notice of a special meeting of the Board of Directors shall be given by the person or persons calling the meeting at least twenty-four hours before the special meeting.

Section 2.5. Telephonic Meetings Permitted. Members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting thereof by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this bylaw shall constitute presence in person at such meeting.

Section 2.6. Quorum; Vote Required for Action. At all meetings of the Board of Directors the directors entitled to cast a majority of the votes of the whole Board of Directors shall constitute a quorum for the transaction of business. Except in cases in which the certificate of incorporation, these bylaws or applicable law otherwise provides, a majority of the votes entitled to be cast by the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors.

Section 2.7. Organization. Meetings of the Board of Directors shall be presided over by the Chairperson of the Board, if any, or in his or her absence by the Vice Chairperson of the Board, if any, or in his or her absence by the President, or in their absence by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 2.8. Action by Unanimous Consent of Directors. Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the Board of Directors or such committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmissions are filed with the minutes of proceedings of the board or committee in accordance with applicable law.

ARTICLE III

Committees

Section 3.1. Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of the committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he, she or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in place of any such absent or disqualified member. Any such committee, to the extent permitted by law and to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it.

Section 3.2. Committee Rules. Unless the Board of Directors otherwise provides, each committee designated by the Board of Directors may make, alter and repeal rules for the conduct of its business. In the absence of such rules each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article II of these bylaws.

ARTICLE IV

Officers

Section 4.1. Officers; Election; Qualifications; Term of Office; Resignation; Removal; Vacancies. The Board of Directors shall elect a President and Secretary, and it may, if it so determines, choose a Chairperson of the Board and a Vice Chairperson of the Board from among its members. The Board of Directors may also choose one or more Vice Presidents, one or more Assistant Secretaries, a Treasurer and one or more Assistant Treasurers and such other officers as it shall from time to time deem necessary or desirable. Each such officer shall hold office until the first meeting of the Board of Directors after the annual meeting of stockholders next succeeding his or her election, and until his or her successor is elected and qualified or until his or her earlier resignation or removal. Any officer may resign at any time upon written notice to the corporation. The Board of Directors may remove any officer with or without cause at any time, but such removal shall be without prejudice to the contractual rights of such officer, if any, with the corporation. Any number of offices may be held by the same person. Any vacancy occurring in any office of the corporation by death, resignation, removal or otherwise may be filled for the unexpired portion of the term by the Board of Directors at any regular or special meeting.

Section 4.2. Powers and Duties of Officers. The officers of the corporation shall have such powers and duties in the management of the corporation as may be prescribed in a resolution by the Board of Directors and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board of Directors. The Board of Directors may require any officer, agent or employee to give security for the faithful performance of his or her duties.

Section 4.3. Appointing Attorneys and Agents; Voting Securities of Other Entities. Unless otherwise provided by resolution adopted by the Board of Directors, the Chairperson of the Board, the President or any Vice President may from time to time appoint an attorney or attorneys or agent or agents of the corporation, in the name and on behalf of the corporation, to cast the votes which the corporation may be entitled to cast as the holder of stock or other securities in any other corporation or other entity, any of whose stock or other securities may be held by the corporation, at meetings of the holders of the stock or other securities of such other corporation or other entity, or to consent in writing, in the name of the corporation as such holder, to any action by such other corporation or other entity, and may instruct the person or persons so appointed as to the manner of casting such votes or giving such consents, and may execute or cause to be executed in the name and on behalf of the corporation and under its corporate seal or otherwise, all such written proxies or other instruments as he or she may deem necessary or proper. Any of the rights set forth in this Section 4.3 which may be delegated to an attorney or agent may also be exercised directly by the Chairperson of the Board, the President or the Vice President.

ARTICLE V

Stock

Section 5.1. Certificates. The shares of the corporation shall be represented by certificates, provided that the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Every holder of stock represented by certificates shall be entitled to have a certificate signed by or in the name of the corporation by the Chairperson or Vice Chairperson of the Board of Directors, if any, or the President or a Vice President, and by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary, of the corporation certifying the number of shares owned by such holder in the corporation. Any of or all the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if such person were such officer, transfer agent, or registrar at the date of issue.

Section 5.2. Lost, Stolen or Destroyed Stock Certificates: Issuance of New Certificates. The corporation may issue a new certificate of stock in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the corporation an affidavit of loss or destruction and/or a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate.

ARTICLE VI

Indemnification and Advancement of Expenses

Section 6.1. Right to Indemnification. The corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was a director or officer of the corporation or, while a director or officer of the corporation, is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Covered Person. Notwithstanding the preceding sentence, except as otherwise provided in Section 6.3, the corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the corporation.

Section 6.2. Advancement of Expenses. The corporation shall to the fullest extent not prohibited by applicable law pay the expenses (including attorneys' fees) incurred by a Covered Person in defending any proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the proceeding shall be made only upon receipt of an undertaking by the Covered Person to repay all amounts advanced if it should be ultimately determined that the Covered Person is not entitled to be indemnified under this Article VI or otherwise.

Section 6.3. Claims. If a claim for indemnification under this Article VI (following the final disposition of such proceeding) is not paid in full within sixty days after the corporation has received a claim therefor by the Covered Person, or if a claim for any advancement of expenses under this Article VI is not paid in full within thirty days after the corporation has received a statement or statements requesting such amounts to be advanced, the Covered Person shall thereupon (but not before) be entitled to file suit to recover the unpaid amount of such claim. If successful in whole or in part, the Covered Person shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any such action, the corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

Section 6.4. Nonexclusivity of Rights. The rights conferred on any Covered Person by this Article VI shall not be exclusive of any other rights which such Covered Person may have or hereafter acquire under any statute, provision of the certificate of incorporation, these bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

Section 6.5. Other Sources. The corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit enterprise.

Section 6.6. Insurance. The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article VI; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article VI.

Section 6.7. Amendment or Repeal. Any right to indemnification or to advancement of expenses of any Covered Person arising hereunder shall not be eliminated or impaired by an amendment to or repeal of these bylaws after the occurrence of the act or omission that is the subject of the civil, criminal, administrative or investigative action, suit or proceeding for which indemnification or advancement of expenses is sought.

Section 6.8. Other Indemnification and Advancement of Expenses. This Article VI shall not limit the right of the corporation, to the extent and in the manner permitted by law, to indemnify and to advance expenses to persons other than Covered Persons when and as authorized by appropriate corporate action.

ARTICLE VII

Miscellaneous

Section 7.1. Fiscal Year. The fiscal year of the corporation shall be determined by resolution of the Board of Directors.

Section 7.2. Seal. The corporate seal shall have the name of the corporation inscribed thereon and shall be in such form as may be approved from time to time by the Board of Directors.

Section 7.3. Manner of Notice. Except as otherwise provided herein or permitted by applicable law, notices to directors and stockholders shall be in writing and delivered personally or mailed to the directors or stockholders at their addresses appearing on the books of the corporation. Without limiting the manner by which notice otherwise may be given effectively to stockholders, and except as prohibited by applicable law, any notice to stockholders given by the corporation under any provision of applicable law, the certificate of incorporation, or these bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any stockholder who fails to object in writing to the corporation, within 60 days of having been given written notice by the corporation of its intention to send the single notice permitted under this Section 7.3, shall be deemed to have consented to receiving such single written notice. Notice to directors may be given by telecopier, telephone or other means of electronic transmission.

Section 7.4. Waiver of Notice of Meetings of Stockholders, Directors and Committees. Any waiver of notice, given by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at nor the purpose of any regular or special meeting of the stockholders, directors, or members of a committee of directors need be specified in a waiver of notice.

Section 7.5. Form of Records. Any records maintained by the corporation in the regular course of its business, including its stock ledger, books of account, and minute books, may be kept on, or by means of, or be in the form of, any information storage device or method, provided that the records so kept can be converted into clearly legible paper form within a reasonable time, which records shall be conclusive and binding for all purposes absent manifest error.

SPECIMEN	NUMBER X-ENERGY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE SHARES COMMON STOCK CUSIP SPECIMEN - NOT NEGOTIABLE THIS CERTIFICATE IS THE PROPERTY OF IS THE OWNER OF FULLY PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF \$0.0001 PAR VALUE EACH OF X-ENERGY, INC. transferable on the books of the Corporation in person or by attorney upon surrender of this certificate duly endorsed or assigned. This certificate and the shares represented hereby are subject to the laws of the State of Delaware, and to the Certificate of Incorporation and Bylaws of the Corporation, as now or hereafter amended. This certificate is not valid until countersigned and registered by the Transfer Agent and Registrar. WITNESS the facsimile seal of the Corporation and the facsimile signatures of its duly authorized officers. Dated:  COUNTERSIGNED AND REGISTERED FIDELITY STOCK TRANSFER SOLUTIONS LLC (Boston, Massachusetts) TRANSFER AGENT AND REGISTRAR BY: _____ AUTHORIZED SIGNATURE SPECIMEN NOT NEGOTIABLE  J. Lay CHIEF EXECUTIVE OFFICER  Dan D. L. CHIEF FINANCIAL OFFICER © COLUMBIA PRINTING SERVICES, LLC

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common
TEN ENT - as tenants by the entireties
JT TEN - as joint tenants with right of survivorship and not as tenants in common

UNIF GIFT MIN ACT - Custodian.....
(Cust) (Minor)
under Uniform Gifts to Minors Act
(State)

Additional abbreviations may also be used though not in the above list.

For Value Received, _____ hereby sell, assign and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER
IDENTIFYING NUMBER OF ASSIGNEE

(PLEASE PRINT OR TYPE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

_____ Shares
of the stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

_____ Attorney
to transfer the said stock on the books of the within named Corporation with full power of substitution in the premises.

Dated _____

NOTICE: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATSOEVER.

Signature(s) Guaranteed

By _____
The Signature(s) must be guaranteed by an eligible guarantor institution (Banks, Stockbrokers, Savings and Loan Associations and Credit Unions with membership in an approved Signature Guarantee Medallion Program), pursuant to SEC Rule 17Ad-15.

THE CORPORATION WILL FURNISH TO ANY STOCKHOLDER, UPON REQUEST AND WITHOUT CHARGE, A FULL STATEMENT OF THE DESIGNATIONS, RELATIVE RIGHTS, PREFERENCES AND LIMITATIONS OF THE SHARES OF EACH CLASS AND SERIES AUTHORIZED TO BE ISSUED, SO FAR AS THE SAME HAVE BEEN DETERMINED, AND OF THE AUTHORITY, IF ANY, OF THE BOARD TO DIVIDE THE SHARES INTO CLASSES OR SERIES AND TO DETERMINE AND CHANGE THE RELATIVE RIGHTS, PREFERENCES AND LIMITATIONS OF ANY CLASS OR SERIES. SUCH REQUEST MAY BE MADE TO THE SECRETARY OF THE CORPORATION OR TO THE TRANSFER AGENT NAMED ON THIS CERTIFICATE.

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X-ENERGY, INC.
2026 EQUITY INCENTIVE PLAN

ARTICLE I.
PURPOSE

The Plan's purpose is to enhance the Company's ability to attract, retain and motivate persons who make (or are expected to make) important contributions to the Company and X-Energy Reactor Company, LLC (the "***Operating Company***") by providing these individuals with equity ownership opportunities and/or equity-linked compensatory opportunities. Capitalized terms used in the Plan are defined in Article XI.

ARTICLE II.
ELIGIBILITY

Service Providers are eligible to be granted Awards under the Plan, subject to the limitations described herein.

ARTICLE III.
ADMINISTRATION AND DELEGATION

3.1 **Administration**. The Plan is administered by the Administrator. The Administrator has authority to determine which Service Providers receive Awards, grant Awards and set Award terms and conditions, subject to the conditions and limitations in the Plan. The Administrator also has the authority to take all actions and make all determinations under the Plan, to interpret the Plan and Award Agreements and to adopt, amend and repeal Plan administrative rules, guidelines and practices as it deems advisable. The Administrator may correct defects and ambiguities, supply omissions and reconcile inconsistencies in the Plan or any Award Agreement as it deems necessary or appropriate to administer the Plan and any Awards. The Administrator's determinations under the Plan are in its sole discretion and will be final and binding on all persons having or claiming any interest in the Plan or any Award.

3.2 **Appointment of Committees**. To the extent Applicable Laws permit, the Board or the Administrator may delegate any or all of its powers under the Plan to one or more Committees or committees of officers of the Company or any of its Subsidiaries. The Board or the Administrator, as applicable, may rescind any such delegation, abolish any such committee or Committee and/or re-vest in itself any previously delegated authority at any time.

ARTICLE IV.
STOCK AVAILABLE FOR AWARDS

4.1 **Number of Shares**. Subject to adjustment under Article VIII and the terms of this Article IV, the maximum number of Shares that may be issued pursuant to Awards under the Plan shall be equal to the Overall Share Limit. Shares issued under the Plan may consist of authorized but unissued Shares, Shares purchased on the open market or treasury Shares. Shares issued under the Plan will be shares of Class A Common Stock.

4.2 Share Recycling. If all or any part of an Award expires, lapses or is terminated, exchanged for or settled in cash, surrendered, repurchased, canceled without having been fully exercised or forfeited, in any case, in a manner that results in the Company acquiring Shares covered by the Award at a price not greater than the price (as adjusted to reflect any Equity Restructuring) paid by the Participant for such Shares or not issuing any Shares covered by the Award, the unused Shares covered by the Award will, as applicable, become or again be available for Award grants under the Plan. Further, Shares delivered (either by actual delivery or attestation) to the Company by a Participant to satisfy the applicable exercise or purchase price of an Award and/or to satisfy any applicable tax withholding obligation with respect to an Award (including Shares retained by the Company from the Award being exercised or purchased and/or creating the tax obligation) will, as applicable, become or again be available for Award grants under the Plan. The payment of Dividend Equivalents in cash in conjunction with any outstanding Awards shall not count against the Overall Share Limit. Notwithstanding anything to the contrary contained herein, the following Shares shall not be added to the Shares authorized for grant under Section 4.1 and shall not be available for future grants of Awards: (a) Shares subject to a Stock Appreciation Right that are not issued in connection with the stock settlement of the Stock Appreciation Right on exercise thereof; and (b) Shares purchased on the open market with the cash proceeds from the exercise of Options. Further notwithstanding anything to the contrary contained herein, no Shares shall again be available for future grants of Awards under the Plan pursuant to this Article IV to the extent that such return of shares would cause the Plan to be a “formula” plan or constitute a “material revision” or “material amendment” subject to stockholder approval under the requirements of the established stock exchange on which the Company’s securities are traded.

4.3 Incentive Stock Option Limitations. Notwithstanding anything to the contrary herein, no more than 100,000,000 Shares may be issued pursuant to the exercise of Incentive Stock Options.

4.4 Substitute Awards. In connection with an entity’s merger or consolidation with the Company or the Company’s acquisition of an entity’s property or stock, the Administrator may grant Awards in substitution for any options or other stock or stock-based awards granted before such merger or consolidation by such entity or its affiliate. Substitute Awards may be granted on such terms as the Administrator deems appropriate, notwithstanding limitations on Awards in the Plan. Substitute Awards will not count against the Overall Share Limit (nor shall Shares subject to a Substitute Award be added to the Shares available for Awards under the Plan as provided above), except that Shares acquired by exercise of substitute Incentive Stock Options will count against the maximum number of Shares that may be issued pursuant to the exercise of Incentive Stock Options under the Plan. Additionally, in the event that a company acquired by the Company or any of its Affiliates or with which the Company or any of its Affiliates combines has shares available under a pre-existing plan approved by stockholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio or formula used in such acquisition or combination to determine the consideration payable to the holders of common stock of the entities party to such acquisition or combination) may be used for Awards under the Plan and shall not reduce the Shares authorized for grant under the Plan (and Shares subject to such Awards shall not be added to the Shares available for Awards under the Plan as provided above); provided that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were not Employees, Consultants or Directors prior to such acquisition or combination.

4.5 Non-Employee Director Compensation. Notwithstanding any provision to the contrary in the Plan, the Administrator may establish compensation for non-employee Directors from time to time, subject to the limitations in the Plan. The Administrator will from time to time determine the terms, conditions and amounts of all such non-employee Director compensation in its discretion and pursuant to the exercise of its business judgment, taking into account such factors, circumstances and considerations as it shall deem relevant from time to time, provided that, commencing with the calendar year following the calendar year in which the Effective Date occurs, the sum of any cash compensation, or other compensation, and the value (determined as of the grant date in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of Awards granted to a non-employee Director as compensation for services as a non-employee Director with respect to any fiscal year of the Company may not exceed \$750,000 (increased to \$1,000,000 in a non-employee Director's initial calendar year of service as a non-employee director or any calendar year during which a non-employee Director serves as chair of the Board), which limits shall not apply to the compensation for any non-employee Director of the Company who serves in any capacity in addition to that of a non-employee Director for which he or she receives additional compensation. The Administrator may make exceptions to this limit for individual non-employee Directors in extraordinary circumstances, as the Administrator may determine in its discretion, provided that the non-employee Director receiving such additional compensation may not participate in the decision to award such compensation or in other contemporaneous compensation decisions involving non-employee Directors.

ARTICLE V. STOCK OPTIONS AND STOCK APPRECIATION RIGHTS

5.1 General. The Administrator may grant Options or Stock Appreciation Rights to Service Providers subject to the limitations in the Plan, including any limitations in the Plan that apply to Incentive Stock Options. A Stock Appreciation Right will entitle the Participant (or other person entitled to exercise the Stock Appreciation Right) to receive from the Company upon exercise of the exercisable portion of the Stock Appreciation Right an amount determined by multiplying the excess, if any, of the Fair Market Value of one Share on the date of exercise over the exercise price per Share of the Stock Appreciation Right by the number of Shares with respect to which the Stock Appreciation Right is exercised. Such amount shall be subject to any limitations of the Plan or that the Administrator may impose and payable in cash, Shares valued at Fair Market Value or a combination of the two as the Administrator may determine or provide in the Award Agreement.

5.2 Exercise Price. The Administrator will establish each Option's and Stock Appreciation Right's exercise price and specify the exercise price in the Award Agreement. The exercise price will not be less than 100% of the Fair Market Value on the grant date of the Option (subject to Section 5.6) or Stock Appreciation Right. Notwithstanding the foregoing, in the case of an Option or a Stock Appreciation Right that is a Substitute Award, the exercise price per share of the Shares subject to such Option or Stock Appreciation Right, as applicable, may be less than the Fair Market Value per share on the date of grant; provided that the exercise price of any Substitute Award shall be determined in accordance with the applicable requirements of Sections 424 and 409A of the Code.

5.3 Duration. Each Option or Stock Appreciation Right will be exercisable at such times and as specified in the Award Agreement, provided that, subject to Section 5.6, the term of an Option or Stock Appreciation Right will not exceed ten years. Notwithstanding the foregoing and unless determined otherwise by the Company, in the event that on the last business day of the term of an Option or Stock Appreciation Right (other than an Incentive Stock Option) (i) the exercise of the Option or Stock Appreciation Right is prohibited by Applicable Law, as determined by the Company, or (ii) Shares may not be purchased or sold by the applicable Participant due to any Company insider trading policy (including blackout periods) or a "lock-up" agreement undertaken in connection with an issuance of securities by the Company, the term of the Option or Stock Appreciation Right shall be extended until the date that is 30 days after the end of the legal prohibition, black-out period or lock-up agreement, as determined by the Company; provided, however, in no event shall the extension last beyond the ten year term of the applicable Option or Stock Appreciation Right. Notwithstanding the foregoing, to the extent permitted under Applicable Laws, if the Participant, prior to the end of the term of an Option or Stock Appreciation Right, violates the non-competition, non-solicitation, confidentiality or other similar restrictive covenant provisions of any employment contract, confidentiality and nondisclosure agreement or other agreement between the Participant and the Company, the Operating Company or any of their respective Subsidiaries or affiliates, the right of the Participant and the Participant's transferees to exercise any Option or Stock Appreciation Right issued to the Participant shall terminate immediately upon such violation, unless the Company otherwise determines.

5.4 Exercise. Options and Stock Appreciation Rights may be exercised by delivering to the Company a written notice of exercise, in a form the Administrator approves (which may be electronic), signed by the person authorized to exercise the Option or Stock Appreciation Right, together with, as applicable, payment in full (i) as specified in Section 5.5 for the number of Shares for which the Award is exercised and (ii) as specified in Section 9.5 for any applicable taxes. Unless the Administrator otherwise determines, an Option or Stock Appreciation Right may not be exercised for a fraction of a Share.

5.5 Payment Upon Exercise. Subject to Sections 9.10 and 10.8, any Company insider trading policy (including blackout periods) and Applicable Laws, the exercise price of an Option must be paid by:

(a) cash, wire transfer of immediately available funds or by check payable to the order of the Company, provided that the Company may limit the use of one of the foregoing payment forms if one or more of the payment forms below is permitted;

(b) if there is a public market for Shares at the time of exercise, unless the Company otherwise determines, (i) delivery (including electronically or telephonically to the extent permitted by the Company) of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to pay the exercise price, or (ii) the Participant's delivery to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to pay the exercise price; provided that such amount is paid to the Company at such time as may be required by the Administrator;

(c) to the extent permitted by the Administrator, delivery (either by actual delivery or attestation) of Shares owned by the Participant valued at their Fair Market Value;

(d) to the extent permitted by the Administrator, surrendering Shares then issuable upon the Option's exercise valued at their Fair Market Value on the exercise date;

(e) to the extent permitted by the Administrator, delivery of a promissory note or any other property that the Administrator determines is good and valuable consideration; or

(f) to the extent permitted by the Company, any combination of the above payment forms approved by the Administrator.

5.6 Additional Terms of Incentive Stock Options. The Administrator may grant Incentive Stock Options only to employees of the Company, any of its present or future parent or subsidiary corporations, as defined in Sections 424(e) or (f) of the Code, respectively, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code. If an Incentive Stock Option is granted to a Greater Than 10% Stockholder, the exercise price will not be less than 110% of the Fair Market Value on the Option's grant date, and the term of the Option will not exceed five years. All Incentive Stock Options will be subject to and construed consistently with Section 422 of the Code. By accepting an Incentive Stock Option, the Participant agrees to give prompt notice to the Company of dispositions or other transfers (other than in connection with a Change in Control) of Shares acquired under the Option made within (i) two years from the grant date of the Option or (ii) one year after the transfer of such Shares to the Participant, specifying the date of the disposition or other transfer and the amount the Participant realized, in cash, other property, assumption of indebtedness or other consideration, in such disposition or other transfer. Neither the Company nor the Administrator will be liable to a Participant, or any other party, if an Incentive Stock Option fails or ceases to qualify as an "incentive stock option" under Section 422 of the Code. Any Incentive Stock Option or portion thereof that fails to qualify as an "incentive stock option" under Section 422 of the Code for any reason, including becoming exercisable with respect to Shares having a fair market value exceeding the \$100,000 limitation under Treasury Regulation Section 1.422-4, will be a Non-Qualified Stock Option.

ARTICLE VI.
RESTRICTED STOCK; RESTRICTED STOCK UNITS

6.1 General. The Administrator may grant Restricted Stock, or the right to purchase Restricted Stock, to any Service Provider, subject to the Company's right to repurchase all or part of such Shares at their issue price or other stated or formula price from the Participant (or to require forfeiture of such Shares) if conditions the Administrator specifies in the Award Agreement are not satisfied before the end of the applicable restriction period or periods that the Administrator establishes for such Award. In addition, the Administrator may grant to Service Providers Restricted Stock Units, which may be subject to vesting and forfeiture conditions during the applicable restriction period or periods, as set forth in an Award Agreement.

6.2 Restricted Stock.

(a) Dividends. Subject to the terms of this Section 6.2(a), Participants holding Shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such Shares, unless the Administrator provides otherwise in the Award Agreement. In addition, unless the Administrator provides otherwise, if any dividends or distributions are paid in Shares, or consist of a dividend or distribution to holders of Common Stock of property other than an ordinary cash dividend, the Shares or other property will be subject to the same restrictions on transferability and forfeitability as the Shares of Restricted Stock with respect to which they were paid. Notwithstanding anything to the contrary herein, with respect to any award of Restricted Stock, dividends which are paid to holders of Common Stock prior to vesting shall only be paid out to a Participant holding such Restricted Stock to the extent that the vesting conditions are subsequently satisfied. All such dividend payments will be made no later than March 15 of the calendar year following the calendar year in which the right to the dividend payment becomes nonforfeitable.

(b) Stock Certificates. The Company may require that the Participant deposit in escrow with the Company (or its designee) any stock certificates issued in respect of Shares of Restricted Stock, together with a stock power endorsed in blank.

6.3 Restricted Stock Units.

(a) Settlement. The Administrator may provide that settlement of Restricted Stock Units will occur upon or as soon as reasonably practicable after the Restricted Stock Units vest or will instead be deferred, on a mandatory basis or at the Participant's election, in a manner intended to comply with Section 409A.

(b) Stockholder Rights. A Participant will have no rights of a stockholder with respect to Shares subject to any Restricted Stock Unit unless and until the Shares are delivered in settlement of the Restricted Stock Unit.

ARTICLE VII.
OTHER STOCK OR CASH BASED AWARDS; DIVIDEND EQUIVALENTS

7.1 Other Stock or Cash Based Awards. Other Stock or Cash Based Awards may be granted to Participants, including Awards entitling Participants to receive Shares to be delivered in the future and including annual or other periodic or long-term cash bonus awards (whether based on specified Performance Criteria or otherwise), in each case subject to any conditions and limitations in the Plan. Such Other Stock or Cash Based Awards will also be available as a payment form in the settlement of other Awards, as standalone payments and as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock or Cash Based Awards may be paid in Shares, cash or other property, as the Administrator determines.

7.2 Dividend Equivalents. A grant of Restricted Stock Units or Other Stock or Cash Based Award may provide a Participant with the right to receive Dividend Equivalents, and no Dividend Equivalents shall be payable with respect to Options or Stock Appreciation Rights. Dividend Equivalents may be paid currently or credited to an account for the Participant, settled in cash or Shares and subject to the same restrictions on transferability and forfeitability as the Award with respect to which the Dividend Equivalents are paid and subject to other terms and conditions as set forth in the Award Agreement. Notwithstanding anything to the contrary herein, Dividend Equivalents with respect to an Award shall only be paid out to a Participant to the extent that the vesting conditions are subsequently satisfied. All such Dividend Equivalent payments will be made no later than March 15 of the calendar year following the calendar year in which the right to the Dividend Equivalent payment becomes nonforfeitable, unless determined otherwise by the Administrator or unless deferred in a manner intended to comply with Section 409A.

ARTICLE VIII.
**ADJUSTMENTS FOR CHANGES IN COMMON STOCK
AND CERTAIN OTHER EVENTS**

8.1 Equity Restructuring. In connection with any Equity Restructuring, notwithstanding anything to the contrary in this Article VIII, the Administrator will equitably adjust each outstanding Award as it deems appropriate to reflect the Equity Restructuring, which may include (if applicable) adjusting the number and type of securities subject to each outstanding Award, adjusting the Award's exercise price, grant price and/or applicable performance goals, granting new Awards to Participants, and/or making a cash payment to Participants. The adjustments provided under this Section 8.1 will be nondiscretionary and final and binding on the affected Participant and the Company; provided that the Administrator will determine whether an adjustment is equitable.

8.2 Corporate Transactions. In the event of any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), reorganization, merger, consolidation, combination, amalgamation, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of all or substantially all of the assets of the Company, or sale or exchange of Common Stock or other securities of the Company, Change in Control, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, other similar corporate transaction or event, other unusual or nonrecurring transaction or event affecting the Company or its financial statements or any change in any Applicable Laws or accounting principles, the Administrator, on such terms and conditions as it deems appropriate, either by the terms of the Award or by action taken in connection with the occurrence of such transaction or event (any action to give effect to a change in Applicable Law or accounting principles may be made within a reasonable period of time after such change), is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to (x) prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award granted or issued under the Plan, (y) to facilitate such transaction or event or (z) give effect to such changes in Applicable Laws or accounting principles:

(a) To provide for the cancellation of any such Award in exchange for either an amount of cash or other property with a value equal to the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights under the vested portion of such Award, as applicable; provided that, if the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights, in any case, is equal to or less than zero, then the Award may be terminated without payment; provided, further, that Awards held by members of the Board will be deemed settled in Shares on or immediately prior to the applicable event if the Administrator takes action under this clause (a);

(b) To provide that such Award shall vest and, to the extent applicable, be exercisable as to all Shares covered thereby, notwithstanding anything to the contrary in the Plan or the provisions of such Award;

(c) To provide that such Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, or equivalent value thereof in cash, with appropriate adjustments as to the number and kind of shares and/or applicable exercise or purchase price, in all cases, as determined by the Administrator;

(d) To make adjustments in the number and type of Shares (or other securities or property) subject to outstanding Awards and/or with respect to which Awards may be granted under the Plan (including, but not limited to, adjustments of the limitations in Article IV on the maximum number and kind of shares which may be issued) and/or in the terms and conditions of (including the grant or exercise price or applicable performance goals), and the criteria included in, outstanding Awards;

(e) To replace such Award with other rights or property selected by the Administrator; and/or

(f) To provide that the Award will terminate and cannot vest, be exercised or become payable after the applicable event.

8.3 Effect of a Change in Control. Notwithstanding the provisions of Section 8.2, if a Change in Control occurs and a Participant's Awards are not continued, converted, assumed, or replaced with a substantially similar award by (a) the Company, or (b) a successor entity or its parent or subsidiary (an "*Assumption*" or "*Assumed*"), and provided that the Participant has not had a Termination of Service, then, immediately prior to the Change in Control, such Awards shall become fully vested, exercisable and/or payable, as applicable, and all forfeiture, repurchase and other restrictions on such Awards shall lapse, in which case, such Awards shall be canceled upon the consummation of the Change in Control in exchange for the right to receive the Change in Control consideration payable to other holders of Common Stock (i) which may be on such terms and conditions as apply generally to holders of Common Stock under the Change in Control documents (including, without limitation, any escrow, earn-out or other deferred consideration provisions) or such other terms and conditions as the Administrator may provide, and (ii) determined by reference to the number of Shares subject to such Awards and net of any applicable exercise price; provided that to the extent that any Awards constitute "nonqualified deferred compensation" that may not be paid upon the Change in Control under Section 409A without the imposition of taxes thereon under Section 409A, the timing of such payments shall be governed by the applicable Award Agreement (subject to any deferred consideration provisions applicable under the Change in Control documents); and provided, further, that if the amount to which a Participant would be entitled upon the settlement or exercise of such Award at the time of the Change in Control is equal to or less than zero, then such Award may be terminated without payment. An Award will be considered replaced with a substantially similar award if the Award is exchanged for an amount of cash or other property with a value equal to the amount that could have been obtained upon the settlement of such Award in such Change in Control (as determined by the Administrator), even if such cash or other property payable with respect to the unvested portion of such Award remains subject to similar vesting provisions following such Change in Control. Notwithstanding the foregoing, the Administrator will have full and final authority to determine whether an Assumption of an Award has occurred in connection with a Change in Control.

8.4 Administrative Stand Still. In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other extraordinary transaction or change affecting the Shares or the share price of Common Stock, including any Equity Restructuring or any securities offering or other similar transaction, for administrative convenience, the Administrator may refuse to permit the exercise of any Award for up to 60 days before or after such transaction.

8.5 General. Except as expressly provided in the Plan or the Administrator's action under the Plan, no Participant will have any rights due to any subdivision or consolidation of Shares of any class, dividend payment, increase or decrease in the number of Shares of any class or dissolution, liquidation, merger, or consolidation of the Company or other corporation. Except as expressly provided with respect to an Equity Restructuring under Section 8.1 or the Administrator's action under the Plan, no issuance by the Company of Shares of any class, or securities convertible into Shares of any class, will affect, and no adjustment will be made regarding, the number of Shares subject to an Award or the Award's grant or exercise price. The existence of the Plan, any Award Agreements and the Awards granted hereunder will not affect or restrict in any way the Company's right or power to make or authorize (i) any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, (ii) any merger, consolidation dissolution or liquidation of the Company or sale of Company assets or (iii) any sale or issuance of securities, including securities with rights superior to those of the Shares or securities convertible into or exchangeable for Shares. The Administrator may treat Participants and Awards (or portions thereof) differently under this Article VIII.

ARTICLE IX.
GENERAL PROVISIONS APPLICABLE TO AWARDS

9.1 Transferability. Except as the Administrator may determine or provide in an Award Agreement or otherwise for Awards other than Incentive Stock Options, Awards may not be sold, assigned, transferred, pledged or otherwise encumbered, either voluntarily or by operation of law, except for certain Designated Beneficiary designations, by will or the laws of descent and distribution, or, subject to the Administrator's consent, pursuant to a domestic relations order, and, during the life of the Participant, will be exercisable only by the Participant. Any permitted transfer of an Award hereunder shall be without consideration, except as required by Applicable Law. References to a Participant, to the extent relevant in the context, will include references to a Participant's authorized transferee that the Administrator specifically approves.

9.2 Documentation. Each Award will be evidenced in an Award Agreement, which may be written or electronic, as the Administrator determines. Each Award may contain terms and conditions in addition to those set forth in the Plan.

9.3 Discretion. Except as the Plan otherwise provides, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award to a Participant need not be identical, and the Administrator need not treat Participants or Awards (or portions thereof) uniformly.

9.4 Termination of Status. The Administrator will determine how the disability, death, retirement, an authorized leave of absence or any other change or purported change in a Participant's Service Provider status affects an Award and the extent to which, and the period during which, the Participant, the Participant's legal representative, conservator, guardian or Designated Beneficiary may exercise rights under the Award, if applicable.

9.5 Withholding. Each Participant must pay the Company, the Operating Company or any of their respective Subsidiaries or affiliates, as applicable, or make provision satisfactory to the Administrator for payment of, any taxes required by Applicable Law to be withheld in connection with such Participant's Awards by the date of the event creating the tax liability. The Company, the Operating Company or any of their respective Subsidiaries or affiliates may deduct an amount sufficient to satisfy such tax obligations based on the applicable statutory withholding rates (or such other rate as may be determined by the Company, the Operating Company or any of their respective Subsidiaries or affiliates after considering any accounting consequences or costs) from any payment of any kind otherwise due to a Participant. In the absence of a contrary determination by the Company, the Operating Company or any of their respective Subsidiaries or affiliates (or, with respect to withholding pursuant to clause (ii) below with respect to Awards held by individuals subject to Section 16 of the Exchange Act, a contrary determination by the Administrator), all tax withholding obligations will be calculated based on the minimum applicable statutory withholding rates. Subject to Section 10.8 and any Company insider trading policy (including blackout periods), Participants may satisfy such tax obligations (i) in cash, by wire transfer of immediately available funds, by check made payable to the order of the Company, provided that the Company may limit the use of the foregoing payment forms if one or more of the payment forms below is permitted, (ii) to the extent permitted by the Administrator, in whole or in part by delivery of Shares, including Shares delivered by attestation and Shares retained from the Award creating the tax obligation, valued at their fair market value on the date of delivery, (iii) subject to Section 9.10, if there is a public market for Shares at the time the tax obligations are satisfied, unless the Company otherwise determines, (A) delivery (including electronically or telephonically to the extent permitted by the Company) of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to satisfy the tax obligations, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to satisfy the tax withholding; provided that such amount is paid to the Company at such time as may be required by the Administrator, or (iv) to the extent permitted by the Company, any combination of the foregoing payment forms approved by the Administrator. Notwithstanding any other provision of the Plan, the number of Shares which may be so delivered or retained pursuant to clause (ii) of the immediately preceding sentence shall be limited to the number of Shares which have a fair market value on the date of delivery or retention no greater than the aggregate amount of such liabilities based on the maximum individual statutory withholding rate in the applicable jurisdiction at the time of such withholding (or such other rate as may be required to avoid the liability classification of the applicable award under generally accepted accounting principles in the United States of America). Subject to Section 9.10, if any tax withholding obligation will be satisfied under clause (ii) above by the Company's retention of Shares from the Award creating the tax obligation and there is a public market for Shares at the time the tax obligation is satisfied, the Company may elect to instruct any brokerage firm determined acceptable to the Company for such purpose to sell on the applicable Participant's behalf some or all of the Shares retained and to remit the proceeds of the sale to the Company or its designee, and each Participant's acceptance of an Award under the Plan will constitute the Participant's authorization to the Company and instruction and authorization to such brokerage firm to complete the transactions described in this sentence.

9.6 Amendment of Award; Repricing. The Administrator may amend, modify or terminate any outstanding Award, including by substituting another Award of the same or a different type, changing the exercise or settlement date, and converting an Incentive Stock Option to a Non-Qualified Stock Option. The Participant's consent to such action will be required unless (i) the action, taking into account any related action, does not materially and adversely affect the Participant's rights under the Award, or (ii) the change is permitted under Article VIII or pursuant to Section 10.6. Notwithstanding the foregoing or anything in the Plan to the contrary, the Administrator may, without the approval of the stockholders of the Company, reduce the exercise price per share of outstanding Options or Stock Appreciation Rights or cancel outstanding Options or Stock Appreciation Rights in exchange for cash, other Awards or Options or Stock Appreciation Rights with an exercise price per share that is less than the exercise price per share of the original Options or Stock Appreciation Rights.

9.7 Conditions on Delivery of Stock. The Company will not be obligated to deliver any Shares under the Plan or remove restrictions from Shares previously delivered under the Plan until (i) all Award conditions have been met or removed to the Company's satisfaction, (ii) as determined by the Company, all other legal matters regarding the issuance and delivery of such Shares have been satisfied, including any applicable securities laws and stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Administrator deems necessary or appropriate to satisfy any Applicable Laws. The Company's inability to obtain authority from any regulatory body having jurisdiction, which the Administrator determines is necessary to the lawful issuance and sale of any securities, will relieve the Company of any liability for failing to issue or sell such Shares as to which such requisite authority has not been obtained.

9.8 Acceleration. The Administrator may at any time provide that any Award will become immediately vested and fully or partially exercisable, free of some or all restrictions or conditions, or otherwise fully or partially realizable.

9.9 Cash Settlement. Without limiting the generality of any other provision of the Plan, the Administrator may provide, in an Award Agreement or subsequent to the grant of an Award, in its discretion, that any Award may be settled in cash, Shares or a combination thereof.

9.10 Broker-Assisted Sales. In the event of a broker-assisted sale of Shares in connection with the payment of amounts owed by a Participant under or with respect to the Plan or Awards, including amounts to be paid under the final sentence of Section 9.5: (a) any Shares to be sold through the broker-assisted sale will be sold on the day the payment first becomes due, or as soon thereafter as practicable; (b) such Shares may be sold as part of a block trade with other Participants in the Plan in which all Participants receive an average price; (c) the applicable Participant will be responsible for all broker's fees and other costs of sale, and by accepting an Award, each Participant agrees to indemnify and hold the Company harmless from any losses, costs, damages, or expenses relating to any such sale; (d) to the extent the Company or its designee receives proceeds of such sale that exceed the amount owed, the Company will pay such excess in cash to the applicable Participant as soon as reasonably practicable; (e) the Company and its designees are under no obligation to arrange for such sale at any particular price; and (f) in the event the proceeds of such sale are insufficient to satisfy the Participant's applicable obligation, the Participant may be required to pay immediately upon demand to the Company or its designee an amount in cash sufficient to satisfy any remaining portion of the Participant's obligation.

ARTICLE X.
MISCELLANEOUS

10.1 No Right to Employment or Other Status. No person will have any claim or right to be granted an Award, and the grant of an Award will not be construed as giving a Participant the right to continued employment or any other relationship with the Company, the Operating Company or any of their respective Subsidiaries or affiliates. The Company, the Operating Company and their respective Subsidiaries or affiliates expressly reserve the right at any time to dismiss or otherwise terminate their relationship with a Participant free from any liability or claim under the Plan or any Award, except as expressly provided in an Award Agreement or in the Plan.

10.2 No Rights as Stockholder; Certificates. Subject to the Award Agreement, no Participant or Designated Beneficiary will have any rights as a stockholder with respect to any Shares to be distributed under an Award until becoming the record holder of such Shares. Notwithstanding any other provision of the Plan, unless the Administrator otherwise determines or Applicable Laws require, the Company will not be required to deliver to any Participant certificates evidencing Shares issued in connection with any Award and instead such Shares may be recorded in the books of the Company (or, as applicable, its transfer agent or stock plan administrator). The Company may place legends on stock certificates issued under the Plan that the Administrator deems necessary or appropriate to comply with Applicable Laws.

10.3 Effective Date and Term of Plan. Unless earlier terminated by the Board, the Plan will become effective on the Effective Date and will remain in effect until terminated by the Administrator in accordance with the Plan. Notwithstanding anything to the contrary in the Plan, an Incentive Stock Option may not be granted under the Plan after 10 years from the earlier of (i) the date the Board adopted the Plan or (ii) the date the Company's stockholders approved the Plan. Notwithstanding anything to the contrary contained herein, if the Plan is not approved by the Company's stockholders, the Plan will not become effective and no Awards will be granted under the Plan.

10.4 Amendment of Plan. The Administrator may amend, suspend or terminate the Plan at any time; provided that no amendment to the Plan, other than an increase to the Overall Share Limit, may materially and adversely affect any Award outstanding at the time of such amendment without the affected Participant's consent. No Awards may be granted under the Plan during any suspension period or after the Plan's termination. Awards outstanding at the time of any Plan suspension or termination will continue to be governed by the Plan and the Award Agreement, as in effect before such suspension or termination. The Board will obtain stockholder approval of any Plan amendment to the extent necessary to comply with Applicable Laws (including to increase the Overall Share Limit).

10.5 Provisions for Foreign Participants. The Administrator may modify Awards granted to Participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Plan to address differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

10.6 Section 409A.

(a) General. The Company intends that all Awards be structured to comply with, or be exempt from, Section 409A, such that no adverse tax consequences, interest, or penalties under Section 409A apply. Notwithstanding anything in the Plan or any Award Agreement to the contrary, the Administrator may, without a Participant's consent, amend this Plan or Awards, adopt policies and procedures, or take any other actions (including amendments, policies, procedures and retroactive actions) as are necessary or appropriate to preserve the intended tax treatment of Awards, including any such actions intended to (A) exempt this Plan or any Award from Section 409A, or (B) comply with Section 409A, including regulations, guidance, compliance programs and other interpretative authority that may be issued after an Award's grant date. The Company makes no representations or warranties as to an Award's tax treatment under Section 409A or otherwise. The Company will have no obligation under this Section 10.6 or otherwise to avoid the taxes, penalties or interest under Section 409A with respect to any Award and will have no liability to any Participant or any other person if any Award, compensation or other benefits under the Plan are determined to constitute noncompliant "nonqualified deferred compensation" subject to taxes, penalties or interest under Section 409A.

(b) Separation from Service. If an Award constitutes “nonqualified deferred compensation” under Section 409A, any payment or settlement of such Award upon a termination of a Participant’s Service Provider relationship will, to the extent necessary to avoid taxes under Section 409A, be made only upon the Participant’s “separation from service” (within the meaning of Section 409A), whether such “separation from service” occurs upon or after the termination of the Participant’s Service Provider relationship. For purposes of this Plan or any Award Agreement relating to any such payments or benefits, references to a “termination,” “termination of employment” or like terms means a “separation from service.” Furthermore, notwithstanding any contrary provision of the Plan or any Award Agreement, any payment of “nonqualified deferred compensation” under the Plan that may be made in installments shall be treated as a right to receive a series of separate and distinct payments.

(c) Payments to Specified Employees. Notwithstanding any contrary provision in the Plan or any Award Agreement, any payment(s) of “nonqualified deferred compensation” required to be made under an Award to a “specified employee” (as defined under Section 409A and as the Administrator determines) due to his or her “separation from service” will, to the extent necessary to avoid taxes under Section 409A(a)(2)(B)(i) of the Code, be delayed for the six-month period immediately following such “separation from service” (or, if earlier, until the specified employee’s death) and will instead be paid (as set forth in the Award Agreement) on the day immediately following such six-month period or as soon as administratively practicable thereafter (without interest). Any payments of “nonqualified deferred compensation” under such Award payable more than six months following the Participant’s “separation from service” will be paid at the time or times the payments are otherwise scheduled to be made.

10.7 Limitations on Liability. Notwithstanding any other provisions of the Plan, and to the fullest extent permitted by Applicable Laws and the Company’s Certificate of Formation and bylaws, (a) no individual acting as a director, officer, other employee or agent of the Company, the Operating Company or any of their respective Subsidiaries or affiliates will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan or any Award, and such individual will not be personally liable with respect to the Plan because of any contract or other instrument executed in his or her capacity as an Administrator, director, officer, other employee or agent of the Company, the Operating Company or any of their respective Subsidiaries or affiliates and (b) the Company will indemnify and hold harmless each director, officer, other employee and agent of the Company, the Operating Company or any of their respective Subsidiaries or affiliates that has been or will be granted or delegated any duty or power relating to the Plan’s administration or interpretation, against any cost or expense (including attorneys’ fees) or liability (including any sum paid in settlement of a claim with the Administrator’s approval) arising from any act or omission concerning this Plan unless arising from such person’s own fraud or bad faith.

10.8 Lock-Up Period. The Company may, at the request of any underwriter representative or otherwise, in connection with registering the offering of any Company securities under the Securities Act, prohibit Participants from, directly or indirectly, selling or otherwise transferring any Shares or other Company securities during a period of up to 180 days following the effective date of a Company registration statement filed under the Securities Act, or such longer period as determined by the underwriter.

10.9 Data Privacy. As a condition for receiving any Award, each Participant explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this section by and among the Company, the Operating Company and their respective Subsidiaries and affiliates exclusively for implementing, administering and managing the Participant's participation in the Plan. The Company, the Operating Company and their respective Subsidiaries and affiliates may hold certain personal information about a Participant, including the Participant's name, address and telephone number; birthdate; social security, insurance number or other identification number; salary; nationality; job title(s); any Shares held in the Company, the Operating Company or their respective Subsidiaries and affiliates; and Award details, to implement, manage and administer the Plan and Awards (the "**Data**"). The Company, the Operating Company and their respective Subsidiaries and affiliates may transfer the Data amongst themselves as necessary to implement, administer and manage a Participant's participation in the Plan, and the Company, the Operating Company and their respective Subsidiaries and affiliates may transfer the Data to third parties assisting the Company with the Plan implementation, administration and management. These recipients may be located in the Participant's country, or elsewhere, and the Participant's country may have different data privacy laws and protections than the recipients' country. By accepting an Award, each Participant authorizes such recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, to implement, administer and manage the Participant's participation in the Plan, including any required Data transfer to a broker or other third party with whom the Company or the Participant may elect to deposit any Shares. The Data related to a Participant will be held only as long as necessary to implement, administer, and manage the Participant's participation in the Plan. A Participant may, at any time, view the Data that the Company holds regarding such Participant, request additional information about the storage and processing of the Data regarding such Participant, recommend any necessary corrections to the Data regarding the Participant or refuse or withdraw the consents in this Section 10.9 in writing, without cost, by contacting the local human resources representative. If the Participant refuses or withdraws the consents in this Section 10.9, the Company may cancel Participant's ability to participate in the Plan and, in the Administrator's discretion, the Participant may forfeit any outstanding Awards. For more information on the consequences of refusing or withdrawing consent, Participants may contact their local human resources representative.

10.10 Severability. If any portion of the Plan or any action taken under it is held illegal or invalid for any reason, the illegality or invalidity will not affect the remaining parts of the Plan, and the Plan will be construed and enforced as if the illegal or invalid provisions had been excluded, and the illegal or invalid action will be null and void.

10.11 Governing Documents. If any contradiction occurs between the Plan and any Award Agreement or other written agreement between a Participant and the Company or the Operating Company (or any of their respective Subsidiaries or Affiliates) that the Administrator has approved, the Plan will govern, unless it is expressly specified in such Award Agreement or other written document that a specific provision of the Plan will not apply.

10.12 Governing Law. The Plan and all Awards will be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding any state's choice-of-law principles requiring the application of a jurisdiction's laws other than the State of Delaware.

10.13 Clawback Provisions. All Awards (including, without limitation, any proceeds, gains or other economic benefit actually or constructively received by Participant upon any receipt or exercise of any Award or upon the receipt or sale of any Shares underlying the Award) shall be subject to the provisions of any clawback policy implemented by the Company, including, without limitation, the Company's Policy for Recovery of Erroneously Awarded Compensation and any other clawback policy adopted to comply with Applicable Laws, as and to the extent set forth in such clawback policy or the Award Agreement.

10.14 Titles and Headings. The titles and headings in the Plan are for convenience of reference only and, if there is any conflict, the Plan's text, rather than such titles or headings, will control.

10.15 Conformity to Laws. Participant acknowledges that the Plan is intended to conform to the extent necessary with Applicable Laws. Notwithstanding anything herein to the contrary, the Plan and all Awards will be administered only in conformance with Applicable Laws. To the extent Applicable Laws permit, the Plan and all Award Agreements will be deemed amended as necessary to conform to Applicable Laws.

10.16 Relationship to Other Benefits. No payment under the Plan will be taken into account in determining any benefits under any pension, retirement, savings, profit sharing, group insurance, welfare or other benefit plan of the Company, the Operating Company or any of their respective Subsidiaries or affiliates except as expressly provided in writing in such other plan or an agreement thereunder.

10.17 Grant of Awards to Certain Eligible Service Providers. The Company may provide through the establishment of a formal written policy (which shall be deemed a part of this Plan) or otherwise for the method by which Common Stock or other securities of the Company may be issued and by which such Common Stock or other securities and/or payment therefor may be exchanged or contributed among the Company, the Operating Company, or any of Affiliates, or may be returned to the Company upon any forfeiture of Common Stock or other securities by the eligible Service Provider.

ARTICLE XI. DEFINITIONS

As used in the Plan, the following words and phrases will have the following meanings:

11.1 “**Administrator**” means the Board or a Committee to the extent that the Board’s powers or authority under the Plan have been delegated to such Committee.

11.2 “**Affiliate**” means, with respect to the Company or the Operating Company, any other person or entity that, directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with the Company or the Operating Company, as applicable, including (i) with respect to the Company, the Operating Company, (ii) any Subsidiary of the Company or the Operating Company, as applicable, and (iii) any affiliate of the Company or the Operating Company, as applicable, that is a domestic eligible entity that is disregarded, under Treasury Regulation Section 301.7701-3, as an entity separate from either the Company or the Operating Company, as applicable (or a Subsidiary thereof). As used in this definition, “control”, as used with respect to any person or entity, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of the controlled person or entity whether through ownership of voting securities, by contract or otherwise.

11.3 “**Applicable Laws**” means any applicable law, including without limitation: (a) provisions of the Code, the Securities Act, the Exchange Act and any rules or regulations thereunder; (b) corporate, securities, tax or other laws, statutes, rules, requirements or regulations, whether U.S. or non-U.S. federal, state or local; and (c) rules of any securities exchange or automated quotation system on which the Shares are listed, quoted or traded.

11.4 “**Award**” means, individually or collectively, a grant under the Plan of Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Dividend Equivalents, or Other Stock or Cash Based Awards.

11.5 “**Award Agreement**” means a written agreement evidencing an Award, which may be electronic, that contains such terms and conditions as the Administrator determines, consistent with and subject to the terms and conditions of the Plan.

11.6 “**Board**” means the Board of Directors of the Company.

11.7 “**Change in Control**” means and includes each of the following:

(a) A transaction or series of transactions (other than an offering of Common Stock to the general public through a registration statement filed with the Securities and Exchange Commission or a transaction or series of transactions that meets the requirements of clauses (i) and (ii) of subsection (c) below) whereby any “person” or related “group” of “persons” (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) (other than the Company, any of its Affiliates, an employee benefit plan maintained by the Company or any of its Affiliates or a “person” that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Company) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company that results in such “person” or related “group” of “persons” (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) possessing more than 50% of the total combined voting power of the Company’s securities outstanding immediately after such acquisition; or

(b) During any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new Director(s) (other than a Director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in subsections (a) or (c)) whose election by the Board or nomination for election by the Company’s stockholders was approved by a vote of at least two-thirds of the Directors then still in office who either were Directors at the beginning of the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company’s assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) which results in the Company’s voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company’s assets or otherwise succeeds to the business of the Company (the Company or such person, the “**Successor Entity**”)) directly or indirectly, at least a majority of the combined voting power of the Successor Entity’s outstanding voting securities immediately after the transaction, and

(ii) after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; provided, however, that no person or group shall be treated for purposes of this clause (ii) as beneficially owning 50% or more of the combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction.

Notwithstanding the foregoing, if a Change in Control constitutes a payment event with respect to any Award (or portion of any Award) that provides for the deferral of compensation that is subject to Section 409A, to the extent required to avoid the imposition of additional taxes under Section 409A, the transaction or event described in subsection (a), (b) or (c) with respect to such Award (or portion thereof) shall only constitute a Change in Control for purposes of the payment timing of such Award (or portion thereof) if such transaction also constitutes a “change in control event,” as defined in Treasury Regulation Section 1.409A-3(i)(5).

The Administrator shall have full and final authority, which shall be exercised in its discretion, to determine conclusively whether a Change in Control has occurred pursuant to the above definition, the date of the occurrence of such Change in Control and any incidental matters relating thereto; provided that any exercise of authority in conjunction with a determination of whether a Change in Control is a “change in control event” as defined in Treasury Regulation Section 1.409A-3(i)(5) shall be consistent with such regulation.

11.8 “**Class A Common Stock**” means the Class A common stock of the Company, par value of \$0.0001 per share.

11.9 “**Class B Common Stock**” means the Class B common stock of the Company, par value of \$0.0001 per share.

11.10 “**Code**” means the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

11.11 “**Committee**” means one or more committees or subcommittees of the Board, which may include one or more Company directors or executive officers, to the extent Applicable Laws permit. To the extent required to comply with the provisions of Rule 16b-3, it is intended that each member of the Committee will be, at the time the Committee takes any action with respect to an Award that is subject to Rule 16b-3, a “non-employee director” within the meaning of Rule 16b-3; however, a Committee member’s failure to qualify as a “non-employee director” within the meaning of Rule 16b-3 will not invalidate any Award granted by the Committee that is otherwise validly granted under the Plan.

11.12 “**Common Stock**” means the Class A Common Stock or Class B Common Stock of the Company.

11.13 “**Company**” means X-Energy, Inc., a Delaware corporation, or any successor.

11.14 “**Consultant**” means any consultant or advisor engaged by the Company, the Operating Company or any of their respective Affiliates to render services to such entity, in each case that can be granted an Award that is eligible to be registered on a Form S-8 Registration Statement.

11.15 “**Designated Beneficiary**” means the beneficiary or beneficiaries the Participant designates, in a manner the Administrator determines, to receive amounts due or exercise the Participant’s rights if the Participant dies or becomes incapacitated. Without a Participant’s effective designation, “Designated Beneficiary” will mean the Participant’s estate.

11.16 “**Director**” means a Board member.

11.17 “**Dividend Equivalents**” means a right granted to a Participant under the Plan to receive the equivalent value (in cash or Shares) of dividends paid on Shares.

11.18 “**Effective Date**” means the day prior to the Public Trading Date.

11.19 “**Employee**” means any employee of the Company, the Operating Company or any of their respective Affiliates.

11.20 “**Equity Restructuring**” means, as determined by the Administrator, a non-reciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off or recapitalization, or a large, nonrecurring cash dividend, that affects the Shares (or other securities of the Company) or the share price of Common Stock (or other securities of the Company) and causes a change in the per share value of the Common Stock underlying outstanding Awards.

11.21 “**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

11.22 “**Fair Market Value**” means, as of any date, the value of a Share determined as follows: (a) if the Class A Common Stock is listed on any established stock exchange, its Fair Market Value will be the closing sales price for such Class A Common Stock as quoted on such exchange for such date, or if no sale occurred on such date, the last day preceding such date during which a sale occurred, as reported in *The Wall Street Journal* or another source the Administrator deems reliable; (b) if the Class A Common Stock is not traded on a stock exchange but is quoted on a national market or other quotation system, the closing sales price on such date, or if no sales occurred on such date, then on the last date preceding such date during which a sale occurred, as reported in *The Wall Street Journal* or another source the Administrator deems reliable; or (c) without an established market for the Class A Common Stock, the Administrator will determine the Fair Market Value in its discretion.

Notwithstanding the foregoing, with respect to any Award granted on the pricing date of the Company’s initial public offering, the Fair Market Value shall mean the initial public offering price of a Share as set forth in the Company’s final prospectus relating to its initial public offering filed with the Securities and Exchange Commission.

11.23 “**Fully-Diluted Shares**” means, as of any given date, (i) shares of Class A Common Stock and Class B Common Stock outstanding on such date, (ii) shares of Common Stock subject to compensatory equity awards (including stock options and restricted stock units) outstanding on such date, with (A) performance-based compensatory equity awards calculated at the “target” level of performance and (B) shares of Common Stock subject to stock options calculated on a “net exercised” basis as of the applicable date, assuming shares are surrendered having a Fair Market Value on such date equal to the exercise price of such options (rounded up to the nearest whole share, and determined without regard to the vested status of the stock option) and (iii) shares issuable upon the exercise or settlement of other equity securities with respect to which shares of Common Stock have not actually been issued and the conversion of all convertible securities into shares of Common Stock, in each case, counted on an as-converted-to shares of Common Stock basis.

11.24 “**Greater Than 10% Stockholder**” means an individual then owning (within the meaning of Section 424(d) of the Code) more than 10% of the total combined voting power of all classes of stock of the Company or its parent or subsidiary corporation, as defined in Section 424(e) and (f) of the Code, respectively.

11.25 “**Incentive Stock Option**” means an Option intended to qualify as an “incentive stock option” as defined in Section 422 of the Code.

11.26 “**Non-Qualified Stock Option**” means an Option, or portion thereof, not intended or not qualifying as an Incentive Stock Option.

11.27 “**Option**” means an option to purchase Shares, which will either be an Incentive Stock Option or a Non-Qualified Stock Option.

11.28 “**Other Stock or Cash Based Awards**” means cash awards, awards of Shares, and other awards valued wholly or partially by referring to, or are otherwise based on, Shares or other property awarded to a Participant under Article VII.

11.29 “**Overall Share Limit**” means the sum of (a) [●] Shares, and (b) an annual increase on the first day of each calendar year beginning on and including January 1, 2027 and ending on and including January 1, 2036 equal to the lesser of (i) a number of Shares equal to 5% of the aggregate number of shares of Class A Common Stock and Class B Common Stock outstanding on the final day of the immediately preceding calendar year, and (ii) such smaller number of Shares as is determined by the Board.

11.30 “**Participant**” means a Service Provider who has been granted an Award.

11.31 “**Performance Criteria**” mean the criteria (and adjustments) that the Administrator may select for an Award to establish performance goals for a performance period, which may include the following: net earnings or losses (either before or after one or more of interest, taxes, depreciation, amortization, and non-cash equity-based compensation expense); gross or net sales or revenue or sales or revenue growth; net income (either before or after taxes) or adjusted net income; profits (including but not limited to gross profits, net profits, profit growth, net operation profit or economic profit), profit return ratios or operating margin; budget or operating earnings (either before or after taxes or before or after allocation of corporate overhead and bonus); cash flow (including operating cash flow and free cash flow or cash flow return on capital); return on assets; return on capital or invested capital; cost of capital; return on stockholders’ equity; total stockholder return; return on sales; costs, reductions in costs and cost control measures; expenses; working capital; earnings or loss per share; adjusted earnings or loss per share; price per share or dividends per share (or appreciation in or maintenance of such price or dividends); regulatory achievements or compliance; implementation, completion or attainment of objectives relating to research, development, regulatory, commercial, or strategic milestones or developments; market share; economic value or economic value added models; division, group or corporate financial goals; customer satisfaction/growth; customer service; employee satisfaction; recruitment and maintenance of personnel; human capital management (including diversity and inclusion); supervision of litigation and other legal matters; strategic partnerships and transactions; financial ratios (including those measuring liquidity, activity, profitability or leverage); debt levels or reductions; sales-related goals; financing and other capital raising transactions; cash on hand; acquisition activity; investment sourcing activity; and marketing initiatives, any of which may be measured in absolute terms or as compared to any incremental increase or decrease. Such performance goals also may be based solely by reference to the Company’s performance or the performance of the Operating Company or any of their respective Subsidiaries or affiliates, division, business segment or business unit of the Company, the Operating Company or any of their respective Subsidiaries or affiliates, or based upon performance relative to performance of other companies or upon comparisons of any of the indicators of performance relative to performance of other companies.

11.32 “**Plan**” means this 2026 Equity Incentive Plan.

11.33 “**Public Trading Date**” means the first date upon which the Class A Common Stock is listed (or approved for listing) upon notice of issuance on any securities exchange or designated (or approved for designation) upon notice of issuance as a national market security on an interdealer quotation system.

11.34 “**Restricted Stock**” means Shares awarded to a Participant under Article VI subject to certain vesting conditions and other restrictions.

11.35 “**Restricted Stock Unit**” means an unfunded, unsecured right to receive, on the applicable settlement date, one Share or an amount in cash or other consideration determined by the Administrator to be of equal value as of such settlement date awarded to a Participant under Article VI subject to certain vesting conditions and other restrictions.

11.36 “**Rule 16b-3**” means Rule 16b-3 promulgated under the Exchange Act.

11.37 “**Section 409A**” means Section 409A of the Code and all regulations, guidance, compliance programs and other interpretative authority thereunder.

11.38 “**Securities Act**” means the Securities Act of 1933, as amended.

11.39 “**Service Provider**” means an Employee, Consultant or Director.

11.40 “**Share**” means a share of Class A Common Stock.

11.41 “**Stock Appreciation Right**” means a stock appreciation right granted under Article V.

11.42 “**Subsidiary**” means any entity (other than the Company), whether domestic or foreign, in an unbroken chain of entities beginning with the Company if each of the entities other than the last entity in the unbroken chain beneficially owns, at the time of the determination, securities or interests representing at least 50% of the total combined voting power of all classes of securities or interests in one of the other entities in such chain.

11.43 “**Substitute Awards**” means Awards granted or Shares issued by the Company in assumption of, or in substitution or exchange for, awards previously granted, or the right or obligation to make future awards, in each case by a company acquired by the Company or any Affiliate or with which the Company or any Affiliate combines.

11.44 “**Termination of Service**” means the date the Participant ceases to be a Service Provider.

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X-ENERGY, INC.
2026 EQUITY INCENTIVE PLAN

RESTRICTED STOCK UNIT GRANT NOTICE

X-Energy, Inc., a Delaware corporation (the “*Company*”), has granted to the participant listed below (“*Participant*”) the Restricted Stock Units (the “*RSUs*”) described in this Restricted Stock Unit Grant Notice (this “*Grant Notice*”), subject to the terms and conditions of the X-Energy, Inc. 2026 Equity Incentive Plan (as amended from time to time, the “*Plan*”) and the Restricted Stock Unit Agreement attached hereto as **Exhibit A** (the “*Agreement*”), both of which are incorporated into this Grant Notice by reference. Capitalized terms not specifically defined in this Grant Notice or the Agreement have the meanings given to them in the Plan.

Participant: [To be specified]
Grant Date: [To be specified]
Number of RSUs: [To be specified]
Vesting Commencement Date: [To be specified]
Vesting Schedule: [To be specified]

By accepting (whether in writing, electronically or otherwise) the RSUs, Participant agrees to be bound by the terms of this Grant Notice, the Plan and the Agreement. Participant has reviewed the Plan, this Grant Notice and the Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, this Grant Notice and the Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement.

X-ENERGY, INC.

PARTICIPANT

By: _____
Name: _____
Title: _____

Name: _____

RESTRICTED STOCK UNIT AGREEMENT

Capitalized terms not specifically defined in this Restricted Stock Unit Agreement (this “*Agreement*”) have the meanings specified in the Grant Notice or, if not defined in the Grant Notice, in the Plan.

ARTICLE I. GENERAL

- 1.1 Award of RSUs. The Company has granted the RSUs to Participant effective as of the Grant Date set forth in the Grant Notice (the “*Grant Date*”). Each RSU represents the right to receive one Share as set forth in this Agreement. Participant will have no right to the distribution of any Shares until the time (if ever) the RSUs have vested.
- 1.2 Incorporation of Terms of Plan. The RSUs are subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan will control.
- 1.3 Unsecured Promise. The RSUs will at all times prior to settlement represent an unsecured Company obligation payable only from the Company’s general assets.

ARTICLE II. VESTING; FORFEITURE AND SETTLEMENT

- 2.1 Vesting; Forfeiture. The RSUs will vest according to the vesting schedule in the Grant Notice except that any fraction of an RSU that would otherwise be vested will be accumulated and will vest only when a whole RSU has accumulated. In the event of Participant’s Termination of Service for any reason, all unvested RSUs will immediately and automatically be cancelled and forfeited, except as otherwise determined by the Administrator or provided in a binding written agreement between Participant and the Company (after taking into consideration any accelerated vesting which may occur in connection with such Termination of Service).
- 2.2 Settlement.
- (a) The RSUs will, to the extent vested, be paid in Shares as soon as administratively practicable after the vesting of the applicable RSU, but in no event later than March 15 of the year following the year in which the RSU’s vesting date occurs.

(b) Notwithstanding the foregoing, the Company may delay any payment under this Agreement that the Company reasonably determines would violate Applicable Law until the earliest date the Company reasonably determines the making of the payment will not cause such a violation (in accordance with Treasury Regulation Section 1.409A-2(b)(7)(ii)); provided the Company reasonably believes the delay will not result in the imposition of excise taxes under Section 409A.

ARTICLE III. TAXATION AND TAX WITHHOLDING

- 3.1 Representation. Participant represents to the Company that Participant has reviewed with Participant’s own tax advisors the tax consequences of this award of RSUs (the “*Award*”) and the transactions contemplated by the Grant Notice and this Agreement. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents.

3.2 Tax Withholding.

(a) Subject to Section 3.2(b), payment of the withholding tax obligations with respect to the Award may be by any of the following, or a combination thereof, as determined by the Company:

(i) Cash or check;

(ii) In whole or in part by delivery of Shares, including Shares delivered by attestation and Shares retained from the Award creating the tax obligation, valued at their Fair Market Value on the date of delivery;

(iii) Subject to Section 9.10 of the Plan, delivery (including electronically or telephonically to the extent permitted by the Company) by Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company that Participant has placed a market sell order with such broker with respect to Shares then-issuable upon settlement of the Award, and that the broker has been directed to deliver promptly to the Company funds sufficient to satisfy the applicable tax withholding obligations; provided, that payment of such proceeds is then made to the Company at such time as may be required by the Administrator; or

(iv) In whole or in part by the Company withholding of Shares otherwise vesting or issuable under this Award in satisfaction of any applicable withholding tax obligations.

(b) Unless the Company otherwise determines, the Company shall withhold, or cause to be withheld, Shares otherwise vesting or issuable under this Award in satisfaction of any applicable withholding tax obligations.

(c) Subject to Section 9.5 of the Plan, the applicable tax withholding obligation will be determined based on Participant's Applicable Withholding Rate. Participant's "**Applicable Withholding Rate**" shall mean (i) if Participant is subject to Section 16 of the Exchange Act, the greater of (A) the minimum applicable statutory tax withholding rate or (B) with Participant's consent, the maximum individual tax withholding rate permitted under the rules of the applicable taxing authority for tax withholding attributable to the underlying transaction, or (ii) if Participant is not subject to Section 16 of the Exchange Act, the minimum applicable statutory tax withholding rate or such other higher rate approved by the Company; *provided, however*, that (x) in no event shall Participant's Applicable Withholding Rate exceed the maximum individual statutory tax rate in the applicable jurisdiction at the time of such withholding (or such other rate as may be required to avoid the liability classification of the applicable award under generally accepted accounting principles in the United States of America); and (y) the number of Shares tendered or withheld, if applicable, shall be rounded up to the nearest whole Share sufficient to cover the applicable tax withholding obligation, to the extent rounding up to the nearest whole Share does not result in the liability classification of the RSUs under generally accepted accounting principles.

(d) Participant acknowledges that Participant is ultimately liable and responsible for all taxes owed in connection with the RSUs, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the RSUs. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or payment of the RSUs or the subsequent sale of Shares. The Company and its Subsidiaries do not commit and are under no obligation to structure the RSUs to reduce or eliminate Participant's tax liability.

**ARTICLE IV.
OTHER PROVISIONS**

4.1 Adjustments. Participant acknowledges that the RSUs and the Shares subject to the RSUs are subject to adjustment, modification and/or termination in certain events as provided in this Agreement and the Plan.

4.2 Clawback. The Award and the Shares issuable hereunder shall be subject to any clawback or recoupment policy in effect on the Grant Date or as may be adopted or maintained by the Company following the Grant Date, including the Company's Policy for Recovery of Erroneously Awarded Compensation.

4.3 Notices. Any notice to be given under the terms of this Agreement to the Company must be in writing and addressed to the Company in care of the Company's Chief Legal Officer at the Company's principal office or the Chief Legal Officer's then-current email address or facsimile number. Any notice to be given under the terms of this Agreement to Participant must be in writing and addressed to Participant (or, if Participant is then deceased, to the Designated Beneficiary) at Participant's last known mailing address, email address or facsimile number in the Company's personnel files. By a notice given pursuant to this Section, either party may designate a different address for notices to be given to that party. Any notice will be deemed duly given when actually received, when sent by email, when sent by certified mail (return receipt requested) and deposited with postage prepaid in a post office or branch post office regularly maintained by the United States Postal Service, when delivered by a nationally recognized express shipping company or upon receipt of a facsimile transmission confirmation.

4.4 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

4.5 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

4.6 Successors and Assigns. The Company may assign any of its rights under this Agreement to a single or multiple assignees, and this Agreement will inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in this Agreement or the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

4.7 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the Grant Notice, this Agreement and the RSUs will be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent Applicable Laws permit, this Agreement will be deemed amended as necessary to conform to such applicable exemptive rule.

4.8 Entire Agreement; Amendment. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board; provided, however, that except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall materially and adversely affect the RSUs without the prior written consent of Participant.

4.9 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

4.10 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and may not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the RSUs, and rights no greater than the right to receive cash or the Shares as a general unsecured creditor with respect to the RSUs, as and when settled pursuant to the terms of this Agreement.

4.11 Not a Contract of Employment. Nothing in the Plan, the Grant Notice or this Agreement confers upon Participant any right to continue in the employ or service of the Company or any Subsidiary or interferes with or restricts in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

4.12 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which will be deemed an original and all of which together will constitute one instrument.

* * * * *

X-ENERGY, INC.
2026 EQUITY INCENTIVE PLAN

STOCK OPTION GRANT NOTICE

X-Energy, Inc., a Delaware corporation (the “*Company*”) has granted to Participant listed below (“*Participant*”) the stock option (the “*Option*”) described in this Stock Option Grant Notice (the “*Grant Notice*”), subject to the terms and conditions of the X-Energy, Inc. 2026 Equity Incentive Plan (as amended from time to time, the “*Plan*”) and the Stock Option Agreement attached hereto as **Exhibit A** (the “*Agreement*”), both of which are incorporated into this Grant Notice by reference. Capitalized terms not specifically defined in this Grant Notice or the Agreement have the meanings given to them in the Plan.

Participant:	[To be specified]
Grant Date:	[To be specified]
Exercise Price per Share:	[To be specified]
Shares Subject to the Option:	[To be specified]
Final Expiration Date:	[To be specified]
Vesting Commencement Date:	[To be specified]
Vesting Schedule:	[To be specified]
Type of Option	[Incentive Stock Option]/[Non-Qualified Stock Option]

By accepting (whether in writing, electronically or otherwise) the Option, Participant agrees to be bound by the terms of this Grant Notice, the Plan and the Agreement. Participant has reviewed the Plan, this Grant Notice and the Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, this Grant Notice and the Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement.

X-ENERGY, INC.	PARTICIPANT
By: _____	Name: _____
Name: _____	
Title: _____	

STOCK OPTION AGREEMENT

Capitalized terms not specifically defined in this Agreement have the meanings specified in the Grant Notice or, if not defined in the Grant Notice, in the Plan.

ARTICLE I. GENERAL

- 1.1 Grant of Option. The Company has granted to Participant the Option effective as of the grant date set forth in the Grant Notice (the “*Grant Date*”).
- 1.2 Incorporation of Terms of Plan. The Option is subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan will control.

ARTICLE II. PERIOD OF EXERCISABILITY

- 2.1 Commencement of Exercisability. The Option will vest and become exercisable according to the vesting schedule in the Grant Notice (the “*Vesting Schedule*”) except that any fraction of a Share as to which the Option would be vested or exercisable will be accumulated and will vest and become exercisable only when a whole Share has accumulated. Notwithstanding anything in the Grant Notice, the Plan or this Agreement to the contrary, unless the Administrator otherwise determines, the Option will immediately expire and be forfeited as to any portion that is not vested and exercisable as of Participant’s Termination of Service for any reason (after taking into consideration any accelerated vesting and exercisability which may occur in connection with such Termination of Service).
- 2.2 Duration of Exercisability. The Vesting Schedule is cumulative. Any portion of the Option which vests and becomes exercisable will remain vested and exercisable until the Option expires. The Option will be forfeited immediately upon its expiration.
- 2.3 Expiration of Option. The Option may not be exercised to any extent by anyone after, and will expire on, the first of the following to occur:
- (a) The final expiration date in the Grant Notice; *provided*, however, such final expiration date may be extended pursuant to Section 5.3 of the Plan;
 - (b) Except as the Administrator may otherwise approve, the expiration of three months from the date of Participant’s Termination of Service, unless Participant’s Termination of Service is for Cause (as defined below) or by reason of Participant’s death or Disability (as defined below);
 - (c) Except as the Administrator may otherwise approve, the expiration of one year from the date of Participant’s Termination of Service by reason of Participant’s death or Disability; and
 - (d) Except as the Administrator may otherwise approve, Participant’s Termination of Service for Cause.

2.4 Certain Definitions.

(a) “**Cause**” shall mean, except as may otherwise be provided in Participant’s employment or service agreement with the Company or an Affiliate thereof to the extent such agreement is in effect at the relevant time and contains a definition of Cause, with respect to any Participant (as determined by the Administrator in its sole discretion): (i) the willful failure of Participant to substantially perform the duties of his or her services to the Company or any of its Affiliates (other than any such failure due to Participant’s death or Disability); (ii) Participant’s engaging in fraud, willful misconduct, or dishonesty that has caused or is reasonably expected to result in injury to the Company or any of its Affiliates; (iii) Participant’s breach of any fiduciary duty owed to the Company or the Subsidiaries; (iv) Participant’s conviction of, or entering a plea of guilty or nolo contendere to, a crime that constitutes a felony or involving moral turpitude; (v) Participant’s violation or breach of any material written Company policy or rule, or Participant’s violation or breach of any of his obligations under any material written agreement or covenant with the Company or any of its Affiliates; or (vi) Participant’s failure to cooperate, if requested by the Company or any of its Affiliates, with any investigation or inquiry into Participant’s or the Company’s or any of its Affiliates’ business practices, whether internal or external, including, but not limited to, Participant’s refusal to be deposed or to provide testimony at any trial or inquiry. A termination for Cause shall include a determination by the Administrator to that effect following the termination of Participant’s services to the Company for any reason that would have justified a termination by the Company for Cause.

(b) “**Disability**” shall mean a permanent and total disability under Section 22(e)(3) of the Code.

ARTICLE III. EXERCISE OF OPTION

3.1 Person Eligible to Exercise. During Participant’s lifetime, only Participant may exercise the Option. After Participant’s death, any exercisable portion of the Option may, prior to the time the Option expires, be exercised by Participant’s Designated Beneficiary as provided in the Plan.

3.2 Partial Exercise. Any exercisable portion of the Option or the entire Option, if then wholly exercisable, may be exercised, in whole or in part, according to the procedures in the Plan at any time prior to the time the Option or portion thereof expires, except that the Option may only be exercised for whole Shares.

3.3 Tax Withholding; Exercise Price.

(a) Subject to Section 3.3(b) and 3.3(c), payment of the exercise price and withholding tax obligations with respect to the Option may be by any of the following, or a combination thereof, as determined by the Company:

(i) Cash or check;

(ii) In whole or in part by delivery of Shares, including Shares delivered by attestation and Shares retained from the Option creating the tax obligation, valued at their Fair Market Value on the date of delivery;

(iii) Subject to Section 9.10 of the Plan, delivery (including electronically or telephonically to the extent permitted by the Company) by Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company that Participant has placed a market sell order with such broker with respect to Shares then-issuable upon exercise of the Option, and that the broker has been directed to deliver promptly to the Company funds sufficient to satisfy the applicable exercise price and/or tax withholding obligations; provided, that payment of such proceeds is then made to the Company at such time as may be required by the Administrator; or

(iv) In whole or in part by the Company withholding of Shares otherwise issuable upon exercise of this Option.

(b) Unless the Company otherwise determines, the Company shall withhold, or cause to be withheld, Shares otherwise issuable under this Option in satisfaction of any exercise price and/or applicable withholding tax obligations.

(c) Subject to Section 9.5 of the Plan, the applicable tax withholding obligation will be determined based on Participant's Applicable Withholding Rate. Participant's "***Applicable Withholding Rate***" shall mean (i) if Participant is subject to Section 16 of the Exchange Act, the greater of (A) the minimum applicable statutory tax withholding rate or (B) with Participant's consent, the maximum individual tax withholding rate permitted under the rules of the applicable taxing authority for tax withholding attributable to the underlying transaction, or (ii) if Participant is not subject to Section 16 of the Exchange Act, the minimum applicable statutory tax withholding rate or such other higher rate approved by the Company; *provided, however*, that (x) in no event shall Participant's Applicable Withholding Rate exceed the maximum individual statutory tax rate in the applicable jurisdiction at the time of such withholding (or such other rate as may be required to avoid the liability classification of the applicable award under generally accepted accounting principles in the United States of America); and (y) the number of Shares tendered or withheld, if applicable, shall be rounded up to the nearest whole Share sufficient to cover the applicable tax withholding obligation, to the extent rounding up to the nearest whole Share does not result in the liability classification of the Option under generally accepted accounting principles.

(d) Participant acknowledges that Participant is ultimately liable and responsible for the exercise price and all taxes owed in connection with the Option (and, with respect to taxes, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the Option). Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or exercise of the Option or the subsequent sale of Shares. The Company and the Subsidiaries do not commit and are under no obligation to structure the Option to reduce or eliminate Participant's tax liability.

ARTICLE IV. OTHER PROVISIONS

4.1 Adjustments. Participant acknowledges that the Option is subject to adjustment, modification and termination in certain events as provided in this Agreement and the Plan.

4.2 Clawback. The Option and the Shares issuable hereunder shall be subject to any clawback or recoupment policy in effect on the Grant Date or as may be adopted or maintained by the Company following the Grant Date, including the Company's Policy for Recovery of Erroneously Awarded Compensation.

4.3 Notices. Any notice to be given under the terms of this Agreement to the Company must be in writing and addressed to the Company in care of the Company's Chief Legal Officer at the Company's principal office or the Chief Legal Officer's then-current email address or facsimile number. Any notice to be given under the terms of this Agreement to Participant must be in writing and addressed to Participant (or, if Participant is then deceased, to the Designated Beneficiary) at Participant's last known mailing address, email address or facsimile number in the Company's personnel files. By a notice given pursuant to this Section, either party may designate a different address for notices to be given to that party. Any notice will be deemed duly given when actually received, when sent by email, when sent by certified mail (return receipt requested) and deposited with postage prepaid in a post office or branch post office regularly maintained by the United States Postal Service, when delivered by a nationally recognized express shipping company or upon receipt of a facsimile transmission confirmation.

4.4 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

4.5 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

4.6 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement will inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in this Agreement or the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

4.7 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the Grant Notice, this Agreement and the Option will be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent Applicable Laws permit, this Agreement will be deemed amended as necessary to conform to such applicable exemptive rule.

4.8 Entire Agreement; Amendment. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board; provided, however, that except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall materially and adversely affect the Option without the prior written consent of Participant.

4.9 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

4.10 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and may not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the Option, and rights no greater than the right to receive the Shares as a general unsecured creditor with respect to the Option, as and when exercised pursuant to the terms hereof.

4.11 Not a Contract of Employment. Nothing in the Plan, the Grant Notice or this Agreement confers upon Participant any right to continue in the employ or service of the Company or any Subsidiary or interferes with or restricts in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

4.12 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which will be deemed an original and all of which together will constitute one instrument.

4.13 Incentive Stock Options. If the Option is designated as an Incentive Stock Option:

(a) Participant acknowledges that to the extent the aggregate fair market value of shares (determined as of the time the option with respect to the shares is granted) with respect to which stock options intended to qualify as “incentive stock options” under Section 422 of the Code, including the Option, are exercisable for the first time by Participant during any calendar year exceeds \$100,000 or if for any other reason such stock options do not qualify or cease to qualify for treatment as “incentive stock options” under Section 422 of the Code, such stock options (including the Option) will be treated as non-qualified stock options. Participant further acknowledges that the rule set forth in the preceding sentence will be applied by taking the Option and other stock options into account in the order in which they were granted, as determined under Section 422(d) of the Code. Participant also acknowledges that if the Option is exercised more than three months after Participant’s Termination of Service, other than by reason of death or Disability, the Option will be taxed as a Non-Qualified Stock Option.

(b) Participant will give prompt written notice to the Company of any disposition or other transfer of any Shares acquired under this Agreement if such disposition or other transfer is made (i) within two years from the Grant Date or (ii) within one year after the transfer of such Shares to Participant. Such notice will specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by Participant in such disposition or other transfer.

* * * * *

X-ENERGY, INC.
2026 EMPLOYEE STOCK PURCHASE PLAN

ARTICLE I.
PURPOSE

The purposes of this X-Energy, Inc. 2026 Employee Stock Purchase Plan (as it may be amended or restated from time to time, the “*Plan*”) are to assist Eligible Employees of X-Energy, Inc., a Delaware corporation (the “*Company*”), X-Energy Reactor Company, LLC (the “*Operating Company*”) and its other Designated Subsidiaries in acquiring a stock ownership interest in the Company.

The Plan consists of two components: (i) the Section 423 Component and (ii) the Non-Section 423 Component. The Section 423 Component is intended to qualify as an “employee stock purchase plan” under Section 423 of the Code and shall be administered, interpreted and construed in a manner consistent with the requirements of Section 423 of the Code. The Non-Section 423 Component authorizes the grant of rights which need not qualify as rights granted pursuant to an “employee stock purchase plan” under Section 423 of the Code. Rights granted under the Non-Section 423 Component shall be granted pursuant to separate Offerings containing such sub-plans, appendices, rules or procedures as may be adopted by the Administrator and designed to achieve tax, securities laws or other objectives for Eligible Employees and Designated Subsidiaries but shall not be intended to qualify as an “employee stock purchase plan” under Section 423 of the Code. Except as otherwise determined by the Administrator or provided herein, the Non-Section 423 Component will operate and be administered in the same manner as the Section 423 Component. Offerings intended to be made under the Non-Section 423 Component will be designated as such by the Administrator at or prior to the time of such Offering.

For purposes of this Plan, the Administrator may designate separate Offerings under the Plan in which Eligible Employees will participate. The terms of these Offerings need not be identical, even if the dates of the applicable Offering Period(s) in each such Offering are identical, provided that the terms of participation are the same within each separate Offering under the Section 423 Component (as determined under Section 423 of the Code). Solely by way of example and without limiting the foregoing, the Company could, but shall not be required to, provide for simultaneous Offerings under the Section 423 Component and the Non-Section 423 Component of the Plan.

ARTICLE II.
DEFINITIONS AND CONSTRUCTION

Wherever the following terms are used in the Plan they shall have the meanings specified below, unless the context clearly indicates otherwise. The singular pronoun shall include the plural where the context so indicates. Masculine, feminine and neuter pronouns are used interchangeably and each comprehends the others.

2.1 “*Administrator*” shall mean the entity that conducts the general administration of the Plan as provided in Article XI. The term “Administrator” shall refer to the Committee unless the Board has assumed the authority for administration of the Plan as provided in Article XI.

2.2 “*Applicable Law*” shall mean any applicable law, including without limitation: (a) provisions of the Code, the Securities Act, the Exchange Act and any rules or regulations thereunder; (b) corporate, securities, tax or other laws, statutes, rules, requirements or regulations, whether U.S. or non-U.S. federal, state or local; and (c) rules of any securities exchange or automated quotation system on which the Shares are listed, quoted or traded.

2.3 “**Board**” shall mean the Board of Directors of the Company.

2.4 “**Change in Control**” shall mean and include each of the following:

(a) A transaction or series of transactions (other than an offering of Common Stock to the general public through a registration statement filed with the Securities and Exchange Commission or a transaction or series of transactions that meets the requirements of clauses (i) and (ii) of subsection (c) below) whereby any “person” or related “group” of “persons” (as such terms are used in Sections 13(d) and 14(d) (2) of the Exchange Act) (other than the Company, any of its affiliates, an employee benefit plan maintained by the Company or any of its affiliates or a “person” that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Company) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company that results in such “person” or related “group” of “persons” (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) possessing more than 50% of the total combined voting power of the Company’s securities outstanding immediately after such acquisition; or

(b) During any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new Director(s) (other than a Director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in subsections (a) or (c)) whose election by the Board or nomination for election by the Company’s stockholders was approved by a vote of at least two-thirds of the Directors then still in office who either were Directors at the beginning of the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company’s assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) which results in the Company’s voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company’s assets or otherwise succeeds to the business of the Company (the Company or such person, the “**Successor Entity**”)) directly or indirectly, at least a majority of the combined voting power of the Successor Entity’s outstanding voting securities immediately after the transaction, and

(ii) after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; *provided, however*, that no person or group shall be treated for purposes of this clause (ii) as beneficially owning 50% or more of the combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction.

Notwithstanding the foregoing, if a Change in Control constitutes a payment event with respect to any portion of any right that provides for the deferral of compensation that is subject to Section 409A of the Code, to the extent required to avoid the imposition of additional taxes under Section 409A of the Code, the transaction or event described in subsection (a), (b) or (c) with respect to such right (or portion thereof) shall only constitute a Change in Control for purposes of the payment timing of such right (or portion thereof) if such transaction also constitutes a “change in control event,” as defined in Treasury Regulation Section 1.409A-3(i)(5).

The Administrator shall have full and final authority, which shall be exercised in its discretion, to determine conclusively whether a Change in Control has occurred pursuant to the above definition, the date of the occurrence of such Change in Control and any incidental matters relating thereto; provided that any exercise of authority in conjunction with a determination of whether a Change in Control is a “change in control event” as defined in Treasury Regulation Section 1.409A-3(i)(5) shall be consistent with such regulation.

2.5 “**Class A Common Stock**” shall mean the Class A common stock of the Company, par value \$0.0001 per share.

2.6 “**Class B Common Stock**” shall mean the Class B common stock of the Company, par value \$0.0001 per share.

2.7 “**Code**” shall mean the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

2.8 “**Common Stock**” shall mean the Class A Common Stock or Class B Common Stock of the Company.

2.9 “**Company**” shall mean X-Energy, Inc., a Delaware corporation, or any successor.

2.10 “**Compensation**” of an Eligible Employee shall mean, unless otherwise specified in the Offering Document, the gross base salary received by such Eligible Employee as compensation for services to the Company or any Designated Subsidiary (excluding one-time bonuses (e.g., retention or sign-on bonuses), periodic (e.g., annual or quarterly) bonuses, commissions, military leave pay, education or tuition reimbursements, travel expenses, business and moving reimbursements, income received in connection with any stock options, stock appreciation rights, restricted stock, restricted stock units or other compensatory equity or equity-linked awards, fringe benefits, other special payments and all contributions made by the Company or any Designated Subsidiary for the Employee’s benefit under any employee benefit plan now or hereafter established).

2.11 “**Designated Subsidiary**” shall mean the Operating Company and any other Subsidiary designated by the Administrator in accordance with Section 11.2(b), such designation to specify whether such participation by Eligible Employees employed by such Designated Subsidiary is in the Section 423 Component or Non-Section 423 Component. All of the Eligible Employees of a Designated Subsidiary may participate in either the Section 423 Component or Non-Section 423 Component, but not both; provided that the Eligible Employees of a Subsidiary that, for U.S. tax purposes, is disregarded from the Company or any Subsidiary that participates in the Section 423 Component shall automatically constitute a Designated Subsidiary that participates in the Section 423 Component.

2.12 “**Director**” shall mean a Board member.

2.13 “**Effective Date**” shall mean the date the Board adopts the Plan.

2.14 “**Eligible Employee**” shall mean, subject to clauses (a) and (b) below, an Employee who does not, immediately after any rights under this Plan are granted, own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of Common Stock and other stock of the Company, a Parent or a Subsidiary (as determined under Section 423(b)(3) of the Code).

(a) With respect to the Section 423 Component:

(i) The rules of Section 424(d) of the Code with regard to the attribution of stock ownership shall apply in determining the stock ownership of an Employee, and stock that an Employee may purchase under outstanding options shall be treated as stock owned by the Employee; and

(ii) The Administrator may provide in an Offering Document that an Employee shall not be eligible to participate in an Offering Period if: (A) such Employee is a highly compensated employee within the meaning of Section 423(b)(4)(D) of the Code, (B) such Employee has not met a service requirement designated by the Administrator pursuant to Section 423(b)(4)(A) of the Code (which service requirement may not exceed two years), (C) such Employee's customary employment is for 20 hours or less per week, (D) such Employee's customary employment is for less than five months in any calendar year and/or (E) such Employee is a citizen or resident of a foreign jurisdiction and the grant of a right to purchase Shares under the Plan to such Employee would be prohibited under the laws of such foreign jurisdiction or the grant of a right to purchase Shares under the Plan to such Employee in compliance with the laws of such foreign jurisdiction would cause the Plan to violate the requirements of Section 423 of the Code, as determined by the Administrator in its sole discretion; *provided, further*, that any exclusion in clauses (A), (B), (C), (D) or (E) shall be applied in an identical manner under each Offering Period to all Employees, in accordance with Treasury Regulation Section 1.423-2(e).

(b) With respect to the Non-Section 423 Component:

(i) The Administrator may limit eligibility further within the Company and each Designated Subsidiary so as to only designate some Employees of the Company or such Designated Subsidiary as Eligible Employees; and

(ii) To the extent the definition of "Eligible Employee" is not consistent with local Applicable Laws, the local Applicable Laws shall control.

2.15 "**Employee**" shall mean an individual who renders services to the Company or any Designated Subsidiary as an employee, and, with respect to the Section 423 Component, a person who is an employee of the Company or any Designated Subsidiary within the meaning of Section 3401(c) of the Code. For purposes of an individual's participation in, or other rights under, the Plan, all determinations by the Company shall be final, binding and conclusive, notwithstanding that any court of law or governmental agency subsequently makes a contrary determination. For purposes of the Plan, the employment relationship shall be treated as continuing intact while the individual is on sick leave or other leave of absence approved by the Company or Designated Subsidiary and meeting the requirements of Treasury Regulation Section 1.421-1(h)(2). Where the period of leave exceeds three months and the individual's right to reemployment is not guaranteed either by statute or by contract, the employment relationship shall be deemed to have terminated on the first day immediately following such three-month period.

2.16 "**Enrollment Date**" shall mean the first Trading Day of each Offering Period, unless otherwise specified in the Offering Document.

2.17 “**Exchange Act**” shall mean the Securities Exchange Act of 1934, as amended from time to time.

2.18 “**Fair Market Value**” shall mean, as of any date, the value of a Share determined as follows: (a) if the Class A Common Stock is listed on any established stock exchange, its Fair Market Value will be the closing sales price for such Class A Common Stock as quoted on such exchange for such date, or if no sale occurred on such date, the last day preceding such date during which a sale occurred, as reported in *The Wall Street Journal* or another source the Administrator deems reliable; (b) if the Class A Common Stock is not traded on a stock exchange but is quoted on a national market or other quotation system, the closing sales price on such date, or if no sales occurred on such date, then on the last date preceding such date during which a sale occurred, as reported in *The Wall Street Journal* or another source the Administrator deems reliable; or (c) without an established market for the Class A Common Stock, the Administrator will determine the Fair Market Value in its discretion.

2.19 “**Non-Section 423 Component**” shall mean those Offerings under the Plan, together with the sub-plans, appendices, rules or procedures, if any, adopted by the Administrator as a part of this Plan, in each case, pursuant to which rights to purchase Shares during an Offering Period may be granted to Eligible Employees that need not satisfy the requirements for rights to purchase Shares granted pursuant to an “employee stock purchase plan” that are set forth under Section 423 of the Code.

2.20 “**Offering**” shall mean an offer under the Plan of a right to purchase Shares that may be exercised during an Offering Period as further described in Article IV hereof. Unless otherwise specified by the Administrator, Offerings under the Section 423 Component and the Non-Section 423 Component shall be treated as separate and distinct Offerings under separate and distinct plans, and each such Offering to the Eligible Employees of the Company or a Designated Subsidiary shall be deemed a separate and distinct Offering under a separate and distinct plan, even if the dates and other terms of the applicable Offering Periods of each such Offering are identical, and the provisions of the Plan will separately apply to each Offering. To the extent permitted by Treasury Regulation Section 1.423-2(a)(1), the terms of each separate Offering under the Section 423 Component need not be identical, provided that the terms of the Section 423 Component and an Offering thereunder together satisfy Treasury Regulation Section 1.423-2(a)(2) and (a)(3). To the extent the terms of any Offering under the Section 423 Component do not satisfy the requirements for rights to purchase Shares granted pursuant to an “employee stock purchase plan” as set forth under Section 423 of the Code, then the Plan and such Offering shall be deemed to be amended to accomplish the objectives of the terms as originally written to the fullest extent permitted by law and in compliance with Section 423 of the Code.

2.21 “**Offering Document**” shall have the meaning given to such term in Section 4.1.

2.22 “**Offering Period**” shall have the meaning given to such term in Section 4.1.

2.23 “**Parent**” shall mean any corporation, other than the Company, in an unbroken chain of corporations ending with the Company if, at the time of the determination, each of the corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

2.24 “**Participant**” shall mean any Eligible Employee who has executed a subscription or enrollment agreement and been granted rights to purchase Shares pursuant to the Plan.

2.25 “**Plan**” shall mean this X-Energy, Inc. 2026 Employee Stock Purchase Plan, including both the Section 423 Component and Non-Section 423 Component and any other sub-plans or appendices hereto, as amended from time to time.

2.26 “**Public Trading Date**” shall mean the first date upon which the Class A Common Stock is listed (or approved for listing) upon notice of issuance on any securities exchange or designated (or approved for designation) upon notice of issuance as a national market security on an interdealer quotation system.

2.27 “**Purchase Date**” shall mean the last Trading Day of each Purchase Period, unless otherwise specified in the Offering Document.

2.28 “**Purchase Period**” shall refer to one or more periods within an Offering Period, as designated in the applicable Offering Document; *provided, however*, that, in the event no Purchase Period is designated by the Administrator in the applicable Offering Document, the Purchase Period for each Offering Period covered by such Offering Document shall be the same as the applicable Offering Period.

2.29 “**Purchase Price**” shall mean the purchase price designated by the Administrator in the applicable Offering Document (which purchase price, for purposes of the Section 423 Component, shall not be less than 85% of the Fair Market Value of a Share on the Enrollment Date or on the Purchase Date, whichever is lower); *provided, however*, that, in the event no purchase price is designated by the Administrator in the applicable Offering Document, the purchase price for the Offering Periods covered by such Offering Document shall be 85% of the Fair Market Value of a Share on the Enrollment Date or on the Purchase Date, whichever is lower; *provided, further*, that the Purchase Price may be adjusted by the Administrator pursuant to Article VIII and shall not be less than the par value of a Share.

2.30 “**Section 423 Component**” shall mean those Offerings under the Plan, together with the sub-plans, appendices, rules or procedures, if any, adopted by the Administrator as a part of this Plan, in each case, pursuant to which rights to purchase Shares during an Offering Period may be granted to Eligible Employees that are intended to satisfy the requirements for rights to purchase Shares granted pursuant to an “employee stock purchase plan” that are set forth under Section 423 of the Code. To the extent any provision of the Plan with respect to the Section 423 Component does not satisfy the requirements for rights to purchase Shares granted pursuant to an “employee stock purchase plan” as set forth under Section 423 of the Code, then the Plan shall be deemed to be amended to accomplish the objectives of the terms as originally written to the fullest extent permitted by law and in compliance with Section 423 of the Code.

2.31 “**Securities Act**” shall mean the Securities Act of 1933, as amended.

2.32 “**Share**” shall mean a share of Class A Common Stock.

2.33 “**Subsidiary**” shall mean any corporation, other than the Company, in an unbroken chain of corporations beginning with the Company if, at the time of the determination, each of the corporations other than the last corporation in an unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain; *provided, however*, that a limited liability company or partnership may be treated as a Subsidiary to the extent either (a) such entity is treated as a disregarded entity under Treasury Regulation Section 301.7701-3(a) by reason of the Company or any other Subsidiary that is a corporation being the sole owner of such entity, or (b) such entity elects to be classified as a corporation under Treasury Regulation Section 301.7701-3(a) and such entity would otherwise qualify as a Subsidiary. In addition, with respect to the Non-Section 423 Component, a Subsidiary shall include any corporate or non-corporate entity in which the Company has a direct or indirect equity interest or significant business relationship that constitutes a “parent” or “subsidiary” of the Company for purposes of Form S-8 of the Securities Act and whose employees are eligible to be offered securities registrable on Form S-8 of the Securities Act.

2.34 “*Trading Day*” shall mean a day on which national stock exchanges in the United States are open for trading.

**ARTICLE III.
SHARES SUBJECT TO THE PLAN**

3.1 Number of Shares. Subject to Article VIII, the aggregate number of Shares that may be issued pursuant to rights granted under the Plan shall be _____ Shares. In addition, subject to Article VIII, on the first day of each calendar year beginning on and January 1 of the first calendar year following the Effective Date and ending on and including January 1, 2036, the number of Shares available for issuance under the Plan shall be increased by that number of Shares equal to (a) a number of Shares equal to 0.5% of the aggregate number of shares of Class A Common Stock and Class B Common Stock outstanding on the final day of the immediately preceding calendar year or (b) such smaller number of Shares as determined by the Board. If any right granted under the Plan shall for any reason terminate without having been exercised, the Shares not purchased under such right shall again become available for issuance under the Plan. Notwithstanding anything in this Section 3.1 to the contrary, the number of Shares that may be issued or transferred pursuant to the rights granted under the Plan shall not exceed an aggregate of 50,000,000 Shares, subject to Article VIII. All or any portion of such maximum number of Shares may be issued under the Section 423 Component.

3.2 Shares Distributed. Any Shares distributed pursuant to the Plan may consist, in whole or in part, of authorized and unissued Class A Common Stock, treasury stock or Class A Common Stock purchased on the open market. Shares issued under the Plan will be shares of Class A Common Stock.

**ARTICLE IV.
OFFERING PERIODS; OFFERING DOCUMENTS; PURCHASE DATES**

4.1 Offering Periods. The Administrator may from time to time grant or provide for the grant of rights to purchase Shares under the Plan to Eligible Employees during one or more periods (each, an “*Offering Period*”) selected by the Administrator. The terms and conditions applicable to each Offering Period shall be set forth in an “*Offering Document*” adopted by the Administrator, which Offering Document shall be in such form and shall contain such terms and conditions as the Administrator shall deem appropriate. The Administrator shall establish in each Offering Document one or more Purchase Periods during such Offering Period during which rights granted under the Plan shall be exercised and purchases of Shares carried out during such Offering Period in accordance with such Offering Document and the Plan. The provisions of separate Offerings or Offering Periods under the Plan need not be identical.

4.2 Offering Documents. Each Offering Document with respect to an Offering Period shall specify (through incorporation of the provisions of this Plan by reference or otherwise):

- (a) the length of the Offering Period, which period shall not exceed 27 months;
- (b) the length of the Purchase Period(s) within the Offering Period;

(c) in connection with each Offering Period that contains only one Purchase Period the maximum number of Shares that may be purchased by any Eligible Employee during such Offering Period, which, in the absence of a contrary designation by the Administrator, shall be 10,000 Shares;

(d) in connection with each Offering Period that contains more than one Purchase Period, the maximum aggregate number of Shares which may be purchased by any Eligible Employee during each Purchase Period, which, in the absence of a contrary designation by the Administrator, shall be 10,000 Shares; and

(e) such other provisions as the Administrator determines are appropriate, subject to the Plan.

ARTICLE V. ELIGIBILITY AND PARTICIPATION

5.1 Eligibility. Any Eligible Employee who shall be employed by the Company or a Designated Subsidiary on a given Enrollment Date for an Offering Period shall be eligible to participate in the Plan during such Offering Period, subject to the requirements of this Article V and, for the Section 423 Component, the limitations imposed by Section 423(b) of the Code.

5.2 Enrollment in Plan.

(a) Except as otherwise set forth herein or in an Offering Document or determined by the Administrator, an Eligible Employee may become a Participant in the Plan for an Offering Period by delivering a subscription or enrollment agreement to the Company by such time prior to the Enrollment Date for such Offering Period (or such other date specified in the Offering Document) designated by the Administrator and in such form as the Company provides.

(b) Except as otherwise determined by the Administrator, each subscription or enrollment agreement shall designate a whole percentage of such Eligible Employee's Compensation to be withheld by the Company or the Designated Subsidiary employing such Eligible Employee on each payday during the Offering Period as payroll deductions under the Plan. The designated percentage may not be less than 1% and may not be more than the maximum percentage specified by the Administrator in the applicable Offering Document (which percentage shall be 15% in the absence of any such designation). The payroll deductions made for each Participant shall be credited to an account for such Participant under the Plan and shall be deposited with the general funds of the Company.

(c) A Participant may be allowed to decrease or increase the percentage of Compensation designated in his or her subscription or enrollment agreement, or may suspend his or her payroll deductions, at any time during an Offering Period (any such decrease, increase or suspension, a "***Contribution Change***") subject to any limits as set forth in the applicable Offering Document (and in the absence of any specific designation by the Administrator, a Participant shall not be allowed any Contribution Changes during an Offering Period with respect to such Offering Period). Any such Contribution Change shall be effective with the first full payroll period following five business days after the Company's receipt of the new subscription or enrollment agreement (or such shorter or longer period as may be specified by the Administrator in the applicable Offering Document). In the event a Participant suspends his or her payroll deductions, such Participant's cumulative payroll deductions prior to the suspension shall remain in his or her account and shall be applied to the purchase of Shares on the next occurring Purchase Date and shall not be paid to such Participant unless he or she withdraws from participation in the Plan pursuant to Article VII.

(d) Except as otherwise set forth in an Offering Document or determined by the Administrator, a Participant may participate in the Plan only by means of payroll deduction and may not make contributions by lump sum payment for any Offering Period.

5.3 Payroll Deductions. Except as otherwise provided in the applicable Offering Document or as determined by the Administrator, payroll deductions for a Participant shall commence on the first payday following the Enrollment Date and shall end on the last payday in the Offering Period to which the Participant's authorization is applicable, unless sooner terminated by the Participant as provided in Article VII or suspended by the Participant or the Administrator as provided in Section 5.2 and Section 5.6, respectively. Notwithstanding any other provisions of the Plan to the contrary, in non-U.S. jurisdictions where participation in the Plan through payroll deductions is prohibited, the Administrator may provide that an Eligible Employee may elect to participate through contributions to the Participant's account under the Plan in a form acceptable to the Administrator in lieu of or in addition to payroll deductions; provided, however, that, for any Offering under the Section 423 Component, the Administrator shall take into consideration any limitations under Section 423 of the Code when applying an alternative method of contribution.

5.4 Effect of Enrollment. A Participant's completion of a subscription or enrollment agreement will enroll such Participant in the Plan for each subsequent Offering Period on the terms contained therein until the Participant either submits a new subscription or enrollment agreement, withdraws from participation under the Plan as provided in Article VII or otherwise becomes ineligible to participate in the Plan.

5.5 Limitation on Purchase of Shares. An Eligible Employee may be granted rights under the Section 423 Component only if such rights, together with any other rights granted to such Eligible Employee under "employee stock purchase plans" of the Company, any Parent or any Subsidiary, as specified by Section 423(b)(8) of the Code, do not permit such employee's rights to purchase stock of the Company or any Parent or Subsidiary to accrue at a rate that exceeds \$25,000 of the fair market value of such stock (determined as of the first day of the Offering Period during which such rights are granted) for each calendar year in which such rights are outstanding at any time. This limitation shall be applied in accordance with Section 423(b)(8) of the Code.

5.6 Suspension of Payroll Deductions. Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 5.5 (with respect to the Section 423 Component) or the other limitations set forth in this Plan, a Participant's payroll deductions may be suspended by the Administrator at any time during an Offering Period. The balance of the amount credited to the account of each Participant that has not been applied to the purchase of Shares by reason of Section 423(b)(8) of the Code, Section 5.5 or the other limitations set forth in this Plan shall be paid to such Participant in one lump sum in cash as soon as reasonably practicable after the Purchase Date.

5.7 Foreign Employees. In order to facilitate participation in the Plan, the Administrator may provide for such special terms applicable to Participants who are citizens or residents of a foreign jurisdiction, or who are employed by a Designated Subsidiary outside of the United States, as the Administrator may consider necessary or appropriate to accommodate differences in local law, tax policy or custom. Except as permitted by Section 423 of the Code, with respect to the Section 423 Component, such special terms may not be more favorable than the terms of rights granted under the Section 423 Component to Eligible Employees who are residents of the United States. Such special terms may be set forth in an addendum to the Plan in the form of an appendix or sub-plan (which appendix or sub-plan may be designed to govern Offerings under the Section 423 Component or the Non-Section 423 Component, as determined by the Administrator). To the extent that the terms and conditions set forth in an appendix or sub-plan conflict with any provisions of the Plan, the provisions of the appendix or sub-plan shall govern. The adoption of any such appendix or sub-plan shall be pursuant to Section 11.2(g). Without limiting the foregoing, the Administrator is specifically authorized to adopt rules and procedures, with respect to Participants who are foreign nationals or employed in non-U.S. jurisdictions, regarding the exclusion of particular Subsidiaries from participation in the Plan, eligibility to participate, the definition of Compensation, handling of payroll deductions or other contributions by Participants, payment of interest, conversion of local currency, data privacy security, payroll tax, withholding procedures, establishment of bank or trust accounts to hold payroll deductions or contributions.

ARTICLE VI.
GRANT AND EXERCISE OF RIGHTS

6.1 Grant of Rights. On the Enrollment Date of each Offering Period, each Eligible Employee participating in such Offering Period shall be granted a right to purchase the maximum number of Shares specified under Section 4.2, subject to the limits in Section 5.5, and shall have the right to buy, on each Purchase Date during such Offering Period (at the applicable Purchase Price), such number of whole Shares as is determined by dividing (a) such Participant's payroll deductions accumulated prior to such Purchase Date and retained in the Participant's account as of the Purchase Date, by (b) the applicable Purchase Price (rounded down to the nearest Share). The right shall expire on the earliest of: (x) the last Purchase Date of such Offering Period, (y) the last day of such Offering Period and (z) the date on which such Participant withdraws in accordance with Section 7.1 or Section 7.3.

6.2 Exercise of Rights. On each Purchase Date, each Participant's accumulated payroll deductions and any other additional payments specifically provided for in the applicable Offering Document will be applied to the purchase of whole Shares, up to the maximum number of Shares permitted pursuant to the terms of the Plan and the applicable Offering Document, at the Purchase Price. No fractional Shares shall be issued upon the exercise of rights granted under the Plan, unless the Offering Document specifically provides otherwise. Any cash remaining after the purchase of Shares upon exercise of a purchase right (including any cash in lieu of fractional Shares) shall be returned to the Participant in one lump sum payment in a subsequent payroll check; *provided, however*, that the Administrator may provide in the applicable Offering Document that cash in lieu of fractional Shares should be carried forward and applied toward the purchase of whole Shares for the following Offering Period. Shares issued pursuant to the Plan may be evidenced in such manner as the Administrator may determine and may be issued in certificated form or issued pursuant to book-entry procedures.

6.3 Pro Rata Allocation of Shares. If the Administrator determines that, on a given Purchase Date, the number of Shares with respect to which rights are to be exercised may exceed (a) the number of Shares that were available for issuance under the Plan on the Enrollment Date of the applicable Offering Period, or (b) the number of Shares available for issuance under the Plan on such Purchase Date, the Administrator may in its sole discretion provide that the Company shall make a pro rata allocation of the Shares available for purchase on such Enrollment Date or Purchase Date, as applicable, in as uniform a manner as shall be practicable and as it shall determine in its sole discretion to be equitable among all Participants for whom rights to purchase Shares are to be exercised pursuant to this Article VI on such Purchase Date, and shall either (i) continue all Offering Periods then in effect, or (ii) terminate any or all Offering Periods then in effect pursuant to Article IX. The Company may make pro rata allocation of the Shares available on the Enrollment Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional Shares for issuance under the Plan by the Company's stockholders subsequent to such Enrollment Date. The balance of the amount credited to the account of each Participant that has not been applied to the purchase of Shares shall be paid to such Participant, without interest, in one lump sum in cash as soon as reasonably practicable after the Purchase Date, or such earlier date as determined by the Administrator.

6.4 Withholding. At the time a Participant's rights under the Plan are exercised, in whole or in part, or at the time some or all of the Shares issued under the Plan are disposed of, the Participant must make adequate provision for the Company's and any applicable Designated Subsidiary's foreign, federal, state, or other tax withholding obligations, if any, that arise upon the exercise of the right or the disposition of the Shares. At any time, the Company and any applicable Designated Subsidiary may, but shall not be obligated to, withhold from the Participant's compensation the amount necessary for the Company or such Designated Subsidiary to meet applicable withholding obligations, including any withholding required to make available to the Company or such Designated Subsidiary any tax deductions or benefits attributable to sale or early disposition of Shares by the Participant.

6.5 Conditions to Issuance of Shares. The Company shall not be required to issue or deliver any certificate or certificates for, or make any book entries evidencing, Shares purchased upon the exercise of rights under the Plan prior to fulfillment of all of the following conditions:

- (a) The admission of such Shares to listing on all stock exchanges, if any, on which the Class A Common Stock is then listed;
- (b) The completion of any registration or other qualification of such Shares under any state or federal law or under the rulings or regulations of the Securities and Exchange Commission or any other governmental regulatory body, that the Administrator shall, in its absolute discretion, deem necessary or advisable;
- (c) The obtaining of any approval or other clearance from any state or federal governmental agency that the Administrator shall, in its absolute discretion, determine to be necessary or advisable;
- (d) The payment to the Company of all amounts that it is required to withhold under federal, state or local law upon exercise of the rights, if any; and
- (e) The lapse of such reasonable period of time following the exercise of the rights as the Administrator may from time to time establish for reasons of administrative convenience.

**ARTICLE VII.
WITHDRAWAL; CESSATION OF ELIGIBILITY**

7.1 Withdrawal. A Participant may withdraw all but not less than all of the payroll deductions credited to his or her account and not yet used to exercise his or her rights under the Plan at any time by giving written notice to the Company in a form acceptable to the Company no later than two weeks prior to the end of the Offering Period or, if earlier, the end of the Purchase Period (or such shorter or longer period as may be specified by the Administrator in the Offering Document). All of the Participant's payroll deductions credited to his or her account during the Offering Period not yet used to exercise his or her rights under the Plan shall be paid to such Participant as soon as reasonably practicable after receipt of notice of withdrawal and such Participant's rights for the Offering Period shall be automatically terminated, and no further payroll deductions for the purchase of Shares shall be made for such Offering Period. If a Participant withdraws from an Offering Period, payroll deductions shall not resume at the beginning of the next Offering Period unless the Participant is an Eligible Employee and timely delivers to the Company a new subscription or enrollment agreement.

7.2 Future Participation. A Participant's withdrawal from an Offering Period shall not have any effect upon his or her eligibility to participate in any similar plan that may hereafter be adopted by the Company or a Designated Subsidiary or in subsequent Offering Periods that commence after the termination of the Offering Period from which the Participant withdraws.

7.3 Cessation of Eligibility. Upon a Participant's ceasing to be an Eligible Employee for any reason, he or she shall be deemed to have elected to withdraw from the Plan pursuant to this Article VII and the payroll deductions credited to such Participant's account during the Offering Period shall be paid to such Participant or, in the case of his or her death, to the person or persons entitled thereto under Section 12.4, as soon as reasonably practicable, and such Participant's rights for the Offering Period shall be automatically terminated. If a Participant transfers employment from the Company or any Designated Subsidiary participating in the Section 423 Component to any Designated Subsidiary participating in the Non-Section 423 Component, such transfer shall not be treated as a termination of employment under the Plan, but the Participant shall immediately cease to participate in the Section 423 Component; however, any contributions made for the Offering Period in which such transfer occurs shall be transferred to the Non-Section 423 Component, and such Participant shall immediately join the then-current Offering under the Non-Section 423 Component upon the same terms and conditions in effect for the Participant's participation in the Section 423 Component, except for such modifications otherwise applicable for Participants in such Offering. A Participant who transfers employment from any Designated Subsidiary participating in the Non-Section 423 Component to the Company or any Designated Subsidiary participating in the Section 423 Component shall not be treated as terminating the Participant's employment under the Plan and shall remain a Participant in the Non-Section 423 Component until the earlier of (i) the end of the current Offering Period under the Non-Section 423 Component or (ii) the Enrollment Date of the first Offering Period in which the Participant is eligible to participate following such transfer. Notwithstanding the foregoing, the Administrator may establish different rules to govern transfers of employment between entities participating in the Section 423 Component and the Non-Section 423 Component, consistent with the applicable requirements of Section 423 of the Code.

ARTICLE VIII. ADJUSTMENTS UPON CHANGES IN STOCK

8.1 Changes in Capitalization. Subject to Section 8.3, in the event that the Administrator determines that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), Change in Control, reorganization, merger, amalgamation, consolidation, combination, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of all or substantially all of the assets of the Company, or sale or exchange of Common Stock or other securities of the Company, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, or other similar corporate transaction or event, as determined by the Administrator, affects the Common Stock such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any outstanding purchase rights under the Plan, the Administrator shall make equitable adjustments, if any, to reflect such change with respect to (a) the aggregate number and type of Shares (or other securities or property) that may be issued under the Plan (including, but not limited to, adjustments of the limitations in Section 3.1 and the limitations established in each Offering Document pursuant to Section 4.2 on the maximum number of Shares that may be purchased); (b) the class(es) and number of Shares and price per Share subject to outstanding rights; and (c) the Purchase Price with respect to any outstanding rights.

8.2 Other Adjustments. Subject to Section 8.3, in the event of any transaction or event described in Section 8.1 or any unusual or nonrecurring transactions or events affecting the Company, any affiliate of the Company, or the financial statements of the Company or any affiliate (including without limitation any Change in Control), or of changes in Applicable Law or accounting principles, the Administrator, in its discretion, and on such terms and conditions as it deems appropriate, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to prevent the dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan or with respect to any right under the Plan, to facilitate such transactions or events or to give effect to such changes in laws, regulations or principles:

(a) To provide for either (i) termination of any outstanding right in exchange for an amount of cash, if any, equal to the amount that would have been obtained upon the exercise of such right had such right been currently exercisable or (ii) the replacement of such outstanding right with other rights or property selected by the Administrator in its sole discretion;

(b) To provide that the outstanding rights under the Plan shall be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by similar rights covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices;

(c) To make adjustments in the number and type of Shares (or other securities or property) subject to outstanding rights under the Plan and/or in the terms and conditions of outstanding rights and rights that may be granted in the future;

(d) To provide that Participants' accumulated payroll deductions may be used to purchase Shares prior to the next occurring Purchase Date on such date as the Administrator determines in its sole discretion and the Participants' rights under the ongoing Offering Period(s) shall be terminated; and

(e) To provide that all outstanding rights shall terminate without being exercised.

8.3 No Adjustment Under Certain Circumstances. Unless determined otherwise by the Administrator, no adjustment or action described in this Article VIII or in any other provision of the Plan shall be authorized to the extent that such adjustment or action would cause the Section 423 Component of the Plan to fail to satisfy the requirements of Section 423 of the Code.

8.4 No Other Rights. Except as expressly provided in the Plan, no Participant shall have any rights by reason of any subdivision or consolidation of shares of stock of any class, the payment of any dividend, any increase or decrease in the number of shares of stock of any class or any dissolution, liquidation, merger, or consolidation of the Company or any other corporation. Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number of Shares subject to outstanding rights under the Plan or the Purchase Price with respect to any outstanding rights.

ARTICLE IX.

AMENDMENT, MODIFICATION AND TERMINATION

9.1 Amendment, Modification and Termination. The Administrator may amend, suspend or terminate the Plan at any time and from time to time; provided, however, that approval of the Company's stockholders shall be required to amend the Plan to: (a) increase the aggregate number, or change the type, of shares that may be sold pursuant to rights under the Plan under Section 3.1 (other than an adjustment as provided by Article VIII); (b) change the corporations or classes of corporations whose employees may be granted rights under the Plan; or (c) as otherwise required to comply with Applicable Law.

9.2 Certain Changes to Plan. Without stockholder consent and without regard to whether any Participant rights may be considered to have been adversely affected (and, with respect to the Section 423 Component of the Plan, after taking into account Section 423 of the Code), the Administrator shall be entitled to change or terminate the Offering Periods, limit the frequency and/or number of changes in the amount withheld from Compensation during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of payroll withholding elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Shares for each Participant properly correspond with amounts withheld from the Participant's Compensation, and establish such other limitations or procedures as the Administrator determines in its sole discretion to be advisable that are consistent with the Plan.

9.3 Actions In the Event of Unfavorable Financial Accounting Consequences. In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may, in its discretion and, to the extent necessary or desirable, modify or amend the Plan to reduce or eliminate such accounting consequence including, but not limited to:

- (a) altering the Purchase Price for any Offering Period including an Offering Period underway at the time of the change in Purchase Price;
- (b) shortening any Offering Period so that the Offering Period ends on a new Purchase Date, including an Offering Period underway at the time of the Administrator action; and
- (c) allocating Shares.

Such modifications or amendments shall not require stockholder approval or the consent of any Participant.

9.4 Payments Upon Termination of Plan. Upon termination of the Plan, the balance in each Participant's Plan account shall be refunded as soon as practicable after such termination, without any interest thereon, or the Offering Period may be shortened so that the purchase of Shares occurs prior to the termination of the Plan.

ARTICLE X. TERM OF PLAN

The Plan shall be effective on the Effective Date. The effectiveness of the Plan shall be subject to approval of the Plan by the stockholders of the Company within 12 months following the date the Plan is first approved by the Board. No right may be granted under the Plan prior to such stockholder approval. No rights may be granted under the Plan during any period of suspension of the Plan or after termination of the Plan.

ARTICLE XI. ADMINISTRATION

11.1 Administrator. Unless otherwise determined by the Board, the Administrator of the Plan shall be the Compensation and Culture Committee of the Board (or another committee or a subcommittee of the Board to which the Board delegates administration of the Plan) (such committee, the "**Committee**"). The Board may at any time vest in the Board any authority or duties for administration of the Plan.

11.2 Authority of Administrator. The Administrator shall have the power, subject to, and within the limitations of, the express provisions of the Plan:

- (a) To determine when and how rights to purchase Shares shall be granted and the provisions of each offering of such rights (which need not be identical).
- (b) To designate from time to time which Subsidiaries of the Company shall be Designated Subsidiaries, which designation may be made without the approval of the stockholders of the Company.
- (c) To impose a mandatory holding period pursuant to which Employees may not dispose of or transfer Shares purchased under the Plan for a period of time determined by the Administrator in its discretion.
- (d) To construe and interpret the Plan and rights granted under it, and to establish, amend and revoke rules and regulations for its administration. The Administrator, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan, in a manner and to the extent it shall deem necessary or expedient to make the Plan fully effective.
- (e) To amend, suspend or terminate the Plan as provided in Article IX.
- (f) Generally, to exercise such powers and to perform such acts as the Administrator deems necessary or expedient to promote the best interests of the Company and its Subsidiaries and to carry out the intent that the Plan be treated as an “employee stock purchase plan” within the meaning of Section 423 of the Code for the Section 423 Component.
- (g) The Administrator may adopt sub-plans applicable to particular Designated Subsidiaries or locations, which sub-plans may be designed to be outside the scope of Section 423 of the Code. The rules of such sub-plans may take precedence over other provisions of this Plan, with the exception of Section 3.1 hereof, but unless otherwise superseded by the terms of such sub-plan, the provisions of this Plan shall govern the operation of such sub-plan.

11.3 Decisions Binding. The Administrator’s interpretation of the Plan, any rights granted pursuant to the Plan, any subscription or enrollment agreement and all decisions and determinations by the Administrator with respect to the Plan are final, binding, and conclusive on all parties.

ARTICLE XII. MISCELLANEOUS

12.1 Restriction upon Assignment. A right granted under the Plan shall not be transferable other than by will or the Applicable Laws of descent and distribution, and is exercisable during the Participant’s lifetime only by the Participant. Except as provided in Section 12.4 hereof, a right under the Plan may not be exercised to any extent except by the Participant. The Company shall not recognize and shall be under no duty to recognize any assignment or alienation of the Participant’s interest in the Plan, the Participant’s rights under the Plan or any rights thereunder.

12.2 Rights as a Stockholder. With respect to Shares subject to a right granted under the Plan, a Participant shall not be deemed to be a stockholder of the Company, and the Participant shall not have any of the rights or privileges of a stockholder, until such Shares have been issued to the Participant or his or her nominee following exercise of the Participant’s rights under the Plan. No adjustments shall be made for dividends (ordinary or extraordinary, whether in cash, securities, or other property) or distribution or other rights for which the record date occurs prior to the date of such issuance, except as otherwise expressly provided herein or as determined by the Administrator.

12.3 Interest. No interest shall accrue on the payroll deductions or contributions of a Participant under the Plan.

12.4 Designation of Beneficiary.

(a) A Participant may, in the manner determined by the Administrator, file a written designation of a beneficiary who is to receive any Shares and/or cash, if any, from the Participant's account under the Plan in the event of such Participant's death subsequent to a Purchase Date on which the Participant's rights are exercised but prior to delivery to such Participant of such Shares and cash. In addition, a Participant may file a written designation of a beneficiary who is to receive any cash from the Participant's account under the Plan in the event of such Participant's death prior to exercise of the Participant's rights under the Plan. If the Participant is married and resides in a community property state, a designation of a person other than the Participant's spouse as his or her beneficiary shall not be effective without the prior written consent of the Participant's spouse.

(b) Such designation of beneficiary may be changed by the Participant at any time by written notice to the Company. In the event of the death of a Participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such Participant's death, the Company shall deliver such Shares and/or cash to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such Shares and/or cash to the spouse or to any one or more dependents or relatives of the Participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

12.5 Notices. All notices or other communications by a Participant to the Company under or in connection with the Plan shall be deemed to have been duly given when received in the form specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

12.6 Equal Rights and Privileges. Subject to Section 5.7, all Eligible Employees will have equal rights and privileges under the Section 423 Component so that the Section 423 Component of this Plan qualifies as an "employee stock purchase plan" within the meaning of Section 423 of the Code. Subject to Section 5.7, any provision of the Section 423 Component that is inconsistent with Section 423 of the Code will, without further act or amendment by the Company, the Board or the Administrator, be reformed to comply with the equal rights and privileges requirement of Section 423 of the Code. Eligible Employees participating in the Non-Section 423 Component need not have the same rights and privileges as other Eligible Employees participating in the Non-Section 423 Component or as Eligible Employees participating in the Section 423 Component.

12.7 Use of Funds. All payroll deductions received or held by the Company under the Plan may be used by the Company for any corporate purpose, and the Company shall not be obligated to segregate such payroll deductions.

12.8 Reports. If required by Applicable Law, statements of account shall be given to Participants at least annually, which statements shall set forth the amounts of payroll deductions, the Purchase Price, the number of Shares purchased and the remaining cash balance, if any.

12.9 No Employment Rights. Nothing in the Plan shall be construed to give any person (including any Eligible Employee or Participant) the right to employment or service with (or to remain in the employ of) the Company, the Operating Company or any Parent or Subsidiary of the Company or the Operating Company or affect the right of the Company, the Operating Company or any such Parent or Subsidiary to terminate the employment of any person (including any Eligible Employee or Participant) at any time, with or without cause.

12.10 Notice of Disposition of Shares. Each Participant shall give prompt notice to the Company of any disposition or other transfer of any Shares purchased upon exercise of a right under the Section 423 Component of the Plan if such disposition or transfer is made: (a) within two years from the Enrollment Date of the Offering Period in which the Shares were purchased or (b) within one year after the Purchase Date on which such Shares were purchased. Such notice shall specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by the Participant in such disposition or other transfer.

12.11 Governing Law. The Plan and any agreements hereunder shall be administered, interpreted and enforced under the internal laws of the State of Delaware without regard to conflicts of laws thereof or of any other jurisdiction.

12.12 Electronic Forms. To the extent permitted by Applicable Law and in the discretion of the Administrator, an Eligible Employee may submit any form or notice as set forth herein by means of an electronic form approved by the Administrator. Before the commencement of an Offering Period, the Administrator shall prescribe the time limits within which any such electronic form shall be submitted to the Administrator with respect to such Offering Period in order to be a valid election.

12.13 Section 409A. The Section 423 Component of the Plan and the rights to purchase Shares granted pursuant to Offerings thereunder are intended to be exempt from the application of Section 409A of the Code and the U.S. Department of Treasury Regulations and other interpretive guidance issued thereunder (collectively, “**Section 409A**”). Neither the Non-Section 423 Component nor any right to purchase Shares granted pursuant to an Offering thereunder is intended to constitute or provide for “nonqualified deferred compensation” within the meaning of Section 409A. Notwithstanding any provision of the Plan to the contrary, if the Administrator determines that any right to purchase Shares granted under the Plan may be or become subject to Section 409A or that any provision of the Plan may cause a right to purchase Shares granted under the Plan to be or become subject to Section 409A, the Administrator may adopt such amendments to the Plan and/or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions as the Administrator determines are necessary or appropriate to avoid the imposition of taxes under Section 409A, either through compliance with the requirements of Section 409A or with an available exemption therefrom.

12.14 Severability. Whenever possible, each provision of the Plan shall be interpreted in such manner as to be effective and valid under Applicable Law, and with respect to the Section 423 Component, to satisfy the requirements for rights to purchase Shares granted pursuant to an “employee stock purchase plan” as set forth under Section 423 of the Code, but if any provision of the Plan or any Offering shall be held by a court of competent jurisdiction to be prohibited by or invalid or unenforceable under applicable law, or with respect to the Section 423 Component, does not satisfy Section 423 of the Code, then (a) such provision shall be deemed to be amended to accomplish the objectives of the provision as originally written to the fullest extent permitted by law and (b) all other provisions of the Plan and Offering shall remain in full force and effect.

* * * * *



X Energy, LLC
 801 Thompson Avenue
 Rockville, MD 20852
 +1 301-358-5600

January 15, 2019

Clay Sell

VIA Email

Dear Clay,

On behalf of the X Energy, LLC Board I am most pleased to offer you the position of Chief Executive Officer reporting to me.

The following terms and conditions apply:

1. You will be paid a salary of \$13,461 .54 bi-weekly, which is equivalent to \$350,000 annually, plus standard company benefits.
2. This is full-time, exempt position working in our Headquarters Office in Rockville, Maryland.
3. Your start date will be January 21, 2019 or as mutually agreed upon between us.
4. You will participate in a Results Based Incentive (RBI) plan equal to twenty percent (20%) of the current year earned salary based upon the company achieving mutually agreeable goals. The RBI will be paid within 90 days of the calendar year end 2019.
5. You will participate in a to-be-formed Value Rewards Plan where you and other X Energy executives will be eligible to earn ownership interest in X Energy.
6. You will accrue vacation at X Energy's highest accrual level.
7. This offer is contingent upon your execution of X Energy's standard employment documents covering non-disclosure, non-solicitation and non-competition.
8. This offer remains valid for five business days from the date of this letter.

Please indicate your acceptance of this offer by signing and returning the enclosed copy of this letter, along with the attached documents, to me.

We look forward to a mutually rewarding association. Should you have any questions, please feel free to contact me at 240-375-3397.

Sincerely,

/s/ Kam Ghaffarian
 Kam Ghaffarian
 Executive Chairman of the Board

I accept the offer from X Energy as it is stated above.

/s/ Jeffrey Clay Sell _____ 1/20/2019
 {First Name} {Last Name} {Date}

Jeffrey Clay Sell

www.x-energy.com



X Energy, LLC
530 Gaither Road
Suite 700
Rockville, MD 20850

November 20, 2025

Daniel Gross

Via e-mail: daniel.andrew.gross@gmail.com

Dear Daniel,

I am very pleased to extend to you an offer to join X-energy (the "Company") as **Executive Vice President and Chief Financial Officer**. We are looking forward to the valuable contributions we know you will make to our Company, and this offer is subject only to approval by our Board of Directors, which is a standard step in our hiring of key senior executives. We look forward to welcoming you to the team. If you decide to join us, the terms and conditions of your employment will be:

Employer: X-energy, LLC

Start Date: December 1, 2025, or earlier if possible

Reporting to: Chief Executive Officer (J. Clay Sell)

Office/Work Location: X-energy HQ, Rockville, MD; full-time on-site (minimum of four days per week)

Base Salary: \$550,000 per year; \$21,153.85 bi-weekly, payable in accordance with the Company's standard payroll practices and subject to all applicable tax withholdings.

Annual Bonus: As a participant in the Company's Short Term Incentive Program ("STIP"), your annual target incentive will be 75% of your base salary, with actual payment based on Company and individual performance in accordance with the applicable STIP plan. Your eligibility under the STIP begins with the 2026 performance year. To receive any STIP bonus, you must be an active employee in good standing at the time bonuses are paid, typically occurring in the first quarter following the performance year.

Long term Incentive Plan: You will be eligible to participate in X-energy's Long-Term Incentive Plan ("LTIP"). You will receive a grant of approximately 1,850,000 Profits Interest Units ("PIUs"), subject to final valuation and confirmation by Deloitte. The PIUs will vest ratably over four years (25% annually), subject to your continued service and all terms of the LTIP and applicable award agreements. Future LTIP grants, if any, will be made solely at the discretion of the Board.

PIUs are speculative and may have no monetary value at issue. The value you may realize, if any, will depend on numerous factors—including the Company's future performance, market conditions, capital structure, dilution, and the total number of PIUs outstanding at the time of any qualifying liquidity event. The Company makes no representation or warranty regarding the timing, likelihood, or terms of any liquidity event, or the future value of any PIU.

Executive Perquisites and Relocation: You will receive a monthly stipend for twelve (12) months, through December 31, 2026, which will cover reasonable expenses related to executive housing, travel, and other expenses associated with commuting to the company's Maryland headquarters. Other business travel and expenses will be subject to the company's travel and expense policy.

You agree to relocate within a reasonable distance of the headquarters no later than February 1, 2027. To support your relocation, you will be eligible for up to \$175,000 in relocation benefits and will work with our designated relocation management provider. Upon relocation, you must provide your updated physical address and required tax forms. Please note that relocation benefits reimbursed to you are considered taxable income under IRS rules.

www.x-energy.com



X Energy, LLC
530 Gaither Road
Suite 700
Rockville, MD 20850

If you voluntarily resign from X-energy within twenty-four (24) months after your relocation, you will be required to repay all relocation benefits previously paid by the Company.

Universal Leave/Paid Holidays: You will accrue 20 days/160 hours of Universal Leave annually for vacation, illness, or time away from work for personal activities. X-energy provides paid holidays in accordance with the company holiday calendar which must be used in each calendar year. The paid holidays are considered floating holidays which can be used on the assigned holiday or taken on another day of the employee's choice. New hires are eligible to utilize any paid holidays that remain on the company schedule after their start date for that given calendar year.

Other Benefits: Medical, dental, life and disability insurance, and other benefits are as set forth in X-energy's Benefits Guide, which will be provided via email. We would be happy to answer any questions that you may have regarding these benefits.

Employment Classification: Full-time exempt

Please note that your employment with X-energy is for no specified period and constitutes at will employment. This offer is contingent upon the successful completion of our pre-employment process which will include a background check and education verification. Additional verifications, such as a credit check, may be required for positions with specialized data access. Once you accept this offer, you will receive an email from the background check administrator, the company that we use to conduct this process. The email will contain a link to our background check vendor's secure website where you will be guided through the process and can safely enter the necessary information. Please watch for this email and submit your information to the background check vendor as soon as possible.

You will be required to sign the Company's standard Confidentiality and Intellectual Property Assignment Agreement. In addition, for a period of twelve (12) months following the end of your employment, you agree not to directly or indirectly solicit or induce any employee, consultant, or customer of the Company to terminate or alter their relationship with the Company, and for a period of six (6) months following the end of your employment, you agree not to engage, whether as an employee, consultant, officer, or otherwise, in any business that competes with the Company's business as conducted during your employment within the geographic areas where the Company conducts business. You also agree not to make or cause to be made any disparaging statements, written or oral, about the Company, its affiliates, officers, directors, or employees. Any unvested equity, bonus, or other incentive compensation paid or awarded to you under this offer letter will be subject to forfeiture or repayment to the extent required by applicable law, Company policy, or (i) in the event of a breach of these obligations, (ii) voluntary resignation or (iii) termination for cause, within twelve (12) months from each payment date.

This offer letter shall be governed by and construed in accordance with the laws of the state of Maryland, without giving effect to any choice of law or conflict of law provisions.

Daniel, we are genuinely excited about the prospect of you joining us as our next Executive Vice President and Chief Financial Officer, and I look forward to working closely with you in what I am confident will be a long, successful, and rewarding partnership. To accept this offer, please sign and date below, and return to rscheinman@x-energy.com.

www.x-energy.com



X Energy, LLC
530 Gaither Road
Suite 700
Rockville, MD 20850

If you have any questions, please do not hesitate to contact me.

Sincerely,

//J. Clay Sell//

J. Clay Sell
Chief Executive Officer

I accept X-energy's offer of employment, and I acknowledge that my title will be **Executive Vice President and Chief Financial Officer** with all of the responsibilities and requirements attendant to such position.

Signature: /s/ Daniel Gross

Name (print): Daniel Gross

Date: November 22, 2025

X Energy, LLC is committed to hiring and retaining a diverse workforce. We are proud to be an Equal Opportunity Employer and make decisions without regard to race, color, religion, creed, sex, sexual orientation, gender identity, marital status, national origin, age, veteran status, disability, or any other protected class. We welcome the employment of women, minorities, veterans, and individuals with disabilities in our workforce. If you are in need of special assistance, please contact our Human Resources Department. X Energy, LLC participates in E-Verify. Please visit the links below for more information about E-Verify and the protection of your Right to Work.

Right To Work Link

[If you have the right to work, don't let anyone take it away \(e-verify.gov\)](#)

E-Verify Participation Link

[E-Verify Participation Poster English and Spanish](#)

www.x-energy.com



X-energy Canada Inc.
393 University Ave, 4th Floor
Toronto, ON • Canada
M5G 1E6

September 22, 2025

Dragan Popovic
110 Parklea Dr
Toronto, On
Canada

Via e-mail: Draganpl010@gmail.com

Dear Dragan,

I am very pleased to extend to you an offer to join X-energy as our next **Executive Vice President and Global Chief Operating Officer**. We are looking forward to the valuable contributions we know you will make to our Company, and this offer is subject only to approval by our Board of Directors, which is a standard step in our hiring of key senior executives. We do not anticipate any issues with this approval and look forward to welcoming you to the team. If you decide to join us, the terms of your employment will be:

Employer: X-energy Canada

Start Date: October 27, 2025, or earlier if possible

Reporting to: Chief Executive Officer (J. Clay Sell)

Office/Work Location: X-energy Canada, Toronto, Ontario; full-time. While you will be expected to travel to the United States or internationally for meetings, training, and consultations incidental to your role, all substantive work and productive employment will be performed in Canada.

Base Salary: \$450,000 USD (or CAD equivalent) per year; \$17,308 bi-weekly

Annual Bonus: As a participant in X-energy's Short Term Incentive Program ("STIP"), your annual target incentive will be 75% of your base salary, attainment of which will be based on Company and personal performance and paid as a bonus each calendar year. Your STIP award for 2025 will be a guaranteed amount of \$134,375 (comprised of a pro-rated STIP target amount of \$84,375, plus an additional \$50,000 incentive bonus). To receive your STIP bonus, you must be an active employee in good standing at the time bonuses are issued.

Long-term Incentive Plan: You are eligible to participate in X-energy's Long-term Incentive Plan ("LTIP"). As such, you will receive a grant of 600,000 Profits Interest Units ("PIUs"), which will vest ratably over four years, 25% per year. Future grants may be awarded at the Company's discretion, based on Company results and your individual performance.

The actual value of your PIUs will depend on many factors, including, but not limited to, the Company's future performance, market conditions, capital structure, and the total number of PIUs outstanding at the time of a qualifying liquidity event (e.g., an initial public offering or a sale of the Company). The Board retains full discretion over any future grants and the treatment of PIUs at exit.

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X-energy Canada Inc.
393 University Ave, 4th Floor
Toronto, ON • Canada
M5G 1E6

The following is provided solely as a hypothetical illustration and should not be relied upon as a prediction or guarantee of any particular outcome. This example is based on numerous assumptions, all of which may change materially without notice. It is not intended to establish a fair market value for tax purposes, nor does it create any obligation on the part of the Company to achieve any particular valuation or to undertake any specific transaction.

Based on a recent value analysis conducted by our outside consultants, if the Company were to achieve a \$10 billion exit value, the current estimated value of one PIU could be approximately \$28.00. Under that purely hypothetical scenario, 600,000 PIUs could have a value of approximately \$16,800,000. Actual results, including the value (if any) realized for your PIUs, may differ significantly from this example. All PIUs will remain subject to the terms, conditions, and restrictions set forth in the governing plan documents and award agreements, which shall control in all respects.

Travel, Visa Sponsorship, and Relocation Expectations. You are currently a citizen of Canada. Should it be necessary, you agree to cooperate fully with all efforts to obtain a work visa authorizing your employment in the United States. Unless and until such visa is issued, all substantive work and productive employment shall be performed in Canada. Notwithstanding the foregoing, in your capacity as Global Chief Operating Officer, you will be required to travel to the Company's headquarters in Maryland, other locations within the United States, and international sites as necessary for meetings, training, and consultations incidental to your role overseeing global operations.

If deemed necessary, the Company will cover your legal and filing expenses associated with obtaining and maintaining any required U.S. work authorization, and, if applicable, U.S. lawful permanent residency ("green card") or U.S. citizenship. You acknowledge that in this scenario, the expectation will be that you will take all reasonable steps, with company support, to obtain U.S. permanent residency and, if eligible and willing, U.S. citizenship within a mutually agreed timeframe. Upon issuance of the requisite work visa, you shall commence employment with X-energy LLC in the United States and shall relocate, as soon as reasonably practicable, to a residence within reasonable commuting distance of the Company's corporate headquarters in the MD/DC/VA metropolitan area.

The Company shall be financially responsible for the following:

- Reasonable travel (including commuting and lodging) expenses incurred from your current residence until relocation;
- If applicable, relocation expenses up to \$135,000, which shall constitute taxable income, subject to applicable tax withholding and reporting requirements. You shall be required to update your physical address and tax forms upon relocation; and
- A reasonable number of house-hunting trips for you and your spouse.

If you resign within 24 months of relocation, you must repay all relocation expenses.

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393 University Ave, 4th Floor
Toronto, ON • Canada
M5G 1E6

Universal Leave/Paid Holidays: You will accrue 20 days/160 hours of Universal Leave annually for vacation, illness, or time away from work for personal activities. X-energy provides ten (10) paid holidays which must be used in each calendar year. The ten (10) paid holidays are considered floating holidays which can be used on the assigned holiday or taken on another day of the employee's choice. New hires are eligible to utilize any paid holidays that remain on the company schedule after their start date for that given calendar year.

Other Benefits: Medical, dental, life and disability insurance, and other benefits are as set forth in X-energy's Benefits Guide, which will be provided via email. We would be happy to answer any questions that you may have regarding these benefits.

Employment Classification: Full-time exempt

Please note that your employment with X-energy Canada is for no specified period and constitutes at will employment. This offer is contingent upon the successful completion of our pre-employment process which will include a background check and education verification. Additional verifications, such as a credit check, may be required for positions with specialized data access. Once you accept this offer, you will receive an email from ClearStar, the company that we use to conduct this process. The email will contain a link to ClearStar's secure website where you will be guided through the process and can safely enter the necessary information. Please watch for this email and submit your information to ClearStar as soon as possible.

Dragan, I am genuinely excited about the prospect of you joining us as our next Executive Vice President and Global Chief Operating Officer, and I look forward to working closely with you in what I am confident will be a long, successful, and rewarding partnership. To accept this offer, please sign and date below, and return

If you have any questions, please do not hesitate to contact me.

Sincerely,

//J. Clay Sell//

J. Clay Sell
Chief Executive Officer

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X-energy Canada Inc.
393 University Ave, 4th Floor
Toronto, ON • Canada
M5G 1E6

I accept X-energy's offer of employment, and I acknowledge that my title will be **Executive Vice President and Global Chief Operating Officer** with all of the responsibilities and requirements attendant to such position.

Signature: /s/ Dragan Popovic

Name (print): Dragan Popovic

Date: Sept 22, 2025

X energy, LLC and it's affiliated companies, are committed to hiring and retaining a diverse workforce. We are proud to be an Equal Opportunity Employer and make decisions without regard to race, color, religion, creed, sex, sexual orientation, gender identity, marital status, national origin, age, veteran status, disability, or any other protected class. We welcome the employment of women, minorities, veterans, and individuals with disabilities in our workforce. If you are in need of special assistance, please contact our Human Resources Department.

X Energy, LLC and it's affiliated entities, participates in E-Verify. Please visit the links below for more information about E-Verify and the protection of your Right to Work.

Right To Work Link

[If you have the right to work, don't let anyone take it away \(e-verify.gov\)](#)

E-Verify Participation Link

[E-Verify Participation Poster English and Spanish](#)

www.x-energy.com

X-ENERGY, INC.

NON-EMPLOYEE DIRECTOR COMPENSATION PROGRAM

Eligible Directors (as defined below) on the board of directors (the “**Board**”) of X-Energy, Inc. (the “**Company**”) shall be eligible to receive cash and equity compensation as set forth in this Non-Employee Director Compensation Program (this “**Program**”). The cash and equity compensation described in this Program shall be paid or be made, as applicable, automatically as set forth herein and without further action of the Board, to each member of the Board who is not an employee of the Company or any of its parents, affiliates or subsidiaries (each, an “**Eligible Director**”), unless such member is determined by the Board to not be an Eligible Director or unless such Eligible Director declines the receipt of such cash or equity compensation by written notice to the Company.

This Program shall become effective upon the closing of the initial public offering of the Company’s Class A common stock (the “**Effective Date**”) and shall remain in effect until it is revised or rescinded by further action of the Board. This Program may be amended, modified or terminated by the Board at any time in its sole discretion. No Eligible Director shall have any rights hereunder, except with respect to equity awards granted pursuant to Section 2 of this Program.

1. Cash Compensation.

- a. Annual Retainers. Each Eligible Director shall be eligible to receive an annual cash retainer of \$80,000 for service on the Board.
- b. Additional Committee Chair Annual Retainers. An Eligible Director serving as a member of a Committee (other than as Chair of such Committee) shall not be eligible to receive an additional annual retainer for such service. An Eligible Director serving as Chair of a Committee or as Non-Executive Chair of the Board shall be eligible to receive the following additional annual retainers, as applicable:
 - (i) Audit Committee. An Eligible Director serving as Chair of the Audit Committee shall be eligible to receive an additional annual retainer of \$25,000 for such service.
 - (ii) Compensation & Culture Committee. An Eligible Director serving as Chair of the Compensation & Culture Committee shall be eligible to receive an additional annual retainer of \$20,000 for such service.
 - (iii) Nominating and Corporate Governance Committee. An Eligible Director serving as Chair of the Nominating and Corporate Governance Committee shall be eligible to receive an additional annual retainer of \$15,000 for such service.
 - (iv) Non-Executive Chair. An Eligible Director serving as non-Executive Chair of the Board shall be receive an additional annual retainer of \$50,000 for such service.

2. Payment of Retainers. The annual cash retainers described in Section 1 shall be earned on a quarterly basis based on a calendar quarter and shall be paid by the Company in arrears not later than 30 days following the end of each calendar quarter. In the event an Eligible Director does not serve as a director, or in the applicable positions described in Section 1.b, for an entire calendar quarter, the retainer paid to such Eligible Director shall be prorated for the portion of such calendar quarter actually served as a director, or in such position, as applicable.

3. Equity Compensation

a. General. Eligible Directors shall be granted the equity awards described below without further action from the Board. The awards described below shall be granted under and shall be subject to the terms and provisions of the Company's 2026 Equity Incentive Plan or any other applicable Company equity incentive plan then-maintained by the Company (such plan, as may be amended from time to time, the "**Equity Plan**") and may be granted subject to the execution and delivery of award agreements, including attached exhibits, in substantially the forms approved by the Board prior to or in connection with such grants. All applicable terms of the Equity Plan apply to this Program as if fully set forth herein, and all grants of equity awards hereby are subject in all respects to the terms of the Equity Plan. Capitalized terms in this Section 3 not otherwise defined herein shall have the meanings ascribed to them in the Equity Plan.

b. 2026 Awards. An Eligible Director who is serving on the Board as of the Effective Date shall be granted a Restricted Stock Unit award (the "**2026 Award**"). Each 2026 Award shall be granted on the later of (i) the date on which the Form S-8 Registration Statement with respect to the Company's Class A common stock issuance under the Equity Plan becomes effective and (ii) the Effective Date. The number of Restricted Stock Units subject to a 2026 Award will be determined by dividing \$150,000 (or, solely with respect to the Non-Executive Chair of the Board as of such Annual Meeting, \$200,000) by the price per share to the public of the Company's Class A common stock as determined on the pricing date of the Company's initial public offering. Each 2026 Award shall vest in full on the earlier to occur of (x) the one-year anniversary of the Effective Date and (y) the date of the Annual Meeting (as defined below) for calendar year 2027, subject to continued service through the applicable vesting date.

c. Annual Awards. An Eligible Director who is serving on the Board as of the date of the annual meeting of the Company's stockholders (each annual meeting, an "**Annual Meeting**") each calendar year beginning with calendar year 2027 shall be granted a Restricted Stock Unit award with a value of \$150,000 (or, solely with respect to the Non-Executive Chair of the Board as of such Annual Meeting, \$200,000) (an "**Annual Award**," and together with the 2026 Award, the "Equity Awards"). The number of Restricted Stock Units subject to an Annual Award will be determined by dividing \$150,000 (or \$200,000, as applicable) by the closing price for the Company's Class A common stock on the applicable grant date. Each Annual Award shall be granted on the date of the applicable Annual Meeting, and shall vest in full on the earlier to occur of (x) the one-year anniversary of the applicable grant date and (y) the date of the next Annual Meeting following the grant date, subject to continued service through the applicable vesting date.

d. Accelerated Vesting Events. Notwithstanding the foregoing, an Eligible Director's Equity Award(s) shall vest in full immediately prior to the occurrence of a Change in Control, to the extent outstanding at such time.

4. Compensation Limits. Notwithstanding anything to the contrary in this Program, all compensation payable under this Program will be subject to any limits on the maximum amount of non-employee Director compensation set forth in the Equity Plan, as in effect from time to time.

INDEMNIFICATION AND ADVANCEMENT AGREEMENT

This Indemnification and Advancement Agreement (this “Agreement”) is made as of [●], 2026 by and between X-Energy, Inc., a Delaware corporation (the “Company”), and _____, [a member of the Board of Directors/an officer] of the Company (“Indemnitee”). This Agreement supersedes and replaces any and all previous Agreements between the Company and Indemnitee covering indemnification and advancement of expenses.

RECITALS

WHEREAS, the Board of Directors of the Company (the “Board”) believes that highly competent persons have become more reluctant to serve publicly-held corporations as directors, officers, or in other capacities unless they are provided with adequate protection through insurance or adequate indemnification and advancement of expenses against inordinate risks of claims and actions against them arising out of their service to and activities on behalf of the corporation;

WHEREAS, the Board has determined that, in order to attract and retain qualified individuals, the Company will attempt to maintain on an ongoing basis, at its sole expense, liability insurance to protect persons serving the Company and its subsidiaries from certain liabilities. Although the furnishing of such insurance has been a customary and widespread practice among United States-based corporations and other business enterprises, the Company believes that, given current market conditions and trends, such insurance may be available to it in the future only at higher premiums and with more exclusions. At the same time, directors, officers, and other persons in service to corporations or business enterprises are being increasingly subjected to expensive and time-consuming litigation relating to, among other things, matters that traditionally would have been brought only against the Company or business enterprise itself. The Company’s Bylaws and Certificate of Incorporation require indemnification of the officers and directors of the Company. Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware (the “DGCL”). The Bylaws, the Certificate of Incorporation, and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive, and thereby contemplate that contracts may be entered into between the Company and its directors, officers, and other persons with respect to indemnification and advancement of expenses;

WHEREAS, the uncertainties relating to such insurance, to indemnification, and to advancement of expenses may increase the difficulty of attracting and retaining such persons;

WHEREAS, the Board has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Company and its stockholders and that the Company should act to assure such persons that there will be increased certainty of such protection in the future;

WHEREAS, it is reasonable, prudent and necessary for the Company contractually to obligate itself to indemnify, and to advance expenses on behalf of, such persons to the fullest extent permitted by applicable law so that they will serve or continue to serve the Company free from undue concern that they will not be so indemnified;

WHEREAS, this Agreement is a supplement to, and in furtherance of, the Bylaws, the Certificate of Incorporation and any resolutions adopted pursuant thereto, as well as any rights of Indemnitee under any directors’ and officers’ liability insurance policy, and is not a substitute therefor, and does not diminish or abrogate any rights of Indemnitee thereunder; and

WHEREAS, Indemnitee does not regard the protection available under the Bylaws, the Certificate of Incorporation, and available insurance as adequate in the present circumstances, and may not be willing to serve or continue to serve as a director or officer of the Company without adequate additional protection, and the Company desires Indemnitee to serve or continue to serve in such capacity. Indemnitee is willing to serve, continue to serve and to take on additional service for or on behalf of the Company on the condition that Indemnitee be so indemnified and be advanced expenses.

NOW, THEREFORE, in consideration of the premises and the covenants contained herein, the Company and Indemnitee do hereby covenant and agree as follows:

Section 1. Services to the Company. Indemnitee agrees to serve as a director or officer of the Company. Indemnitee may at any time and for any reason resign from such position (subject to any other contractual obligation or any obligation imposed by operation of law). This Agreement does not create any obligation on the Company to continue Indemnitee in such position and is not an employment contract between the Company (or any of its subsidiaries or any Enterprise) and Indemnitee.

Section 2. Definitions. As used in this Agreement:

(a) "Agent" means any person who is authorized by the Company or an Enterprise to act for or represent the interests of the Company or an Enterprise, respectively.

(b) A "Change in Control" occurs upon the earliest to occur after the date of this Agreement of any of the following events:

i. Acquisition of Stock by Third Party. Any Person (as defined below) is or becomes the Beneficial Owner (as defined below), directly or indirectly, of securities of the Company representing fifteen percent (15%) or more of the combined voting power of the Company's then outstanding securities unless the change in relative beneficial ownership of the Company's securities by any Person results solely from a reduction in the aggregate number of outstanding shares of securities entitled to vote generally in the election of directors;

ii. Change in Board of Directors. During any period of two (2) consecutive years (not including any period prior to the execution of this Agreement), individuals who at the beginning of such period constitute the Board, and any new director (other than a director designated by a person who has entered into an agreement with the Company to effect a transaction described in Sections 2(b)(i), 2(b)(ii) or 2(b)(iv) of this Agreement) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute at least a majority of the members of the Board;

iii. Corporate Transactions. The effective date of a merger or consolidation of the Company with any other entity, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than 50% of the combined voting power of the voting securities of the surviving entity outstanding immediately after such merger or consolidation and with the power to elect at least a majority of the board of directors or other governing body of such surviving entity;

iv. Liquidation. The approval by the stockholders of the Company of a complete liquidation of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets; and

v. Other Events. There occurs any other event of a nature that would be required to be reported in response to Item 6(e) of Schedule 14A of Regulation 14A (or a response to any similar item on any similar schedule or form) promulgated under the Exchange Act (as defined below), whether or not the Company is then subject to such reporting requirement.

vi. For purposes of this Section 2(b), the following terms have the following meanings:

- 1 “Exchange Act” means the Securities Exchange Act of 1934, as amended from time to time.
- 2 “Person” has the meaning as set forth in Sections 13(d) and 14(d) of the Exchange Act; provided, however, that Person excludes (i) the Company, (ii) any trustee or other fiduciary holding securities under an employee benefit plan of the Company, and (iii) any entity owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company.
- 3 “Beneficial Owner” has the meaning given to such term in Rule 13d-3 under the Exchange Act; provided, however, that Beneficial Owner excludes any Person otherwise becoming a Beneficial Owner by reason of the stockholders of the Company approving a merger of the Company with another entity.

(c) “Corporate Status” describes the status of a person who is or was acting as a director, officer, employee, or Agent of the Company or an Enterprise.

(d) “Disinterested Director” means a director of the Company who is not and was not a party to the Proceeding in respect of which indemnification is sought by Indemnitee.

(e) “Enterprise” means any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other entity for which Indemnitee is or was serving at the request of the Company as a director, officer, employee, or Agent.

(f) “Expenses” includes all reasonable attorneys’ fees, retainers, court costs, transcript costs, fees and other costs of experts and other professionals, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, any federal, state, local or foreign taxes imposed on Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement, ERISA excise taxes and penalties, and all other disbursements, obligations, or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, a Proceeding. Expenses also include (i) Expenses incurred in connection with any appeal resulting from any Proceeding, including without limitation the premium, security for, and other costs relating to any cost bond, supersedeas bond, or other appeal bond or its equivalent, and (ii) for purposes of Section 14(d) of this Agreement only, Expenses incurred by Indemnitee in connection with the interpretation, enforcement or defense of Indemnitee’s rights under this Agreement, by litigation or otherwise. Expenses, however, do not include amounts paid in settlement by Indemnitee or the amount of judgments or fines against Indemnitee.

(g) “Independent Counsel” means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has been, retained to represent: (i) the Company or Indemnitee in any matter material to either such party (other than with respect to matters concerning the Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements) or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term “Independent Counsel” does not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee’s rights under this Agreement. The Company agrees to pay the reasonable fees and expenses of the Independent Counsel.

(h) “Proceeding” includes any threatened, pending or completed action, suit, claim, counterclaim, cross claim, arbitration, mediation, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing, or any other actual, threatened or completed proceeding, whether brought in the right of the Company or otherwise and whether of a civil, criminal, administrative, legislative, regulatory, or investigative (formal or informal) nature, including any appeal therefrom, in which Indemnitee was, is, or will be involved as a party, potential party, non-party witness, or otherwise by reason of Indemnitee’s Corporate Status or by reason of any action taken by Indemnitee (or a failure to take action by Indemnitee) or of any action (or failure to act) on Indemnitee’s part while acting pursuant to Indemnitee’s Corporate Status, in each case whether or not serving in such capacity at the time any liability or Expense is incurred for which indemnification, reimbursement, or advancement of Expenses can be provided under this Agreement. A Proceeding also includes a situation the Indemnitee believes in good faith may lead to, or culminate in, the institution of a Proceeding.

Section 3. Indemnity in Third-Party Proceedings. The Company will indemnify Indemnitee in accordance with the provisions of this Section 3 if Indemnitee is, or is threatened to be made, a party to or a participant in any Proceeding, other than a Proceeding by or in the right of the Company to procure a judgment in its favor. Pursuant to this Section 3, the Company will indemnify Indemnitee to the fullest extent permitted by applicable law against all Expenses, judgments, fines and amounts paid in settlement (including all interest, assessments and other charges paid or payable in connection with, or in respect of, such Expenses, judgments, fines and amounts paid in settlement) actually and reasonably incurred by Indemnitee or on Indemnitee’s behalf in connection with such Proceeding or any claim, issue, or matter therein, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company and, in the case of a criminal Proceeding, had no reasonable cause to believe that Indemnitee’s conduct was unlawful.

Section 4. Indemnity in Proceedings by or in the Right of the Company. The Company will indemnify Indemnitee in accordance with the provisions of this Section 4 if Indemnitee is, or is threatened to be made, a party to or a participant in any Proceeding by or in the right of the Company to procure a judgment in its favor. Pursuant to this Section 4, the Company will indemnify Indemnitee to the fullest extent permitted by applicable law against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee’s behalf in connection with such Proceeding or any claim, issue or matter therein, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Company. The Company will not indemnify Indemnitee for Expenses under this Section 4 related to any claim, issue, or matter in a Proceeding for which Indemnitee has been finally adjudged by a court to be liable to the Company, unless, and only to the extent that, the Court of Chancery of the state of Delaware (the “Delaware Court”) or any court in which the Proceeding was brought determines upon application by Indemnitee that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnification.

Section 5. Indemnification for Expenses of a Party Who is Wholly or Partly Successful. To the fullest extent permitted by applicable law, the Company will indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee in connection with any Proceeding to the extent that Indemnitee is successful, on the merits or otherwise. If Indemnitee is not wholly successful in such Proceeding but is successful, on the merits or otherwise, as to one or more but less than all claims, issues, or matters in such Proceeding, the Company will indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee’s behalf in connection with or related to each successfully resolved claim, issue or matter to the fullest extent permitted by law. For purposes of this Section 5 and without limitation, the termination of any claim, issue, or matter in such a Proceeding by dismissal, with or without prejudice, will be deemed to be a successful result as to such claim, issue, or matter.

Section 6. Indemnification for Expenses of a Witness. To the fullest extent permitted by applicable law, the Company will indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee's behalf in connection with any Proceeding to which Indemnitee is not a party but to which Indemnitee is a witness, deponent, interviewee, or otherwise asked to participate or provide information.

Section 7. Partial Indemnification. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of Expenses, but not, however, for the total amount thereof, the Company will indemnify Indemnitee for the portion thereof to which Indemnitee is entitled.

Section 8. Additional Indemnification. Notwithstanding any limitation in Sections 3, 4, or 5 of this Agreement, the Company will indemnify Indemnitee to the fullest extent permitted by applicable law (including but not limited to, the DGCL and any amendments to or replacements of the DGCL adopted after the date of this Agreement that expand the Company's ability to indemnify its officers, directors, employees or Agents) if Indemnitee is a party to, or threatened to be made a party to, any Proceeding (including a Proceeding by or in the right of the Company to procure a judgment in its favor).

Section 9. Exclusions. Notwithstanding any provision in this Agreement, the Company is not obligated under this Agreement to indemnify Indemnitee for:

(a) for any amount actually paid to or on behalf of Indemnitee under any insurance policy or other indemnity provision, except to the extent provided in Section 15(b) of this Agreement and except with respect to any excess beyond the amount paid under any insurance policy or other indemnity provision;

(b) an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Company within the meaning of Section 16(b) of the Exchange Act or similar provisions of state statutory law or common law;

(c) reimbursement of the Company by the Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by the Indemnitee from the sale of securities of the Company, as required in each case under the Exchange Act (including any such reimbursements that arise from an accounting restatement of the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), or the payment to the Company of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act);

(d) reimbursement of the Company by Indemnitee of any compensation pursuant to any compensation recoupment or clawback policy adopted by the Board or the compensation and culture committee of the Board, including but not limited to any such policy adopted to comply with stock exchange listing requirements implementing Section 10D of the Exchange Act; or

(e) any Proceeding initiated by Indemnitee, including any Proceeding (or any part of any Proceeding) initiated by Indemnitee against the Company or its directors, officers, employees or other indemnitees, unless (i) the Proceeding or part of any Proceeding is to enforce Indemnitee's rights to indemnification or advancement, of Expenses, including a Proceeding (or any part of any Proceeding) initiated pursuant to Section 14 of this Agreement, (ii) the Board authorized the Proceeding (or any part of any Proceeding) prior to its initiation or (iii) the Company provides the indemnification, in its sole discretion, pursuant to the powers vested in the Company under applicable law.

Section 10. Advances of Expenses.

(a) The Company will advance, to the extent not prohibited by law, the Expenses incurred by Indemnitee in connection with:

- i. any Proceeding (or any part of any Proceeding) not initiated by Indemnitee; or
- ii. any Proceeding (or any part of any Proceeding) initiated by Indemnitee if:

- 1 the Proceeding or part of any Proceeding is to enforce Indemnitee's rights to obtain indemnification or advancement of Expenses from the Company or Enterprise, including a Proceeding initiated pursuant to Section 14 of this Agreement, or
- 2 the Board authorized the Proceeding (or any part of any Proceeding) prior to its initiation.

(b) The Company will advance the Expenses within thirty (30) days after the receipt by the Company of a statement or statements requesting such advances from time to time, whether prior to or after final disposition of any Proceeding eligible for advancement of expenses.

(c) Advances will be unsecured and interest free. Indemnitee hereby undertakes to repay any amounts so advanced (without interest) to the extent that it is ultimately determined that Indemnitee is not entitled to be indemnified by the Company, thus Indemnitee qualifies for advances upon the execution of this Agreement and delivery to the Company. No other form of undertaking is required other than the execution of this Agreement. The Company will make advances without regard to Indemnitee's ability to repay the Expenses and without regard to Indemnitee's ultimate entitlement to indemnification under the other provisions of this Agreement.

Section 11. Procedure for Notification of Claim for Indemnification or Advancement.

(a) Indemnitee will notify the Company in writing of any Proceeding with respect to which Indemnitee intends to seek indemnification or advancement of Expenses hereunder as soon as reasonably practicable following the receipt by Indemnitee of written notice thereof. Indemnitee will include in the written notification to the Company a description of the nature of the Proceeding and the facts underlying the Proceeding and provide such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification following the final disposition of such Proceeding. Indemnitee's failure to notify the Company will not relieve the Company from any obligation it may have to Indemnitee under this Agreement, and any delay in so notifying the Company will not constitute a waiver by Indemnitee of any rights under this Agreement. The Chief Legal Officer of the Company will, promptly upon receipt of such a request for indemnification or advancement, advise the Board in writing that Indemnitee has requested indemnification or advancement.

(b) The Company will be entitled to participate in the Proceeding at its own expense.

Section 12. Procedure Upon Application for Indemnification.

(a) Unless a Change of Control has occurred, the determination of Indemnatee's entitlement to indemnification will be made:

- i. by a majority vote of the Disinterested Directors, even though less than a quorum of the Board;
- ii. by a committee of Disinterested Directors designated by a majority vote of the Disinterested Directors, even though less than a quorum of the Board; or
- iii. if there are no such Disinterested Directors or, if such Disinterested Directors so direct, by written opinion provided by Independent Counsel selected by the Board.

(b) If a Change in Control has occurred, the determination of Indemnatee's entitlement to indemnification will be made by written opinion provided by Independent Counsel selected by Indemnatee (unless Indemnatee requests such selection be made by the Board).

(c) The party selecting Independent Counsel pursuant to Sections 12(a)(iii) or (b) of this Agreement will provide written notice of the selection to the other party. The notified party may, within ten (10) days after receiving written notice of the selection of Independent Counsel, deliver to the selecting party a written objection to such selection; *provided, however*, that such objection may be asserted only on the ground that the Independent Counsel so selected does not meet the requirements of "Independent Counsel" as defined in Section 2 of this Agreement, and the objection will set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person so selected will act as Independent Counsel. If such written objection is so made and substantiated, the Independent Counsel so selected may not serve as Independent Counsel unless and until such objection is withdrawn or the Delaware Court has determined that such objection is without merit. If, within thirty (30) days after the later of submission by Indemnatee of a written request for indemnification pursuant to Section 11(a) of this Agreement and the final disposition of the Proceeding, Independent Counsel has not been selected or, if selected, any objection to such selection has not been resolved, either the Company or Indemnatee may petition the Delaware Court for resolution of any objection made by the Company or Indemnatee to the other's selection of Independent Counsel and/or for the appointment as Independent Counsel of a person selected by such court or by such other person as such court designates. Upon the due commencement of any judicial proceeding or arbitration pursuant to Section 14(a) of this Agreement, Independent Counsel will be discharged and relieved of any further responsibility in such capacity (subject to the applicable standards of professional conduct then prevailing).

(d) Indemnatee will cooperate with the person, persons or entity making the determination with respect to Indemnatee's entitlement to indemnification, including providing to such person, persons, or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnatee and reasonably necessary to such determination. The Company will advance and pay any Expenses incurred by Indemnatee in so cooperating with the person, persons or entity making the indemnification determination irrespective of the determination as to Indemnatee's entitlement to indemnification and the Company hereby indemnifies and agrees to hold Indemnatee harmless therefrom. The Company promptly will advise Indemnatee in writing of the determination that Indemnatee is or is not entitled to indemnification, including a description of any reason or basis for which indemnification has been denied and providing a copy of any written opinion provided to the Board by Independent Counsel.

(e) If it is determined that Indemnatee is entitled to indemnification, the Company will make payment to Indemnatee within thirty (30) days after such determination.

Section 13. Presumptions and Effect of Certain Proceedings.

(a) In making a determination with respect to entitlement to indemnification under this Agreement, the person, persons, or entity making such determination will, to the fullest extent not prohibited by law, presume Indemnitee is entitled to indemnification under this Agreement if Indemnitee has submitted a request for indemnification in accordance with Section 11(a) of this Agreement, and the Company will, to the fullest extent not prohibited by law, have the burden of proof to overcome that presumption. Neither the failure of the Company (including by its directors or Independent Counsel) to have made a determination prior to the commencement of any action pursuant to this Agreement that indemnification is proper under the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Company (including by its directors or Independent Counsel) that Indemnitee has not met such applicable standard of conduct, will be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct.

(b) If the determination of the Indemnitee's entitlement to indemnification has not been made pursuant to Section 12 of this Agreement within sixty (60) days after the later of (i) receipt by the Company of Indemnitee's request for indemnification pursuant to Section 11(a) of this Agreement and (ii) the final disposition of the Proceeding for which Indemnitee requested Indemnification (the "Determination Period"), the requisite determination of entitlement to indemnification will, to the fullest extent not prohibited by law, be deemed to have been made and Indemnitee will be entitled to such indemnification absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's statement not materially misleading, in connection with the request for indemnification or (ii) a prohibition of such indemnification under applicable law. The Determination Period may be extended for a reasonable time, not to exceed an additional thirty (30) days, if the person, persons or entity making the determination with respect to entitlement to indemnification in good faith requires such additional time for the obtaining or evaluating of documentation and/or information relating thereto; and provided, further, the Determination Period will not apply if the determination of entitlement to indemnification is to be made by Independent Counsel.

(c) The termination of any Proceeding or of any claim, issue, or matter therein by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, will not (except as otherwise expressly provided in this Agreement) of itself adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which Indemnitee reasonably believed to be in or not opposed to the best interests of the Company or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that Indemnitee's conduct was unlawful.

(d) For purposes of any determination of good faith, Indemnitee will be deemed to have acted in good faith if Indemnitee acted based on (i) the records or books of account of the Company, its subsidiaries, or an Enterprise, including financial statements, (ii) information supplied to Indemnitee by the directors or officers of the Company, its subsidiaries, or an Enterprise in the course of their duties, (iii) the advice of legal counsel for the Company, its subsidiaries, or an Enterprise or (iv) information or records given or reports made to the Company or an Enterprise by an independent certified public accountant or by an appraiser, financial advisor or other expert selected with reasonable care by or on behalf of the Company, its subsidiaries, or an Enterprise. Further, Indemnitee will be deemed to have acted in a manner "not opposed to the best interests of the Company," as referred to in this Agreement if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in the best interests of the participants and beneficiaries of an employee benefit plan. The provisions of this Section 13(d) are not exclusive and do not limit in any way the other circumstances in which the Indemnitee may be deemed to have met the applicable standard of conduct set forth in this Agreement.

(e) The knowledge and/or actions, or failure to act, of any other person affiliated with the Company or an Enterprise (including, but not limited to, a director, officer, trustee, partner, managing member, Agent or employee) may not be imputed to Indemnitee for purposes of determining Indemnitee's right to indemnification under this Agreement.

Section 14. Remedies of Indemnitee.

(a) Indemnitee may commence litigation against the Company in the Delaware Court to obtain indemnification or advancement of Expenses provided by this Agreement in the event that (i) a determination is made pursuant to Section 12 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) the Company does not advance Expenses pursuant to Section 10 of this Agreement, (iii) the determination of entitlement to indemnification is not made pursuant to Section 12 of this Agreement within the Determination Period, (iv) the Company does not indemnify Indemnitee pursuant to Section 5 or 6 or the second to last sentence of Section 12(d) of this Agreement within thirty (30) days after receipt by the Company of a written request therefor, (v) the Company does not indemnify Indemnitee pursuant to Section 3, 4, 7, or 8 of this Agreement within thirty (30) days after a determination has been made that Indemnitee is entitled to indemnification, or (vi) in the event that the Company or any other person takes or threatens to take any action to declare this Agreement void or unenforceable, or institutes any litigation or other action or Proceeding designed to deny, or to recover from, the Indemnitee the benefits provided or intended to be provided to the Indemnitee hereunder. Alternatively, Indemnitee, at Indemnitee's option, may seek an award in arbitration to be conducted by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. Indemnitee must commence such Proceeding seeking an adjudication or an award in arbitration within one hundred and eighty (180) days following the date on which Indemnitee first has the right to commence such Proceeding pursuant to this Section 14(a); *provided, however*, that the foregoing clause does not apply in respect of a Proceeding brought by Indemnitee to enforce Indemnitee's rights under Section 5 of this Agreement. The Company will not oppose Indemnitee's right to seek any such adjudication or award in arbitration.

(b) If a determination is made pursuant to Section 12 of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding or arbitration commenced pursuant to this Section 14 will be conducted in all respects as a *de novo* trial or arbitration on the merits and Indemnitee may not be prejudiced by reason of that adverse determination. In any judicial proceeding or arbitration commenced pursuant to this Section 14 the Company will have the burden of proving Indemnitee is not entitled to indemnification or advancement of Expenses, as the case may be, and will not introduce evidence of the determination made pursuant to Section 12 of this Agreement.

(c) If a determination is made pursuant to Section 12 of this Agreement that Indemnitee is entitled to indemnification, the Company will be bound by such determination in any judicial proceeding or arbitration commenced pursuant to this Section 14 unless (i) a made of a material fact, or an omission of a material fact necessary to make Indemnitee's statement not materially misleading, in connection with Indemnitees' request for indemnification, or (ii) the Company is prohibited from indemnifying Indemnitee under applicable law.

(d) The Company is, to the fullest extent not prohibited by law, precluded from asserting in any judicial proceeding or arbitration commenced pursuant to this Section 14 that the procedures and presumptions of this Agreement are not valid, binding, or enforceable and will stipulate in any such court or before any such arbitrator that the Company is bound by all the provisions of this Agreement.

(e) It is the intent of the Company that, to the fullest extent permitted by law, the Indemnitee not be required to incur legal fees or other Expenses associated with the interpretation, enforcement, or defense of Indemnitee's rights under this Agreement, by litigation or otherwise, because the cost and expense thereof would substantially detract from the benefits intended to be extended to the Indemnitee under this Agreement. The Company, to the fullest extent permitted by law, will (within thirty (30) days after receipt by the Company of a written request therefor) advance to Indemnitee such Expenses which are incurred by Indemnitee in connection with a Proceeding concerning this Agreement, Indemnitee's other rights to indemnification or advancement of Expenses from the Company, or concerning any directors' and officers' liability insurance policies maintained by the Company, and will indemnify Indemnitee against any and all such Expenses unless the court determines that Indemnitee's claims in such action were made in bad faith or frivolous, or that the Company is prohibited by law from indemnifying Indemnitee for such Expenses.

Section 15. Non-exclusivity; Survival of Rights; Insurance; Subrogation.

(a) The indemnification and advancement of Expenses provided by this Agreement are not exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Certificate of Incorporation, the Bylaws, any agreement, a vote of stockholders, a resolution of the board of directors, or otherwise. The indemnification and advancement of Expenses provided by this Agreement may not be limited or restricted by any amendment, alteration or repeal of this Agreement in any way with respect to any action taken or omitted by Indemnitee in Indemnitee's Corporate Status occurring prior to any amendment, alteration or repeal of this Agreement. To the extent that a change in Delaware law, whether by statute or judicial decision, permits greater indemnification or advancement of Expenses than would be afforded currently under the Bylaws, the Certificate of Incorporation, or this Agreement, it is the intent of the parties hereto that Indemnitee enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy is cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, will not prevent the concurrent assertion or employment of any other right or remedy.

(b) The Company hereby acknowledges that Indemnitee may have certain rights to indemnification, advancement of Expenses and/or insurance provided by one or more other Persons with whom or which Indemnitee may be associated. The relationship between the Company and such other Persons, other than an Enterprise, with respect to Indemnitee's rights to indemnification, advancement of Expenses, and insurance is described by this subsection, subject to the provisions of subsection (d) of this Section 15 with respect to a Proceeding concerning Indemnitee's Corporate Status with an Enterprise.

i. The Company hereby acknowledges and agrees:

1) the Company's obligations to Indemnitee are primary and any obligation of any other Persons, other than an Enterprise, are secondary (i.e., the Company is the indemnitor of first resort) with respect to any request for indemnification or advancement of Expenses made pursuant to this Agreement concerning any Proceeding;

2) the Company is primarily liable for all indemnification or advancement of Expenses obligations for any Proceeding, whether created by law, the Bylaws, the Certificate of Incorporation, contract (including this Agreement) or otherwise;

3) any obligation of any other Persons with whom or which Indemnitee may be associated to indemnify Indemnitee and/or advance Expenses to Indemnitee in respect of any proceeding are secondary to the Company's obligations;

4) the Company will indemnify Indemnitee and advance Expenses to Indemnitee hereunder to the fullest extent provided herein without regard to any rights Indemnitee may have against any other Person with whom or which Indemnitee may be associated or an insurer of any such Person; and

ii. the Company irrevocably waives, relinquishes and releases (A) any other Person with whom or which Indemnitee may be associated from any claim of contribution, subrogation, reimbursement, exoneration or indemnification, or any other recovery of any kind in respect of amounts paid by the Company to Indemnitee pursuant to this Agreement and (B) any right to participate in any claim or remedy of Indemnitee against any Person, whether or not such claim, remedy or right arises in equity or under contract, statute or common law, including, without limitation, the right to take or receive from any Person, directly or indirectly, in cash or other property or by set-off or in any other manner, payment or security on account of such claim, remedy or right.

iii. In the event any other Person with whom or which Indemnitee may be associated or their insurers advances or extinguishes any liability or loss for Indemnitee, the payor has a right of subrogation against the Company or its insurers for all amounts so paid which would otherwise be payable by the Company or its insurers under this Agreement. In no event will payment by any other Person with whom or which Indemnitee may be associated or their insurers affect the obligations of the Company hereunder or shift primary liability for the Company's obligation to indemnify or advance Expenses to any other Person with whom or which Indemnitee may be associated.

iv. Any indemnification or advancement of Expenses provided by any other Person with whom or which Indemnitee may be associated is specifically in excess over the Company's obligation to indemnify and advance Expenses or any valid and collectible insurance (including but not limited to any malpractice insurance or professional errors and omissions insurance) provided by the Company.

(c) To the extent that the Company maintains an insurance policy or policies providing liability insurance for directors, officers, employees, or Agents of the Company, the Company will obtain a policy or policies covering Indemnitee to the maximum extent of the coverage available for any such director, officer, employee or Agent under such policy or policies, including coverage in the event the Company does not or cannot, for any reason, indemnify or advance Expenses to Indemnitee as required by this Agreement. If, at the time of the receipt of a notice of a claim pursuant to this Agreement, the Company has director and officer liability insurance in effect, the Company will give prompt notice of such claim or of the commencement of a Proceeding, as the case may be, to the insurers in accordance with the procedures set forth in the respective policies. The Company will thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such Proceeding in accordance with the terms of such policies. Indemnitee agrees to assist the Company's efforts to cause the insurers to pay such amounts and will comply with the terms of such policies, including selection of approved panel counsel, if required.

(d) The Company's obligation to indemnify or advance Expenses hereunder to Indemnitee for any Proceeding concerning Indemnitee's Corporate Status with an Enterprise will be reduced by any amount Indemnitee has actually received as indemnification or advancement of Expenses from such Enterprise. The Company and Indemnitee intend that any such Enterprise (and its insurers) be the indemnitor of first resort with respect to indemnification and advancement of Expenses for any Proceeding related to or arising from Indemnitee's Corporate Status with such Enterprise. The Company's obligation to indemnify and advance Expenses to Indemnitee is secondary to the obligations the Enterprise or its insurers owe to Indemnitee. Indemnitee agrees to take all reasonably necessary and desirable action to obtain from an Enterprise indemnification and advancement of Expenses for any Proceeding related to, or arising from, Indemnitee's Corporate Status with such Enterprise.

(e) In the event of any payment made by the Company under this Agreement, the Company will be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee from any Enterprise or its insurance carrier. Indemnitee will execute all papers required and take all action necessary to secure such rights, including execution of such documents as are necessary to enable the Company to bring suit to enforce such rights.

Section 16. Duration of Agreement. The indemnification and advancement of Expenses rights provided by or granted pursuant to this Agreement are (i) binding upon and be enforceable by the parties hereto and their respective successors and assigns (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business or assets of the Company), (ii) continue as to an Indemnitee who has ceased to be a director, officer, employee or Agent of the Company or of any other Enterprise, and (iii) inure to the benefit of Indemnitee and Indemnitee's spouse, assigns, heirs, devisees, executors and administrators and other legal representatives.

Section 17. Severability. If any provision or provisions of this Agreement is held to be invalid, illegal or unenforceable for any reason whatsoever: (a) the validity, legality and enforceability of the remaining provisions of this Agreement (including without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that is not itself invalid, illegal or unenforceable) will not in any way be affected or impaired thereby and will remain enforceable to the fullest extent permitted by law; (b) such provision or provisions will be deemed reformed to the extent necessary to conform to applicable law and to give the maximum effect to the intent of the parties hereto; and (c) to the fullest extent possible, the provisions of this Agreement (including, without limitation, each portion of any Section of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that is not itself invalid, illegal or unenforceable) will be construed so as to give effect to the intent manifested thereby.

Section 18. Interpretation. Any ambiguity in the terms of this Agreement will be resolved in favor of Indemnitee and in a manner to provide the maximum indemnification and advancement of Expenses permitted by law. The Company and Indemnitee intend that this Agreement provide to the fullest extent permitted by law for indemnification and advancement of Expenses in excess of that expressly provided, without limitation, by the Certificate of Incorporation, the Bylaws, vote of the Company's stockholders or Disinterested Directors, or applicable law.

Section 19. Enforcement.

(a) The Company expressly confirms and agrees that it has entered into this Agreement and assumed the obligations imposed on it hereby in order to induce Indemnitee to serve as a director, officer, employee, or Agent of the Company, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving or continuing to serve as director, officer, employee, or Agent of the Company.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof; provided, however, that this Agreement is a supplement to and in furtherance of the Certificate of Incorporation, the Bylaws, any directors' and officers' insurance maintained by the Company, and applicable law, is not a substitute therefor, and does not diminish or abrogate any rights of Indemnitee thereunder.

Section 20. Modification and Waiver. No supplement, modification or amendment of this Agreement is binding unless executed in writing by the parties hereto. No waiver of any of the provisions of this Agreement will be deemed to constitute a waiver of any other provision of this Agreement nor will any waiver constitute a continuing waiver.

Section 21. Notice by Indemnitee. Indemnitee agrees to promptly notify the Company in writing upon being served with any summons, citation, subpoena, complaint, indictment, information or other document relating to any Proceeding or matter which may be subject to indemnification or advancement of Expenses covered hereunder. The failure of Indemnitee to so notify the Company does not relieve the Company of any obligation which it may have to the Indemnitee under this Agreement or otherwise.

Section 22. Notices. All notices, requests, demands and other communications under this Agreement will be in writing and will be deemed to have been duly given if (a) delivered by hand to the other party, (b) sent by reputable overnight courier to the other party or (c) sent by facsimile transmission or electronic mail, with receipt of oral confirmation that such communication has been received:

- (a) If to Indemnitee, at the address indicated on the signature page of this Agreement, or such other address as Indemnitee provides to the Company.
- (b) If to the Company to:

X-Energy, Inc.
801 Thompson Avenue, Suite 400
Rockville, MD 20852
Attention: Steve Miller
Email: smiller@x-energy.com

or to any other address as may have been furnished to Indemnitee by the Company.

Section 23. Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, will contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (a) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or transaction(s) giving cause to such Proceeding; and/or (b) the relative fault of the Company (and its directors, officers, employees and Agents) and Indemnitee in connection with such event(s) and/or transaction(s).

Section 24. Applicable Law and Consent to Jurisdiction. This Agreement and the legal relations among the parties are governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules. Except with respect to any arbitration commenced by Indemnitee pursuant to Section 14(a) of this Agreement, the Company and Indemnitee hereby irrevocably and unconditionally (a) agree that any action, claim, or proceeding between the parties arising out of or in connection with this Agreement may be brought only in the Delaware Court and not in any other state or federal court in the United States of America or any court in any other country, (b) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action, claim, or proceeding arising out of or in connection with this Agreement, (c) waive any objection to the laying of venue of any such action, claim, or proceeding in the Delaware Court, and (d) waive, and agree not to plead or to make, any claim that any such action, claim, or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

Section 25. Identical Counterparts. This Agreement may be executed in one or more counterparts, each of which will for all purposes be deemed to be an original but all of which together constitute one and the same Agreement. Only one such counterpart signed by the party against whom enforceability is sought needs to be produced to evidence the existence of this Agreement.

Section 26. Headings. The headings of this Agreement are inserted for convenience only and do not constitute part of this Agreement or affect the construction thereof.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed as of the day and year first above written.

COMPANY

INDEMNITEE

By: _____
Name: _____
Title: _____

Name: _____
Address: _____

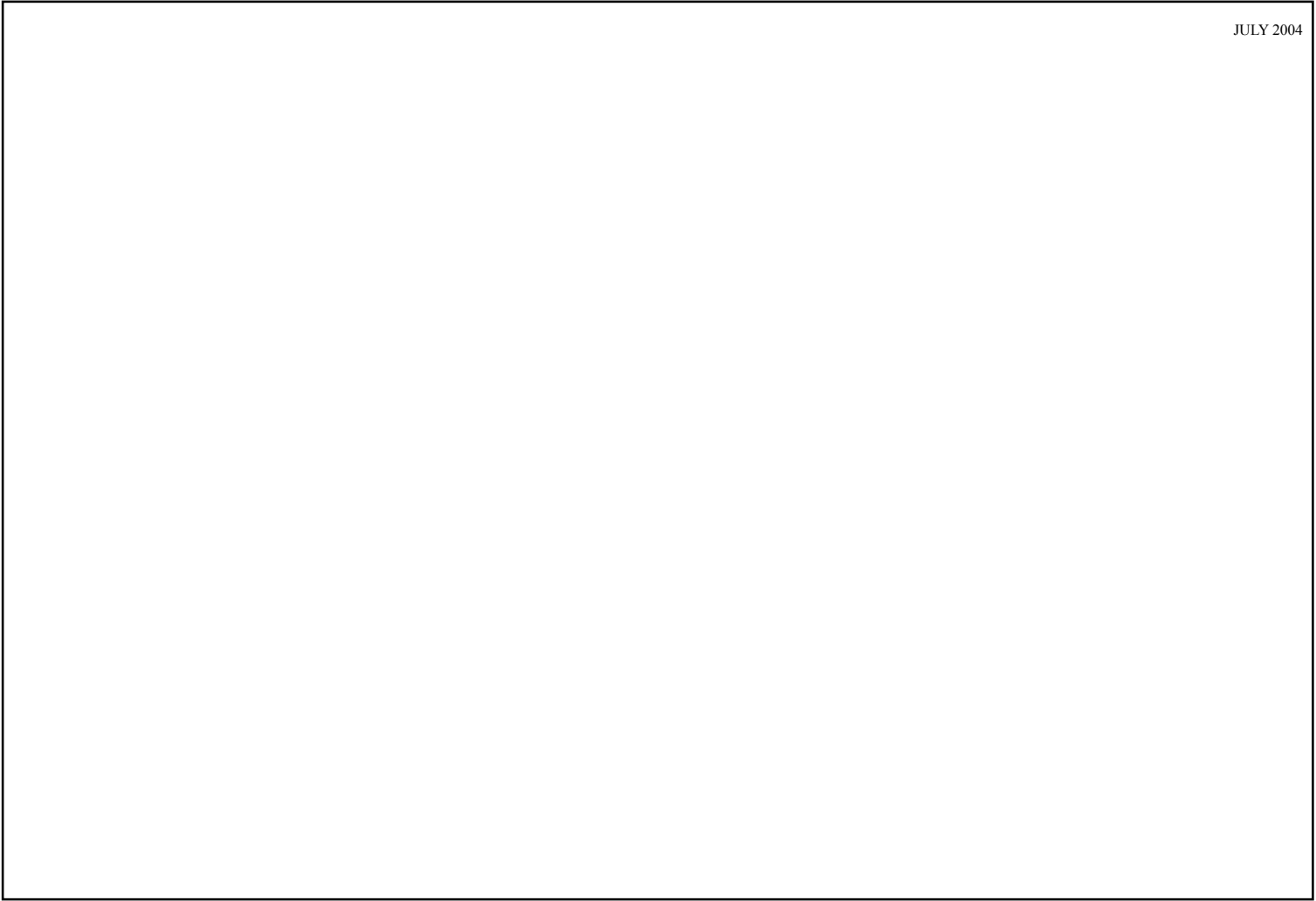
CERTAIN IDENTIFIED INFORMATION, MARKED BY [**], HAS BEEN EXCLUDED FROM THIS AGREEMENT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE OF INFORMATION THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL.

ASSISTANCE AGREEMENT							
1. Award No. DE-NE0009040		2. Modification No.		3. Effective Date 02/02/2021		4. CFDA No. 81.121	
5. Awarded To X Energy, LLC Attn: HARLAN BOWERS 801 THOMPSON AVE ROCKVILLE MD 208521627			6. Sponsoring Office Office of Nuclear Energy NE-1 U.S. Department of Energy 1000 Independence Avenue, S.W. Washington DC 20585			7. Period of Performance [**] through [**]	
8. Type of Agreement ☐ Grant ☒ Cooperative Agreement ☐ Other		9. Authority See Text Below			10. Purchase Request or Funding Document No. [**]		
11. Remittance Address X Energy, LLC Attn: X ENERGY, LLC 801 Thompson Avenue Rockville MD 20852			12. Total Amount Govt. Share : [**] Cost Share : [**] Total : [**]		13. Funds Obligated This action : [**] Total : [**]		
14. Principal Investigator		15. Program Manager CARL D. FRIESEN Phone: [**]			16. Administrator U.S. Department of Energy Idaho Operations Office 1955 Fremont Avenue Idaho Falls ID 83415		
17. Submit Payment Requests To		18. Paying Office OR for Idaho U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 6017 Oak Ridge TN 37831				19. Submit Reports To See Attachment B3	
20. Accounting and Appropriation Data X-Energy Demonstration 2 Project							
21. Research Title and/or Description of Project X-energy and Energy Northwest Deploy First Commercial-Scale Advanced Reactor by [**]							
For the Recipient				For the United States of America			
22. Signature of Person Authorized to Sign				25. Signature of Grants/Agreements Officer Signature on File			
23. Name and Title		24. Date Signed		26. Name of Officer Jeffrey C. Fogg			27. Date Signed

CONTINUATION SHEET		REFERENCE NO. OF DOCUMENT BEING CONTINUED			PAGE	OF
		DE-NE0009040			2	4
NAME OF OFFEROR OR CONTRACTOR						
X Energy, LLC						
ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	
	DUNS Number: 078846872 Box 9: Authority The activities to be supported under this award are authorized under § 951 (a) of the Energy Policy Act of 2005, as codified at 42 U.S.C. § 16271(a). Congress appropriated \$230 M for NE to develop the Advanced Reactor Demonstration Program and an additional \$20 M for Advanced Reactor Technologies in the Further Consolidation Appropriations Act, 2020 (H.R. 1865). Energy Policy Act of 1992, 42 U.S.C. 13525, also applies to this action. Energy Policy Act of 1992 (EPAc 92) is (Pub. L. 102-486 (Oct. 24, 1992) 106 STAT 2951) Further Consolidated Appropriations Act of 2020, Pub. L. 116-94 (Dec. 2019), Division C, Nuclear Energy. Section 4 of the Act incorporates the Explanatory Statement, which is published in the Congressional Record. Citation: 165 Cong. Rec. H11246 (daily ed. Dec. 17, 2019) (Explanatory Statement regarding H.R. 1865, Further Consolidated Appropriations Act 2020). Award as a result of Funding Opportunity Announcement (FOA) DE-FOA-0002271. This cooperative agreement is made as a result of the applicant's submission selected under FOA As a part of its mission, the United States (U.S.) Department of Energy (DOE), Office of Nuclear Energy (NE) has a long and successful history of working with the domestic nuclear industry, national laboratories, and academia to support the development of advanced reactor designs and capabilities over a continuum of technology maturity levels. DOE currently supports research and development (R&D) activities for a variety of advanced reactor technologies that are expected to improve on the safety, security, economics, and/or environmental impacts of current nuclear power plant designs. DOE undertakes these activities in support of the Administration's objectives to maintain the Nation's technological leadership position in the global nuclear industry and ensure national energy security. DOE recognizes that work remains to ensure continued U.S. leadership in the research, design, and development of advanced Continued ...					

CONTINUATION SHEET		REFERENCE NO. OF DOCUMENT BEING CONTINUED			PAGE	OF
		DE-NE0009040			3	4
NAME OF OFFEROR OR CONTRACTOR						
X Energy, LLC						
ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	
	reactors and to ensure the successful deployment of these reactors in the U.S. and international marketplaces. As part of the FY2020 Further Consolidation Appropriations Act, (H.R. 1865), Congress has provided funding for NE to address advanced reactor development at various stages of the technology maturity continuum. This program is intended to facilitate the development of U.S. private industry advanced nuclear reactor demonstrations. It will provide funding for several advanced reactors that are reliable, cost effective, licensable, and commercially viable. These designs are expected to enable a market environment in which commercial reactor services are available that are safe and affordable to both construct and operate when compared to competing, alternative sources of energy in the near- and mid-term. These designs are expected to provide significant improvements in safety, security, economics, and environmental impacts over current nuclear power plant designs. Additionally, the Project Narrative, submitted with the Recipient's application ARDP-20-23767, is incorporated herein by reference as part of the Statement of Project Objectives. Special Award Requirements 1. No Cost Time Extensions. Unilateral no cost time extensions by the awardee will NOT be permitted under this award. The awardee must request any extension from DOE at least 3 months prior to the award's period of performance end date, unless otherwise agreed to by DOE. Any no cost time extension must receive prior written approval from the DOE Contracting Officer. 2. Direct Cost Funds Transfers. The awardee is restricted from transferring funds between direct cost categories; the cumulative amount of such transfers must not exceed 10% of the total budget as last approved by DOE. For funds transfers greater than 10% the recipient is required to obtain DOE prior approval. 3. Per recommendation from the Environmental Review Officer, X Energy and the Nuclear Regulatory Council must complete an environmental Continued ...					

CONTINUATION SHEET		REFERENCE NO. OF DOCUMENT BEING CONTINUED			PAGE	OF
		DE-NE0009040			4	4
NAME OF OFFEROR OR CONTRACTOR						
X Energy, LLC						
ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	
	impact statement (EIS) or environmental assessment (EA) for construction and operation of the facility during the appropriate budget periods before construction begins. Directly Incorporated Attachments: A. Special Terms and Conditions B1. Intellectual Property Provisions B2. Statement of Substantial Involvement B3. Federal Assistance Reporting Checklist B4. Budget Pages B5. Project Milestones Point Of Contact Sheet Advanced Agreement on Pre-award Costs Notice: This award is incrementally funded. The amount listed in Block 12 (Total Amount) represents the total estimated project amount, including FFRDC funding. FFRDC funding will be sent directly to the appropriate FFRDC through its prime contract with DOE. Block 13 (Funds Obligated) lists the total estimated funding to the awardee. These amounts are reflected in the attached budget sheet. **Due to a system issue, the PI does not show in Block 14. The PI for this award is Darren Gale.** ASAP: NO: STD IMMEDIATE Extent Competed: COMPETED Davis-Bacon Act: YES PI: Darren Gale Delivery: [**] Delivery Location Code: [**] Idaho Operations U.S. Department of Energy Idaho Operations 1955 Fremont Avenue Idaho Falls ID 83415 US Fund: 05350 Appr Year: 2020 Allottee: 02 Report Entity: 500201 Object Class: 25233 Program: 2721049 Project: 0000000 WFO: 0000000 Local Use: 0000000					



AWARD TERMS AND CONDITIONS
X-Energy, LLC DE-NE0009040
Demonstration

TERMS AND CONDITIONS
FOR THE
DEMOS COOPERATIVE AGREEMENT

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**TERMS AND CONDITIONS FOR THE ADVANCED REACTOR
DEMONSTATION COOPERATIVE AGREEMENT**

(1) ADMINISTRATIVE REQUIREMENTS (DECEMBER 2014)

The administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR § 200 as amended by 2 CFR Part 910 [DOE Financial Assistance Regulation] (See: <http://www.eCFR.gov>). All references to 2 CFR 200, 2 CFR 910, FAR and DEAR clauses and articles incorporated by reference are, unless otherwise specified, to the version applicable as of the effective date of this Agreement.

(2) NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities, such as the collection and dissemination of information related to potential, planned, or pending legislation.

(3) LEGAL AUTHORITY AND EFFECT (JUNE 2015)

A DOE financial assistance award is valid only if it is in writing and is signed, either in writing or electronically, by a DOE Contracting Officer. Recipients are free to accept or reject the award. A request to draw down DOE funds constitutes the Recipient's acceptance of the terms and conditions of this Award.

(4) RESOLUTION OF CONFLICTING CONDITIONS

Any apparent inconsistency between Federal statutes and regulations and the terms and conditions contained in this award must be referred to the DOE Award Administrator for guidance.

(5) AWARD AGREEMENT TERMS AND CONDITIONS (DECEMBER 2014)

This award/agreement consists of the Assistance Agreement cover page, plus the following:

Attachments:

- Special Terms and Conditions
- Intellectual Property Provisions
- Federal Assistance Reporting Checklist
- Statement of Substantial Involvement
- Pre-award Agreement
- Budget Pages
- Project Milestones
- Point of Contact List

DOE Assistance Regulations, 2 CFR § 200 as amended by 2 CFR § 910 at <http://www.eCFR.gov>. Application/proposal as approved by DOE, in effect on the date of award or as amended by the parties thereafter
National Policy Assurances to Be Incorporated as Award Terms in effect on date of award at: <http://www.nsf.gov/awards/managing/rtc.jsp>.

(6) AWARD PROJECT PERIOD AND BUDGET PERIODS

The Project Period for this award is [**] through [**], consisting of the following Budget Periods:

- Period 1: [**] to [**]
- Period 2: [**] to [**]
- Period 3: [**] to [**]
- Period 4: [**] to [**]
- Period 5: [**] to [**]
- Period 6: [**] to [**]
- Period 7: [**] to [**]

(7) CONFERENCE SPENDING (FEBRUARY 2015)

The recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the United States Government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the United States Government would otherwise exceed \$20,000, thereby circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General (or senior ethics official for any entity without an Inspector General), of the date, location, and number of employees attending such conference.

(8) PAYMENT PROCEDURES - REIMBURSEMENT THROUGH THE AUTOMATED CLEARING HOUSE (ACH) VENDOR INQUIRY PAYMENT ELECTRONIC REPORTING SYSTEM (VIPERS)

Method of Payment. Payment will be made by reimbursement through ACH.

Requesting Reimbursement. Requests for reimbursements must be made electronically through Department of Energy's Oak Ridge Financial Service Center (ORFSC) VIPERS. To access and use VIPERS, the Recipient must enroll at <https://vipers.doe.gov>. Detailed instructions on how to enroll are provided on the website.

For non-construction awards, the Recipient must submit a Standard Form (SF) 270, "Request for Advance or Reimbursement" at <https://vipers.doe.gov> and attach a file containing appropriate supporting documentation. The file attachment must show the total federal share claimed on the SF 270, the non-federal share claimed for the billing period, if cost sharing is required, and cumulative expenditures to date (both Federal and non- Federal) for each of the following categories: salaries/wages and fringe benefits; equipment; travel; participant/training support costs, if any; other direct costs, including subawards/contracts; and indirect costs. For construction awards, the Recipient must submit a SF 271, "Outlay Report and Request for Reimbursement for Construction Programs," through VIPERS.

Timing of submittals. Submittal of the SF 270 or SF 271 should coincide with the Recipient's normal billing pattern, but not more frequently than every two weeks. Requests for reimbursement must be limited to the amount of disbursements made during the billing period for the federal share of direct project costs and the proportionate share of any allowable indirect costs incurred during that billing period.

Adjusting payment requests for available cash. The Recipient must disburse any funds that are available from repayments to and interest earned on a revolving fund, program income, rebates, refunds, contract settlements, audit recoveries, credits, discounts, and interest earned on any of those funds before requesting additional cash payments from DOE.

Payments. The DOE approving official will approve the invoice as soon as practicable but not later than 30 days after the Recipient's request is received, unless the billing is improper. Upon receipt of an invoice payment authorization from the DOE approving official, the ORFSC will disburse payment to the Recipient. The Recipient may check the status of its payments at the VIPER web site. All payments are made by electronic funds transfer to the bank account identified on the ACH Vendor/Miscellaneous Payment Enrollment Form (SF 3881) that the Recipient filed.

(9) INCREMENTAL FUNDING AND MAXIMUM OBLIGATION - DIFFERENT BUDGET PERIOD AND PROJECT PERIOD

If at any time during the award a budget period is funded on an incremental basis, the maximum obligation of the DOE is limited to the amount shown on the Award Agreement. The Recipient is not obligated to continue performance of the project beyond the total amount obligated and the Recipient's pro rata share of the project costs, if cost sharing is required.

Subject to the availability of additional funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority, DOE anticipates obligating the total estimated amount for the current budget period.

(10) COST SHARING FFRDC'S PARTICIPATE

a. Total Estimated Project Cost is the sum of the Government share, including Federally Funded Research and Development Center (FFRDC) contractor costs, and Recipient share of the estimated project costs. The DOE/NNSA FFRDC contractor cost is not included in the total approved budget for this award, because DOE/NNSA will pay the DOE/NNSA FFRDC contractor portion of the effort under an existing DOE/NNSA contract. Recipient is not responsible for reporting on that portion of the total estimated cost that is paid directly to the DOE/NNSA FFRDC contractor.

The Recipient's cost share must come from non-Federal sources unless otherwise allowed by law. By accepting federal funds under this award, the Recipient agrees that it is liable for the Recipient's percentage share of allowable project costs, on a budget period basis, even if the project is terminated early or is not funded to its completion. This cost share requirement is reflected in the budget pages in Attachment B5.

b. If the Recipient discovers that it may be unable to provide cost sharing of at least the amount identified in paragraph a. of this Section (10), the Recipient should immediately provide written notification to the DOE Award Administrator indicating whether the Recipient will continue or phase out the project. If the Recipients plan to continue the project, the notification must describe how replacement cost sharing will be secured.

c. The Recipient must maintain records of all project costs that it claims as cost sharing, including in-kind costs, as well as records of costs to be paid by DOE/NNSA. Such records are subject to audit.

d. Failure to provide the cost sharing required by this Section (10) may result in the subsequent recovery by DOE/NNSA of some or all the funds provided under the award.

(11) DIRECT PAYMENT BY DOE OF FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTER (FFRDC) CONTRACTOR COST

For the purposes of this term, Total Estimated Cost of Project includes DOE FFRDC contractor costs. The DOE FFRDC contractor cost is not included in the total approved budget for this award, because DOE will pay the DOE FFRDC contractor portion of the effort under an existing DOE contract. Recipient is not responsible for reporting on that portion of the total estimated cost that is paid directly to the DOE FFRDC contractor.

(12) REBUDGETING AND RECOVERY OF INDIRECT COSTS - REIMBURSABLE INDIRECT COSTS AND FRINGE BENEFITS

If actual allowable indirect costs are less than those budgeted and funded under the award, the Recipient may use the difference to pay additional allowable direct costs during the project period. If at the completion of the award the Government's share of total allowable costs (i.e., direct and indirect), is less than the total costs reimbursed, the Recipient must refund the difference.

Recipients are expected to manage their indirect costs. DOE will not amend an award solely to provide additional funds for changes in indirect cost rates. DOE recognizes that the inability to obtain full reimbursement for indirect costs means the recipient must absorb the underrecovery. Such underrecovery may be allocated as part of the organization's required cost sharing.

(13) PRE-AWARD COSTS (DECEMBER 2014)

The Recipient is entitled to reimbursement for costs incurred on or after 11/02/2020 as authorized by the pre- award costs letter dated 10/30/2020, if such costs are allowable in accordance with the applicable Federal cost principles referenced in 2 CFR § 200 as amended by 2 CFR § 910.

(14) USE OF PROGRAM INCOME - ADDITION

If the Recipient earns program income during the project period as a result of this award, the Recipient may add the program income to the funds committed to the award and use it to further eligible project objectives.

(15) STATEMENT OF FEDERAL STEWARDSHIP

DOE will exercise normal Federal stewardship in overseeing the project activities performed under this award. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to correct deficiencies that develop during the project, consistent with U.S. Nuclear Regulatory Commission (NRC) regulatory, licensing, and permitting requirements for commercial nuclear reactors, insofar as the reactor will be licensed by the NRC ;assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the award objectives have been accomplished.

(16) STATEMENT OF SUBSTANTIAL INVOLVEMENT PROVIDED AS ATTACHMENT

A Statement of Substantial Involvement applicable to this cooperative agreement is provided as Attachment C to this award.

(17) SITE VISITS

DOE's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. The Recipient must provide, and must require subrecipients to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

(18) REPORTING REQUIREMENTS (APRIL 2018)

Requirements. The reporting requirements for this award are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to this award. Failure to comply with these reporting requirements is considered a material noncompliance with the terms of the award. Noncompliance may result in withholding of future payments, suspension, or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by Federal agencies.

Dissemination of scientific/technical reporting products. Reporting project results in scientific and technical information (STI) publications/products to the DOE Office of Scientific and Technical Information (OSTI) ensures dissemination of research results to the public as well as preservation of the results. The DOE form F 4600.2, B. Scientific/Technical Reporting, has instructions for the DOE Energy Link (E-Link) system managed by OSTI. Scientific/technical reports and other STI products submitted under this award will be disseminated publicly on the Web via OSTI.GOV (<https://www.osti.gov>), unless the STI contains patentable material, protected data, or SBIR/STTR data, which must be indicated per instructions in DOE4600.2.

Restrictions. STI products submitted to the DOE via E-link must not contain any Protected Personally Identifiable Information (PII), classified information, information subject to export control classification, or other information not subject to release.

(19) PUBLICATIONS

The Recipient is encouraged to publish or otherwise make publicly available the results of the work conducted under the award. An acknowledgment of Federal support and a disclaimer must appear in the publication of any material, whether copyrighted or not, based on or developed under this project, as follows:

Acknowledgment: "This material is based upon work supported by the Department of Energy under Award Number(s) DE-NE0009040."

Disclaimer: "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

(20) FEDERAL, STATE, AND MUNICIPAL REQUIREMENTS

The Recipient must obtain any required permits and comply with applicable federal, state, and municipal laws, codes, and regulations for work performed under this award.

(21) INTELLECTUAL PROPERTY PROVISIONS

Special Intellectual Property Provisions will apply to Agreements awarded under this FOA. These include special data protection provisions and the issuance of a class patent waiver to enhance commercialization of technology developed under this program. Additionally, specific intellectual property provisions can be found in Attachment B and will be amended as directed under any class patent waiver.

Special Protected Data Statutes. This program is covered by a special protected data statute. The provisions of the statute provide for the protection from public disclosure, for a period of up to five (5) years, technical data or commercial or financial data first produced in the performance of the award which if it had been obtained from and first produced by a non-federal party, would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552(b)(4), and which data is marked as being protected data by a party to the award. Generally, the provision entitled, Rights in Data – Programs Covered Under Special Protected Data Statutes, (2 CFR 910 Appendix A to Subpart D—Patent and Data Provisions), would apply, but may be modified to accommodate NE program requirements. Otherwise, the government has unlimited rights in technical data created under the DOE agreement. Delivery or third- party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in an agreement or patent waiver to satisfy DOE’s needs or to ensure the commercialization of technology developed under the DOE agreement.

Class Patent Waiver: DOE is expecting to issue a class patent waiver for agreements awarded under this FOA, which will cover most large business recipients and lower-tier subrecipients under this FOA. The patent waiver will provide those recipients, not subject to the Bayh-Dole Act, the option to retain title to their own inventions, subject to the same government retained rights identified in the Act above. To qualify for the class waiver, a recipient must maintain the required cost-share under the program and agree to substantially manufacture technology created under this FOA in the U.S., or provide other economic benefits to the U.S. Specifically, the recipient must agree to the following U.S. Competitiveness clause:

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in an appropriate, legally binding manner. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention(s): (1) undergo a change in ownership amounting to a controlling interest, or (2) sell, assign, or otherwise transfer title or exclusive rights in the invention (s), then the waiver, assignment, license, or other transfer of rights in the waived invention(s) is/are suspended until approved in writing by the DOE. Approval of any modification of this provision, shall require the concurrence of the Assistant Secretary for Nuclear Energy, the Acting Assistant Secretary, or the cognizant Principal Deputy Assistant Secretary.

If the recipient is unable to maintain the required cost-share or is unable to manufacture substantially in the U.S., the waiver may be terminated by DOE.

If DOE does not issue a class waiver or if applicants do not meet the criteria of the class waiver, applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this FOA, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

Small Businesses and Nonprofits: Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

(22) CONTINUATION APPLICATION AND FUNDING - AWARDS UNDER 2 CFR § 200 AS AMENDED BY 2 CFR § 910

Continuation Application. A continuation application is a non-competitive application for an additional budget period within a previously approved project period. At least 90 days before the end of each budget period, the Recipient must submit its continuation application to the DOE Program Manager whose name is in block 15 of the Award Agreement and to the Agreements Officer/Administrator whose name is in block 25 and address is listed in block 16 of the Award Agreement

The Recipient’s continuation application must include the following information:

A report on the Recipient’s progress towards meeting the objectives of the project, including any significant findings, conclusions, or developments, and an estimate of any unobligated balances remaining at the end of the budget period. If the remaining unobligated balance is estimated to exceed 20 percent of the funds available for the budget period, explain why the excess funds have not been obligated and how they will be used in the next budget period.

A detailed budget and supporting justification for the upcoming budget period if additional funds are requested, a reduction of funds is anticipated, or a budget for the upcoming budget period was not approved at the time of award, or other annual bilateral budgetary pricing adjustments by the parties, if necessary, as the project progresses.

A description of the Recipient’s plans for the conduct of the project during the upcoming budget period in a Milestone format as described in Attachment B5 Project Milestones, and if there are changes from the DOE approved application, including changes to the total project cost, if necessary.

Continuation Funding. Continuation funding is contingent on (1) availability of funds appropriated by Congress for the purpose of this program; (2) the availability of future-year budget authority; (3) substantial progress towards meeting the objectives of the Recipient’s approved application; (4) submittal of required reports; and (5) compliance with the terms and conditions of the award.

(23) NOTICE REGARDING THE PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS -- SENSE OF CONGRESS

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.

(24) ENVIRONMENTAL, SAFETY AND HEALTH (ES&H) PERFORMANCE OF WORK AT DOE FACILITIES

With respect to the performance of any portion of the work under this award which is performed at a DOE-owned or controlled site, the recipient agrees to comply with all State and Federal ES&H regulations and with all other ES&H requirements of the operator of such site.

Prior to the performance on any work at a DOE-Owned or controlled site, the recipient shall contact the site facility manager for information on DOE and site-specific ES&H requirements.

The recipient shall apply this term to its sub-recipients and contractors.

(25) INSURANCE COVERAGE (DECEMBER 2014)(REVISED)

See 2 CFR 200.310 for insurance requirements for real property and equipment acquired or improved with Federal funds.

At a minimum, the Recipient shall provide insurance in the minimum amounts as set forth below. The required amount of insurance to be carried by the Recipient under this section may be changed upon the Government's written notice to the Recipient.

(a) Worker's Compensation and Employer's Liability.

The Recipient is required to comply with applicable Federal and State workers' compensation and occupational disease statutes. If occupational diseases are not compensable under those statutes, they shall be covered under the employer's liability section of the insurance policy, except when project operations are so commingled with a Recipient's commercial operations that it would not be practical to require this coverage. The Recipient or shall obtain employer's liability coverage of at least \$100,000.

(b) General Liability.

The Recipient is encouraged to obtain bodily injury liability insurance coverage written on the comprehensive form of policy. Recommended levels of at least \$500,000 per occurrence and property damage liability insurance coverage of at least \$500,000 per occurrence are encouraged.

(c) Automobile Liability.

The Recipient is encouraged to obtain automobile liability insurance written on the comprehensive form of policy. It is recommended that the policy provide for bodily injury and property damage liability covering the operation of all automobiles, including Government furnished vehicles, used in connection with performing the contract, at the following recommended amounts: obtain coverage of at least \$200,000 per person and \$500,000 per occurrence for bodily injury and \$50,000 per occurrence for property damage, including any property damage to Government furnished vehicles.

(26) REAL PROPERTY (DECEMBER 2014)

Subject to the conditions set forth in 2 CFR § 200.311, title to real property acquired or improved under a Federal award will vest upon acquisition in the non-Federal entity.

The non-Federal entity cannot encumber this property and must follow the requirements of 2 CFR § 200.311 before disposing of the property.

Except as otherwise provided by Federal statutes or by the Federal awarding agency, real property will be used for the originally authorized purpose as long as needed for that purpose. When real property is no longer needed for the originally authorized purpose, the non-Federal entity must obtain disposition instructions from the Federal awarding agency or pass-through entity. The instructions must provide for one of the following alternatives: (a) retain title after compensating the Federal awarding agency as described in 2 CFR § 200.311(c)(1); (b) Sell the property and compensate the federal awarding agency as specified in CFR § 200.311(c)(2); or transfer title to the Federal awarding agency or to a third Party designated/approved by the Federal awarding agency as specified in CFR § 200.311(c)(3).

See 2 CFR §200.311 for additional requirements pertaining to real property acquired or improved under a Federal award. Also see 2 CFR § 910.360 for amended requirements for Real Property for For-Profit recipients.

(27) EQUIPMENT (DECEMBER 2014)

Subject to the conditions provided in 2 CFR 200.313, title to equipment (property) acquired under a Federal award will vest conditionally with the non-Federal entity.

The non-Federal entity cannot encumber this property and must follow the requirements of 2 CFR §200.313 before disposing of the property.

States must use equipment acquired under a Federal award by the state in accordance with state laws and procedures.

Equipment must be used by the non-Federal entity in the program or project for which it was acquired as long as it is needed, whether or not the project or program continues to be supported by the Federal award. When no longer needed for the originally authorized purpose, the equipment may be used by programs supported by the Federal awarding agency in the priority order specified in 2 CFR § 200.313(c)(1)(i) and (ii).

Management requirements, including inventory and control systems, for equipment are provided in 2 CFR § 200.313(d).

When equipment acquired under a Federal award is no longer needed, the non-Federal entity must obtain disposition instructions from the Federal awarding agency or pass-through entity.

Disposition will be made as follows: (a) items of equipment with a current fair market value of \$5,000 or less may be retained, sold, or otherwise disposed of with no further obligation to the Federal awarding agency; (b) Non-Federal entity may retain title or sell the equipment after compensating the Federal awarding agency as described in 2 CFR § 200.313(e)(2); or (c) transfer title to the Federal awarding agency or to an eligible third Party as specified in CFR § 200.313(e)(3).

See 2 CFR § 200.313 for additional requirements pertaining to equipment acquired under a Federal award. Also see 2 CFR § 200.439 Equipment and other capital expenditures.

See 2 CFR § 910.360 for amended requirements for Equipment for For-Profit recipients.

(28) USE OF REAL PROPERTY AND EQUIPMENT ACQUIRED UNDER THE AWARD

For real property and equipment acquired in the performance of this award, the real property and equipment can continue to be used for the originally authorized purpose as long as needed for that purpose (i.e., as part of the power generation facilities of an electric utility system or in any other manner for the purpose of demonstrating the suitability for commercial application of the advanced nuclear reactor. Accordingly, at the end of the award project period, DOE will proceed with its normal award close out procedures; however, the recipient shall maintain conditional title to the property and continue to use it for its originally authorized purpose. The Recipient cannot encumber this property, without prior written approval by Contracting Officer, and must follow the requirements set forth in 2 C.F.R. § 910.360 before disposing of the property.

It is anticipated that the recipient will continue to use the property for the originally authorized purpose as long as needed for that purpose, for the life of the plant/reactor (which could be of an extended duration). The Recipient is solely responsible for the operation, maintenance and any other costs and liabilities (including accidents) associated with the plant/reactor, including all end of reactor service life decommissioning costs, unless otherwise agreed to in writing by the Contracting Officer. The recipient may make additions, improvements, modifications, replacements, rearrangements, reinstallations, renovations or alterations to the property that materially increases its value or useful life (other than normal ordinary repairs and maintenance) but make advanced written notification, at least 60 days prior, to the Contracting Officer (such that the Contracting Officer can ensure the property will continue to be used for its original purpose). If the change to the property prevents its continue use for the original purpose, the Government has the right to deny the change provided that denial is issued within the 60 day period.

The recipient must maintain records of any changes to the property, which shall be subject to DOE or NRC review upon request.

Recipient will be allowed to continue to use all equipment and property acquired in connection with this award for the original purposes of the award after the award term has ended. Title to this equipment and property will be held by the recipient conditionally with the US Government maintaining a reversionary interest commensurate with the federal participation in the original project. Recipient shall provide a report at least once every five (5) years following the award term period of performance to describe the continued use and to certify that it is in accordance with current regulations, licensing and the original purpose(s) of the award. This report shall also include updated current Fair Market Value (FMV) of the aggregate equipment and property, hereafter referred to as the complex. (see next paragraph)

Within 90 days of initial award, recipient shall submit to the Contracting Officer (CO) a projected progressive FMV (in 2020 dollars) in 5 year increments lasting 75 years (or whatever the design time period for the operational life of the reactor is; e.g. value at construction completion, value at 5/10/15/20/25/....../75 years after construction) of the entire operational complex constructed for the award. The projected progressive FMV (in current year dollars) shall be updated and submitted to the CO within 90 days following completion of the complex construction. The projected FMV will serve as a basis for determining when the US Government will surrender all interest in the title of the complex acquired/constructed in connection with this award.

Values should be projections of expected sales price if complex were to be advertised widely and sold to an open and competitive market. Do not use depreciated or book value. When the FMV of the complex is less than \$5,000, the US government will surrender/abandon claim to title for the complex acquired/constructed in connection with this award. FMV calculations should consider anticipated liabilities and costs associated with maintenance and end of life remediation.

Recipient will remain liable for all maintenance, remediation, and end of life disposition activities associated with the complex throughout its entire lifecycle.

If recipient desires to sell or transfer the complex to a different entity at any time prior to full title transfer, contact the CO for guidance.

During the time the property continues to be used, the recipient must report to DOE on the continued use of the property, as specified in the award's Reporting Requirements Checklist and in accordance with 2 CFR § 200.329. Further, at the time recipient decides to no longer use the property for its originally authorized purpose, the recipient shall proceed with obtaining disposition instructions, as specified in the terms and conditions of this award.

In addition, should the recipient, during reactor operation, sell or have a change of control, the parties will follow 2 CFR § 910.368 and §910.370, as applicable.

(29) SUPPLIES (DECEMBER 2014)

See 2 CFR § 200.314 for requirements pertaining to supplies acquired under a Federal award. See also §

200.453 Materials and supplies costs, including costs of computing devices.

(30) INTANGIBLE PROPERTY (DECEMBER 2014)

Title to intangible property (as defined in 2 CFR § 200.59) acquired under a Federal award vests upon acquisition in the non-Federal entity. Intangible property includes trademarks, copyrights, patents and patent applications.

See 2 CFR § 200.315 for additional requirements pertaining to intangible property acquired under a Federal award. Also see 2 CFR § 910.362 for amended requirements for Intellectual Property for For-Profit recipients.

(31) PROPERTY TRUST RELATIONSHIP (DECEMBER 2014)

Real property, equipment, and intangible property, that are acquired or improved with a Federal award must be held in trust by the non-Federal entity as trustee for the beneficiaries of the project or program under which the property was acquired or improved.

See 2 CFR § 200.316 for additional requirements pertaining to real property, equipment, and intangible property acquired or improved under a Federal award.

(32) INSOLVENCY, BANKRUPTCY OR RECEIVERSHIP

The Recipient shall immediately notify the DOE of the occurrence of any of the following events: (i) filing by Recipient or its parent entity(ies) of a voluntary case seeking liquidation or reorganization under the Bankruptcy Act; (ii) consent to the institution of an involuntary case under the Bankruptcy Act against the Recipient or its parent entity(ies); (iii) the filing of any similar proceeding for or against the Recipient or its parent entity(ies), or its or their consent to, the dissolution, winding-up or readjustment of debts, appointment of a receiver, conservator, trustee, or other officer with similar powers over the Recipient or its or parent entity(ies), under any other applicable state or federal law; or (iv) insolvency of recipient(s) or its parent entity(ies) due to the inability to pay debts generally as they become due.

Such notification shall be in writing and shall: (i) specifically set out the details of the occurrence of an event referenced in the above paragraph; (ii) provide the facts surrounding that event; and (iii) provide the impact such event will have on the project being funded by this award.

Upon the occurrence of any of the four events described in the first paragraph of this Section (33), DOE reserves the right to conduct a review of its award to the Recipient to determine compliance with the required elements of the award (including such items as cost share, progress towards technical project objectives, and submission of required reports). If the DOE review determines that there are significant deficiencies or concerns with the Recipient performance under the award, DOE reserves the right to impose additional requirements, as needed, including (i) change the award's payment method; or (ii) institute payment controls.

Failure of the Recipient to comply with this term may be considered a material noncompliance of this financial assistance award by the Contracting Officer.

(33) NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS

National Environmental Policy Act (42 USC 4321, *et seq.*). The recipient is restricted from taking any action using Federal funds, which would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE providing either a NEPA clearance or a final NEPA decision regarding this project.

Prohibited actions include:

- Construction of the Demonstration Facilities and Additional Buildings within appropriate budget periods
- Operation of the Demonstration Facilities and Additional Buildings within appropriate budget periods

This restriction does not preclude the recipient from:

- Planning Demonstration Facilities and Additional Buildings prior to construction
- Designing Demonstration Facilities and Additional Buildings prior to construction

If the recipient moves forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, the recipient is doing so at the risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Where this award includes construction activities, the recipient must submit an Environmental Evaluation Notification Form, addressing NEPA issues prior to DOE initiating the NEPA process. DOE's decision whether and how to distribute federal funds under this award is subject to NEPA. NEPA requires Federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For additional background on NEPA, please see DOE's NEPA website, at <http://nepa.energy.gov/>.

While NEPA compliance is a Federal agency responsibility and the ultimate decisions remain with DOE, the recipient is required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to the project. If DOE determines certain records must be prepared to complete the NEPA review process (e.g., biological evaluations or environmental assessments), the costs to prepare the necessary records may be included as part of the project costs. The recipient may be required to submit one or more environmental check lists.

DOE must comply with the National Environmental Policy Act (NEPA) prior to authorizing the use of Federal funds for certain activities under this award. Based on the information available, DOE may determine that an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) is required. A final NEPA decision (e.g., a Finding of No Significant Impact [FONSI] for projects requiring an EA or a Record of Decision [ROD] for projects requiring an EIS) is required prior to DOE notifying the Recipient of approval to proceed with the expenditure of Federal funds for certain activities under this award. Prohibited actions include, but are not limited to: detailed design; purchase of long-lead time equipment; demolition or decontamination of existing buildings; and site preparation, clearing, ground breaking, excavation, and construction. However, DOE may provide cost-shared funding for activities necessary to perform site characterization, sampling, and monitoring to support the NEPA process; preparation of conceptual design data, analysis, and documentation (including project planning assistance); and training before a final NEPA decision is issued.

Questions about the permissibility of Federal cost sharing on activities prior to DOE's issuance of a FONSI or ROD shall be directed to the Contracting Officer. At its discretion, DOE may issue an Interim Action Determination to document DOE's decision regarding the permissibility of Federal cost-sharing on the activities that are within the scope of an on-going EA or EIS process. Approval to incur cost eligible for Federal cost sharing requires written approval from the Contracting Officer. After receiving Interim Action approval from the Contracting Officer, if the Recipient chooses to incur costs eligible for Federal cost sharing for the approved activities, the Recipient agrees to abide by the conditions, limitations, mitigation measures, monitoring requirements, and reporting responsibilities specified in the Interim Action Determination and to undertake these activities in accordance with necessary landowner approvals, required permits, and any additional approvals and mitigation requirements of other Federal, state and local governmental agencies with jurisdiction by law.

Prior to issuance of a final NEPA document (Final EA/EIS, FONSI, ROD, Mitigation Action Plan, etc.), DOE agrees to discuss with the Recipient any proposed conditions and requirements that may be imposed if DOE decides to proceed with its proposed action. However, DOE retains sole discretion on whether to issue a final NEPA document and what conditions to include in it if one is issued.

If DOE decides to proceed with its proposed action subject to conditions, limitations, mitigation requirements, or monitoring requirements specified in a final NEPA document, the Recipient agrees to:

1. abide by the conditions, limitations, mitigation requirements, and monitoring requirements specified in the final NEPA document;
2. negotiate changes to the project schedule, costs, and/or scope as necessary to effect the requirements or conditions in the final NEPA document;
3. allow DOE's authorized representatives to visit the site and facilities upon notice to verify project status and compliance to include conditions and requirements in the final NEPA document; and
4. submit data or otherwise meet specified reporting requirements that may be in the final NEPA document.

If the Recipient finds the conditions and requirements to be unacceptable, it reserves the right to terminate the Award in accordance with 2 CFR 200.339.

(34) DECONTAMINATION AND/OR DECOMMISSIONING (D&D) COSTS

Notwithstanding any other terms of this Agreement, the Government shall not be responsible for or have any obligation to the recipient for (i) Decontamination and/or Decommissioning (D&D) of any of the recipient's facilities, or (ii) any costs which may be incurred by the recipient in connection with the D&D of any of its facilities due to the performance of the work under this Agreement, whether said work was performed prior to or subsequent to the effective date of this Agreement.

(35) HISTORIC PRESERVATION

Prior to the expenditure of Federal funds to alter any structure or site, the Recipient is required to comply with the requirements of Section 106 of the National Historic Preservation Act (NHPA), consistent with DOE's 2009 letter of delegation of authority regarding the NHPA. Section 106 applies to historic properties that are listed in or eligible for listing in the National Register of Historic Places. In order to fulfill the requirements of Section 106, the recipient must contact the State Historic Preservation Officer (SHPO), and, if applicable, the Tribal Historic Preservation Officer (THPO), to coordinate the Section 106 review outlined in 36 CFR § 800. SHPO contact information is available at the following link: <http://www.ncshpo.org/find/index.htm>. THPO contact information is available at the following link: <http://www.nathpo.org/map.html>.

Section 110(k) of the NHPA applies to DOE funded activities. Recipients shall avoid taking any action that results in an adverse effect to historic properties pending compliance with Section 106.

Recipients should be aware that the DOE Contracting Officer will consider the recipient in compliance with Section 106 of the NHPA only after the Recipient has submitted adequate background documentation to the SHPO/THPO for its review, and the SHPO/THPO has provided written concurrence to the Recipient that it does not object to its Section 106 finding or determination. Recipient shall provide a copy of this concurrence to the Contracting Officer.

(36) REPORTING SUBAWARDS AND EXECUTIVE COMPENSATION

a. Reporting of first-tier subawards.

- Applicability. Unless the Recipient is exempt as provided in paragraph d. of this Section (37), the Recipient must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph e. of this Section (37)).
- Where and when to report.
 - The Recipient must report each obligating action described in paragraph a.1. of this award term to <http://www.fsrs.gov>.
 - For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

- What to report. The Recipient must report the information about each obligating action that the submission instructions posted at <http://www.fsrs.gov> specify.

b. Reporting Total Compensation of Recipient Executives.

- 1) Applicability and what to report. The Recipient must report total compensation for each of the Recipient's five most highly compensated executives for the preceding completed fiscal year, if
 - a) the total Federal funding authorized to date under this award is \$25,000 or more;
 - b) in the preceding fiscal year, the Recipient received;
 - 80 percent or more of the Recipient's annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - c) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)
- 2) Where and when to report. Recipient must report executive total compensation described in paragraph b.1. of this award term:
 - a) As part of the Recipient's registration profile at <http://www.sam.gov>.
 - b) By the end of the month following the month in which this award is made, and annually thereafter.

c. Reporting of Total Compensation of Subrecipient Executives.

- Applicability and what to report. Unless the Recipient is exempt as provided in paragraph d. of this Section (37) term, for each first-tier subrecipient under this award, Recipient(s) shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if;
- in the subrecipient's preceding fiscal year, the subrecipient received;
- 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
- \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and
- The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

- Where and when to report. Recipient(s) must report subrecipient executive total compensation described in paragraph c.1. of this Section (37):
 - To the recipient.
- By the end of the month following the month during which the Recipient makes the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (i.e., between October 1 and 31), the Recipient must report any required compensation information of the subrecipient by November 30 of that year.

d. Exemptions

If, in the previous tax year, the Recipient had gross income, from all sources, under \$300,000, the Recipient is exempt from the requirements to report:

- 1) Subawards, and
 - 2) The total compensation of the five most highly compensated executives of any subrecipient.
- a) Definitions. For purposes of this award term:

Entity means all of the following, as defined in 2 CFR part 25:

- A Governmental organization, which is a State, local government, or Indian tribe;
- A foreign public entity;
- A domestic or foreign nonprofit organization;
- A domestic or foreign for-profit organization;
- A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

Executive means officers, managing partners, or any other employees in management positions.

Subaward:

- This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this award or that the Recipient awards to an eligible subrecipient.
- The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see Sec. .210 of the attachment to OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations).
- A subaward may be provided through any legal agreement, including an agreement that the Recipient or a subrecipient considers a contract.

Subrecipient means an entity that:

- Receives a subaward from the Recipient under this award; and
- Is accountable to the Recipient for the use of the Federal funds provided by the subaward.

Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):

- Salary and bonus.
- Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
- Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
- Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
- Above-market earnings on deferred compensation which is not tax-qualified.
- Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, prerequisites or property) for the executive exceeds \$10,000.

(37) SUBAWARD AND EXECUTIVE REPORTING

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are contained in 2 CFR, Part 170. (See: <http://www.eCFR.gov>). Prime awardees must register with the new FSRS database and report the required data on their first tier subawardees. Prime awardees must report the executive compensation for their own executives as part of their registration profile in the System for Award Management (SAM).

(38) SYSTEM FOR AWARD MANAGEMENT AND UNIVERSAL IDENTIFIER REQUIREMENTS

a. Requirement for Registration in the System for Award Management(SAM)

Unless the Recipient is exempted from this requirement under 2 CFR 25.110, the Recipient must maintain the currency of its information in SAM until the Recipient submits the final financial report required under this award or receives the final payment, whichever is later. This requires that the Recipient review and update the information at least annually after the initial registration, and more frequently if required by changes in the Recipient's information or another award term.

If the Recipient had an active registration in the CCR, the Recipient has an active registration in SAM.

- b. Requirement for Data Universal Numbering System (DUNS) Numbers. If the Recipient is authorized to make subawards under this award, the Recipient must notify potential subrecipients that no entity (see definition in paragraph c. of Section 39) may receive a subaward from the Recipient unless the entity has provided its DUNS number to the Recipient.

Note: Recipient may not make a subaward to an entity unless the entity has provided its DUNS number to the Recipient.

c. Definitions

For purposes of this award Section (39):

System for Award Management (SAM) means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the SAM Internet site (currently at <http://www.sam.gov>).

Data Universal Numbering System (DUNS) number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at <http://fedgov.dnb.com/webform>).

Entity, as it is used in this award term, means all of the following, as defined at 2 CFR § 25, subpart C:

- A Governmental organization, which is a State, local government, or Indian Tribe,
- A foreign public entity,
- A domestic or foreign nonprofit organization,
- A domestic or foreign for-profit organization; and
- A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

Subaward: Means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this award and that the Recipient awards to an eligible subrecipient.

The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see Sec. .210 of the attachment to OMB Circular A-133, Audits of States, Local Governments, and Non- Profit Organizations).

A subaward may be provided through any legal agreement, including an agreement that the Recipient considers a contract.

Subrecipient means an entity that:

Receives a subaward from the Recipient under this award; and

Is accountable to the Recipient for the use of the Federal funds provided by the subaward.

(39) FINAL INCURRED COST AUDIT (DECEMBER 2014)

In accordance with 2 CFR § 200 as amended by 2 CFR § 910, DOE reserves the right to initiate a final incurred cost audit on this award. If the audit has not been performed or completed prior to the closeout of the award, DOE retains the right to recover an appropriate amount after fully considering the recommendations on disallowed costs resulting from the final audit.

(40) INDEMNITY

The Recipient shall indemnify the Government and its officers, agents, or employees for any and all liability, including litigation expenses and attorneys' fees, arising from suits, actions, or claims of any character for death, bodily injury, or loss of or damage to property or to the environment, resulting from the project, except to the extent that such liability results from the direct fault or negligence of Government officers, agents or employees, or to the extent such liability may be covered by applicable allowable costs provisions, or to the extent such liability arises from a nuclear incident or precautionary evacuation as defined by the Price Anderson Act.

(41) FINANCIAL COMMITMENT/FUNDING PLAN

Not later than 90 days prior to the budget period start date:

a. The Recipient shall provide to DOE an updated cost estimate for the subsequent budget along with evidence of firm commitments for the full private sector share of the subsequent budget cost. Such evidence may include executed loans, bond financing agreements, state or local grants, and third-party contribution agreements. For each non-governmental source of cost-sharing, the DOE may request audited financial statements for the most recent two years, which if requested will be provided directly to the DOE from such recipient.

b. If firm commitments for the full private sector share of the subsequent budget period cost have not been secured, Recipient shall provide evidence of firm commitments made to date, as set forth in paragraph of this Section (42), and a detailed Funding Plan in accordance with the requirements set forth below:

- The Funding Plan will demonstrate a reasonable plan to obtain the balance of funding for the private sector share of the project cost. The Funding Plan must identify all anticipated sources of the private sector cost-share such as bank loans, bond offerings, state or local grants, and equity contributions.
- The Recipient shall provide a full description of any limitations, conditions or other factors that could affect the availability of funding. If third party financing will be a source of project funds, the Recipient shall discuss the timing, conditionality and terms and conditions of such financing.
- If requested by the DOE, audited financial statements for the most recent two fiscal years shall be provided for each non-governmental source of funds. If a source does not have audited financial statements, that source should provide equivalent financial statements prepared by the party, in accordance with Generally Accepted Accounting Principles, and certified as to accuracy and completeness by the Chief Financial Officer of the party providing the statements.
- The Recipient shall obtain and provide a commitment letter from each source, signed by an officer of the corporation or other entity that is authorized to commit the funding to the proposed project. The amount of funds to be provided, the timing of the funding, and any contingencies, should be specified. Commitment letters should identify the type of proposed cost sharing (e.g., cash, services, and/or property) to be contributed.
- If in-kind contributions of property or services are proposed, the Recipient shall provide support for their valuation and explain how the valuation was determined.
- If the project will be financed on a non-recourse basis, the Recipient shall provide a working financial model (in MS Excel 2003 or 2007) that provides projections of the project including an income statement, balance sheet, cash flow statement, and sources and uses of funds statement, all on an annual basis with appropriate supporting schedules. The financial projections should be developed in this financial model, commencing with the initial project development phase and extending through the period of operations needed to obtain funding. The model should be provided in electronic form including cell formulas so that review of the model assumptions and sensitivity calculations may be facilitated. The recipient shall provide a description and explanation for each of the financial, economic, and operating assumptions for the project. The assumptions should be consistent with and supported by the information provided in the project cost estimate.

In the event DOE determines that the information provided by Recipient is inadequate to assure the availability of full funding for the private sector share of the subsequent budget period, DOE reserves the right, at DOE's discretion, to: (1) stop payment, (2) renegotiate the project scope and/or payment schedule, or (3) after Recipient is provided 30 days advance written notice and opportunity to cure, declare the grant terminated by mutual agreement. Should DOE declare the grant terminated, the Recipient shall be entitled to payment of DOE's share of allowable project cost incurred prior to the date of termination plus the reasonable cost of terminating contracts. DOE's maximum liability for project cost in the event of termination is [enter amount of max liability].

(42) LOBBYING RESTRICTIONS (MARCH 2012)

By accepting funds under this award, the Recipient agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

(43) CORPORATE FELONY CONVICTION AND FEDERAL TAX LIABILITY ASSURANCES (MARCH 2014)

By entering into this agreement, the undersigned attests that X Energy, LLC has not been convicted of a felony criminal violation under Federal law in the 24 months preceding the date of signature.

The undersigned further attests that X Energy, LLC does not have any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

For purposes of these assurances, the following definitions apply:

A Corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States [but not foreign corporations]. It includes both for-profit and non-profit organizations.

(44) NONDISCLOSURE AND CONFIDENTIALITY AGREEMENTS ASSURANCES (JUNE 2015)

By entering into this agreement, the undersigned attests that X Energy, LLC does not and will not require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

The undersigned further attests that X Energy, LLC does not and will not use any Federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:

a. "These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling."

The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information.

Notwithstanding provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States Government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States Government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

(45) DATA MANAGEMENT PLAN (SEPT 2015)

a. (1) Not later than 90 days after the effective date of the award the Recipient must provide the Contracting Officer with a Data Management Plan. A Data Management Plan (“DMP”) explains how data generated in the course of the research or work performed under an assistance award will be shared and preserved or, when justified, explains why data sharing or preservation is not possible or scientifically appropriate. (2) In the event the Recipient fails to submit the DMP within 90 days after award or DOE determines that the of this Section (46), information provided by the Recipient in its DMP does not meet the requirements in section b), DOE may take one or more of the actions identified in 2 CFR 200.388, including, but not limited to, temporarily withholding payments to the Recipient pending correction of the deficiency, or wholly or partially suspending or terminating the Federal award.

b. DMP Requirements - In order for a DMP to be considered acceptable, the DMP must address the following:

- At a minimum, the DMP must describe how data sharing and preservation will enable validation of the results from the proposed work, or how results could be validated if data are not shared or preserved.
- The DMP must provide a plan for making all research data displayed in publications resulting from the proposed work digitally accessible at the time of publication. This includes data that are displayed in charts, figures, images, etc. In addition, the underlying digital research data used to generate the displayed data should be made as accessible as possible in accordance with the principles stated above. This requirement could be met by including the data as supplementary information to the published article, or through other means. The published article should indicate how these data can be accessed.
- The DMP should consult and reference available information about data management resources to be used in the course of the proposed research work. In particular, a DMP that explicitly or implicitly commits data management resources at a facility beyond what is conventionally made available to approved users should be accompanied by written approval from that facility. In determining the resources available for data management at DOE User Facilities, researchers should consult the published description of data management resources and practices at that facility and reference it in the DMP. Information about other DOE facilities can be found in the additional guidance from the sponsoring program.
- The DMP must protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; avoid significant negative impact on innovation, and U.S. competitiveness; and otherwise be consistent with all laws (e.g., export control laws), and DOE regulations, orders, and policies.

c. Data Determination for a DMP

The Principal Investigator should determine which data should be the subject of the DMP and, in the DMP, propose which data should be shared and/or preserved in accordance with the DMP Requirements noted above.

For data that will be generated through the course of the proposed research/work, the Principal Investigator should indicate what types of data should be protected from immediate public disclosure by DOE (referred to as “protected data”) and what types of data that DOE should be able to release immediately. Similarly, for data developed outside of the proposed research work at private expense that will be used in the course of the proposed research work, the Principal Investigator should indicate whether that type of data will be subject to public release or kept confidential (referred to as “Limited Rights Data”). Any use of Limited Rights Data or labeling of data as “protected data” must be consistent with the DMP Requirements noted above.

d. Suggested Elements for a DMP - The following list of elements for a DMP provides suggestions regarding the data management planning process and the structure of the DMP:

- Data Types and Sources: A brief, high-level description of the data to be generated or used through the course of the proposed research work and which of these are considered digital research data necessary to validate the research findings or results.
- Content and Format: A statement of plans for data and metadata content and format including, where applicable, a description of documentation plans, annotation of relevant software, and the rationale for the selection of appropriate standards. Existing, accepted community standards should be used where possible. Where community standards are missing or inadequate, the DMP could propose alternate strategies for facilitating sharing, and should advise the sponsoring program of any need to develop or generalize standards.
- Sharing and Preservation: A description of the plans for data sharing and preservation. This should include, when appropriate: the anticipated means for sharing and the rationale for any restrictions on who may access the data and under what conditions; a timeline for sharing and preservation that addresses both the minimum length of time the data will be available and any anticipated delay to data access after research findings are published; any special requirements for data sharing, for example, proprietary software needed to access or interpret data, applicable policies, provisions, and licenses for re-use and re-distribution, and for the production of derivatives, including guidance for how data and data products should be cited; any resources and capabilities (equipment, connections, systems, software, expertise, etc.) requested in the research proposal that are needed to meet the stated goals for sharing and preservation (this could reference the relevant section of the associated research proposal and budget request); and whether/where the data will be preserved after direct project funding ends and any plans for the transfer of responsibilities for sharing and preservation.
- Protection: A statement of plans, where appropriate and necessary, to protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; and avoid significant negative impact on innovation, and U.S. competitiveness.
- Rationale: A discussion of the rationale or justification for the proposed data management plan including, for example, the potential impact of the data within the immediate field and in other fields, and any broader societal impact.

e. Additional Guidance

In determining which data should be shared and preserved, researchers must consider the data needed to validate research findings as described in the DMP Requirements, and are encouraged to consider the potential benefits of their data to their own fields of research, fields other than their own, and society at large.

DMPs should reflect relevant standards and community best practices and make use of community accepted repositories whenever practicable.

Costs associated with the project description/scope of work and resources articulated in a DMP may be included in the proposed research budget as permitted by the applicable cost principles.

To improve the discoverability of and attribution for datasets created and used in the course of research, DOE encourages the citation of publicly available datasets within the reference section of publications, and the identification of datasets with persistent identifiers such as Digital Object Identifiers (DOIs). In most cases, DOE can provide DOIs free of charge for data resulting from DOE-funded research through its Office of Scientific and Technical Information (OSTI) DataID Service.

f. Definitions

Data Preservation: Data preservation means providing for the usability of data beyond the lifetime of the research activity that generated them.

Data Sharing: Data sharing means making data available to people other than those who have generated them. Examples of data sharing range from bilateral communications with colleagues, to providing free, unrestricted access to anyone through, for example, a web-based platform.

Digital Research Data: The term digital data encompasses a wide variety of information stored in digital form including: experimental, observational, and simulation data; codes, software and algorithms; text; numeric information; images; video; audio; and associated metadata. It also encompasses information in a variety of different forms including raw, processed, and analyzed data, published and archived data.

Research Data: The recorded factual material commonly accepted in the scientific community as necessary to validate research findings, but not any of the following: preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This 'recorded' material excludes physical objects (e.g., laboratory samples). Research data also do not include:

- Trade secrets, commercial information, materials necessary to be held confidential by a researcher until they are published, or similar information which is protected under law; and
- Personnel and medical information and similar information the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, such as information that could be used to identify a particular person in a research study.”

Validate: In the context of DMPs, validate means to support, corroborate, verify, or otherwise determine the legitimacy of the research findings. Validation of research findings could be accomplished by reproducing the original experiment or analyses; comparing and contrasting the results against those of a new experiment or analyses; or by some other means.

(46) REPORTING OF MATTERS RELATED TO RECIPIENT INTEGRITY AND PERFORMANCE (DECEMBER 2015)(Revision)

a. General Reporting Requirement

If the total value of the Recipient's currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this Federal award, then the Recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System FAPIIS)) about civil, criminal, or administrative proceedings described in this award term and condition. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

b. Proceedings About Which The Recipient Must Report

Submit the information required about each proceeding that:

1. Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;
2. Reached its final disposition during the most recent five year period; and
3. Is one of the following:
 - 1) A criminal proceeding that resulted in a conviction, as defined in this award term and condition,
 - 2) A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more,
 - 3) An administrative proceeding, as defined in this award term and condition, that resulted in a finding of fault and liability and the Recipient's payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or
 - 4) Any other criminal, civil, or administrative proceeding if:
 - a) It could have led to an outcome described in this award term and condition,
 - b) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on the Recipient's part; and
 - c) The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.

c. Reporting Procedures

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in this award term and condition. The Recipient does not need to submit the information a second time under assistance awards that the Recipient received if the Recipient already provided the information through SAM because the Recipient was required to do so under Federal procurement contracts that the Recipient was awarded.

d. Reporting Frequency

During any period of time when the Recipient is subject to the requirement in this award term and condition, the Recipient must report proceedings information through SAM for the most recent five year period, either to report new information about any proceeding(s) that it has not reported previously or affirm that there is no new information to report. Recipients that have Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than \$10,000,000 must disclose semiannually any information about the criminal, civil, and administrative proceedings.

e. Definitions

For purposes of this award term and condition:

1. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or A. Reporting of Matters Related to Recipient Integrity and Performance.
2. Conviction, for purposes of this award term and condition, means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere.
3. Total value of currently active grants, cooperative agreements, and procurement contracts includes—
 - 1) Only the Federal share of the funding under any Federal award with a recipient cost share or match; and
 - 2) The value of all expected funding increments under a Federal award and options, even if not yet exercised.

(47) PERSONNEL (DECEMBER 2014)

The individual named in Block 14 of the Assistance Agreement is designated a key person; additional key personnel are listed below. Changes to designated key personnel or participating organizations require prior written DOE approval in accordance with 2 CFR 200.308.

- [**]
- [**]
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- [**]
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(48) PROHIBITION ON PERSONALLY IDENTIFIABLE INFORMATION (PII)

The Recipient / Contractor must not provide PII, either printed or electronic, to the U.S. Department of Energy within any deliverable, report or submittal under this agreement / contract. Personally Identifiable Information (PII) is any information maintained by the Contractor / Recipient about an individual, including but not limited to, education, financial transactions, medical history and criminal or employment history, and information that can be used to distinguish or trace an individual’s identity, such as his/her name, social security number, date and place of birth, mother’s maiden name, biometric data, etc., and including any other personal information that is linked or linkable to a specific individual. This requirement must be incorporated into any and all subcontracts or subagreements to the lowest tier.

(49) CONFIDENTIAL BUSINESS INFORMATION

The Government acknowledges that the recipient or its subcontractors may provide to DOE confidential or proprietary business, technical or financial information. DOE will manage this information consistent with the Trade Secrets Act, 18 U.S.C. §1905. DOE will also process any request for release of this information to the public consistent with the Freedom of Information Act (FOIA), 5 U.S.C. §552 and DOE's FOIA regulations, 10 C.F.R Part 1004. DOE agrees that any confidential business, financial, and legal information provided by the recipient is not "data" within the meaning of the Rights in Data clause.

(50) CHANGE OF CONTROL

Change of Control is defined as any of the following:

- 1) Any event by which any individual or entity other than the recipient becomes the beneficial owner of more than 50% of total voting power of the voting stock of the recipient;
- 2) The recipient merges with or into any entity other than a transaction in which the shares of the recipient's voting stock are converted into a majority of the voting stock of the surviving entity.
- 3) The sale, lease or transfer of all or substantially all of the assets of the recipient to any individual or entity other than the recipient in one or a series of related transactions.
- 4) The adoption of a plan relating to the liquidation or dissolution of the recipient; or
- 5) Where the recipient is a wholly-owned subsidiary at the time of award or novation, and the recipient's parent entity undergoes a Change of Control as defined in this section.

Upon any Change of Control or if DOE requests the information in writing, the recipient must provide the Contracting Officer with documentation identifying all parties who exercise control in the recipient at the time of award.

When there is a Change of Control of a recipient, or the recipient has reason to know a Change of Control is likely, the recipient must notify the Contracting Officer within thirty (30) days of its knowledge of such Change of Control. Such notification must include, at a minimum, copies of documents necessary to reflect the transaction that resulted or will result in the Change of Control, and identification of all entities, individuals or other parties to such transaction. Failure to notify the Contracting Officer of a Change of Control is grounds for suspension of the award or termination for failure to comply with the terms and conditions of the award.

The Contracting Officer must authorize a Change of Control for the purposes of the award. Failure to receive the Contracting Officer's authorization for a Change of Control may lead to a suspension of the award, termination for failure to comply with the terms and conditions of the award, or imposition of special award conditions. Special award conditions may include, but are not limited to: Additional reporting requirements related to the Change of Control; and Suspension of payments due to the recipient.

(51) AWARD PERIOD DURATION AND EXTENSION

Awards are for 5 – 7 years, as proposed by the applicant and approved by DOE (see Section (6), titled “Award Project Period and Budget Periods”. In addition, awards may be extended; such extensions may be exercised more than once, but the total extension of performance hereunder shall not exceed 3 years (for a total period of performance of 8 – 10 years). Note that these extensions are not considered “one-time cost extensions”, as contemplated by 2 CFR 200.308(d)(2).

Period of performance extensions must remain within the programmatic boundaries of the original Funding Opportunity Announcement (FOA) and be considered meritorious under the original merit review criteria of the announcement (FOA). Substantial changes to the project’s budget and/or scope or objectives will not be approved under this provision if the changes would not be acceptable under the original announcement.

Should the Recipient desire an extension of the period of performance, a written request is to be provided to the Contracting Officer no later than six months prior to the scheduled expiration of the project period. The request must detail the rationale/justification for the extension, as well as detail any other changes needed for the award to implement the extended period of performance.

The Contracting Officer will review the request and consider the value to the overall success of the project or increased significance and value to the extended project when reviewing request(s) for period of performance extensions. The Contracting Officer will provide the Recipient a preliminary written notice of its intent to extend the period of performance extension within 60 days after receipt of the request and request the recipient provide a revised project plan, budget and supporting documentation, and any other needed information. The preliminary notice does not commit the Government to an extension to the award.

After submission of any of the required information and DOE review and approval of it, the Contracting Officer may exercise the period of performance extension by written amendment to the award.

(52) ONE TIME EXTENSION

As permitted by 2 CFR 200.308(d)(2), a one-time extension of the period of performance by up to 12 months may be granted. However, the following restriction applies: Unilateral no cost time extensions by the recipient will NOT be permitted under this award.

The recipient must request any extension from DOE at least 60 days prior to the award’s period of performance end date, unless otherwise agreed to by DOE. Any no cost time extension must receive prior written approval from the DOE Contracting Officer.

(53) SPECIAL DISPOSITION OF PROPERTY AT THE END OF THE AWARD

The Government does not anticipate providing any Government Furnished Property (GFP) for this award. However, there will be substantial awardee acquired property. Property acquired under the award will need to be dispositioned at the end of the award. This is typically done by the Recipient either returning it to DOE or by the Recipient reimbursing DOE based on the fair market value (FMV) of the property and the DOE participation in the project, i.e., the cost sharing percentage which DOE contributed to the award. As this is a cost shared award under the financial assistance rules an awardee would normally reimburse DOE for the FMV of DOE’s share of any property acquired during performance of the award. However, DOE intends to permit the recipient to continue to use the property after the project period until its useful life (and value) are exhausted for the original purposes of the award.

The intent of the ARD Project is that the Demo reactor not be owned or operated by DOE, but by the recipient, or another private entity; or by a Federal, tribal, state, or municipal utility. The provisions of 2 CFR 200 and 2 CFR 910 allow for the continued operation and use of the reactor by the original awardee. Novation may be allowable in accordance with the procedures of Chapter 1 of Title 48, CFR, Subpart 42.12. If the Recipient desires to sell the reactor to another entity (e.g., a utility, etc.) for continued operation at the end of the award, then DOE may require compensation based on the FMV and DOE participation in the project.

(54) COOPERATIVE AGREEMENT TERMINATION OR RECIPIENT SUSPENSION OF PROJECT WORK

In addition to the requirements set forth at 2 CFR 200.339(a)(4), regarding awardee termination of the award or suspension of work, the Recipient must provide the Contracting Officer written notification of its intent to terminate or otherwise suspend work under the award at least 90 days prior to any termination decision/proposed termination date or suspension of work. DOE and the recipient must concur on the terms of the termination or work suspension. To protect DOE's interest, and notwithstanding other terms and conditions of this award, DOE will become the owner of all intellectual property acquired or developed under the agreement by the Recipient terminating the project with unlimited rights in that intellectual property unless otherwise agreed to in writing by the Contracting Officer. Also, if the Recipient terminates the award early prior to completion of the objectives or otherwise suspends work, property and equipment acquired under the award must be dispositioned in accordance with 2 CF 200.311 and 2 CFR 200.313.

(55) COST SHARING ON INVOICES SUBMITTED FOR PAYMENT

The recipient must at least meet its cost sharing minimum obligation (as calculated based on total cost incurred to date) on every invoice submitted for payment to ensure that its cost sharing requirement is always met on an on-going basis throughout performance, unless otherwise authorized by the Contracting Officer.

The recipients must contribute the required cost share amount incrementally over the life of the award. Standard Form 270, Request for Advance or Reimbursement (hereafter "Invoice") is to be used for invoices. The recipient is required to submit an Invoice to DOE for payment for reimbursement as the project progresses; the recipient's cost share amount listed for each billing period must always reflect not less than 50 percent from nonfederal sources overall cost share ratio for the current Budget Period, i.e., the amount of cost sharing included on each Invoice – and the cumulative amount of cost sharing listed relative to the total costs billed - must always be at least equal to the figure calculated by multiplying the total costs of the project incurred to date (including costs incurred by the FFRDC/NL) by the cost sharing percentage required by the award. If the recipient has incurred a greater amount of cost sharing than is required at that point in the Budget Period, the higher amount of cost sharing may be reflected on the Invoice - but in no case may the Invoice ever reflect a lower amount of cost share than is required.

(56) TEST AND EVALUATION

Test and evaluation of the advanced demonstration reactors will primarily be done by the U.S. Nuclear Regulatory Commission (NRC) for reactors to be licensed by the NRC.

(57) LIABILITY DURING OPERATION OF THE ADVANCED DEMONSTRATION REACTOR

Notwithstanding any other terms of this Agreement, the Government shall not be responsible for or have any obligation to the recipient for operation of the advanced demonstration reactor or other recipient facilities operated in connection with the reactor, including any costs which may be incurred by the recipient in connection with the operation of the reactor or related facilities due to the performance of the work under this Agreement, whether said work was performed prior to or subsequent to the effective date of this Agreement or following the end of the project period of this agreement.

(58). MILESTONES AND PAYMENTS

Recipient's invoices may be submitted on a monthly, in a manner consistent with Article 8 (Payment Procedures) and Article 55 (Cost Sharing on Invoices Submitted for Payment). DOE staff will conduct invoice reviews on a monthly schedule.

DOE and the recipient will continuously evaluate the project execution team's performance in adhering to the project schedule and in meeting the set of mutually-agreed-upon project milestones during each budget period, and at the budget continuation process at the end of each budget period. Continued invoice payments will be dependent on a determination of adequate project progress as determined by the DOE program manager and technical project officer.

(59) POST AWARD CONFERENCE

The recipient is required to attend a post-award conference. The recipient will contact the designated TPO for details regarding this meeting. DOE may limit the number of recipient personnel attending. All recipient personnel attending must have a valid ID for security clearance into the building.

(60) PROJECT MANAGEMENT PLAN

The Project Management Plan (PMP) submitted and approved in the application shall be maintained and implemented by the recipient throughout the project period of performance. Regular updates to the PMP shall be made by the recipient, as necessary, during project performance. All updates shall be submitted to DOE for review and approval.

Within 30 days following the post award conference as a first task, the recipient will revise the version of the PMP that was submitted with its application by including details from the negotiation process. The PMP, is updated by the recipient as the project progresses to reflect updates to the approved cost and schedule baselines. The Recipient prepares periodic reports which include schedule and budget variances. The PMP contains the project cost and schedule baseline and is used as a basis to report budget and schedule variances.

Post award, in conjunction with a PMP, DOE will jointly develop quality assurance requirements and plans with the Recipient to monitor performance to ensure standards are met. The PMP will not specify how the award recipient will do the work, but rather describe the work in terms of outcomes or results. The PMP will provide flexibility to account for variations and changes in requirements as the project progresses.

(61) COORDINATION AND MANAGEMENT PLAN

If the recipient uses multiple project managers (PMs), the recipient must provide for DOE approval a “Coordination and Management Plan” that describes the organization structure of the project as it pertains to the designation of multiple PMs. This plan must be updated by the recipient throughout the project period, as necessary (with a copy of any update provided to DOE). The plan must include (at a minimum):

- Process for making decisions on scientific/technical direction
- Publications
- Intellectual property issues
- Communication plans
- Procedures for resolving conflicts
- PMs’ roles and administrative, technical, and scientific responsibilities for the project.

(62) WAIVER REQUESTS: PERFORMANCE OF WORK IN THE UNITED STATES

Work performed (i.e., purchases and labor) under awards must be performed in the U.S., unless otherwise approved as part of the original application, or during performance, by DOE in accordance with the thresholds set forth in this clause.

- Below \$1M: This requirement does not apply to the foreign purchase of supplies and equipment or for foreign labor (cumulative) performed below \$1M; however, the Awardee should make reasonable efforts to perform labor and/or purchase supplies and equipment within the U.S. below this threshold.
- At \$1M or above, up to \$5M, the awardee must notify DOE at least 30 days prior to foreign purchase of supplies and equipment or for foreign labor (cumulative) performed, using the Special Status report specified in the award’s Reporting Requirements checklist.
- Over \$5M, the awardee must obtain prior written DOE approval using the Waiver Request for Non-US Work at Appendix F, at least 30 days prior to the foreign purchase of supplies and equipment or for foreign labor (cumulative) performed.

In adherence to the above thresholds, awards proposing foreign purchase of supplies and equipment or for foreign labor performed must clearly specify what work is to be done, by which entity, where the work is to be performed, the estimated time period for the work, the estimated dollar value of the work and the rationale for doing the work outside the U.S.

The Awardee must flow down these requirements to its subrecipients.

(63) DOE APPROVAL FOR SUBAWARDS AND SUBCONTRACTS

The Recipient is required to obtain DOE approval on all subcontracts or subawards over \$5 million, including all options and/or material modifications thereto, unless these are already otherwise listed in the award’s approved project narrative and/or as listed below:

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In addition, any prime award entity receiving funds of more than \$200,000 under the DOE Advanced Small Modular Reactor Research and Development (R&D) program is ineligible to receive funding under this award for the advanced reactor demonstration project.

Performance of the work under this award shall be subject to the technical direction of the DOE Technical Project Officer (TPO). The term “technical direction” is defined to include:

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Technical direction must be within the scope of work stated in the award. The TPO does not have the authority to, and may not, issue any technical direction that—

- Constitutes an assignment of additional work outside the Project Narrative,
- Constitutes a change,
- In any manner causes an increase or decrease in the total estimated award project cost or the time required for award performance,
- Changes any of the expressed terms, conditions or specifications of the award,
- Interferes with the Recipient's right to perform the terms and conditions of the award. All technical direction shall be issued in writing by the TPO; or
- Conflicts with US NRC issued permits, licenses or guidance under which the project is performing.

The Recipient must proceed promptly with the performance of technical direction duly issued by the TPO in the manner prescribed by this clause and within its authority under the provisions of this clause. If, in the opinion of the Recipient, any instruction or direction by the TPO falls within one of the categories defined as being beyond its authority, in this Section (65), the Recipient must not proceed and must notify the Contracting Officer in writing within five (5) working days after receipt of any such instruction or direction and must request the Contracting Officer to modify the award accordingly. Upon receiving the notification from the Recipient, the Contracting Officer must—

- Advise the Recipient in writing within thirty (30) days after receipt of the Recipient's letter that the technical direction is within the scope of the award effort and does not constitute a change under the Changes clause of the award,
- Advise the Recipient in writing within a reasonable time that the Government will issue a written change order; or
- Advise the Recipient in writing within a reasonable time not to proceed with the instruction or direction of the TPO.

A failure of the Recipient and Contracting Officer either to agree that the technical direction is within the scope of the award or to agree upon the award action to be taken with respect to the technical direction will be subject to a final decision by the Contracting Officer.

(65) TECHNICAL PROJECT OFFICER/PROJECT MANAGER AUTHORITY

The DOE Technical Project Officer/Project Manager assigned to this award is not authorized to issue, and the Recipient is not required to follow, any technical advice that constitutes work which:

- is not within the agreed work scope approved by the award,
- in any manner causes an increase or decrease in the total estimated Project cost or in the time required for performance of the Project,
- has the effect of changing any of the terms or conditions of the award,
- unduly interferes with the recipient's contractual negotiations or obligations with third-parties,
- unduly interferes with recipient's health, safety, security, and environmental obligations whether provided by statute, ordinance or regulation ("law"), or recipient corporate policy that is consistent with law,
- interferes with the recipient's right to perform the project in accordance with the terms and conditions of the award; or

Conflicts with US NRC issued permits, licenses or guidance under which the project is performing.

(66) AWARD TERMINATION

Government financial assistance rules permit a cooperative agreement to be terminated in whole or in part by the non-Federal entity upon sending to DOE written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, given the importance of the ARD, an awardee can only terminate the award with prior notice to DOE at least 90 days prior to the planned termination date, unless a different time period is approved by the Contracting Officer.

(67) ADMINISTRATION BY NON-FEDERAL PERSONNEL

The Government may use non-Federal personnel to conduct award oversight and administrative activities. Non-Federal personnel used must sign conflict of interest and non-disclosure agreements prior to doing any of this kind of work regarding the award.

(68) RECIPIENT INSPECTION REQUIREMENTS

The recipient is responsible for performing the work (including any needed inspections, tests, etc.) under this cooperative agreement such that it conforms to award requirements, including the award's project plan as well as any applicable technical requirements DOE may also perform specialized inspections or tests in a manner that will not unduly delay work, as it deems necessary.

"Work," as used in this Section (69), includes services performed, workmanship, and material furnished or used in performing work under the award.

The recipient shall provide and maintain an inspection system acceptable to the Government covering the work under this award. DOE may perform inspections as necessary to determine Recipient compliance with the cooperative agreement requirements. NRC may also perform technical inspections as required as part of the licensing process. The Recipient is responsible to maintain work records, including of inspections and tests, and provide those when requested by either DOE or NRC.

Complete records of work performed (including inspections and tests) by the recipient shall be maintained and made available to the Government during award performance and for as long afterwards as the award requires. The Government has the right to inspect the work called for by the award, to the extent practicable at all places and times during the term of the award. The Government shall perform inspections in a manner that will not unduly delay the work.

If any of the work performed does not conform with award requirements, the Government may require the recipient to perform the work again in conformity with award requirements. In accordance with 2 CFR § 200.338, if the recipient fails to comply with Federal statutes, regulations or the terms and conditions of the award, DOE may impose one or more of the additional specific award conditions described in § 200.207 *Specific conditions*, as appropriate for the circumstances.

(69) REAL ESTATE (LAND) TRANSACTION APPROVAL

Should the Recipient propose to acquire land for the project, the Recipient must comply with the Uniform Relocation and Assistance and Real Property Acquisition Act (URA), as implemented by 49 CFR § 24. At least 60 days prior to consummating a land acquisition under the award, the Recipient must submit the proposed real estate transaction to DOE for review and approval by a DOE Real Estate Contracting Officer (RECO). This will be done within 30 days of the Recipient's submission of the real estate transaction to DOE.

Should the Recipient propose that the project is located on DOE- or other Federally-controlled land, an out grant agreement will be required. This will provide a grant of interest or right to the Recipient to use government real property by a lease, easement, license, or permit for the project. This agreement will be subject to normal DOE real estate activity rules and procedures; the Recipient must contact the Contracting Officer at least 150 days in advance of the land need date for guidance and to begin making the arrangements for the out grant.

(70) PREPARATION OF COST ESTIMATE FOR CONSTRUCTION OF THE ADVANCED DEMONSTRATION REACTOR

a. As agreed to by the parties during performance, the recipient must submit a detailed cost estimate for the construction portion of the Advanced Demonstration Reactor; the cost estimate must be submitted on the forms agreed to by the parties or on copies of those forms. The Recipient will be required to certify that to the best of its knowledge and belief, the cost estimate data are accurate, complete, and current when submitting the cost estimate, and to re-certify this as of the date of agreement on the cost estimate by the parties, or if applicable, an earlier date agreed upon between the parties that is as close as practicable to the date of agreement on the cost estimate.

b. The cost estimate form may require the recipient to categorize the costs using various categories, including-

- 1) Costs provided by subcontractors on a lump sum basis,
- 2) Costs provided by subcontractors on target price basis,
- 3) Costs provided by subcontractors on a cost reimbursable basis,
- 4) Costs provided by subcontractors on a time and material basis,
- 5) Costs provided by subcontractors on firm/ fixed price per Unit of construction (e.g. yard of safety related concrete); or
- 6) Any combination of paragraphs (b)(1) through (b)(5) of this term.

c. If the recipient does not submit the construction cost estimate on all required items, failure to do so may result in the award being terminated without further consideration.

(71) RESERVED

(72) RESERVED

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(74) RESERVED

(75) ORGANIZATION AND DIRECTION OF THE CONSTRUCTION WORK FOR THE ADVANCED DEMONSTRATION REACTOR

When the construction portion of this award is executed, the Recipient shall submit to the Contracting Officer a chart showing the project organization with key personnel to be employed in connection with the work under this award, and their respective duties. The Recipient shall keep the data furnished current by supplementing it as additional information becomes available.

Work performance under this award shall be under the full-time resident direction of (1) the Recipient, if the Recipient is an individual; (2) one or more principal partners, if the Recipient is a partnership; or (3) one or more senior officers, if Recipient is a corporation, association, or similar legal entity. However, if the Contracting Officer approves, the Recipient may be represented in the direction of the work by a specific person or persons holding positions other than those identified in this paragraph.

(76) SUBAWARDS

a. *Definitions.* As used in this clause-

“Approved purchasing system” means a Recipient’s purchasing system that has been reviewed and approved by DOE.

“Consent to subaward” means the Contracting Officer’s written consent for the Recipient to enter into a particular subaward.

The terms *Subaward* and *Subrecipient* are defined in 2 CFR 200, Subpart A.

b. If the Recipient does not have an approved purchasing system, consent to subaward is required for any subaward that was not already approved as part of the recipient’s initial application submitted and selected for award in response to the Funding Opportunity Announcement for this program and that (1) Is of the cost- reimbursement, time-and-materials, or labor-hour type; or (2) Is fixed-price and exceeds either \$250,000 or 5 percent of the total estimated cost of the award. The Recipient shall notify the Contracting Officer reasonably in advance of placing any subrecipient modification thereof for which consent is required under paragraph (b) of this clause, including the following information:

- i. A description of the supplies or services to be sub awarded.
- ii. Identification of the type of subaward to be used.
- iii. Identification of the proposed subrecipient.
- iv. The proposed subaward price.
- v. A negotiation memorandum reflecting-
 - 1) The principal elements of the subaward price negotiations,
 - 2) The most significant considerations controlling establishment of initial or revised prices,
 - 3) The reasons for any significant difference between the Recipient’s price objective and the price negotiated; (a) The Recipient is not required to notify the Contracting Officer in advance of entering into any subaward for which consent is not required under paragraph (b) of this Section (77)

c. Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subaward nor approval of the Recipient’s purchasing system shall constitute a determination:

- 1) Of the acceptability of any subaward terms or conditions,
- 2) Of the allowability of any cost under this award; or
- 3) To relieve the Recipient of any responsibility for performing this award

- d. The Recipient shall give the Awarding Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Recipient by any subrecipient or vendor that, in the opinion of the Recipient, may result in litigation related in any way to this award, with respect to which the Recipient may be entitled to reimbursement from the Government.

(77) GOVERNMENT ACCESS TO CONSTRUCTION PROJECT INFORMATION

The Contracting Officer shall have access to recipient construction project information. This access shall be limited to the minimum necessary as determined by the Contracting Officer to verify the Recipient is successfully and efficiently performing the construction portion of the project. The Contracting Officer will make reasonable efforts to ensure this access does not interfere with or unduly delay project work. Access includes but is not limited to the following:

- o Drawings and specifications
- o Construction and Execution plans
- o Resource loaded schedules
- o Design functions and requirements for the site final design review
- o Risk management plans
- o Value management and engineering studies and/or plans
- o Acquisition strategies
- o Project execution plans
- o Project controls including earned value management systems
- o Qualifications of the integrated project team.
- o Financial/cost share strategy for funding the construction project

(78) RESERVED

(79) RESERVED

(80) WORK OVERSIGHT IN ENGINEERING, PROCUREMENT, CONSTRUCTION CONTRACT AWARDS

The extent and character of the work to be done by the Recipient shall be subject to these terms and conditions, and the general oversight direction, and approval of the Contracting Officer, and as necessary, the NRC.

(81) RESERVED

(82) ARCHITECTURAL BARRIERS ACT OF 1968 (42 U.S.C. § 4151 ET SEQ.) - CONSTRUCTION OF THE ADVANCED DEMONSTATION REACTOR

The Recipient must ensure that all persons have ready access to, and use, of buildings regardless of disability in the design, construction or alteration of buildings and facilities financed with Federal funds to the extent practicable consistent with existing applicable statute and NRC regulations.

(83) EQUAL EMPLOYMENT OPPORTUNITY UNDER E.O. 11246 – CONSTRUCTION OF THE ADVANCED DEMONSTATION REACTOR

E.O. 11246, as amended, requires the recipient and subrecipients performing federally assisted construction projects to provide equal opportunity, without regard to race, color, religion, sex or national origin, to persons employed or seeking employment with them.

(84) PERFORMANCE AND PAYMENT BONDS- CONSTRUCTION OF THE ADVANCED DEMONSTRATION REACTOR

Prior to commencement of construction of the advanced reactor, bonding requirements must be met by the recipient. To do this, the recipient may provide DOE with its proposed bonding policy and requirements; these should be submitted to DOE concurrent with the recipient's continuation award budget(s) which include construction work, but in any event must be provided to the Contracting Officer for review/approval at least 120 days prior to the planned beginning of construction. DOE may accept the bonding policy and requirements of the recipient provided that the Contracting Officer makes a determination that the Federal interest is adequately protected. The required bonds must at least cover the Government portion of the construction cost, but may cover 100 percent of the construction cost as an allowable cost under this award. At a minimum, requirements must be as follows:

A performance bond on the part of the recipient for 100 percent of the Government share of the construction cost. A "performance bond" is one executed in connection with a contract for the construction to secure fulfillment of all the Recipient's/subcontractor's obligations under such contract/subcontract.

A payment bond on the part of the Recipient/subcontractor for 100 percent of the Government share construction contract cost. A "payment bond" is one executed in connection with the construction contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

Other information pertaining to this is as follows:

Definitions. As used in this clause-

a. "Original award ceiling" means the award price for the construction of the advanced reactor.

b. *Forms for required bonds.* The recipient shall furnish performance and payment bonds to the Contracting Officer as follows:

Performance bonds – use Standard Form 25.

Payment Bonds – use Standard Form 25A

Additional bond protection

c. The Government may require additional performance and payment bond protection if the price for the construction of the advanced reactor is increased. The increase in protection generally will equal 100 percent of the increase in award price.

d. *Furnishing executed bonds.* The Recipient shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified by the Contracting Officer, but in any event, at least 120 days prior to starting work.

e. *Surety or other security for bonds.* The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the *Federal Register* or may be obtained from the:

U.S. Department of the Treasury,
Financial Management,
Service Surety Bond Branch,
3700 East West Highway,
Room 6 F01,
Hyattsville, MD 20782.
Or via the internet at <http://www.fms.treas.gov/c570/>.

(85) RESERVED
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(89) RESERVED

(90) CONSTRUCTION PERFORMANCE REPORTS

For the most part, onsite technical inspections and certified percentage of completion data will be relied on heavily by DOE to monitor progress under the award for construction. However, DOE may require additional performance reports when considered necessary and as directed by the Contracting Officer.

(91) REPORTING ON REAL PROPERTY

The recipient must submit reports at least annually on the status of real property in which the Federal Government retains an interest, unless the Federal interest in the real property extends 15 years or longer. If the Federal interest attached is for a period of 15 years or more, DOE, at its option, may require the recipient to report at various multi-year frequencies (e.g., every two years or every three years, not to exceed a five-year reporting period; or a Federal awarding agency or pass-through entity may require annual reporting for the first three years of a Federal award and thereafter require reporting every five years). Unless otherwise specified by the Contracting Officer, recipient format for this reporting is acceptable.

(92) MATERIAL AND WORKMANSHIP FOR THE CONSTRUCTION OF THE ADVANCED DEMONSTRATION REACTOR

All equipment, material, and articles incorporated into the work covered by this award shall comply with applicable NRC quality assurance and safety-related regulations, and (upon issuance) the License for the advanced demonstration reactor.

If work is performed at a Federal location, the Contracting Officer may require, in writing, that the Recipient remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(93) PERMITS AND RESPONSIBILITIES - CONSTRUCTION OF THE ADVANCED DEMONSTATION REACTOR

For the construction portion of this award, the Recipient shall be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. Expenses associated with such permits and licenses shall be deemed allowable costs that are eligible for DOE cost share.

The Recipient shall be responsible for all damages to persons or property that occur as a result of the Recipient's fault or negligence. The Recipient shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the award.

(94) EXCUSABLE DELAYS - CONSTRUCTION OF THE ADVANCED DEMONSTATION REACTOR

Except for defaults of subcontractors or subrecipients at any tier, the Recipient shall be in an excusable delay position because of any failure to perform this cooperative agreement under its terms if the failure arises from causes beyond the control and without the fault or negligence of the Recipient. Examples of these causes are (1) acts of God or of the public enemy, (2) acts of the Government in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance, the failure to perform must be beyond the control and without the fault or negligence of the Recipient. "Default" includes failure to make progress in the work so as to endanger performance.

If the failure to perform is caused by the failure of a subcontractor or subrecipient at any tier to perform or make progress, and if the cause of the failure was beyond the control of both the Recipient and subcontractor/subrecipient, and without the fault or negligence of either, the Recipient shall not be deemed to be in default, unless-

- The subcontracted supplies or services were obtainable from other sources,
- The Contracting Officer ordered the Recipient in writing to purchase these supplies or services from the other source; and
- The Recipient failed to comply reasonably with this order.

Upon request of the Recipient, the Contracting Officer shall ascertain the facts and extent of the failure. If the Contracting Officer determines that any failure to perform results from one or more of the causes above, the completion time shall be revised, subject to the rights of the Government to terminate this cooperative agreement.

(95) RESERVED

(96) BUDGET TRANSFERS BETWEEN CONSTRUCTION AND NON-CONSTRUCTION WORK

This award includes both construction and non-construction work. In the event that a single budget period contains scope of work for both construction and non-construction work, the recipient is required to notify DOE at least 30 days in advance of making any fund or budget transfers between the two types of work supported that exceed a cumulative value of \$2M within a specific budget period, considering the immediate transfer as well as all prior transfers within the current budget period, unless otherwise authorized by the Contracting Officer.

(97) DIRECT COST FUNDS TRANSFERS

The Recipient is restricted from transferring funds between direct cost categories within the total budget; the cumulative amount of such transfers must not exceed \$2M for the current Budget Period, as last approved by DOE. For funds transfers that are greater than \$2M, the recipient must obtain prior DOE Contracting Officer approval.

(98) RESTRICTION ON SMR FUNDING

Any prime award entity other than a national laboratory that receives fiscal year 2020 funds of more than \$200,000 under the US Department of Energy Advanced Small Modular Reactor Research and Development (SMR R&D) program is not eligible to receive fiscal year 2020 funds from within the Advanced Reactor Demonstration Program. Further, funds provided under the Advanced Reactor Demonstration project award are not permitted to be used for the SMR R&D award activities.

(99) CONTINGENCY FOR CONSTRUCTION OF THE ADVANCED DEMONSTATION REACTOR

a. Contingency is that part of a budget estimate of future construction costs associated with possible events or conditions arising from causes the precise outcome of which is indeterminable at the time of estimate, and that experience shows will likely result, in aggregate, in additional costs for the project. Amounts for major project scope changes, unforeseen risks, or extraordinary events are excluded from contingency estimates.

b. It is permissible for contingency amounts, other than those excluded in paragraph (a) of this clause, to be explicitly included in budget estimates for the construction portion of this award, to the extent they are necessary to improve the precision of those estimates. Amounts must be estimated using broadly-accepted cost estimating methodologies, specified in the budget documentation of the award, and accepted by DOE. As such, any contingency amounts are to be included in the award. In order for actual costs incurred to be allowable, they must comply with the cost principles, other requirements in this award, and national policy requirements; be necessary and reasonable for proper and efficient accomplishment of project; and be verifiable from the recipient's records.

c. Payments made by DOE to the recipient's "contingency reserve" or any similar payment, made for events the occurrence of which cannot be foretold with certainty as to the time or intensity, or with an assurance of their happening, are unallowable, except as noted in § 200.431 Compensation—fringe benefits regarding self- insurance, pensions, severance and post-retirement health costs, and § 200.447 Insurance and indemnification.

(100) RESERVED

(101) DOE RIGHT TO REVIEW RECIPIENT SYSTEMS

During performance of this award, DOE reserves the right for any reason to assess the recipient's continued ability to manage the financial aspects of an award and its plans to accomplish project activities with reasonable economy and efficiency. The standards for acceptable financial management are found at 2 CFR Part 200.302. This may include a review of different recipient systems, including but not limited to:

- 1) The recipient's accounting system to determine whether it is adequate for the accumulation and segregation of costs on a project-by-project basis and whether its books of account are adequate for and suited to the organization's business.
- 2) The recipient's purchasing procedures to determine if they exist in written form and whether they result in effective, economical, and well-documented procurement.
- 3) The recipient's personnel practices and procedures to determine if they exist in written form, whether they provide for adequate separation of responsibilities for hiring, dismissal, promotion, etc., and whether the organization can meet the cost principle standards for documenting its payroll.
- 4) The existence and adequacy of other written procedures governing travel, use of consultants, and property management.
- 5) The organizational structure and assignment of functional responsibilities to determine whether the organization can adequately safeguard its assets provide accurate and dependable financial and cost data, and whether employees can adequately discharge their responsibilities and adhere to established policies.
- 6) The recipient's make-or-buy program when necessary to ensure negotiation of reasonable award prices, satisfactory performance, or implementation of socioeconomic policies.

**Intellectual Property Provisions (CDSB-115)
Cooperative Agreement - Special Data Statute
Research, Development, or Demonstration
Domestic Small Business**

01.	FAR 52.227-1	Authorization and Consent (DEC 2007) Alternate I (APR 1984)
02.	FAR 52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (DEC 2007)
03.	2 CFR 910 Appendix A of Subpart D	Rights in Data – Programs Covered under Special Data Statutes
04.	2 CFR 910 Appendix A of Subpart D	Patent Rights (Small Business Firms and Nonprofit Organizations)

NOTE: In reading these provisions, any reference to “contractor” shall mean “recipient,” and any reference to “contract” or “subcontract” shall mean “award” or “subaward.”

01. FAR 52.227-1 Authorization and Consent (DEC 2007) Alternate I (APR 1984)

- (a) The Government authorizes and consents to all use and manufacture of any invention described in and covered by a United States patent in the performance of this contract or any subcontract at any tier.
 - (b) The Contractor shall include the substance of this clause, including this paragraph (b), in all subcontracts that are expected to exceed the simplified acquisition threshold. However, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.
- (End of clause)

02. FAR 52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement (DEC 2007)

- (a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.
 - (b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in the Contractor's possession pertaining to such claim or suit. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.
 - (c) The Contractor shall include the substance of this clause, including this paragraph (c), in all subcontracts that are expected to exceed the simplified acquisition threshold.
- (End of clause)

03. 2 CFR 910, Appendix A of Subpart D, Rights in Data - Programs Covered Under Special Data Statutes

- (a) Definitions
 - Computer Data Bases, as used in this clause, means a collection of data in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.
 - Computer software, as used in this clause, means
 - (i) computer programs which are data comprising a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations and
 - (ii) data comprising source code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the computer program to be produced, created or compiled. The term does not include computer data bases.

Data, as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to administration, such as financial, administrative, cost or pricing or management information.

Form, fit, and function data, as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability as well as data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

Limited rights data, as used in this clause, means data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged.

Restricted computer software, as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and confidential or privileged; or is published copyrighted computer software; including modifications of such computer software.

Protected data, as used in this clause, means technical data or commercial or financial data first produced in the performance of the award which, if it had been obtained from and first produced by a non-federal party, would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552(b)(4) and which data is marked as being protected data by a party to the award.

Protected rights, as used in this clause, mean the rights in protected data set forth in the Protected Rights Notice of paragraph (g) of this clause.

Technical data, as used in this clause, means that data which are of a scientific or technical nature. Technical data does not include computer software, but does include manuals and instructional materials and technical data formatted as a computer data base.

Unlimited rights, as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose whatsoever, and to have or permit others to do so.

(b) Allocation of Rights

(1) Except as provided in paragraph (c) of this clause regarding copyright, the Government shall have unlimited rights in—

(i) Data specifically identified in this agreement as data to be delivered without restriction;

(ii) Form, fit, and function data delivered under this agreement;

(iii) Data delivered under this agreement (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this agreement; and

(iv) All other data delivered under this agreement unless provided otherwise for protected data in accordance with paragraph (g) of this clause or for limited rights data or restricted computer software in accordance with paragraph (h) of this clause.

(2) The Recipient shall have the right to—

- (i) Protect rights in protected data delivered under this agreement in the manner and to the extent provided in paragraph (g) of this clause;
- (ii) Withhold from delivery those data which are limited rights data or restricted computer software to the extent provided in paragraph (h) of this clause;
- (iii) Substantiate use of, add, or correct protected rights or copyrights notices and to take other appropriate action, in accordance with paragraph (e) of this clause; and
- (iv) Establish claim to copyright subsisting in data first produced in the performance of this agreement to the extent provided in paragraph (c)(1) of this clause.

(c) Copyright

(1) Data first produced in the performance of this agreement. Except as otherwise specifically provided in this agreement, the Recipient may establish, without the prior approval of the Contracting Officer, claim to copyright subsisting in any data first produced in the performance of this agreement. If claim to copyright is made, the Recipient shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including agreement number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For such copyrighted data, including computer software, the Recipient grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government, for all such data.

(2) Data not first produced in the performance of this agreement. The Recipient shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this agreement any data that are not first produced in the performance of this agreement and that contain the copyright notice of 17 U.S.C. 401 or 402, unless the Recipient identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in paragraph (c)(1) of this clause; provided, however, that if such data are computer software, the Government shall acquire a copyright license as set forth in paragraph (h)(3) of this clause if included in this agreement or as otherwise may be provided in a collateral agreement incorporated or made a part of this agreement.

(3) Removal of copyright notices. The Government agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(d) Release, Publication and Use of Data

(1) The Receipt shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Recipient in the performance of this contract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this contract.

(2) The Recipient agrees that to the extent it receives or is given access to data necessary for the performance of this agreement which contain restrictive markings, the Recipient shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the Contracting Officer.

(e) Unauthorized Marking of Data

(1) Notwithstanding any other provisions of this agreement concerning inspection or acceptance, if any data delivered under this agreement are marked with the notices specified in paragraph (g)(2) or (g)(3) of this clause and use of such is not authorized by this clause, or if such data bears any other restrictive or limiting markings not authorized by this agreement, the Contracting Officer may at any time either return the data to the Recipient or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer shall make written inquiry to the Recipient affording the Recipient 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Recipient fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Recipient provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(i) of this clause, the Contracting Officer shall consider such written justification and determine whether or not the markings are to be cancelled or ignored. If the Contracting Officer determines that the markings are authorized, the Recipient shall be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer shall furnish the Recipient a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Recipient files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government shall continue to abide by the markings under this subdivision (e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination become final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in paragraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(f) Omitted or Incorrect Markings

(1) Data delivered to the Government without either the limited rights or restricted rights notice as authorized by paragraph (g) of this clause, or the copyright notice required by paragraph (c) of this clause, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Recipient may request, within 6 months (or a longer time approved by the Contracting Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Recipient's expense, and the Contracting Officer may agree to do so if the Recipient—

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the use of the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(2) The Contracting Officer may also:

(i) Permit correction at the Recipient's expense of incorrect notices if the Recipient identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized; or

(ii) Correct any incorrect notices.

(g) Rights to Protected Data

(1) The Recipient may, with the concurrence of DOE, claim and mark as protected data, any data first produced in the performance of this award that would have been treated as a trade secret if developed at private expense. Any such claimed "protected data" will be clearly marked with the following Protected Rights Notice, and will be treated in accordance with such Notice, subject to the provisions of paragraphs (e) and (f) of this clause.

Protected Rights Notice

These protected data were produced under agreement no. ____ with the U.S. Department of Energy and may not be published, disseminated, or disclosed to others outside the Government until (Note:) The period of protection of such data is fully negotiable, but cannot exceed the applicable statutorily authorized maximum), unless express written authorization is obtained from the recipient. Upon expiration of the period of protection set forth in this Notice, the Government shall have unlimited rights in this data. This Notice shall be marked on any reproduction of this data, in whole or in part.

(End of notice)

(2) Any such marked Protected Data may be disclosed under obligations of confidentiality for the following purposes:

(a) For evaluation purposes under the restriction that the "Protected Data" be retained in confidence and not be further disclosed; or

(b) To subcontractors or other team members performing work under the Government's (insert name of program or other applicable activity) program of which this award is a part, for information or use in connection with the work performed under their activity, and under the restriction that the Protected Data be retained in confidence and not be further disclosed.

(3) The obligations of confidentiality and restrictions on publication and dissemination shall end for any Protected Data:

(a) At the end of the protected period;

(b) If the data becomes publicly known or available from other sources without a breach of the obligation of confidentiality with respect to the Protected Data;

(c) If the same data is independently developed by someone who did not have access to the Protected Data and such data is made available without obligations of confidentiality; or

(d) If the Recipient disseminates or authorizes another to disseminate such data without obligations of confidentiality.

(4) However, the Recipient agrees that the following types of data are not considered to be protected and shall be provided to the Government when required by this award without any claim that the data are Protected Data. The parties agree that notwithstanding the following lists of types of data, nothing precludes the Government from seeking delivery of additional data in accordance with this award, or from making publicly available additional non-protected data, nor does the following list constitute any admission by the Government that technical data not on the list is Protected Data. (Note: It is expected that this paragraph will specify certain types of mutually agreed upon data that will be available to the public and will not be asserted by the recipient/contractor as limited rights or protected data).

(5) The Government's sole obligation with respect to any protected data shall be as set forth in this paragraph (g).

(h) Protection of Limited Rights Data

When data other than that listed in paragraphs (b)(1)(i), (ii), and (iii) of this clause are specified to be delivered under this agreement and such data qualify as either limited rights data or restricted computer software, the Recipient, if the Recipient desires to continue protection of such data, shall withhold such data and not furnish them to the Government under this agreement. As a condition to this withholding the Recipient shall identify the data being withheld and furnish form, fit, and function data in lieu thereof.

(i) Subaward/Contract

The Recipient has the responsibility to obtain from its subrecipients/contractors all data and rights therein necessary to fulfill the Recipient's obligations to the Government under this agreement. If a subrecipient/contractor refuses to accept terms affording the Government such rights, the Recipient shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subaward/contract award without further authorization.

(j) Additional Data Requirements

In addition to the data specified elsewhere in this agreement to be delivered, the Contracting Officer may, at any time during agreement performance or within a period of 3 years after acceptance of all items to be delivered under this agreement, order any data first produced or specifically used in the performance of this agreement. This clause is applicable to all data ordered under this subparagraph. Nothing contained in this subparagraph shall require the Recipient to deliver any data the withholding of which is authorized by this clause or data which are specifically identified in this agreement as not subject to this clause. When data are to be delivered under this subparagraph, the Recipient will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.

(k) The Recipient agrees, except as may be otherwise specified in this agreement for specific data items listed as not subject to this paragraph, that the Contracting Officer or an authorized representative may, up to three years after acceptance of all items to be delivered under this contract, inspect at the Recipient's facility any data withheld pursuant to paragraph (h) of this clause, for purposes of verifying the Recipient's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the Recipient whose data are to be inspected demonstrates to the Contracting Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Contracting Officer shall designate an alternate inspector.

(End of clause)

04. 2 CFR 910, Appendix A of Subpart D, Patent Rights (Small Business Firms and Nonprofit Organizations)

(a) Definitions

Invention means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 *et seq.*).

Made when used in relation to any invention means the conception or first actual reduction to practice of such invention.

Nonprofit organization is defined in 2 CFR 200.70.

Practical application means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

Small business firm means a small business concern as defined at section 2 of Public Law 85-536 (16 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3 through 121.8 and 13 CFR 121.3 through 121.12, respectively, will be used.

Subject invention means any invention of the Recipient conceived or first actually reduced to practice in the performance of work under this award, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d) must also occur during the period of award performance.

(b) Allocation of Principal Rights

The Recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this Patent Rights clause and 35 U.S.C. 203. With respect to any subject invention in which the Recipient retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. the subject invention throughout the world.

(c) Invention Disclosure, Election of Title and Filing of Patent Applications by Recipient

(1) The Recipient will disclose each subject invention to DOE within two months after the inventor discloses it in writing to Recipient personnel responsible for the administration of patent matters. The disclosure to DOE shall be in the form of a written report and shall identify the award under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to DOE, the Recipient will promptly notify DOE of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Recipient.

(2) The Recipient will elect in writing whether or not to retain title to any such invention by notifying DOE within two years of disclosure to DOE. However, in any case where publication, on sale, or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the U.S., the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Recipient will file its initial patent application on an invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the U.S. after a publication, on sale, or public use. The Recipient will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application, or six months from the date when permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure to DOE, election, and filing under subparagraphs (c)(1), (2), and (3) of this clause may, at the discretion of DOE, be granted.

(d) Conditions When the Government May Obtain Title

The Recipient will convey to DOE, upon written request, title to any subject invention:

(1) If the Recipient fails to disclose or elect the subject invention within the times specified in paragraph (c) of this patent rights clause, or elects not to retain title; provided that DOE may only request title within 60 days after learning of the failure of the Recipient to disclose or elect within the specified times;

(2) In those countries in which the Recipient fails to file patent applications within the times specified in paragraph (c) of this Patent Rights clause; provided, however, that if the Recipient has filed a patent application in a country after the times specified in paragraph (c) of this Patent Rights clause, but prior to its receipt of the written request of DOE, the Recipient shall continue to retain title in that country; or

(3) In any country in which the Recipient decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in a reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum Rights to Recipient and Protection of the Recipient Right To File

(1) The Recipient will retain a non-exclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Recipient fails to disclose the subject invention within the times specified in paragraph (c) of this Patent Rights clause. The Recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope of the extent the Recipient was legally obligated to do so at the time the award was awarded. The license is transferable only with the approval of DOE except when transferred to the successor of that part of the Recipient's business to which the invention pertains.

(2) The Recipient's domestic license may be revoked or modified by DOE to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and the agency's licensing regulation, if any. This license will not be revoked in that field of use or the geographical areas in which the Recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at discretion of the funding Federal agency to the extent the Recipient, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the funding Federal agency will furnish the Recipient a written notice of its intention to revoke or modify the license, and the Recipient will be allowed thirty days (or such other time as may be authorized by DOE for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and the agency's licensing regulations, if any, concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(f) Recipient Action To Protect Government's Interest

(1) The Recipient agrees to execute or to have executed and promptly deliver to DOE all instruments necessary to:

(i) Establish or confirm the rights the Government has throughout the world in those subject inventions for which the Recipient retains title; and

(ii) Convey title to DOE when requested under paragraph (d) of this Patent Rights clause, and to enable the government to obtain patent protection throughout the world in that subject invention.

(2) The Recipient agrees to require, by written agreement, its employees, other than clerical and non- technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Recipient each subject invention made under this award in order that the Recipient can comply with the disclosure provisions of paragraph (c) of this Patent Rights clause, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. The disclosure format should require, as a minimum, the information requested by paragraph (c)(1) of this Patent Rights clause. The Recipient shall instruct such employees through the employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Recipient will notify DOE of any decision not to continue prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Recipient agrees to include, within the specification of any U.S. patent application and any patent issuing thereon covering a subject invention, the following statement: "This invention was made with Government support under (identify the award) awarded by (identify DOE). The Government has certain rights in this invention."

(g) Subaward/Contract

(1) The Recipient will include this Patent Rights clause, suitably modified to identify the parties, in all subawards/contracts, regardless of tier, for experimental, developmental or research work to be performed by a small business firm or nonprofit organization. The subrecipient/contractor will retain all rights provided for the Recipient in this Patent Rights clause, and the Recipient will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractors' subject inventions.

(2) The Recipient will include in all other subawards/contracts, regardless of tier, for experimental, developmental or research work, the patent rights clause required by 2 CFR 910.362(c).

(3) In the case of subawards/contracts at any tier, DOE, the Recipient, and the subrecipient/contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subrecipient/contractor and DOE with respect to those matters covered by the clause.

(h) Reporting on Utilization of Subject Inventions

The Recipient agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Recipient or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Recipient and such other data and information as DOE may reasonably specify. The Recipient also agrees to provide additional reports in connection with any march-in proceeding undertaken by DOE in accordance with paragraph (j) of this Patent Rights clause. As required by 35 U.S.C. 202(c)(5), DOE agrees it will not disclose such information to persons outside the Government without the permission of the Recipient.

(i) Preference for United States Industry.

Notwithstanding any other provision of this Patent Rights clause, the Recipient agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the U.S. unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the U.S. However, in individual cases, the requirement for such an agreement may be waived by DOE upon a showing by the Recipient or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the U.S. or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in-Rights

The Recipient agrees that with respect to any subject invention in which it has acquired title, DOE has the right in accordance with procedures at 37 CFR 401.6 and any supplemental regulations of the Agency to require the Recipient, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances and if the Recipient, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that:

(1) Such action is necessary because the Recipient or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Recipient, assignee, or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee, or licensee; or

(4) Such action is necessary because the agreement required by paragraph (i) of this Patent Rights clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the U.S. is in breach of such agreement.

(k) Special Provisions for Awards With Nonprofit Organizations

If the Recipient is a nonprofit organization, it agrees that:

(1) Rights to a subject invention in the U.S. may not be assigned without the approval of DOE, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Recipient;

(2) The Recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when DOE deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific or engineering research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms and that it will give preference to a small business firm if the Recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that the Recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Recipient. However, the Recipient agrees that the Secretary of Commerce may review the Recipient's licensing program and decisions regarding small business applicants, and the Recipient will negotiate changes to its licensing policies, procedures or practices with the Secretary when the Secretary's review discloses that the Recipient could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).

(l) Communications

All communications required by this Patent Rights clause should be sent to the DOE Patent Counsel address listed in the Award Document.

(m) Electronic Filing

Unless otherwise specified in the award, the information identified in paragraphs (f)(2) and (f)(3) may be electronically filed.

(End of clause)

B2 STATEMENT OF SUBSTANTIAL INVOLVEMENT**X-energy and Energy Northwest Deploy First
Commercial-Scale Advanced Reactor by [**]****DEMOS**

a. DOE anticipates having substantial involvement during the project period, through technical assistance, advice, intervention, integration with other awardees performing related activities, and technical transfer activities. The recipient's responsibilities are listed in paragraph b and DOE's responsibilities are listed in paragraph c.

b. Recipient's responsibilities.

The recipient is responsible for:

1. Performing the activities supported by this award, including providing the required personnel, facilities, equipment, construction, licensing activities, supplies and services;
2. Defining approaches and plans, submitting the plans to DOE for review, and incorporating DOE's comments;
3. Managing and conducting the project activities, including coordinating with DOE contractors as needed;
4. Attending annual program review meetings and reporting project status;
5. Submitting technical reports as stated in the Federal Assistance Reporting Checklist, and incorporating DOE comments;
6. Updating project costs and performance data in the DOE-NE Performance Information Collection System (PICS). Recipient personnel will update project information at the work breakdown level agreed to in separate negotiations. Schedules will be developed at the appropriate level of detail to define work, key milestones will be provided with the reasonable costs assigned, and personnel will be assigned clear responsibility to update and submit work package information; and
7. Presenting project results at appropriate technical conferences or meetings as directed by the DOE Project Officer.
8. Providing DOE-NE Program Accrual Information. DOE requires the monthly tracking of uncosted obligations on financial assistance awards in the DOE accounting system to assist DOE in accomplishing more accurate project management and to more accurately recognize Department liabilities to the recipient. DOE personnel do this internally by subtracting paid costs and any costs accrued (yet to be paid incurred costs of the recipient) from the amounts obligated on the financial assistance award. In accomplishing this, DOE may request the recipient provide additional cost accrual information to accurately estimate/document the accrual in the DOE accounting system. If such information is needed DOE will normally do this using an e-mail to the recipient requesting the recipient identify the dollar value of work it has performed each month but not yet invoiced as of month end. Recipients will cooperate with DOE in providing the needed cost accrual information.

c. DOE responsibilities.**Normal Federal Stewardship Responsibilities**

DOE is responsible for executing normal Federal stewardship responsibilities, including:

1. Approving recipient plans prior to award.
2. Providing technical assistance prior to the start of the activity and assuring the recipient understands this prior to award, if requested by the recipient.
3. Providing technical assistance to correct deficiencies in project or financial performance when reports or monitoring indicates some sort of problem.
4. Performing site visits.
5. Reviewing financial, performance, and audit reports.
6. Performing technical reviews to determine whether to continue funding the next budget period.
7. Reviewing performance to ensure that the objectives, terms, and conditions of the award are accomplished.
8. Providing general administrative requirements, such as prior approvals required by the financial assistance regulations and/or OMB Circulars.
9. Reviewing performance after completion.

DOE Substantial Federal Involvement

DOE has substantial involvement in work performed under cooperative agreements made as a result of this FOA. DOE does not limit its involvement to the administrative requirements of the Award. Instead, DOE has substantial involvement in collaborating with the recipient on the direction and redirection of various aspects of the project as a whole. Substantial involvement includes, but is not limited to, the following:

1. DOE may collaborate with the recipient on the management, control, direction, and performance of the Project.
2. DOE may make any continuation application contingent upon the recipient's changing the conduct or performance of work under this if recipient is not meeting agreed upon project milestones.
3. DOE may participate in mutually-agreed major project decision-making processes.
4. DOE may promote and facilitate technology awareness activities, including disseminating program results through presentations and publications, subject to provisions on maintaining protection of confidential or proprietary information.
5. DOE may serve as scientific/technical liaison between awardees and other project stakeholders.

In addition, DOE may perform the following in the conduct of the award:

1. Reviewing in a timely manner annual project work plans, deliverables, and/or continuation requests and modifications, as well as technology transfer plans, and collaborating with recipient on the work effort if the plans do not address critical programmatic issues;

2. Conducting semiannual and/or annual program review meetings to ensure adequate progress and that the work accomplishes the program and project activities. At the appropriate project review meetings, the award recipient will provide progress status and issues and present the detailed work plan and budget requirements for the following period. In addition to these scheduled reviews, DOE may conduct unscheduled reviews, if necessary, on a non-interference basis, which may be used by DOE for assessments of whether to have continued performance of the awards.
3. Collaborating with recipient on redirection of work or shifting work emphasis, if needed; participating in recipient periodic project status, technical or progress review meetings and conference calls; this includes additional monitoring to permit specified kinds of collaboration on direction or redirection of the work because of interrelationships with other projects;
4. Promoting and facilitating technology transfer activities, including disseminating program results through presentations and publications, subject to provisions on maintaining protection of confidential or proprietary information;
5. Serving as scientific/technical liaison between awardees and other program or industry staff;
6. Oversight of recipient progress to help ensure the projects achieve their intended results. This may include collaboration with recipient on shifting work emphasis, within the various projects, if necessary, to achieve project goals. If work scope changes are required, they will be negotiated when the continuation funding is approved;
7. Assisting recipient with coordination between reactor vendors and power companies to ensure vendor engineering and design activities support the ARDP project requirements;
8. Setting project milestones together with recipient for review as part of each continuation application;
9. Coordinating the conduct of independent reviews of the project baseline and review of project status against project milestones in advance of each continuation application; and
10. Review and approval of one stage before work can begin on a subsequent stage.
11. The power to immediately halt an activity, if performance specifications (e.g., construction specifications) are not met or unsafe practices are identified.

d. There are limitations on recipient and DOE responsibilities and authorities in the performance of the project activities. Performance of the project activities must be within the scope of the Statement of Objectives, the terms and conditions of the Cooperative Agreement, and the funding and schedule constraints.

U.S.Department of Energy
FEDERAL ASSISTANCE REPORTING CHECKLIST
AND INSTRUCTIONS

1. Identification Number: DE-NE0009040		2. Program/Project Title:															
3. Recipient: X Energy, LLC 7701 Greenbelt Rd Suite 320 Greenbelt, MD20770-6517		X-energy and Energy Northwest Deploy First Commercial-Scale Advanced Reactor by [**]															
4. Reporting Requirements:		Frequency	Addresses														
A. MANAGEMENT REPORTING ☒ Research Performance Progress Report (RPPR) (RD & D Projects) ☐ Progress Report (Non - RD & D Projects) ☒ Special Status Report		O F O	https://fedconnect.net & (A B C E) https://fedconnect.net & (A B C E)														
B. SCIENTIFIC/TECHNICAL REPORTING (Dissemination of results is required for RD&D projects. Reports & other S&T publications/products must be submitted using the appropriate DOE Announcement Notice(AN) located at: https://www.osti.gov/eliink)																	
<table><tr><th>Product</th><th>Announcement Notice(AN)</th></tr><tr><td>☒ Scientific & Technical Reporting Product</td><td></td></tr><tr><td>A. Journal Article-Accepted Manuscript</td><td>DOE AN 241.3</td></tr><tr><td>B. Scientific/Technical Conference Paper /Presentation or Proceedings</td><td>DOE AN 241.3</td></tr><tr><td>C. Scientific/Technical Software & Manual</td><td>DOE AN 241.4</td></tr><tr><td>D. Other STI (e.g., dissertation/thesis, see instructions)</td><td>DOE AN 241.3</td></tr><tr><td>☒ Final Scientific/Technical Report</td><td>DOE AN 241.3</td></tr></table>		Product	Announcement Notice(AN)	☒ Scientific & Technical Reporting Product		A. Journal Article-Accepted Manuscript	DOE AN 241.3	B. Scientific/Technical Conference Paper /Presentation or Proceedings	DOE AN 241.3	C. Scientific/Technical Software & Manual	DOE AN 241.4	D. Other STI (e.g., dissertation/thesis, see instructions)	DOE AN 241.3	☒ Final Scientific/Technical Report	DOE AN 241.3	O O A O F	https://www.osti.gov/eliink-2413 https://fedconnect.net https://www.osti.gov/eliink-2413 https://fedconnect.net https://www.osti.gov/eliink/241-4.jsp https://fedconnect.net https://www.osti.gov/eliink-2413 https://fedconnect.net https://www.osti.gov/eliink-2413 https://fedconnect.net
Product	Announcement Notice(AN)																
☒ Scientific & Technical Reporting Product																	
A. Journal Article-Accepted Manuscript	DOE AN 241.3																
B. Scientific/Technical Conference Paper /Presentation or Proceedings	DOE AN 241.3																
C. Scientific/Technical Software & Manual	DOE AN 241.4																
D. Other STI (e.g., dissertation/thesis, see instructions)	DOE AN 241.3																
☒ Final Scientific/Technical Report	DOE AN 241.3																
C. FINANCIAL REPORTING ☒ SF -425, Federal Financial Report		Q F	https://fedconnect.net & (A B E)														
D. CLOSEOUT REPORTING ☒ Patent Certification ☒ SF -428 & 428B Final Property Report ☐ Other (see special instructions)		F F	https://fedconnect.net & (A E) https://fedconnect.net & (A E)														
E. OTHER REPORTING ☒ Annual Indirect Cost Proposal ☒ Audit of For-Profit Recipients ☒ SF -428 Tangible Personal Property Report Forms Family ☐ Other (see special instructions)		O O O	https://fedconnect.net (or Cognizant Federal Agency) & (A E) https://fedconnect.net & send to CFO at: DOE-Audit-Submission@hq.doe.gov & (A E) https://fedconnect.net & (A E)														
FREQUENCY CODES AND DUE DATES: A - Within 5 calendar days after events or as specified Y - Yearly; within 90 days after the end of the reporting period. Q - Quarterly; within 30 days after end of the reporting period. O - Other; See special instructions for further details.																	
F - Final; within 90 calendar days after expiration or termination of award. Y180 - Yearly; within 180 days after the end of the recipient's fiscal year. S - Semiannually; within 30 days after end of reporting period.																	

5. *Special Instructions: [Insert special instructions to recipient for unique reporting requirements or reporting requirements with frequency of O]*

Your performance in providing on-time report deliverables will be monitored by Procurement Services Division (PSD), Idaho Operations Office, Department of Energy. Reports not received by the specified due date are late. Overdue, inaccurate, or non-conforming reports are not acceptable. PSD will withhold payments or take other administrative actions as needed for non-compliance with reporting requirements. Only the Contracting Officer may waive or excuse required reports.

In order for accurate logging and processing of reports, it is critical that reports be sent to all the specified addressees and in the manner requested. PSD receives a copy of all reports via psdrept@id.doe.gov. The message subject line must include the award number.

Message Subject Line Example: DE-NE000XXXX, 4Q SF 269A Report.

The official award number must also be identified on all reports. A project number, if assigned by the program manager, may also be included, but is not a substitute for the official award number.

Special Instructions:

A. Management Reporting:

- Research Performance Progress Report - Reports that address the Research Performance Progress Report Template item under Management Reports will be provided monthly. DOE personnel will work with the recipient to define the information required, and this information will be entered into the Office of Nuclear Energy's Program Information Collection System (PICS), which will be used to monitor post-award project performance.

- Special Status Report – See frequency in Section A below

B. Scientific/Technical Reporting:

- Scientific & Technical Reporting Product – Within 30 days after document is issued, presented, or announced. In addition to the osti.gov and fedconnect.net email addresses the Scientific/Technical Reporting also requires a copy to be sent to [**]

E. Other Reporting:

- Reports are to be submitted on an annual basis.

REPORT ADDRESSEES

- A. Procurement Services Division (PSD): [**]
- B. DOE Project Manager: [**]
- C. DOE Headquarters Program Manager: [**]
- D. Technical Monitor:
- E. Technical Project Officer: [**]
- F.
- G.

Federal Assistance Reporting Instructions

A. **MANAGEMENT REPORTING**

For awards involving RD&D a Research Performance Progress Report is required to be submitted. For all other awards a Progress Report is required to be submitted.

Either the Research Performance Progress Report (RPPR) or the Progress Report must be checked, but not both.

Research Performance Progress Report (RPPR) (RD&D Projects)

See the attachment entitled "Research Performance Progress Report" for instructions on what the Recipient is to include in the RPPR.

Progress Report (Non-RD&D Projects)

The Recipient must provide a concise narrative assessment of the status of work and include the following information and any other information identified under Special Instructions on the Federal Assistance Reporting Checklist:

1. The DOE award and report information:
 - a. The DOE Award Number (as it appears on the award face page)
 - b. Recipient Name (as it appears on the award face page)
 - c. Project Title
 - d. PD/PI Name, Title and Contact Information (e-mail address and phone number)
 - e. Name of Submitting Official, Title, and Contact Information (e-mail address and phone number), if other than PD/PI
 - f. Project Period (Start Date, End Date)
 - g. Report Submission Date
 - h. Reporting Period Start and End Date
2. A written comparison of the actual project accomplishments with the project goals and objectives established for the reporting period; if goals and/or objectives for the reporting period were not met, a detailed description of the variance shall be provided.
3. A discussion of what was accomplished under these goals and objectives established for this reporting period, including major activities, significant results, major findings or conclusions, key outcomes or other achievements. This section should not contain any proprietary data or other information not subject to public release. If such information is important to reporting progress, do not include the information, but include a note in the report advising the reader to contact the Principal Investigator or the Project Director for further information.
4. Cost Status. A comparison of the approved budget by budget period and the actual costs incurred during the reporting period shall be provided. If cost sharing is required, the cost breakdown shall show the DOE share, recipient share, and total costs.
5. Schedule Status. List milestones, anticipated completion dates and actual completion dates. If you submitted a project management plan with your application, you must use this plan to report schedule and budget variances. You may use your own project management system to provide this information.

6. Describe any changes during the reporting period in project approach and the reasons for these changes. Remember, significant changes to the project objectives and scope require prior approval by the Contracting Officer.
7. Describe any actual or anticipated problems or delays and any actions taken or planned to resolve them.
8. Describe any absence or changes of key personnel or changes in consortium/teaming arrangement during the reporting period.
9. List and describe any product produced or technology transfer activities accomplished during this reporting period, such as:
 - A. Publications (list journal name, volume, issue); conference papers; or other public releases of results. Attach or send copies of public releases to the DOE Program Manager identified in Block 15 of the Assistance Agreement Cover Page.
 - B. Web site or other Internet sites (list the URL) that reflect the results of this project.
 - C. Networks or collaborations fostered.
 - D. Technologies/Techniques (Identify and Describe).
 - E. Inventions/Patent Applications (Identify and Describe with date of application)
 - F. Other products, such as data or databases, physical collections, audio or video, software or NetWare, models, educational aid or curricula, instruments or equipment (Identify and Describe).

Special Status Report

The recipient must report the following events by e-mail as soon as possible after they occur:

1. Developments that have a significant favorable impact on the project.
2. Problems, delays, or adverse conditions which materially impair the recipient's ability to meet the objectives of the award or which may require DOE to respond to questions relating to such events from the public. The recipient must report any of the following incidents and include the anticipated impact and remedial action to be taken to correct or resolve the problem/condition:
 - a. Any single fatality or injuries requiring hospitalization of five or more individuals.
 - b. Any significant environmental permit violation.
 - c. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes.
 - d. Any incident which causes a significant process or hazard control system failure.
 - e. Any event which is anticipated to cause a significant schedule slippage or cost increase.
 - f. Any damage to Government-owned equipment in excess of \$50,000.
 - g. Any other incident that has the potential for high visibility in the media.

B. SCIENTIFIC/TECHNICAL REPORTING

The dissemination of scientific and technical information (STI) ensures public access to the results of federally funded research. STI refers to information products in any medium or format used to convey results, findings, or technical innovations from research and development or other scientific and technological work that are prepared with the intention of being preserved and disseminated in the broadest sense applicable (i.e., to the public or, in the case of controlled unclassified information or classified information, disseminated among authorized individuals). Access to and archival of DOE-funded STI are managed by the DOE Office of Scientific and Technical Information (OSTI). For information about OSTI see <http://www.osti.gov>

For more information on STI submittals, see <http://www.osti.gov/stip/submittal>

By properly notifying DOE OSTI about the published results, the information will be made publicly accessible and discoverable through DOE web-based products.

NOTE: SCIENTIFIC/TECHNICAL PRODUCTS INTENDED FOR PUBLIC RELEASE MUST NOT CONTAIN PROTECTED PERSONALLY IDENTIFIABLE INFORMATION (PII). PII is defined as any information about an individual which can be used to distinguish or trace an individual's identity. Some information that is considered to be PII is available in public sources such as telephone books, public websites, university listings, etc. This type of information is considered to be Public PII and includes, for example, first and last name, address, work telephone number, e-mail address, home telephone number, and general educational credentials. In contrast, Protected PII is defined as an individual's first name or first initial and last name in combination with any one or more of the following types of information: social security number, passport number, credit card numbers, clearances, bank numbers, biometrics, date and place of birth, mother's maiden name, criminal, medical and financial records, educational transcripts, etc., which could be misused if made publicly available.

1. Scientific and Technical Reporting Products

a. Journal Article-Accepted Manuscript

Recipients are encouraged to publish their work in scholarly journals. When/if a recipient has an article accepted for publication in a peer-reviewed journal they are required to announce the publication to OSTI as detailed below. This Reporting Requirement will be denoted with the Frequency "O – Other" on the Checklist.

Public access to peer-reviewed scholarly publications can be achieved by following these instructions. If the Recipient has a journal article accepted for publication which contains information/data produced under the award, then the Recipient must submit an AN 241.3 for the author's full-text version of the accepted manuscript, as described below, at the time the article meets the status of being "accepted" for publication. The Federal Government's right to use the data produced under a Federal award is established in 2 CFR 200.315(d), U.S. Government's retained license to published results of federally funded research.

Content. The Recipient is to announce to DOE the final peer-reviewed accepted manuscript (AM), i.e., the version of the journal article content that has been peer reviewed and accepted for publication in a journal, by providing a persistent link to the accepted manuscript on the recipient's publicly accessible institutional repository or submitting the full text (see Electronic Submission Process below). The Recipient should NOT submit the journal's published version of the article, i.e., the Recipient should NOT submit a copyrighted reprint. The Recipient should not submit the content of peer reviews or a commitment to publish. The Recipient should provide only the accepted manuscript content intended to be the published article.

DOE will make no additional review of the content of an AM because the AM is a version of the journal article with the content to be published (i.e., publicly released) by the journal publisher. The Recipient is responsible for ensuring the suitability of the content for public release. The terms and conditions of award provide that PII, proprietary, export control or classified information shall be protected. DOE may choose to defer providing public access until an administrative interval period has passed.

The Recipient must self-certify at the time of submission to DOE via E-Link that the content is appropriate and that it is not a copyrighted reprint, i.e., the final version of the published article. Recipients are reminded that the article is to include an acknowledgement of Federal support and a disclaimer.

Electronic Submission Process. The Journal Article-Accepted Manuscript must be announced via the DOE Energy Link System (E-Link) by submitting a completed DOE Announcement Notice (AN) 241.3 (<https://www.osti.gov/mlink-2413>).

Within the AN 241.3, provide relevant journal information (article title, journal name, volume, issue, and any other pertinent publication information). Also provide a persistent link to the repository location of the accepted manuscript. An example of an acceptable persistent link is a URL to the specific location of the Journal Article-Accepted Manuscript hosted on a public, openly accessible university research publications website. If a persistent link is not available or if the website has access restrictions (preventing public access), then the Recipient must upload the full-text of the Accepted Manuscript using the AN 241.3 and E-Link instructions.

Full-text of accepted manuscripts must be in Adobe Portable Document Format (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts. Please refer to <http://www.osti.gov/stip/best-practices-portable-document-format-pdf-creation> for PDF document creation.

b. **Scientific/Technical Conference Paper/Presentation or Proceedings**

Recipients are encouraged to announce Scientific and Technical Conference Papers/Presentations if they are the primary means by which certain research results are disseminated or if they contain research results not already announced to DOE by the Recipient in technical reports, accepted journal articles, or other STI. This Reporting Requirement will be denoted with the Frequency “O – Other” on the Checklist. Instructions for how to announce such STI can be found below. In cases where the Recipient is required to create and submit a Conference Proceedings, the Frequency will be “F – Final.”

Content. The content should include: (1) Name of conference; (2) Location of conference; (3) Date of conference; and (4) Conference sponsor. Also include an acknowledgement of Federal support and a disclaimer.

Electronic Submission Process. Scientific/technical conference papers/presentations or proceedings must be submitted via the DOE Energy Link System (E-Link) with a completed DOE Announcement Notice (AN) 241.3 (<https://www.osti.gov/mlink-2413>).

DOE will not review conference papers or presentations prior to making publicly available via OSTI since they were already presented in a public setting during a conference. The Recipient is responsible for ensuring the suitability of the content for public release. The terms and conditions of award provide that PII, proprietary, export control or classified information shall be protected. The Recipient must self-certify at the time of submission to DOE via E-Link that the content is appropriate for and has been publicly released.

Scientific/technical conference papers or proceedings that are textual documents must be submitted in Adobe Portable Document Format (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts. Please refer to <http://www.osti.gov/stip/best-practices-portable-document-format-pdf-creation> for PDF document creation. Audiovisual formats, such as PowerPoint (PPT) or video presentations, may be submitted as a Microsoft PPT file or audiovisual file by selecting the appropriate format on the AN 241.3 for the file to be uploaded or, in the case of videos posted on a publicly available website, by providing a link to the specific video. Format options and other instructions can be found at <http://www.osti.gov/stip/audiovisualsti>.

c. **Scientific/Technical Software & Manual**

Content. When a Recipient submits software to OSTI for dissemination, the following must be delivered: source code, the executable object code and the minimum support documentation needed by a competent user to understand and use the software and to be able to modify the software in subsequent development efforts, unless otherwise specified in the award.

Submission Process. The software submission must be accompanied by a completed DOE Announcement Notice (AN) 241.4 “Announcement of U.S. Department of Energy Computer Software.” The announcement notice and instructions are available on E-Link at <https://www.osti.gov/mlink/241-4.jsp>. The AN 241.4 may be filled online and submitted electronically, with a printed copy or note accompanying the shipped software package.

Software (including user guide or manual) must be submitted on computer disk (CD) shipped via regular mail to:

Energy Science and Technology Software Center
P.O. Box 1020
Oak Ridge, TN 37831

d. **Other STI**

Recipients are encouraged to announce other forms of STI especially if they are the primary means by which certain research results are disseminated or if they contain research results not already announced to DOE by the Recipient in technical reports, accepted journal articles, or other STI. This Reporting Requirement will be denoted with the Frequency “O – Other” on the Checklist.

Other types of STI produced which may be for used for public dissemination of project results include: dissertation/thesis, patent, book, or other similar products. These types of STI may also be announced using DOE AN 241.3 by following instructions on the E-Link website (<https://www.osti.gov/mlink-2413>).

2. **Final Scientific/Technical Report**

For R&D type awards where a Final Scientific/Technical Report is required, recipients are required to create and submit a final technical report. This Reporting Requirement will be denoted with the Frequency “F – Final” on the Federal Assistance Reporting Checklist.

The scientific/technical report is intended to increase the diffusion of knowledge gained by DOE-funded research, and all requirements shall be interpreted in that light.

Content. Research findings and other significant STI resulting from the DOE-sponsored R&D project shall be included in the final scientific/technical report, subject to the following provisions:

1. The scientific/technical report is to cover the entire project period. For Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards, a final scientific/technical report must be submitted after the completion of each phase, e.g., Phase I, Phase II, and sequential Phase II, as described in the Special Instructions.
2. **STI that is publicly accessible need not be duplicated in the report if a citation with a link to where the information may be found is included in the report. For example, articles found in PAGES (i.e., DOE’s Public Access Gateway for Energy and Science, <http://www.osti.gov/pages/>) are accessible to the public.**
3. Provide identifying information: the DOE award number; sponsoring program office; name of recipient; project title; name of project director/principal investigator; and consortium/teaming members.
4. Include an acknowledgment of Federal support and a disclaimer, which must appear in the publication of any material as noted in the terms and conditions.
5. Include any limitations on public release of the report, if applicable. If the document being submitted contains patentable material or protected data (i.e., data first produced in the performance of the award that is protected from public release for a period of time by terms of the award agreement, e.g., SBIR protected data), then (1) prominently display on the cover of the report any authorized distribution limitation notices, such as patentable material or protected data (e.g., SBIR protected data) and (2) clearly identify patentable or protected data on each page of the report. Reports delivered without such notices may be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use or reproduction of such reports. Any restrictive markings must also be noted in the distribution limitation section of the Announcement Notice (AN) 241.3 (see Electronic Submission Process, below). No protected PII should be included (see PII definition).
6. Provide an abstract or executive summary, which should be a minimum of one paragraph and written in terms understandable by an educated layperson. (Refer to <http://www.osti.gov/stip/standards> for ANSI/NISO guidance as needed.) The abstract included in an application may serve as a model for this.
7. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, and findings. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the results in a manner that conveys to the scientific community the STI created during the project. To minimize duplication, the report may reference STI, including journal articles, that is publicly accessible. See also #2.

8. For guidance offered by the National Information Standards Organization on typical attributes and content of a technical report, if needed, refer to ANSI/NISO Z39.18-2005 (R2010), Scientific and Technical Reports – Preparation, Presentation, and Preservation (see <http://www.osti.gov/stip/standards>).

Electronic Submission Process. The final scientific/technical report must be submitted via the DOE Energy Link System (E-Link) with a completed electronic version of DOE Announcement Notice (AN) 241.3, “U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI).” The Recipient can complete, upload, and submit the DOE AN 241.3 online via E-Link (<https://www.osti.gov/elink-2413>).

The Recipient must mark the appropriate block in the “Intellectual Property/Distribution Limitations” Section of the DOE AN 241.3. Reports that are electronically uploaded must not contain any limited rights data (proprietary data), classified information, protected PII, information subject to export control classification, or other information not subject to release. During the upload process, the Recipient must self-certify that no content of this nature is being submitted. For assistance with reports containing such content, contact the Contracting Officer.

Text documents must be submitted in Adobe Portable Document Format (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts. Please refer to <http://www.osti.gov/stip/best-practices-portable-document-format-pdf-creation> for PDF document creation.

C. **FINANCIAL REPORTING**

The Recipient must complete the SF-425 as identified on the Reporting Checklist in accordance with the report instructions. A fillable version of the form is available at <https://www.grants.gov/web/grants/forms/post-award-reporting-forms.html>.

D. **CLOSEOUT REPORTS**

Final Invention and Patent Report

The Recipient must provide a DOE Form 2050.11, “PATENT CERTIFICATION.” This form is available at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Reporting Forms.

Final Property Report

See Instructions under **SF-428 Tangible Personal Property Report Forms Family** below.

E. **OTHER REPORTING**

Annual Indirect Cost Proposal and Reconciliation

Requirement. In accordance with the applicable cost principles, the recipient must submit an annual indirect cost proposal, reconciled to its financial statements, within six months after the close of the recipient’s fiscal year, unless the award is based on a predetermined or fixed indirect rate(s), or a fixed amount for indirect or facilities and administration (F&A) costs. The format and content of the indirect cost proposal should follow the Defense Contract Audit Agency’s (DCAA) ICE Model in order to be considered an adequate proposal.

DCAA's ICE Model can be found on the DCAA website at: <https://www.dcaa.mil/Checklists-Tools/ICE-Model/>.

Cognizant Agency. The Recipient must submit its annual indirect cost proposal directly to the cognizant agency for negotiating and approving its indirect costs. If the DOE awarding office is the cognizant agency, the Recipient must submit their annual indirect cost proposal to <https://www.fedconnect.net/fedconnect/default.aspx>.

Audit of For-Profit Recipients

As required by 2 CFR parts 910.500 through 910.521, a For-Profit entity which expends \$750,000 or more during their fiscal year in DOE awards must have a compliance audit conducted for that year.

Submission: The compliance audit report(s) must be submitted to DOE within the earlier of 30 days after receipt of the auditor's report(s) or nine months after the end of the audit period (Recipient's fiscal year-end). The compliance audit report must be submitted, along with audited financial statements (if applicable), to the appropriate DOE Contracting Officer at <https://www.fedconnect.net/fedconnect/default.aspx> as well as to the DOE Office of the Chief Financial Officer (CFO) at DOE-Audit-Submission@hq.doe.gov.

SF-428 Tangible Personal Property Report Forms Family

Requirement. The SF-428 is a forms family consisting of 5 forms: the SF-428, SF-428-A, SF-428-B, SF-428-C and SF-428S. Fillable versions of the SF-428 forms are temporarily available at https://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201002-3090-001&icID=192059. The SF-428 is the cover page and the submitter attaches the appropriate form or forms as listed on the SF-428.

- The SF-428A is the Annual report, due Oct 30th of each calendar year.
- The SF-428B is the Final Award Closeout Report, due 90 calendar days after completion or termination of the award.
- The SF-428C is the Disposition Report/Request.
- The SF-428S is the supplemental form for the SF-428-A, SF-428-B, and SF-428-C.

If at any time during the award the Recipient is provided Government-furnished property or acquires property with project funds and the award specifies that the property vests in the Federal Government (i.e. federally owned property), the Recipient must submit an annual inventory of this property to the DOE Administrator using the SF-428 and SF-428-A forms at the address on page 1 of this checklist **no later than October 30th of each calendar year**, to cover an annual reporting period ending on the preceding September 30th. The SF-428 and SF-428-B reports are required 90 calendar days after completion or termination of award to complete the closeout process.

Content of Inventory. As required on the SF-428-A and SF-428-S forms, the inventory must include a description of the property, tag number, acquisition date, and acquisition cost, if purchased with project funds. The location of property should be listed under the Comments section. The report must list all federally owned property, including property located at subcontractor's facilities or other locations.

RESEARCH PERFORMANCE PROGRESS REPORT

Standard Cover Page Data Elements and Reporting Categories

The standard cover page data elements shown below, as well as mandatory and optional components comprise the complete research performance progress report format. Each category in the RPPR is a separate reporting component. Each component is marked to indicate if it is optional or mandatory. Mandatory components must be addressed in each report, optional are at your discretion. For Optional components, if you have nothing significant to report during the reporting period on a question or item, state "Nothing to Report," if there are reportable items, please submit according to the instructions for each section.

1. COVER PAGE DATA ELEMENTS: Mandatory

- a. Federal Agency and Organization Element to Which Report is Submitted
- b. Federal Grant or Other Identifying Number Assigned by Agency
- c. Project Title
- d. PD/PI Name, Title and Contact Information (e-mail address and phone number)
- e. Name of Submitting Official, Title, and Contact Information (e-mail address and phone number), if other than PD/PI
- f. Submission Date
- g. DUNS Number
- h. Recipient Organization (Name and Address)
- i. Project/Grant Period (Start Date, End Date)
- j. Reporting Period End Date
- k. Report Term or Frequency (annual, semi-annual, quarterly, final, other)
- l. Signature of Submitting Official (electronic signatures (i.e., Adobe Acrobat) are acceptable)

2. ACCOMPLISHMENTS: Mandatory**What was done? What was learned?**

The information provided in this section allows the agency to assess whether satisfactory progress has been made during the reporting period. The PI is reminded that the grantee is required to obtain prior written approval from the Contracting Officer whenever there are significant changes in the project or its direction. Requests for prior written approval must be submitted to the Contracting Officer.

a. What are the major goals and objectives of this project?

List the major goals of the project as stated in the approved application or as approved by the agency. Describe the proposed technical approach to obtain those goals. If the application lists milestones/target dates for important activities or phases of the project, identify these dates and show actual completion dates or the percentage of completion. Generally, the goals will not change from one reporting period to the next. However, if the awarding agency approved changes to the goals during the reporting period, list the revised goals and objectives. Also explain any significant changes in approach or methods from the agency approved application or plan.

b. What was accomplished under these goals?

For this reporting period describe: 1) major activities; 2) specific objectives; 3) significant results or key outcomes, including major findings, developments, or conclusions (both positive and negative); and/or 4) other achievements. Include a discussion of stated goals not met. As the project progresses, the emphasis in reporting in this section should shift from reporting activities to reporting accomplishments.

c. **What opportunities for training and professional development has the project provided?**

Describe opportunities for training and professional development provided to anyone who worked on the project or anyone who was involved in the activities supported by the project. "Training" activities are those in which individuals with advanced professional skills and experience assist others in attaining greater proficiency. Training activities may include, for example, courses or one-on-one work with a mentor. "Professional development" activities result in increased knowledge or skill in one's area of expertise and may include workshops, conferences, seminars, study groups, and individual study. Include participation in conferences, workshops, and seminars not listed under major activities.

If the project was not intended to provide training and professional development opportunities or there is nothing significant to report during this reporting period, state "Nothing to Report."

d. **How have the results been disseminated to communities of interest?**

Describe how the results have been disseminated to communities of interest. Include any outreach activities that have been undertaken to reach members of communities who are not usually aware of these research activities, for the purpose of enhancing public understanding and increasing interest in learning and careers in science, technology, and the humanities.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

e. **What do you plan to do during the next reporting period to accomplish the goals and objectives?**

Describe briefly what you plan to do during the next reporting period to accomplish the goals and objectives.

If there are no changes to the agency-approved application or plan for this project or if this is the final report, state "Nothing to Report."

3. **PRODUCTS: Optional**

What has the project produced?

Publications are the characteristic product of research. Agencies evaluate what the publications demonstrate about the excellence and significance of the research and the efficacy with which the results are being communicated to colleagues, potential users, and the public, not the number of publications. Many projects (though not all) develop significant products other than publications. Agencies assess and report both publications and other products to Congress, communities of interest, and the public.

List any products resulting from the project during the reporting period. Examples of products include: publications, conference papers, and presentations; website(s) or other Internet site(s); technologies or techniques; inventions, patent applications, and/or licenses; and other products, such as data or databases, physical collections, audio or video products, software or NetWare, models, educational aids or curricula, instruments or equipment, research material, interventions (e.g., clinical or educational), new business creation or any other public release of information related to the project.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

a. **Publications, conference papers, and presentations**

Report only the major publication(s) resulting from the work under this award. There is no restriction on the number. However, Agencies are interested in only those publications that most reflect the work under this award in the following categories:

- i. **Journal publications.** List peer-reviewed articles or papers appearing in scientific, technical, or professional journals. Include any peer-reviewed publication in the periodically published proceedings of a scientific society, a conference, or the like. A publication in the proceedings of a one-time conference, not part of a series, should be reported under "Books or other non-periodical, one-time publications."

Identify for each publication: Author(s); title; journal; volume; year; page numbers; status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no). Also see instructions under **B. Scientific/Technical Reporting** regarding the submission of accepted manuscripts and other STI as appropriate.

- ii. **Books or other non-periodical, one-time publications.** Report any book, monograph, dissertation, abstract, or the like published as or in a separate publication, rather than a periodical or series. Include any significant publication in the proceedings of a one-time conference or in the report of a one-time study, commission, or the like.

Identify for each one-time publication: author(s); title; editor; title of collection, if applicable; bibliographic information; year; type of publication (book, thesis or dissertation, other); status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no).

- iii. **Other publications, conference papers and presentations.** Identify any other publications, conference papers and/or presentations not reported above. Specify the status of the publication as noted above.

b. **Website(s) or other Internet site(s)**

List the URL for any Internet site(s) that disseminates the results of the research activities. A short description of each site should be provided. It is not necessary to include the publications already specified above in this section.

c. **Technologies or techniques**

Identify technologies or techniques that have resulted from the research activities. Describe the technologies or techniques and how they are being shared.

d. **Inventions, patent applications, and/or licenses**

Identify inventions, patent applications with date, and/or licenses that have resulted from the research. Submission of this information as part of an interim or final Research Performance Progress Report is not a substitute for any other invention reporting required under the terms and conditions of an award.

e. **Other products**

Identify any other significant products that were developed under this project. Describe the product and how it is being shared. Examples of other products are: Data or databases; Physical collections; Audio or video products; Software or NetWare; Models; Educational aids or curricula; Instruments or equipment; Research material (e.g., germplasm, cell lines, DNA probes, animal models); Interventions (e.g. clinical, educational); new business creation; and Other.

4. **PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS: Optional**

Who has been involved?

Agencies need to know who has worked on the project to gauge and report performance in promoting partnerships and collaborations. The following information on participants and other collaborating organizations during this reporting period must be provided:

a. **What individuals have worked on the project?**

Provide the following information for: (1) Project director(s)/Principal investigator(s) (PDs/PIs); and (2) each person who has worked, and was funded by the project, at least one person month per year on the project during the reporting period, regardless of the source of compensation (a person month equals approximately 160 hours of effort). Please note that such reporting does not constitute a formal institutional report of effort on the project, but rather is used by agency program staff to evaluate the progress of the project during a given reporting period.

i. **Provide the name and identify the role the person played in this project.**

Indicate the total number of months (including partial months) (Calendar, Academic, Summer) that the individual worked on this project. Using the project roles identified below, select the most senior role in which the person worked on the project for any significant length of time. For example, if an undergraduate student graduated, entered graduate school, and continued to work on the project, show that person as a graduate student, preferably explaining the change in involvement.

ii. **Project Roles:**

- PD/PI
- Co PD/PI
- Faculty
- Community College Faculty
- Technical School Faculty
- K-12 Teacher
- Postdoctoral (scholar, fellow or other postdoctoral position)
- Other Professional
- Technician
- Staff Scientist (doctoral level)
- Statistician
- Graduate Student (research assistant)
- Non-Student Research Assistant
- Undergraduate Student
- Technical School Student
- High School Student
- Consultant
- Research Experience for Undergraduates (REU) Participant
- Other (specify)

iii. **Describe briefly how this person contributed to this project.**

If information is unchanged from a previous progress report, provide the name only and indicate “no change.”

iv. **Identify the person’s state, U.S. territory, and/or country of residence. State whether this person has collaborated internationally.**

If the participant was U.S.-based, state whether this person collaborated internationally with an individual located in a foreign country, and specify whether the person traveled to the foreign country as part of that collaboration, and, if so, what the duration of stay was. The foreign country(ies) should be identified.

If the participant was not U.S.-based, state whether this person traveled to the U.S. or another country as part of a collaboration, and, if so, what the duration of stay was. The destination country should be identified.

Example:

1. **Name:** Mary Smith
2. **Total Number of Months:** 5.5
3. **Project Role:** Graduate Student
4. **Researcher Identifier:** 1234567
5. **Contribution to Project:** Ms. Smith has performed work in the area of combined error-control and constrained coding.
6. **State, U.S. territory, and/or country of residence:** Michigan, U.S.A.
7. **Collaborated with individual in foreign country:** Yes
8. **Country(ies) of foreign collaborator:** China
9. **Travelled to foreign country:** Yes
10. **If traveled to foreign country(ies), duration of stay:** 5 months

b. Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?

Describe active other support for the PD/PI(s) or senior/key personnel whose support has changed and what the change has been (e.g., a previously active grant that has closed, a previously pending grant that is now active). Active other support includes all financial resources, whether Federal, non-Federal, commercial or organizational, available in direct support of an individual's research endeavors, including, but not limited to, research grants, cooperative agreements, contracts, or organizational awards, (e.g., Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations). Annotate this information so it is clear what has changed from the previous submission. Other support does not include prizes or gifts.

Submission of active other support information is not necessary for pending changes or for changes in the level of effort for active support reported previously. DOE requires prior written approval if a change in active other support significantly impacts the effort on this award.

If there is nothing significant to report during this reporting period or no change from the previous reporting period, state "Nothing to Report."

c. What other organizations have been involved as partners?

Describe partner organizations – academic institutions, other nonprofits, industrial or commercial firms, state or local governments, schools or school systems, or other organizations (foreign or domestic) – that have been involved with the project. Partner organizations may provide financial or in-kind support, supply facilities or equipment, collaborate in the research, exchange personnel, or otherwise contribute.

Provide the following information for each partnership:

1. Organization Name:
2. Location of Organization: (if foreign location list country)
3. Partner's contribution to the project: (identify one or more)
 - i. Financial support;

- ii. In-kind support (e.g., partner makes software, computers, equipment, etc., available to project staff);
- iii. Facilities (e.g., project staff use the partner's facilities for project activities);
- iv. Collaborative research (e.g., partner's staff work with project staff on the project);
- v. Personnel exchanges (e.g., project staff and/or partner's staff use each other's facilities, work at each other's site).
- vi. Other

- 4. More detail on partner and contribution (foreign or domestic).

If there is nothing significant to report during this reporting period, state "Nothing to Report."

d. **Have other collaborators or contacts been involved?**

Some significant collaborators or contacts within the recipient's organization may not be covered by "What people have worked on the project?" Likewise, some significant collaborators or contacts outside the recipient's organization may not be covered under "What other organizations have been involved as partners?"

For example, describe any significant:

- 1. collaborations with others within the recipient's organization, especially interdepartmental or interdisciplinary collaborations;
- 2. collaborations or contact with others outside the organization; and
- 3. collaborations or contacts with others outside the United States or with an international organization.

Identify the state(s), U.S. territory(ies), or country(ies) of collaborations or contacts.

It is likely that many recipients will have no other collaborators or contacts to report.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

5. **IMPACT: Optional**

What was done? What was learned?

Over the years, this base of knowledge, techniques, people, and infrastructure is drawn upon again and again for application to commercial technology and the economy, to health and safety, to cost-efficient environmental protection, to the solution of social problems, to numerous other aspects of the public welfare, and to other fields of endeavor.

The taxpaying public and its representatives deserve a periodic assessment to show them how the investments they make benefit the nation. Through this reporting format, and especially this section, recipients provide that assessment and make the case for Federal funding of research and education.

Agencies use this information to assess how their research programs: increase the body of knowledge and techniques; enlarge the pool of people trained to develop that knowledge and techniques or put it to use; and improve the physical, institutional, and information resources that enable those people to get their training and perform their functions.

This component will be used to describe ways in which the work, findings, and specific products of the project have had an impact during this reporting period. Describe distinctive contributions, major accomplishments, innovations, successes, or any change in practice or behavior that has come about as a result of the project relative to: the development of the principal discipline(s) of the project; other disciplines; the development of human resources; teaching and educational experiences; physical, institutional, and information resources that form infrastructure; technology transfer (include transfer of results to entities in government or industry, adoption of new practices, or instances where research has led to the initiation of a startup company); society beyond science and technology; or foreign countries.

a. **What was the impact on the development of the principal discipline(s) of the project?**

Describe how findings, results, and techniques that were developed or extended, or other products from the project made an impact or are likely to make an impact on the base of knowledge, theory, and research and/or pedagogical methods in the principal disciplinary field(s) of the project. Summarize using language that a lay audience can understand (Scientific American style). How the field or discipline is defined is not as important as covering the impact the work has had on knowledge and technique. Make the best distinction possible, for example, by using a “field” or “discipline”, if appropriate, that corresponds with a single academic department (i.e., physics rather than nuclear physics).

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

b. **What was the impact on other disciplines?**

Describe how the findings, results, or techniques that were developed or improved, or other products from the project made an impact or are likely to make an impact on other disciplines.

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

c. **What was the impact on the development of human resources?**

Describe how the project made an impact or is likely to make an impact on human resource development in science, engineering, and technology. For example, how has the project: provided opportunities for research and teaching in the relevant fields; improved the performance, skills, or attitudes of members of underrepresented groups that will improve their access to or retention in research, teaching, or other related professions; developed and disseminated new educational materials; provided scholarships; or provided exposure to science and technology for practitioners, teachers, young people, or other members of the public?

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

d. **What was the impact on teaching and educational experiences?**

Describe how the project made an impact or is likely to make an impact on teaching and educational experiences. For example, has the project: developed and disseminated new educational materials; led to ideas for new approaches to course design or pedagogical methods; or developed online resources that will be useful for teachers and students and other school staff?

If there is nothing significant to report during this reporting period, state “Nothing to Report.”

e. **What was the impact on physical, institutional, and information resources that form infrastructure?**

Describe ways, if any, in which the project made an impact, or is likely to make an impact, on physical, institutional, and information resources that form infrastructure, including: physical resources such as facilities, laboratories, or instruments; institutional resources (such as establishment or sustenance of societies or organizations); or information resources, electronic means for accessing such resources or for scientific communication, or the like.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

f. **What was the impact on technology transfer?**

Describe ways in which the project made an impact, or is likely to make an impact, on commercial technology or public use, including: transfer of results to entities in government or industry; instances where the research has led to the initiation of a start-up company; or adoption of new practices.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

g. **What was the impact on society beyond science and technology?**

Describe how results from the project made an impact, or are likely to make an impact, beyond the bounds of science, engineering, and the academic world on areas such as: improving public knowledge, attitudes, skills, and abilities; changing behavior, practices, decision making, policies (including regulatory policies), or social actions; or improving social, economic, civic, or environmental conditions.

If there is nothing significant to report during this reporting period, state "Nothing to Report."

h. **What percentage of the award's budget was spent in foreign country(ies)?**

Describe what percentage of the award's budget was spent in foreign country(ies). If more than one foreign country is involved, identify the distribution between the foreign countries. U.S.-based recipients should provide the percentage of the budget spent in the foreign country(ies) and/or, if applicable, the percentage of the budget obligated to foreign entities as first-tier subawards.

Recipients that are not U.S.-based should provide the percentage of the direct award received, excluding all first-tier subawards to U.S. entities. If applicable, provide separately the percentage of the budget obligated to non-U.S. entities as first-tier subawards.

6. **CHANGES/PROBLEMS: Optional**

The PD/PI is reminded that the grantee is required to obtain prior written approval from the Contracting Officer whenever there are significant changes in the project or its direction. Requests for prior written approval must be submitted to the Contracting Officer. If not previously reported in writing, provide the following additional information, if applicable: Changes in approach and reasons for change; Actual or anticipated problems or delays and actions or plans to resolve them; Changes that have a significant impact on expenditures; Significant changes in use or care of animals, human subjects, and/or biohazards.

a. **Changes in approach and reasons for change**

Describe any changes in approach during the reporting period and reasons for these changes. Remember that significant changes in objectives and scope require prior approval of the Contracting Officer.

b. **Actual or anticipated problems or delays and actions or plans to resolve them**

Describe problems or delays encountered during the reporting period and actions or plans to resolve them.

c. **Changes that have a significant impact on expenditures**

Describe changes during the reporting period that may have a significant impact on expenditures, for example, delays in hiring staff or favorable developments that enable meeting objectives at less cost than anticipated.

d. **Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**

Describe significant deviations, unexpected outcomes, or changes in approved protocols for the use or care of human subjects, vertebrate animals, biohazards and/or select agents during the reporting period. If required, were these changes approved by the applicable institution committee and reported to the agency? Also specify the applicable Institutional Review Board/Institutional Animal Care and Use Committee approval dates.

e. **Change of primary performance site location from that originally proposed**

Identify any change to the primary performance site location identified in the proposal, as originally submitted.

7. **SPECIAL REPORTING REQUIREMENTS: Optional**

Respond to any special reporting requirements specified in the award terms and conditions, as well as any award specific reporting requirements.

8. **BUDGETARY INFORMATION: Optional**

This component will be used to collect budgetary data from the recipient organization. The information will be used in conducting periodic administrative/budgetary reviews. Budgetary data identified and required by the Contracting Officer should be submitted in an Excel spreadsheet format.

9. **PROJECT OUTCOMES: Optional**

What were the outcomes of the award?

This information is used at the completion of the award to ascertain the cumulative outcomes or findings of a project. Describe project outcomes specifically for the public to provide insight into the outcomes of Federally- funded research, education, and other activities. Agencies may make this information available to the public in an electronic format.

Project Outcomes

The recipient is to provide information regarding the cumulative outcomes or findings of the project. For the final RPPR for the project, provide a concise summary of the outcomes or findings of the award (no more than 8,000 characters) that:

- a. is written for the general public (non-technical audiences) in clear, concise, and comprehensible language;
- b. is suitable for dissemination to the general public, as the information may be available electronically;
- c. does not include proprietary, confidential information or trade secrets; and
- d. includes up to six images (images are optional).

Please note that this reporting of project outcomes does not constitute a formal dissemination of scientific and technical information (STI) but rather is used by agency program staff to publicize project results, outcomes or findings.

To ensure the public access to the results of federally funded research notify DOE Office of Scientific and Technical Information about the published results so the information will be made publicly accessible and discoverable through DOE web-based products. Access to and archival of DOE-funded STI are managed by the (OSTI). For information about OSTI see <http://www.osti.gov>.

For more information on STI submittals, see <http://www.osti.gov/stip/submittal>.

DEMOGRAPHIC INFORMATION FOR SIGNIFICANT CONTRIBUTORS

Agencies may require that recipients provide demographic data about significant contributors for a variety of purposes, including the following:

- to gauge whether our programs and other opportunities are fairly reaching and benefiting everyone regardless of demographic category;
- to ensure that those in under-represented groups have the same knowledge of and access to programs, meetings, vacancies, and other research and educational opportunities as everyone else;
- to gauge and report performance in promoting partnerships and collaborations;
- to assess involvement of international investigators or students in work we support;
- to track the evolution of changing science, technology, engineering and mathematics (STEM) fields at different points in the pipeline (e.g., medicine and law demographics have recently changed dramatically);
- to raise investigator and agency staff awareness of the involvement of under-represented groups in research;
- to encourage the development of creative approaches for tapping into the full spectrum of talent of the STEM workforce;
- to respond to external requests for data of this nature from a variety of sources, including the National Academies, Congress, etc.; and
- to respond to legislatively-required analysis of workforce dynamics. Legislation requires at least one agency to routinely estimate scientific workforce needs. This analysis is accomplished through reviewing demographic data submitted for the existing workforce.

Demographic data (i.e., gender, ethnicity, race, and disability status) should be provided directly by significant contributors, with the understanding that submission of such data is voluntary. There are no adverse consequences if the data are not provided. Confidentiality of demographic data will be in accordance with agency's policy and practices for complying with the requirements of the Privacy Act.

Gender:	Male Female Do not wish to provide
Ethnicity:	Hispanic or Latina/o Not-Hispanic or not-Latina/o Do not wish to provide
Race (select one or more):	American Indian or Alaska Native Asian Black or African American Native Hawaiian or other Pacific Islander White Do not wish to provide
Disability Status:	Yes (check yes if any of the following apply to you)

- Deaf or serious difficulty hearing
- Blind or serious difficulty seeing even when wearing glasses
- Blind or serious difficulty seeing even when wearing glasses
- Other serious disability related to a physical, mental, or emotional condition

No

Do not wish to provide

This measure is designed as a binary measure; it encompasses all self-reported disabilities. Please do not use it to report the number of individuals who have different types of disabilities (e.g., hearing impairments).

Note: This construct is not designed to be used at an individual-level (i.e., it should not be used for determining accommodation needs or disability status for particular individuals associated with the project).

U.S.Department of Energy

Federal Assistance Budget Information

1. Award Number: DE-NE0009040	2. Awardee Name and Address: X Energy, LLC 7701 Greenbelt Rd Suite 320 Greenbelt, MD20770-6517
3. Mod Number: 000	
4. Project Title: X-energy and Energy Northwest Deploy First Commercial-Scale Advanced Reactor by [**]	5. Project Period: [**]

SECTION A - BUDGET SUMMARY

Budget Period	Start Date	End Date	Federal	Non-Federal	Total Approved Budget	Total Obligated Federal Funds
1	[**]	[**]	[**]	[**]	[**]	[**]
2	[**]	[**]	[**]	[**]	[**]	[**]
3	[**]	[**]	[**]	[**]	[**]	[**]
4	[**]	[**]	[**]	[**]	[**]	[**]
5	[**]	[**]	[**]	[**]	[**]	[**]
6	[**]	[**]	[**]	[**]	[**]	[**]
7	[**]	[**]	[**]	[**]	[**]	[**]
TOTALS			[**]	[**]	[**]	[**]

SECTION B - BUDGET CATEGORIES

Object Class Categories	Period 1	Period 2	Period 3	Period 4
Personnel	[**]	[**]	[**]	[**]
Fringe Benefits	[**]	[**]	[**]	[**]
Travel	[**]	[**]	[**]	[**]
Equipment	[**]	[**]	[**]	[**]
Indirect Costs	[**]	[**]	[**]	[**]
Teammate Labor	[**]	[**]	[**]	[**]
Reserves & Contingencies	[**]	[**]	[**]	[**]
Total	[**]	[**]	[**]	[**]

Object Class Categories	Period 5	Period 6	Period 7	Total
Personnel	[**]	[**]	[**]	[**]
Fringe Benefits	[**]	[**]	[**]	[**]
Travel	[**]	[**]	[**]	[**]
Equipment	[**]	[**]	[**]	[**]
Indirect Costs	[**]	[**]	[**]	[**]
Teammate Labor	[**]	[**]	[**]	[**]
Reserves & Contingencies	[**]	[**]	[**]	[**]
Total	[**]	[**]	[**]	[**]

SECTION C - FFRDC FUNDING

Share	Period 1	Period 2	Period 3	Period 4
DOE Share	[**]	[**]	[**]	[**]
Awardee Cost Share	[**]	[**]	[**]	[**]
FFRDC	[**]	[**]	[**]	[**]
Total	[**]	[**]	[**]	[**]

Share	Period 5	Period 6	Period 7	Total
DOE Share	[**]	[**]	[**]	[**]
Awardee Cost Share	[**]	[**]	[**]	[**]
FFRDC	[**]	[**]	[**]	[**]
Total	[**]	[**]	[**]	[**]

Note 1: All estimated future budget allocations are subject to availability of funds.

Note 2: FFRDC funding will be provided directly to the lab and will not be available to Awardee.

**Attachment B5 – Project Milestones for DE-NE0009040 X-energy and Energy
Northwest Deploy First Commercial-Scale Advanced Reactor by [**]**

Introduction and Background:

As a part of its mission, the United States (U.S.) Department of Energy (DOE), Office of Nuclear Energy (NE) has a long and successful history of working with the domestic nuclear industry, national laboratories, and academia to support the development of advanced reactor designs and capabilities over a continuum of technology maturity levels. DOE currently supports research and development (R&D) activities for a variety of advanced reactor technologies that are expected to improve on the safety, security, economics, and/or environmental impacts of current nuclear power plant designs. DOE undertakes these activities in support of the Administration's objectives to maintain the Nation's technological leadership position in the global nuclear industry and ensure national energy security. DOE recognizes that work remains to ensure continued U.S. leadership in the research, design, and development of advanced reactors and to ensure the successful deployment of these reactors in the U.S. and international marketplaces. As part of the FY2020 Further Consolidation Appropriations Act, (H.R. 1865), Congress has provided funding for NE to address advanced reactor development at various stages of the technology maturity continuum.

The primary objective of the new Advanced Reactor Demonstration Program (ARDP) program is to focus DOE and non-federal resources on actual construction and initial operation of real demonstration reactors in the U.S. that are safe and affordable to both build and operate in the near and mid-term.

The ARDP is intended to facilitate the development of U.S. private industry advanced nuclear reactor demonstrations. It will provide funding for advanced reactors that are reliable, cost effective, licensable, and commercially viable. These designs are expected to enable a market environment in which commercial reactor services are available that are safe and affordable to both construct and operate when compared to competing, alternative sources of energy in the near- and mid-term. These designs are expected to provide significant improvements in safety, security, economics, and environmental impacts over current nuclear power plant designs.

To be successful, the advanced reactor must be designed, sited, licensed by the U.S. Nuclear Regulatory Commission (NRC), constructed and operational within 5 – 7 years from the date of award of the cooperative agreement.

The recipient of this Award, X-Energy, LLC (X-Energy) is expected to conduct engineering, analysis, and testing activities to develop, certify, and demonstrate the specified advanced reactor design in accordance with NRC regulations. Specifically, X-Energy is expected to execute the following activities:

1. Perform the necessary engineering, analysis, and validation to bring the advanced reactor design to a deployment level of technological readiness, including procuring all necessary licensing and approvals to perform demonstration of the advanced reactor design.
 2. Perform first-of-a-kind engineering and construction, including components, reactor facility, and fuel production facility systems to demonstrate a deployment of the advanced reactor design.
 3. Commissioning and operation of a first-of-a-kind advanced reactor to generate commercial scale power.
-

Project Scope:

X-Energy's high-level Work Breakdown Structure (WBS) that defines the steps for engineering, analysis, validation, construction, and demonstration from the original submission are produced below.

1	2	3	4	5	6	7	8	9	Description
ARDP									ARDP Proposed Four Pack
	ARDP.1								Program Controls
		ARDP.1.1							Program Management
		ARDP.1.2							Schedule Management
		ARDP.1.3							Quality Assurance and Audits
		ARDP.1.4							Risk Management
		ARDP.1.5							Program Cost Controls
		ARDP.1.6							Resource Management
		ARDP.1.7							Configuration Control
		ARDP.1.8							Document Control (Team Center)
		ARDP.1.9							Contracts Management
		ARDP.1.10							Legal
		ARDP.1.11							Procurement
		ARDP.1.12							Reporting
	ARDP.2								Design
		ARDP.2.1							Preliminary Design
			ARDP.2.1.1						Preliminary-Plant Design and Development
			ARDP.2.1.2						Preliminary-Nuclear Island Design and Development
			ARDP.2.1.3						Preliminary-conventional Island Design and Development
		ARDP.2.2							Final Design
			ARDP.2.2.1						Final-Plant Design and Development
			ARDP.2.2.2						Final-Nuclear Island Design and Development
			ARDP.2.2.3						Final-conventional Island Design and Development
	ARDP.3								Analysis
		ARDP.3.1							Analysis Management
			ARDP.3.1.1						Software Management
			ARDP.3.1.2						Software Development
			ARDP.3.1.3						Software V&V (BN)
			ARDP.3.1.4						Software Procurement
			ARDP.3.1.5						Software Maintenance
		ARDP.3.2							Preliminary Design Analysis Work
			ARDP.3.2.1						Systems Analysis

	ARDP.3.2.2	Neutronics
	ARDP.3.2.3	CFD
	ARDP.3.2.4	Structural
	ARDP.3.2.5	PRA
	ARDP.3.2.6	Source Term
	ARDP.3.2.7	Shielding
	ARDP.3.2.8	Other Analyses
ARDP.3.3		Final Design Analysis Work
	ARDP.3.3.1	Systems Analysis
	ARDP.3.3.2	Neutronics
	ARDP.3.3.3	CFD
	ARDP.3.3.4	Structural
	ARDP.3.3.5	PRA
	ARDP.3.3.6	Source Term
	ARDP.3.3.7	Shielding
	ARDP.3.3.8	Other Analyses
ARDP.4		Licensing
	ARDP.4.1	Pre-Application Engagement
	ARDP.4.1.1	Safety Classification and Construction Codes for the ARDP-100 Pressure Vessel
	ARDP.4.1.2	ARDP-100 Fuel Qualification
	ARDP.4.1.3	Mechanistic Source Term
	ARDP.4.1.4	Safety Analysis Codes and V&V
	ARDP.4.2	Development of PSAR
	ARDP.4.3	Support of Site License
	ARDP.4.4	Development of FSAR
ARDP.5		Training Simulator and Operator Training
	ARDP.5.1	Phase 3: "Engineering" Simulator for control system Training/HFE
	ARDP.5.1.1	Formalize the OTS Development Process
	ARDP.5.1.2	Special Component/subsystem Development
	ARDP.5.1.3	Nuclear Island
	ARDP.5.1.4	Conventional Island
	ARDP.5.1.5	3D Development
	ARDP.5.2	Phase 4: Operator Training Simulator
	ARDP.5.2.1	Process model Update
	ARDP.5.2.2	Special model Verification and Validation
	ARDP.5.2.3	Inclusion of final data for Process Models
	ARDP.5.2.4	Interfacing to Plant Controls
	ARDP.5.2.5	Interfacing to Nuclear Island Investment Protection

	ARDP.5.2.6	Interfacing to Conventional island Investment Protection
	ARDP.5.2.7	Interfacing to Reactor Protection system
	ARDP.5.2.8	Human Factors Engineering
	ARDP.5.2.9	Update HMI/Sequencing
	ARDP.5.2.10	Operational Procedure Development
	ARDP.5.2.11	Simulator Ready for Training
ARDP.5.3		Phase 5: Developing Training Curriculum
	ARDP.5.3.1	Simulator Scenarios
	ARDP.5.3.2	Training Manuals
	ARDP.5.3.3	NRC qualification of Curriculum
ARDP.5.4		Phase 6: Operator Training
	ARDP.5.4.1	Start Simulator Training
	ARDP.5.4.2	Operator Training
	ARDP.5.4.3	NRC Qualification of Operators
	ARDP.5.4.4	Trained Operators
ARDP.6		Test Programs
	ARDP.6.1	Graphite irradiation
	ARDP.6.1.1	Material and Specimen Machining
	ARDP.6.1.2	Pre-Irradiation Examination
	ARDP.6.1.3	Rabbit Design/Construction
	ARDP.6.1.4	Size Effect Study
	ARDP.6.1.5	Irradiation
	ARDP.6.1.6	Post irradiation Examination
	ARDP.6.1.7	Reporting
ARDP.6.2		Helium Test Facility
	ARDP.6.2.1	HTF Test Planning
	ARDP.6.2.2	HTF Design
	ARDP.6.2.3	HTF Procurement
	ARDP.6.2.4	HTF Construction
	ARDP.6.2.5	HTF Testing
	ARDP.6.2.6	HTF Maintenance and Decommissioning
ARDP.7		Supply Chain/Long lead Procurement
	ARDP.7.1	Reactor pressure Vessel
	ARDP.7.2	Steam Generator
	ARDP.7.3	Fuel Handling System
	ARDP.7.4	Helium Circulator

ARDP.7.5	Turbine Generators
ARDP.8	Fuel
ARDP.8.1	Program Management
ARDP.8.1.1	Project Controls
ARDP.8.1.2	CM/DM
ARDP.8.2	TRISO Fuel Element Fabrication
ARDP.8.2.1	Kernel
ARDP.8.2.2	TRISO
ARDP.8.2.3	Matrix Production
ARDP.8.2.4	Overcasting
ARDP.8.2.5	Pebble Pressing
ARDP.8.2.6	Carbonization
ARDP.8.2.7	Heat Treatment
ARDP.8.2.8	Machining
ARDP.8.2.9	QC Inspection
ARDP.8.2.10	Fuel Qualification Testing
ARDP.8.2.11	Initial Fuel Core Load
ARDP.8.3	Design - Fuel Fabrication Facility
ARDP.8.3.1	Conceptual
ARDP.8.3.2	Basic
ARDP.8.3.3	Detailed
ARDP.8.4	Licensing - Fuel Fabrication Facility
ARDP.8.4.1	Safety Program Description
ARDP.8.4.2	Environmental Report
ARDP.8.4.3	Security Plan
ARDP.8.4.4	Emergency Plan
ARDP.8.4.5	NRC Engagement
ARDP.8.5	Construction - Fuel Fabrication Facility
ARDP.8.5.1	Site work
ARDP.8.5.2	Structure
ARDP.8.5.3	Fuel Fabrication line Fit-up
ARDP.8.5.4	Fuel Fabrication Commissioning
ARDP.8.5.5	NRC Engagement
ARDP.9	Site Permitting & Licensing
ARDP.10	Site Specific Design
ARDP.11	Construction
ARDP.11.1	Reactor 1

	ARDP.11.1.1	Nuclear Island
	ARDP.11.1.2	Conventional Island
ARDP.11.2		Reactor 2
	ARDP.11.2.1	Nuclear Island
	ARDP.11.2.2	Conventional Island
ARDP.11.3		Reactor 3
	ARDP.11.3.1	Nuclear Island
	ARDP.11.3.2	Conventional Island
ARDP.11.4		Reactor 4
	ARDP.11.4.1	Nuclear Island
	ARDP.11.4.2	Conventional Island
ARDP.11.5		Site Construction
	ARDP.11.5.1	Grading and Drainage
	ARDP.11.5.2	Site Utilities
	ARDP.11.5.3	Site perimeter
	ARDP.11.5.4	Security Buildings
	ARDP.11.5.5	Administrative Building
	ARDP.11.5.6	Transmission Switch Yard
	ARDP.11.5.7	Spent Fuel Storage – ISFSI
	ARDP.11.5.8	Backup Generators
	ARDP.11.5.9	Distributed Control System
	ARDP.11.5.10	Plant Electrical System
	ARDP.11.5.11	Plant Water Treatment and Storage System
	ARDP.11.5.12	Maintenance and Storage Building
	ARDP.11.5.13	Warehouse
	ARDP.11.5.14	Electrical Control Building
	ARDP.11.5.15	Fire Pump house and water storage
	ARDP.11.5.16	Helium Storage Building
	ARDP.11.5.17	
	ARDP.11.5.18	Plant logistics support system
ARDP.12		Commissioning
ARDP.12.1		Non-Nuclear Island commissioning
	ARDP.12.1.1	Establish Temporary site buildings
	ARDP.12.1.2	Site Prep to Rough Grade & Storm Water Management
	ARDP.12.1.3	Establish temporary site buildings
	ARDP.12.1.4	Establish temporary roads and laydown areas

ARDP.12.1.5	Final Permit Reviews
ARDP.12.2	Nuclear Island commissioning
ARDP.12.2.1	Reactor 1
ARDP.12.2.2	Reactor 2
ARDP.12.2.3	Reactor 3
ARDP.12.2.4	Reactor 4
ARDP.13	Commercial Operations
ARDP.14	Decommissioning
ARDP.15	Financial Costs
ARDP.15.1	EPC Contractor Bonds and insurance
ARDP.15.2	EPC Contractor Fees
ARDP.15.3	Sales Tax
ARDP.15.4	Estimate Uncertainty
ARDP.15.5	Management Reserve
ARDP.15.6	DOE Held Contingency
ARDP.15.7	Schedule Reserve
ARDP.15.8	Schedule DOE held Contingency
ARDP.15.9	Owner Provided insurances
ARDP.15.10	Escalation Costs
ARDP.15.11	X-Energy G&A
ARDP.16	Field indirect costs
ARDP.16.1	EPC General Conditions Costs
ARDP.16.2	Owner Project Staff
ARDP.16.3	ENW Staffing

Below is a brief description of each WBS and sub-WBS that is contained above:

1.0 Program Controls (applies to both the Xe-100 and our TRISO-X Fuel Facility)

1.1 Program Management – Oversight of the overall Advanced Reactor Demonstration Program.

1.2 Schedule Management - Development and maintenance of the complete project schedule for the FOAK reactor and for our TRISO-X Fuel Facility. This schedule will include the development and design costs for the FOAK reactor that will not be present for the 2nd, 3rd, or 4th unit in the plant.

1.3 QA and Audits - The project will be controlled to NQA-1 including the design, procurement, and construction. QA will provide audits of the entire process including all phases of the project.

1.4 Risk Management (RM) - Development and maintenance of the RM program including development of the Risk Matrix, the RMP, and the Risk Analysis Report. This includes the efforts of the Risk Management Team and the periodic maintenance of the risk program during and throughout the entire project.

1.5 Cost Controls - Implementation and maintenance of an EVMS based PM control system for the project. This includes the Project Controls Manager, Control Account Managers, and Cost Analysts

1.6 Data Management - Control and storage of all project-related documents, design data and revisions including non-NQA-1 documentation.

1.7 Configuration Control - A SE process for establishing and maintaining consistency of the plant performance, functional, and physical attributes through requirements, design, and operational information throughout the plant lifecycle. Control of Documents required for design and construction especially for NQA-1 documentation. Includes design drawings, shop drawings, construction testing results, NCRs and DCNs, turnover packages and Objective Records of Quality.

1.8 Document Control - Control of all project documentation including NQA-1 Documentation for the project including design documents analysis reports, specifications, and all plant related data such as CAD file revisions for each phase of the project and all safety and licensing reports.

1.9 Contracts Management - Management and control of all contract documentation including design contract, EPC contract, any subcontracts, purchase orders, and change orders.

1.10 Legal - Maintenance and control of Legal documentation for the project including records of contract negotiations, issues with DOE, owner contracts with legal interface, and claims on the project.

1.11 Procurement - Control of all procurement documents including notice to bid, requests for proposals, received proposals, records of negotiations, draft and final procurement documents including contracts and purchase orders of all procurement actions and documents.

1.12 Reporting - Preparation and control of all reporting including daily reports, weekly reports, monthly reports, application for payment, notices to the owner, owner records of general operation.

2.0 Design

2.1 Preliminary (Basic) Design - Design development including all drawings and specifications for the project including architectural, civil, nuclear, and trade engineering efforts. This includes internal review meetings and independent design reviews This leads directly to the final design at the 60% level and following the 60% design review.

2.2 Final Design - All the design effort to complete the design to shovel ready state. This includes all final fabrication drawings and specifications, construction drawings and construction plans, final plant performance specifications, plant manuals such as operational, training and maintenance manuals. Final fabrication and construction schedules and level 1 cost estimates to complete the project.

3.0 Analysis

3.1 Analysis Management - All analysis that support the Design. Includes seismic analysis, neutronics analysis, thermal analysis, transient analysis, Probabilistic Risk Analysis (PRA), Safety Analysis, software development, software Verification and Validation (V&V) for supporting of all NQA-1 safety analysis.

3.2 Preliminary Design Analysis Work - All analysis efforts that support the Design Effort. Includes seismic analysis, neutronics analysis, thermal analysis, transient analysis, PRA, safety analysis, software development, software V&V for Preliminary Design Effort.

3.3 Final Design Analysis Work - All analysis efforts that support the Design Effort. Includes seismic analysis, neutronics, thermal analysis, transient analysis, PRA, safety analysis, software development, software V&V for Final Design.

4.0 Licensing

4.1 Pre-Application / CP Application Development - NRC engagements and licensing topical reports on critical HTGR licensing issues to be re-solved early in the § Part 50 licensing approach. Includes both XEP engineering/management cost and NRC review fees. This phase also includes development of the CP application (Preliminary Safety Analysis Report (PSAR) and Environmental Report).

4.2 NRC CP Review Support - NRC environmental, safety, and anti-trust review for the CP application, including NRC fees and XEP support during the review. Followed by NRC construction oversight.

4.3 Op. License Development - Development of the FSAR, updates to the Environmental Report, and development/implementation of site operating programs supporting the Class 103 OL application.

4.4 NRC OL Review Support - NRC review of updates to the environmental, safety, security, safeguards, and financial review for the OL application, including NRC fees and program inspection, and XEP support costs

4.5 Other Licenses - Development and NRC review of Part 30, 40, 70, and 72 licenses for source/byproduct material, fresh fuel receipt/storage, and the Independent Spent Fuel Storage Installation.

5.0 Training Simulator and Operator Training

5.1 Engineering Simulator - Modeling of plant performance including the reactor, SG, startup shutdown system and CI (steam turbine generator), and associated control systems. The engineering simulator provides the ability to predict final plant performance, transient response during all design basis events.

5.2 Operator Training Simulator - A Realtime plant simulator that is used to develop the training simulator platform. This includes development of the physical simulator including software development and interphase with the actual plant control platform. Includes procurement of the simulator and erection at the project site, startup, and V&V and NRC approval of the simulator prior to operator training.

5.3 Training Curriculum - Development of the training scenarios for training or plant operators. This also includes NRC approval and qualification of the training program and manuals.

5.4 Operator Training - All operator training on the simulator including training on operations procedures developed for the reactor, accident scenarios, and all events noted in the FSAR. Includes operator certification by the NRC.

6.0 Test Programs

6.1 Graphite Irradiation - In-reactor irradiation of the graphite material to assure that irradiation material data meets the assumptions used in the design analyses. This includes post irradiation examination of the irradiated material.

6.2 Helium Test Facility (HTF) - Develop, design, and construct the HTF to test helium circulators, reactivity control systems (control rods and shutdown rods), FHS, and other helium components. Includes the Design, Procurement, Construction, and Testing of the required components. Documentation of the test results and analyses is also included in the scope. The HTF will also be used to qualify systems that operate in a high temperature helium environment.

7.0 Supply Chain/Long lead Procurement

7.1 Reactor Pres. Vessel - Final design, procurement, fabrication, shipping, QA, and receipt inspection of the RPV.

7.2 SG - Design, procurement, fabrication, shipping, QA, and receipt inspection of the SG.

7.3 Fuel Handling System - Design, procurement, fabrication, shipping, QA, and receipt inspection of the FHS.

7.4 Helium Circulator - Design, procurement, fabrication, shipping, QA, and receipt inspection of the Helium Circulators.

7.5 Graphite Material - Procurement of the reactor structural graphite material.

8.0 Fuel

8.1 Program Management - Program management related to fuel development, procurement, design, fabrication, shipping, and certification for use in the reactor plant.

8.2 TRISO Fuel Element Fabrication - Contains all costs associated with the fabrication, QA, shipping, and receipt inspection of the TRISO fuel. Includes the uranium kernel, TRISO coatings, matrix production, overcasting, pebble pressing, carbonization, heat treatment, machining, and QC inspection.

8.3 Design - All costs associated with the Commercial Fuel Facility Development including Preliminary and Final Design efforts.

8.4 Licensing - All licensing efforts associated with the Fuel Development Process including safety, security, emergency planning, and NRC engagement including XEP support costs and NRC fees.

8.5 Construction – Construction of the Fuel Fabrication Facility.

9.0 Site Permitting & Licensing

Permitting & Licensing All non-NRC-related site permits, approvals, and licenses required to support construction and Xe-100 Plant operation. Includes federal, state, and local activities and XEP support costs.

10.0 Site Specific Design

All other design activities for nuclear plant support systems that deviate from the generic Xe- 100 design and are specific to the nuclear plant construction site, such as the turbine/generator condenser cooling system.

11.0 Construction

11.1 Site preparation and Development - All site development costs including perimeter, controls, site grading and paving, excavation, storm water management and controls, roads and site development and improvements, temporary facilities and offices, and final permitting and review costs.

11.2 Nuclear Is-land (NI) - All scope related to the NI. This includes the reactor system, SG, reactor cavity cooling system, helium circulators, feedwater pumps, FHS, all NI auxiliary systems, reactor building, NI Auxiliary building, high energy spent fuel storage, connecting tunnel, ISFI pads, electrical building, operator control room, radwaste building & intermediate spent fuel storage facility. Includes building construction, setting & final assembly of all NI equipment, piping wiring, HVAC, and controls.

11.3 Conventional Island (CI) - All scope outside of the NI including the steam turbine generator, CI buildings, transformers and foundations, electrical I&C, and all balance of plant structures and systems & admin/support.

12.0 Commissioning

12.1 Non-Nuclear Commissioning - All testing and startup activities on the CI including flush & hydro, systems integrated testing control and instrumentation tests and all CI auxiliary systems. Common plant infrastructure (operator control room, fuel storage) is commissioned to support Unit 1 startup. Security systems are progressively commissioned for each unit, then expanded plant-wide to facilitate operations during construction.

12.2 NI Commissioning - All testing and startup activities on the NI. NI commissioning is segmented into 4 stages: Stage 1 included testing of all systems without fuel in the reactor. This includes helium circulator tests, FHS, Reactor Cavity Cooling System, SG hydro tests, feed pump tests, startup shutdown system and all NI auxiliary systems (helium purification system, helium supply system etc.) Stage 2: Cold Critical testing, Stage 3 Hot Critical Testing, Stage 4 Power Operations testing

12.3 Cold Critical testing - During cold critical testing fuel is loaded into the reactor for the first time. Cold critical tests are performed to establish the reactor reactivity coefficients at cold conditions. During cold commissioning there is no flow through the reactor.

12.4 Hot critical testing - During hot critical testing, the temperature of the reactor is increased to establish the reactor reactivity coefficients at conditions. These tests confirm the negative temperature coefficient of the reactor. During hot commissioning, the circulators are started to confirm the pressure drop over the core and to test the outlet plenum temperature sensors. Tests are essentially iso thermal tests and no power is generated in hot or cold commissioning.

12.5 Power Operation Testing - During power ops testing the reactor is brought up to power for the first time. The reactor, SG, startup-shutdown system, and the turbine generator are tested at various power levels. Power Operation Testing is concluded once sustained full power has been achieved.

13.0 Commercial Operations

Reserved

14.0 Decommissioning

Reserved

15.0 Financial Costs

Category of scope/cost associated with escalation, contingency, schedule reserve, estimate uncertainties and gross receipts or sales tax.

16.0 Field Indirect Costs

Category of scope/cost associated with construction management, QA Staff, owner project staff, and X-energy project staff during site construction.

The ultimate goal of the project is to successfully complete the deployment and demonstration of the advanced reactor design to make this technology available to customers who need clean affordable energy generation capability. The milestone list below is detailed for Budget Period 1. As part of the continuation application process, a new detailed milestone sheet will be supplied by X-Energy each budget period.

Deliverable/Milestone Schedule

#	WBS	Milestone Title and Description	Planned Completion	Deliverable	Milestone Description	Responsible
		BUDGET PERIOD 1				
1	[**]	[**]	[**]	[**]	[**]	[**]
2	[**]	[**]	[**]	[**]	[**]	[**]
3	[**]	[**]	[**]	[**]	[**]	[**]
4	[**]	[**]	[**]	[**]	[**]	[**]
5	[**]	[**]	[**]	[**]	[**]	[**]
6	[**]	[**]	[**]	[**]	[**]	[**]
7	[**]	[**]	[**]	[**]	[**]	[**]
8	[**]	[**]	[**]	[**]	[**]	[**]
9	[**]	[**]	[**]	[**]	[**]	[**]
10	[**]	[**]	[**]	[**]	[**]	[**]
11	[**]	[**]	[**]	[**]	[**]	[**]
12	[**]	[**]	[**]	[**]	[**]	[**]

#	WBS	Milestone Title and Description	Planned Completion	Deliverable	Milestone Description	Responsible
13	[**]	[**]	[**]	[**]	[**]	[**]
14	[**]	[**]	[**]	[**]	[**]	[**]
15	[**]	[**]	[**]	[**]	[**]	[**]
16	[**]	[**]	[**]	[**]	[**]	[**]
17	[**]	[**]	[**]	[**]	[**]	[**]
18	[**]	[**]	[**]	[**]	[**]	[**]
19	[**]	[**]	[**]	[**]	[**]	[**]
20	[**]	[**]	[**]	[**]	[**]	[**]
21	[**]	[**]	[**]	[**]	[**]	[**]
22	[**]	[**]	[**]	[**]	[**]	[**]
23	[**]	[**]	[**]	[**]	[**]	[**]
24	[**]	[**]	[**]	[**]	[**]	[**]

#	WBS	Milestone Title and Description	Planned Completion	Deliverable	Milestone Description	Responsible
25	[**]	[**]	[**]	[**]	[**]	[**]
26	[**]	[**]	[**]	[**]	[**]	[**]
27	[**]	[**]	[**]	[**]	[**]	[**]

X Energy, LLC
Award Number: DE-NE0009040

Point of Contact Sheet

DOE CONTACTS	RECIPIENT CONTACTS
Contract Specialist [**] Telephone Number: [**] Email: [**]	Business Officer [**] Telephone Number: [**] Email: [**]
DOE Project Manager/Initiator [**] Telephone Number: [**] Email: [**]	Principal Investigator (PI) [**] Telephone Number: [**] Email: [**]
HQ Program Manager [**] Telephone Number: [**] Email: [**]	Co-Principal Investigator [**] Telephone Number: [**] Email: [**]
Technical Project Officer [**] Telephone Number: [**] Email: [**]	Financial Report POC [**] Telephone Number: [**] Email: [**]
Technical Monitor Telephone Number: Email:	Additional POC [**] Telephone Number: [**] Email: [**]
Contracting Officer [**] Telephone Number: [**] Email: [**]	
Budget Specialist [**] Telephone Number: [**] Email: [**]	



Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

October 30, 2020

[**]

X-Energy, LLC 801 Thompson Ave
Rockville, MD 20852

SUBJECT: Authorization of Pre-award Costs for Advance Reactor Demonstration Program X- Energy Xe-100 Reactor Design

REFERENCE: Funding Opportunity DE-FOA-0002271, "Re: Advanced Reactor Demonstration Funding Opportunity Award" Letter dated October 26, 2020.

Dear Ms. Lester:

In accordance with 2 CFR 200.458, *Pre-contract costs* and the "Department of Energy Guide to Financial Assistance" dated April 2017, authorization is given to incur pre-award costs under the subject project and reference pending award. This pre-award cost authorization is valid for ninety (90) calendar days from November 2, 2020. Should the final actual award be later than ninety (90) days from November 2, 2020, authorization to incur further pre-award costs must be extended by written approval from the Department of Energy Contracting Officer.

Pre-award expenditures are made at the recipient's risk and do not impose an obligation on DOE:

(1) in the absence of appropriations; (2) if an award is not made; or (3) if an award is made for a lesser amount than the recipient anticipated. Pre-award costs incurred are allowable to the extent that they would have been allowable if incurred after the date of the financial assistance award amendment.

If you have any questions, please do not hesitate to contact [**] via email at [**].

Sincerely,

[**] Digitally signed by
[**]
Date: 2020.10.30
12:33:57 -06'00'

[**]
Contract Management Division

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated March 20, 2026, with respect to the consolidated financial statements of X-Energy Reactor Company, LLC included in the Registration Statement (Form S-1) and related Prospectus of X-Energy, Inc. dated March 20, 2026.

/s/ Ernst & Young LLP

Tysons, Virginia

March 20, 2026

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated March 20, 2026 with respect to the financial statements of X-Energy, Inc. included in the Registration Statement (Form S-1) and related Prospectus of X-Energy, Inc.

/s/ Ernst & Young LLP

Tysons, Virginia

March 20, 2026

Calculation of Filing Fee Tables

S-1

X-Energy, Inc.

Table 1: Newly Registered and Carry Forward Securities

☐ Not Applicable

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to be Paid	1 Equity	Class A common stock	457(o)			100,000,000.00	\$ 0.0001381	\$ 13,810.00				
Fees Previously Paid												
Carry Forward Securities												
Carry Forward Securities												
Total Offering Amounts:						\$ 100,000,000.00		\$ 13,810.00				
Total Fees Previously Paid:								\$ 0.00				
Total Fee Offsets:								\$ 0.00				
Net Fee Due:								\$ 13,810.00				

Offering Note

¹

(1A) Includes Class A common stock, par value \$0.0001 per share ("Class A common stock"), issuable upon exercise of the underwriters' option to purchase additional Class A common stock, if any.

(1B) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

Table 2: Fee Offset Claims and Sources

☒ Not Applicable

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rules 457(b) and 0-11(a)(2)											
Fee Offset Claims											
Fee Offset Sources											
Rule 457(p)											
Fee Offset Claims											
Fee Offset Sources											

Table 3: Combined Prospectuses

☒ Not Applicable

Security Type	Security Class Title	Amount of Securities Previously Registered	Maximum Aggregate Offering Price of Securities Previously Registered	Form Type	File Number	Initial Effective Date