X-energy Confirms Feasibility of Xe-100 Advanced Small Modular Reactor Deployment in Alberta

September 25, 2025

EDMONTON, Canada, September 25, 2025 – X-energy Canada ("X-energy" or "the Company"), a subsidiary of X-energy Reactor Company, LLC announced the successful completion of a study confirming the feasibility and benefits of repurposing an existing TransAlta thermal generation site in Alberta with Xe-100 Small Modular Reactors ("SMR"). The findings establish a foundation for further planning and regulatory engagement to support future deployment.

The study, funded by Emissions Reduction Alberta ("ERA") through the Government of Alberta's TIER fund, and conducted with TransAlta, Hatch, PCL, and Kinectrics, found significant alignment between the province's unique energy and industrial profile and the attributes of the Xe-100. It identifies areas where X-energy's technology can directly support Alberta's energy economy and long-term competitiveness.

X-energy's Xe-100 SMR is an 80-megawatt ("MW") high-temperature gas-cooled reactor uniquely suited to Alberta's energy needs. In addition to electricity, the Xe-100 is specifically designed to reliably provide 565° C heat and steam for industrial applications, unlocking a broad range of use cases for Alberta's industrial and oil and gas sectors. The province's established supply chain capabilities are well-positioned to support the manufacturing and construction of X-energy's technology. Further, the Xe-100's advanced design enables the efficient use of air-cooling systems, significantly reducing overall water usage, and offering greater siting flexibility as compared to conventional light-water reactors.

> Alberta is uniquely suited to leverage the benefits of the Xe-100 with a strong industrial base, skilled workforce, and unmatched energy expertise. We look forward to working with provincial and community leaders to explore Xe-100 applications in the province, and its potential to support critical Canadian industries with clean, reliable, and safe energy.
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> *Ben Reinke, Senior Vice President and Deputy Chief Commercial Officer at X-energy*

As affirmed in the study, the Xe-100's next-generation intrinsic safety characteristics are central to its design. It uses tristructural-isotropic ("TRISO") fuel, described by the U.S. Department of Energy as "the most robust nuclear fuel on earth," that is designed to withstand extreme temperatures beyond any operating or accident scenario, leveraging physics in addition to mechanical systems to allow for safe operation.

X-energy is advancing the Xe-100 as a grid-scale energy solution for utilities, industrial customers, and hyperscalers with customer commitments from Dow, Amazon, and Centrica. The Company's first proposed plant at Dow's UCC Seadrift, Texas, site is expected to be the first grid-scale advanced nuclear reactor project deployed to serve an industrial site in North America, providing the site with both power and high-temperature steam. Following the project with Dow, X-energy and Amazon have committed to deploy 5 GW by 2039, beginning in Washington state with Energy Northwest. Additionally, X-energy recently announced an agreement with Centrica to deploy 6 GW in the United Kingdom. The Company is also constructing an advanced nuclear fuel fabrication facility to manufacture its proprietary TRISO-X fuel, a first of its kind in the United States. Together, X-energy's portfolio is designed to deliver scalable, secure, and reliable power to meet growing global energy demand.

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About X-Energy Reactor Company, LLC

X-Energy Reactor Company, LLC, is a leading developer of advanced small modular nuclear reactors and fuel technology for clean energy generation that is redefining the nuclear energy industry through its development of safer and more efficient advanced small modular nuclear reactors and proprietary fuel to deliver reliable, zero-carbon and affordable energy to people around the world. X-energy's simplified, modular, and intrinsically safe SMR design expands applications and markets for deployment of nuclear technology and drives enhanced safety, lower cost and faster construction timelines when compared with other SMRs and conventional nuclear. For more information, visit X-energy.com or connect with us on X or LinkedIn.