X·ENERGY

Xe-100 HTGR

June 2026

Oded Doron

Our Company

Xe-100 Small Modular Reactor

- X-energy's flagship product is a **High-Temperature Gas-cooled Reactor (HTGR)** that can be configured for power and industrial heat applications (e.g. mining, chemical production, refining)
- Four **80 MWe reactors (320 MWe total "4-packs")** are bundled to optimize economics and performance

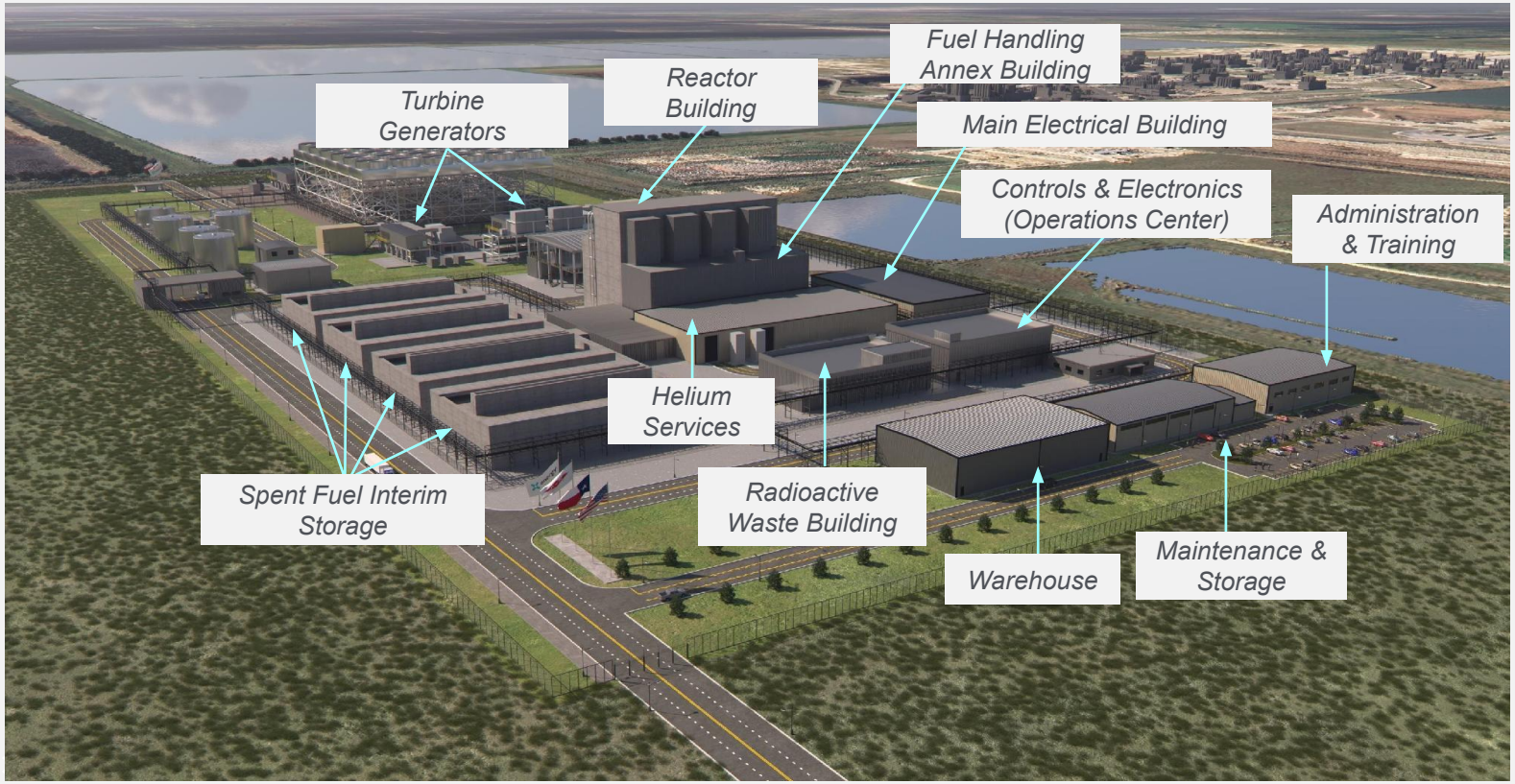
TRISO-X Fuel Fabrication

- Our reactors use **tri-structural isotropic (TRISO)** coated particle fuel and our TRISO-X pebble fuel qualification methodology is approved by the NRC
- TRISO-X developed a **proprietary process** with improved supply and quality control processes

- Founded in 2009
  17 years of investment and business development
- Rockville, MD Headquarters
  Rooted in the nuclear community with proximity to DOE and the Nuclear Regulatory Commission
- 50+ Years of R&D
  Our technology builds upon decades of R&D in high-temperature gas reactors
- 1,000+ Employees
  Leading Generation IV nuclear reactor development
- $1.2b Initial Federal Award
  One of two companies selected for DOE's Advanced Reactor Demonstration Program
- ~$3b Raised from Investors
  One of the highest amounts of capital raised of any advanced nuclear company

Xe-100: What are we building?

Plant Design for Project Long Mott (Dow)



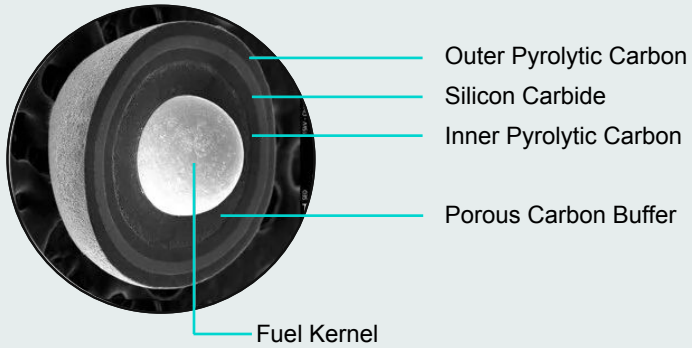
Note: Figure is intended to represent a proposed rendering and is for illustrative purposes only.

Key Highlights

- A plant with applications to multiple industries
- Separation of nuclear and conventional island (where off-the-shelf design, materials and equipment are used)
- A development timeline inline with traditional, non-nuclear projects
- An Emergency Planning Zone suitable for high-density populations

TRISO-X fuel: Our proprietary TRISO fuel methods

Proprietary TRISO-X Fuel Form



~220,000 pebbles form the core of each Xe-100 reactor

Proprietary fabrication methods

More Secure

Self-containment of each pebble reduces need for expensive concrete and steel containment

Robust

Designed to withstand high temperatures without melting

Efficient

Uses HALEU[1] fuel for higher burn up, allowing pebbles to remain in reactor longer and burn off more by-product

Integrated fuel fabrication business

Cutting Edge

Expected to be North America's first purpose-built, commercial, advanced nuclear Category II fuel fabrication facility

Reduced Risk

Benefits from 50/50 cost share with the U.S. Department of Energy through the ARDP for TX-1

At Scale

Expected to enable simultaneous fueling of an initial fleet of Xe-100 reactors, meeting large-scale deployment needs

Current TX-1 Vertical Construction Progress

[1] High-Assay Low-Enriched Uranium

Varied customer base shows that Xe-100 reactors can exist in a variety of use cases

Industrial Heat

First-of-a-Kind ("FOAK") Deployment

- **320 MWe Xe-100 plant** at Dow's Seadrift Operations site in Texas

AI Demand

Our First SMR Data Center Customer in U.S.

- **Up to 5 GW of planned projects** for development in 2030s

Energy Security

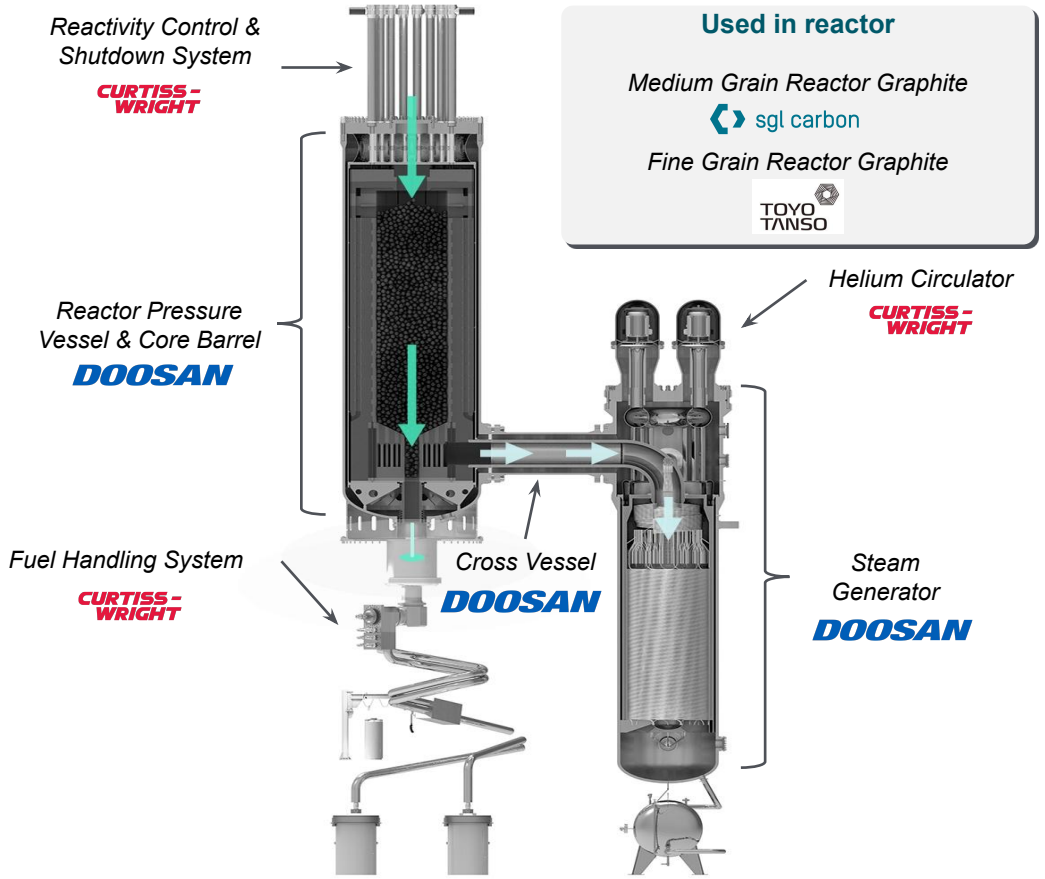
Our First SMR Utility Customer in the U.K.

- **Approximately 6 GW of power** to be deployed across the U.K.

X-energy's Xe-100 platform can provide more than just power to sites. This variability enables a high level of adoption across multiple industries.

Key Component Suppliers of Xe-100 Reactor

Illustrative Xe-100 Schematic



X-energy Supply Chain Strategy

- Multiple qualified vendors already in place for nearly every major system and component for the Xe-100 plant
- X-energy works with suppliers in all phases of design, equipment supply, fabrication and construction
- X-energy works to ensure its production timeline by making deposits to lock its place in the queue with major suppliers
- Long-lead supplier list of blue-chip companies across the U.S., Europe, Japan, Canada and Korea
- X-energy is working with international suppliers to expand supply chain capabilities
- Proactive supply chain management minimizes risks and identifies vulnerabilities early to protect critical materials

An Xe-100 power plant is analogous to a traditional infrastructure project, that happens to be nuclear

Xe-100

LNG Liquification Facility

	Xe-100	LNG Liquification Facility
Development timeline	> 5 years	> 5 years
Permitting requirements	Requires NRC operating license application, environmental review, and safety review	Requires FERC application, environmental review and safety review
Technical & traditional components	Modular nuclear island and simple conventional island	Complex liquification facilities with conventional components
EPC Providers	Kiewit, FLUOR, BECHTEL	Kiewit, FLUOR, BECHTEL

Unique aspects of Xe-100 projects

- Conventional Islands are standard to non-nuclear applications **decreasing equipment risk**
- Inherently safe design enables use of commodity industrial equipment and components for conventional island, **lowering supply chain bottleneck risk**
- High production volume allows for an **easy exchange of components** from one Xe-100 project to another

X-energy's emergency planning zone (EPZ) is smaller than LWRs, allowing for greater location flexibility

- **97% Smaller EPZ:** 400-meter planning zone vs. 16-kilometer for traditional LWRs
- **TRISO Fuel's Inherent Safety:** Ceramic layers at the particle level expected to maintain integrity under extreme conditions
- **Passive Safety Design:** Natural circulation and high thermal inertia reduce reliance on active systems
- **Access to New Markets:** Enables deployment at industrial sites and near population centers
- **Streamlined Community Coordination:** Fewer stakeholders, simplified emergency planning, and faster licensing timelines improve commercial viability
- **Clear Regulatory Pathway:** NRC's performance-based EPZ framework provides a replicable approach for advanced reactor licensing

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Summary

1. **Breaking Down Barriers through Traditional Applications**
   - **Majority of the Xe-100 plant is off-the-shelf** which is expected to result in a faster deployment of the Xe-100 plant
   - **Minimal nuclear safety related footprint** resulting in more affordable and safer design, smaller EPZ, and lower risk to the public
2. **Qualified Trades & Traditional EPCs Opening the Construction Site**
   - Standard industrial construction practices apply to most of the plant
   - Traditional EPCs can **partner with X-energy** rather than sitting on the sidelines—nuclear is no longer a closed ecosystem
3. **Innovation Ecosystem Powering the Next Wave**
   - Clean, reliable baseload enables AI, data centers, advanced manufacturing, and industrial decarbonization
   - A necessary and futuristic next step in the energy sector

Questions?