NUCLEAR INNOVATION ALLIANCE

ADVANCED NUCLEAR REACTOR TECHNOLOGY

A COMPANY COMPENDIUM

November 2025 UPDATE

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A COMPANY COMPENDIUM

NUCLEAR INNOVATION ALLIANCE

nuclearinnovationalliance.org

November 2025

PHOTO CREDITS

Cover:
X-energy

Other images:

ARC Clean Energy, BWXT, GE-Hitachi, General Atomics, Holtec, International Atomic Energy Agency, Kairos Power, NuScale Power, Nuclear Innovation Alliance, Oklo, TerraPower,Terrestrial Energy, Westinghouse, X-energy.

FOR MORE INFORMATION

Contact: Zach Koshgarian

zkoshgarian@nuclearinnovationalliance.org

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Introduction:

Advanced nuclear energy companies are completing development activities for new nuclear reactors and beginning construction and deployment in the United States and Canada. While there is a significant overlap in the needs of advanced and conventional nuclear reactors, each advanced reactor will require new supply chains. Some advanced nuclear power plants will have similar power conversion systems but others will require new structures, systems, and components that differ from existing large light water reactors. Clear understanding of the design and the future supply chains for different advanced reactor companies enable more effective engagement and investment in advanced nuclear energy.

This compendium highlights major advanced reactor developers and their current development and deployment status, and documents public agreements between advanced reactor companies and outside parties including the private sector, government, universities, and international organizations. The compendium is a broad summary of the advanced reactor business ecosystem and provides insight into what companies are associated with the planning, design, testing, construction, and operation of advanced nu-clear energy projects. This compendium was created using publicly available information as of November 2025.

This compendium is sorted by advanced reactor company and highlights their major projects. The compendium also includes brief information about the advanced nucle-ar fuel cycle here in the United States and Canada. For detailed information about each reactor design and other advanced nuclear energy technologies, see NIA's report, Ad-vanced Nuclear Reactor Technology: A Primer, to see the differences between conventional nuclear reactors and advanced nuclear reactors, as well as the differences among advanced reactor technologies themselves.

Nuclear Energy Supply Chain
Source: IAEA

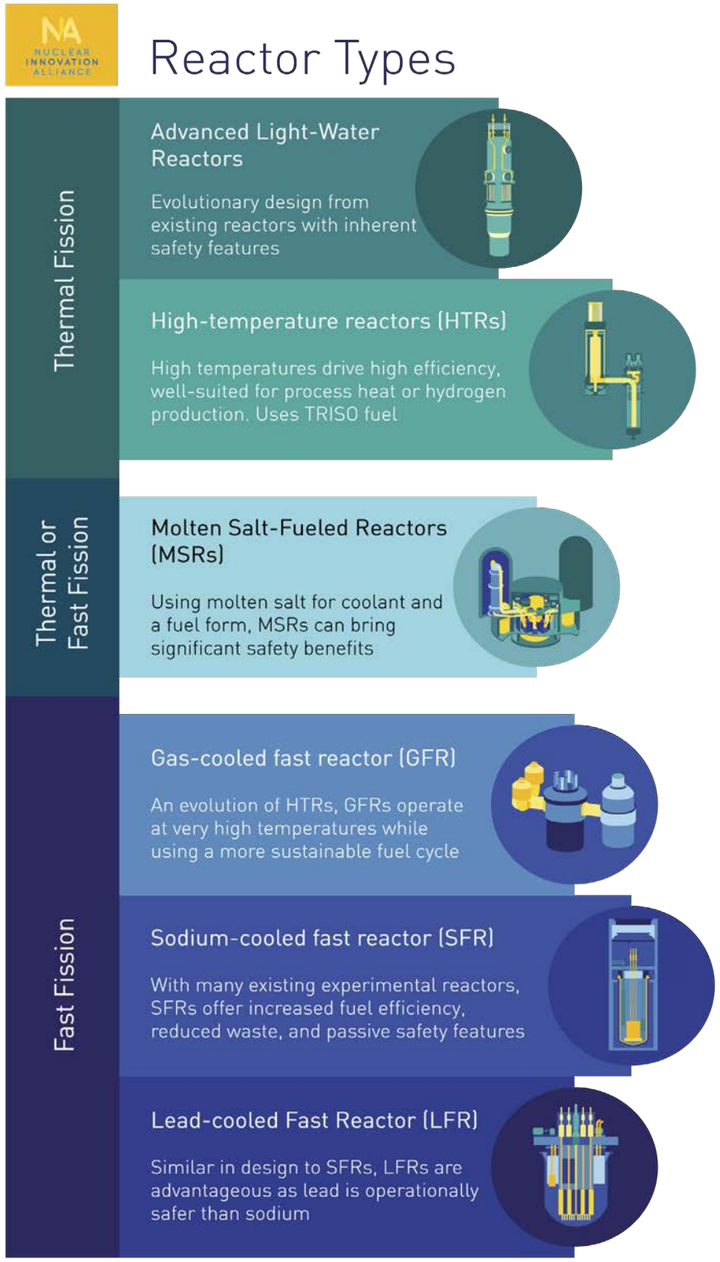
Salt Cooled or Metal Cooled Reactor

Light Water Cooled Reactor

Micro-reactor

Gas Cooled Reactor

Quick Reference Guide for Company Reactor Technology Type



Quick Reference Guide on Advanced Reactor Technology Types
Source: NIA

ARC Clean Technology

Major Project
Canadian Commercial Reactor: **ARC-100**;
United States' Advanced Reactor Demonstration Program (ARDP) ARC 20
Project: First-Of-A-Kind (FOAK) Reactor

Major Project Description
Small Modular Sodium-Cooled Fast Reactor

Project Location or Headquarters
HQ**:** Washington, DC
Project Location: ARC-100 Commercial Demonstration: New Brunswick, Canada; ARDP ARC20 FOAK: TBD, USA

Government Funding Status
US$27.5 million awarded by US DOE ARDP ARC 20 Program; CAD32 million awarded by the Government of Canada and the Province of New Brunswick, Canada

Nuclear Regulatory Commission (NRC) and Canadian Nuclear Safety Commission (CNSC) Licensing Status
NRC: Preapplication Interaction

CNSC: Vendor Design Review Phase 2 completed July 2025. License to prepare site application submitted in June, 2023.

Expected Deployment
Point Lepreau Demonstration: 2029
Port of Bellendune Project: 2030-2035

Partners

Utility Partners
New Brunswick Power (NB Power)
New Brunswick, Canada
New Brunswick Power Corporation, operating as NB Power, is the primary electric utility in the Canadian province of New Brunswick. NB Power is a vertically-integrated Crown Corporation wholly owned by the Government of New Brunswick and is responsible for the generation, transmission, and distribution of electricity

Technology Partner
GE-Hitachi
Wilmington, NC
GE Hitachi Nuclear Energy is a provider of advanced reactors and nuclear services with deep experience in sodium cooled reactors.

Industry Partners
Hatch
Mississauga, ON, Canada..... (905) 855-7600
Hatch is a leading Canadian engineering firm with xtensive history in energy project design and execution and will design ARC's power plants in a fully digital format.

United Engineers & Constructors
Mount Laurel, NJ..... (844) 860-0504
United is a leading infrastructure engineering, procurement, construction, and consulting company.

Industry Partners (continued)

Kinectrics
Toronto, Ontario..... (416) 207-6000
Kinectrics is an integrated life cycle management services company providing testing, inspection, certific tion and engineering consulting for the electric power generation, transmission and distribution markets worldwide. ARC Clean Energy and Kinectrics will collaborate on regulatory affairs, safety analysis, and licensing support.

IHI Corporation
Tokyo, Japan..... +81 36-204-7800
IHI is a Japanese engineering corporation that produces and offers plant engineering and industrial machinery.

Cross River Infrastructure Partners
Greenwich, CT..... (203) 340-5750
Cross River will help ARC Clean Energy develop sustainable industrial projects globally that employ ARC Clean Energy's advanced Small Modular Reactor (SMR) technology.

Belledune Port Authority
New Brunswich, Canada..... (506) 522-1200
Port of Bellendune is Canada's Green Energy Hub whihc is a specialized development district on Port lands welcoming green energy projects and complementary, low-carbon industries

Other Partners

Argonne National Laboratory (ANL)
Argonne, IL..... (630) 252-2000
ANL is a multidisciplinary science and engineering research center, focused on nationally important energy and environmental research.

Idaho National Laboratory (INL)
Idaho Falls, ID..... (866) 495-7440
INL, a DOE national laboratory, is the nation's leading center for nuclear energy research and development.

Sandia National Laboratory (Sandia)
Albuquerque, NM..... (505) 844-8066
Sandia is a DOE national science and engineering laboratory focused on national security and technology innovation in support of the U.S. Department of Energy's National Nuclear Security Administration.

Other Partners (continued)

University of New Brunswick (UNB)
Fredericton, NB, Canada..... (506) 453-4508
UNB offers undergraduate and graduate degrees in more than 60 disciplines and continuing education in a variety of fields ARC and UNB are collaborating on several projects in support of the commercial deployment of the ARC-100 in New Brunswick.

Canadian Nuclear Laboratories (CNL)
Deep River, ON, Canada..... (613) 584-3311
CNL is Canada's premier nuclear science and technology organization, and a world leader in developing nuclear technology for peaceful and innovative applications. CNL is focused on restoring and protecting the environment, advancing clean energy technology, and medical breakthroughs continue to improve the health of people around the world. Through a joint agreement signed in July 2022, CNL will deliver a technology demonstration of the fuel fabrication process for ARC's reactor.

Province of Saskatchewan
Regina, SK, Canada..... (306) 787-2198
The Province of Saskatchewan and the Province of New Brunswick have signed an MOU to enhance collaboration on the development and deployment of ARC's small modular reactor.

Province of New Brunswick
Fredericton, NB, Canada..... (506) 453-3826
The Province of Saskatchewan and the Province of New Brunswick have signed an MOU to enhance collaboration on the development and deployment of ARC's small modular reactor.

Invest Alberta
Edmonton, AB, Canada.....
ARC and Invest Alberta Corporation have signed a Memorandum of Understanding ("MOU") to jointly pursue activities to support commercialization of ARC's advanced Small Modular Reactor in the province of Alberta.

Korea Hydro and Nuclear Power Co.
ARC, Korea Hydro and Nuclear Power Co (KHNP), and New Brunswick Power (NB Power) signed an MOU to explore collaboration opportunities for the commercialization of ARC's advanced SMR technology in Canada, Korea, United States and other areas where KHNP operates.

BWX Technologies

Major Project
BWXT Advanced Nuclear Reactor (BANR)™

Major Project Description
High Temperature Gas Reactor

Project Location or Headquarters
HQ: Lynchburg, VA
Project Location: TBD

Government Funding Status
DOE Risk Reduction Award Winner ($106.6 million)

NRC Licensing Status
QA Topical Report Submitted to the NRC

Expected Deployment
Early 2030s

Partners

Other Partners
Idaho National Laboratory

Idaho Falls, ID..... (866) 495-7440
INL is providing support via irradiation of fuel specimens in the Advanced Test Reactor (ATR) and post-irradiation examinations.

Other Partners (continued)
Oak Ridge National Laboratory (ORNL)
Lemont, IL..... (303) 751-0741
ORNL is providing support via TRISO fuel research and collaborating on developing new ways to manufacture and qualify parts and materials for high-temperature reactor applications.

BWX Technologies

Major Project
Project PELE™

Major Project Description
Transportable High Temperature Gas Microreactor

Project Location or Headquarters
HQ: Lynchburg, VA
Project Location: Lynchburg, VA*
Reactor Site: Idaho National Laboratory, Idaho Falls, ID

Government Funding Status
DOD-SCO Project Pele Winner ($300 million)

NRC Licensing Status
None - DOE authorization; NRC observing

Expected Deployment
2026

*A majority of the work and reactor assembly on Project Pele will be performed in Lynchburg. The microreactor will then be shipped to INL.

Partners

Industry Partners

Northrop Grumman
Falls Church, VA..... (703)-280-2900
Northrop Grumman Corporation is an American multinational aerospace and defense technology company.

Rolls-Royce LibertyWorks
Indianapolis, IN..... (317) 230-2000
Rolls-Royce is a leading manufacturer of highly-efficient integ ated power and propulsion solutions. Their power systems are used in aerospace, naval marine, energy and off-highway applications.

Torch Technologies, Inc.
Huntsville, AL..... (256) 319-6000
Torch Technologies provides research, development, and engineering services to the Federal Government and Department of Defense.

Other Partners

Idaho National Laboratory
Idaho Falls, ID..... (866) 495-7440
Under a $37 million award from the Idaho National Laboratory (INL), BWXT will manufacture a core for Project Pele, TRISO fuel for additional reactors and coated particle fuel for NASA. INL administers the contract and provides the technical support and oversight. Fuel for the reactor will be downblended from U.S. government stockpiles of high-enriched uranium (HEU) to high-assay low-enriched uranium (HALEU) and fabricated into TRISO fuel at the BWXT facility in Lynchburg, Virginia.

GE Vernova Hitachi

Major Project(s)
BWRX-300

Major Project Description
Small Modular Boiling Water Reactor

Project Location or Headquarters
HQ: Wilmington, NC
Project Location: Toronto, Ontario, Canada and Saskatchewan, Canada; Clinch River, TN, USA

Government Funding Status
DOE Technology Development Grant Awardee

NRC, ONR (U.K. Office for Nuclear Regulation) and CNSC Licensing Status

NRC: Construction Permit Application submitted May 2025.

CNSC: Construction license issued April 2025

ONR: Generic Design Assessment is progressing with step one complete

Timeline
Darlington, Canada Project Deployment Expected: 2030

Timeline (continued)

Clinch River, TN Project Deployment Expected: 2032

Partners

Utility Partners

SaskPower
Regina, SK, Canada..... (306) 536-2886
SaskPower has selected the BWRX-300 for potential deployment in the mid 2030s.

Ontario Power Generation (OPG)
Toronto, ON, Canada..... (416) 592-2555
OPG has selected the BWRX-300 s for the Darlington new nuclear site, and will work with GE Vernova Hitachi Nuclear Energy (GEH) to deploy the reactor. Canada's first comme cial grid-scale, SMR could be completed as early as Q4 2028. In 2023, TVA, OPG, and SGE an-nounced that they will invest in the develop-ment of the BWRX-300 standard design and detailed design for key components, includ-ing reactor pressure vessel and internals.

Tennessee Valley Authority (TVA)
Knoxville, TN..... (865) 632-2101
In early 2022, TVA Board Members authorized a New Nuclear Program to explore innovative technologies and the company is currently in discussions with GHV to support their BWRX-300 design. In 2023, TVA, OPG, and SGE announced that they will invest in the development of the BWRX-300 standard design and detailed design for key components, including reactor pressure vessel and internals.

Industry Partners (continued)

Hatch
Mississauga, ON, Canada..... (905) 855-7600
Hatch will deliver engineering, construction, and modularization services as well as the manufacturing of safety-related components. Hatch expects to provide key engineering and project delivery services.

Black and Veatch
Markham, OR, Canada..... (905) 747-8506
Black and Veatch is providing "architectural input" for GVH's BWRX-300 small mod-ular reactors. GVH has also partnered with Overland Contracting (a Black and Veatch company), a full-service engineering, procurement and construction contractor.

Saskatchewan Industrial and Mining Sup-plier's Association (SIMSA)
Saskatoon, SK, Candada..... (306) 343-0019
GVH SMR Canada and SIMSA agree to col-laborate in engaging with local suppliers to enhance the role of the Saskatchewan supply chain in the nuclear energy industry.

Synthos Group
Oświęcim, Poland..... +48 33 844 18 21
In 2019, Synthos Green Energy - part of the Synthos Group - signed a cooperation agreement with GVH for the construction of the BWRX-300 reactor in Poland. In 2023, TVA, OPG, and SGE announced that they will invest in the development of the BWRX-300 standard design and detailed design for key components, including reactor pressure ves-sel and internals.

Cameco
Saskatoon, SK, Canada..... (306) 956-6294
GVH, Global Nuclear Fuel-Americas, and Cameco have entered into a Memorandum of Understanding to explore several areas of cooperation to advance the commercialization and deploy-ment of BWRX-300 small modular reactors (SMRs) in Canada and around the world. Cameco supplies uranium, uranium refining and conversion services to the nuclear indus-try worldwide and is a leading manufacturer of fuel assemblies and reactor components for CANDU reactors.

AECON Nuclear
Calgary, AB, Canada..... (519) 740-7477
Aecon Nuclear provides a full spectrum of Engineering, Procurement and Construction (EPC) services, in addition to maintenance and manufacturing services for the nuclear power industry. Per a contract announcement between OPG, GVH, Aecon, and SNC-Lav-alin, Aecon will handle all construction services, including project management, construction planning, and execution for the Darlington project.

BWXT Nuclear Energy Canada
Cambridge, ON, Canada..... (717) 235-5469
BWXT NEC has over 60 years of experience in the design and supply of large nuclear vessels and other highly reliable nuclear equipment that is used to fuel, inspect, and refurbish reactors. BWXT Canada was award-ed the engineering contract for GVH's BWRX-300 reactor pressure vessel (RPV) at the Darlington site. Work associated with the contract includes engineering analysis, design support, manufacturing and procure-ment preparations.

AtkinsRéalis
Montreal,Canada..... (514)-393-1000
Per a contract announcement between OPG, GVH, SNC-Lavalin, and Aecon, SNC-Lava-lin will serve as the architect and engineer, providing design, engineering, and procure-ment support.

Sheffield Forgemasters
Sheffield UK..... +44 (0)114-244-907
Sheffield orgemasters have manufactured cast and forged nuclear components for multiple applications since 1950. Through an MOU, GVH and Sheffield Forgemasters agree to discuss how the Sheffield-based comp -ny's existing and future capabilities could help meet the potential demands of BWRX-300 deployment.

Fermi Energia
Tallinn, Estonia.....
Fermi Energia is a privately-held company that is introducing a new generation small modular reactor in Estonia to help meet the secu-rity of supply of Estonian energy and achieve the climate goals. help meet the potential demands of BWRX-300 deployment.

Industry Partners (continued)

Boccard
Boccard, a France-based engineering firm, and GVH will strengthen the UK nuclear supply chain to help deliver the BWRX-300 SMR technology to the UK.

Cavendish
London, UK.....+44 20 7908 6000

GVH signed an MOU with Cavendish Nuclear, a subsidiary of Babcock International, focusing on advanced manufacturing practices, operational readiness, and supply chain development for the Reactor Pressure Vessel and other key components.

General Atomics

Major Project(s)
Fast Modular Reactor™ (FMR)

Major Project Description
Small Modular High Temperature Gas Fast Reactor

Project Location or Headquarters
HQ: San Diego, CA
Contact: Ron Faibish, 202-713-8333

Government Funding Status
DOE ARC-20 Award Winner ($31.1 million)

NRC Licensing Status
Preapplication Interaction

Timeline
Mid-2030s

Partners

Industry Partners
Framatome
Lynchburg, VA..... (434) 832-3000
Framatome signed an agreement to provide testing and analyses needs. Addtionally, Framatome's US engineering team will be responsible for designing several critical structures, systems and components for the FMR

Holtec International

Major Project(s)
SMR-300™

Major Project Description
Small Modular Pressurized Water Reactor

Project Location or Headquarters
HQ: Camden, NJ
Project Location: Oyster Creek Nuclear Site, NJ

Government Funding Status
DOE Risk Reduction Award Winner ($147.5 million)

NRC, ONR and CNSC Licensing Status

NRC: Preapplication Engagement

CNSC: VDR Phase 1 complete

UK ONR: Generic Design Assessment review is underway

Timeline
First Commercial SMR-300 at Palisades, USA 2030

Partners

Utility Partners

Energoatom
Kyiv, Ukraine.....
The National Nuclear Energy Generating Company of Ukraine (Energoatom) is the Ukrainian state operator for the country's four nuclear power stations. "Energoatom" and Holtec International have signed a Cooperation Agreement that envisions building the first SMR-300 Pilot Project by March 2029.

ČEZ Group
Prague, CZ..... +420 211-041-111
ČEZ currently operates two nuclear power plants in the Czech Republic, with nuclear power generating roughly one third of all electricity in the country. Holtec and ČEZ Group have an MOU to develop the division of responsibilities for procurement, construc-tion, and commissioning of SMR-300 plants in Czech Republic in accordance with Czech Codes and Standards and inclusion of Czech content in the delivery of the projects. The Parties will also develop a cost estimate for deployment of the SMR-300 standard design in the Czech Republic.

Industry Partners

Mitsubishi Electric
Warrendale, PA..... (724) 772-2555
Mistsubishi will design and engineer the digital instrumentation and control systems (I&C) for Holtec's SMR-300.

ÚJV Řež
Husinec, Czech Republic... +420 266 172 000
This partnership will provide for technical exchange and cooperation, focusing on the licensing pathway and project assessment for SMR-300.

Škoda Praha
Prague, Czech Republic.... +420 211 045 242
Through this partnership Holtec and Skoda Praha will develop the division of responsibilities for procurement, construction, and commissioning of SMR-300 plants in Czech Republic in accordance with Czech Codes and Standards. They will also develop a cost estimate for deployment of the SMR-300 standard design in the Czech Republic.

Mooreside Clean Energy Hub
White Haven, England
Holtec has joined a consortium with 15 major companies to establish the Moorside Clean Energy Hub in North West England. At the center of the Hub's plan is a number of nuclear projects at Moorside, including a new UK-EPR pressurized water reactor together with potentially a batch of small modular reactors and other innovative technologies.

North American ForgeMasters (NAF)
New Castle, PA..... (724) 658-4703
North American Forgemasters (NAF) is a 50-50 joint venture between Scot Forge and Ell-wood Group, Inc. NAF will provide the large component forgings for SMR-300s.

Framatome
Lynchburg, VA..... (434) 832-3000
Holtec International has selected Framatome to develop and qualify the SMR-300 PWR fuel design.

Industry Partners (continued)

Hyundai E&C
Seoul, South Korea..... (822) 2005-0800
Hyundai will complete the Balance-of-Plant (BOP) design for Holtec's SMR-300 SMRs and develop the integrated 3D plant model for construction using HDEC's proven Building Information Modelling (BIM) management process.

Other Partners

Korea Trade Insurance Corporation (K-SURE)
Seoul, South Korea..... (82-2) 399-7441
K-SURE was established with the goal of promoting trade and overseas investment of Korean enterprises and a mission to boost South Korea's national comptetitiveness. In a joint announcement with KEXIM and Holtec, the partnership made between companies will focus on provide financial backing to SMR-300 projects around the world.

Export-Import Bank of Korea (KEXIM)
Seoul, South Korea..... (82-2) 3779-6114
The primary purpose of KEXIM is to support South Korea's export-led economy by providing loans, financing mega p ojects and thereby facilitating economic cooperation with other countries. In a joint announcement with K-SURE and Holtec, the partnership made between companies will focus on provide financial backing to SMR-300 projects around the world.

Hi Tech Solutions LLC
Kennewick, WA
Hi Tech Solutions, a nuclear services and energy development company, signed a strategic cooperation agreement with Holtec and the state of Utah, to collaborate in the development of SMR-300s in Utah and the broader Mountain West region. Hi Tech Solutions will leverage its extensive industry experience to train a highly skilled workforce, creating high-paying, sustainable jobs, while fostering a talent pipeline that will power the nuclear energy ecosystem for years to come.

Kairos Power

Kairos Power

Major Project
Kairos Power Fluoride Salt-Cooled High-Temperature Reactor (KP-FHR)™

Major Project Description
1. Hermes Low-Power Demonstration Reactor
2. Hermes 2 Demonstration Plant

Project Location or Headquarters
HQ: Alameda, CA
Project Location (for Hermes demonstration reactor): Oak Ridge, TN

Government Funding Status
DOE Advanced Reactor Demonstration Program (ARDP) Risk Reduction Award Winner - $629 million cost share agreement. DOE share: $303 million through a performance-based, fixed-price milestone approach

NRC Licensing Status
Hermes 1 Construction Permit issued December 2023

Hermes 2 Construction Permit issued November 2024

Expected Deployment
Hermes Demonstration Reactor: 2027
Hermes 2: Late 2030

Partners

Utility Partners

Tennessee Valley Authority (TVA)
Knoxville, TN..... (865) 632-2101
TVA and Kairos Power have formed a collaborative development agreement to provide defined engineering, perations, and licensing support for the Hermes low-power demonstration reactor.

KP-OMADA Advanced Nuclear Alliance
Kairos Power has assembled leading North American utilities and generating companies to form the Kairos Power Operations, Manufacturing, and Development Alliance (KP-OMADA) – the first modern advanced n - clear consortium in the U.S., which will advise on the development of KP-FHR technology, licensing, manufacturing, construction, and commercialization. Current members include:

Bruce Power
Tiverton, ON, Canada..... (519) 361-2673
Bruce Power is Canada's only private sector nuclear generator, producing 30% of Ontario's power and employing more than 4,000 people.

Utility Partners (continued)

Tennessee Valley Authority (TVA)

Knoxville, TN..... (865) 632-2101
Through a new power purchase agreement (PPA) between Kairos Power and TVA, Kairos Power's Hermes 2 Plant in Oak Ridge, Tenn., will deliver up to 50 megawatts (MW) of reliable, 24/7 energy to the TVA grid that powers Google data centers in Tennessee and Alabama.

Other Partners

Materion Corporation (ARDP Partner)

Mayfield Ohio..... (216) 486-4200
Kairos Power and Materion Corporation have partnered in a strategic collaboration to develop a reliable and cost-effective supply of salt coolant for high-temperature molten salt reactors. This coolant is a key component of Kairos Power's fluoride salt-cooled high-temperature reactors (KP-FHR). Under the agreement, Materion supplies beryllium fluoride expert technical consultation, and key interfaces, as well as operational support for the Kairos Power-designed Molten Salt Purific tion Plant. Materion is also a partner in the ARDP Risk Reduction award to support construction, operation, and commissioning of Kairos Power's Hermes demonstration reactor. In July 2022, Kairos Power and Materion commissioned their Molten Salt Purific - tion Plant to produce coolant for high-temperature molten salt reactors.

EPRI (ARDP Partner)

Charolotte, NC..... (650) 855-2121
The Electric Power Research Institute (EPRI) is a partner in the ARDP Risk Reduction award to support construction, operation, and commissioning of Kairos Power's Hermes demonstration reactor. EPRI conducts research, development, and demonstration projects for the benefit o the public in the United States and internationally.

Other Partners (continued)

Idaho National Laboratory (ARDP Partner)

Idaho Falls, ID..... (866) 495-7440
INL also partnered with Kairos Power on government contract awards including development of a prototype control room for an advanced reactor, among others.

Argonne National Laboratory

Lemont, IL..... (630) 252-2000
Argonne National Laboratory and Kairos Power have collaborated on multiple government contract awards, including the development of the System Analysis Module (SAM) Reactor Analysis Code to simulate entire nuclear power plants, and the development of an analytical method to detect oxygen impurities in Flibe salt.

Oak Ridge National Laboratory (ARDP Partner)

Oak Ridge, TN..... (865) 576-7658
Sited in Oak Ridge, TN, Hermes will build upon research first pionee ed in the lab on molten salts and the TRISO annular pebble fuel form to be used in KP-FHR. ORNL has also partnered with Kairos Power on government contract awards including fabrication and testing of corrosion-resistant alloys for use in molten fluoride salt envi onments, among others.

Sandia National Laboratory

Albuquerque, NM..... (505) 844-8066
Sandia National Lab and Kairos Power have collaborated on multiple government contract awards including a DOE Advanced Valve Project grant to develop a more reliable, high-temperature molten salt valve that can safely collect, store and transfer extremely hot and corrosive molten salt.

Urenco

Eunice, NM..... (703) 465 8110
Kairos Power has signed a memorandum of understanding (MOU) with Urenco to collaborate on a path forward to securing a HALEU supply for future commercial reactors.

Other Partners (continued)

Canadian Nuclear Laboratories

Deep River, ON, Canada..... (613) 584-3311
Canadian Nuclear Laboratories and Kairos Power collaborated on a grant funded through the Canadian Nuclear Research Initiative (CNRI) to engineer technologies to better separate, analyze and store tritium generated in small modular reactors.

Los Alamos National Laboratory (ARDP Partner)

Los Alamos, NM..... (505) 667-4391
Los Alamos National Lab (LANL) and Kairos Power have collaborated on multiple government contract awards including a study of molten salt as a coolant for advanced nuclear reactors, working together to develop new technologies to study chemical reactions within, and thermophysical properties of, molten fluoride salt In late 2022, Kairos announced that LANL will produce TRISO fuel pebbles for the Hermes demonstration reactor at Los Alamos' Low Enriched Fuel Fabrication Facility (LEFFF) in New Mexico.

NuScale Power Corp

Major Project(s)
NuScale Power SMR Technology

Major Project Description
Small Modular Integral Pressurized Water Reactor and Power Plant

Project Location or Headquarters
HQ: Corvallis, Oregon
Project Location: Doicesti, Romania (RoPower Project)

Government Funding Status
DOE cost-shared financial assistance awards of over $578 million

NRC and CNSC Licensing Status
NRC: Standard Design Approval for NuScale Module approved in May 2025

Timeline
RoPower Project Deployment Expected: Early 2030s

Partners

Utility Partners

Societatea Nationala Nuclearelectrica SA (SNN)

Bucharest, Romania..... +40 21-203-8200

SNN, a Romanian nuclear energy provider and Nova Power & Gas S.A., joined to create RoPower Nuclear S.A., and signed an MOU with NuScale to conduct engineering studies, technical reviews, and licensing and permitting activities at a site in Doicesti, Romania that is the preferred location for the deployment of the first NuScale power plant in Romania. In December 2022, a contract for Front-End Engineering and Design (FEED) work was signed. Phase 1 of the work defined the major site and specific inputs for a NuScale-based SMR plant at the Doicesti Power Plant and has been completed. Phase 2 is ongoing and projected to complete in 2025

Utility Partners (continued)

Indonesia Power

Jakarta, Indonesia..... (62-21) 5267666
Indonesia Power, in collaboration with Flour and Japan's JGC Corporation, is looking to deploy a 462-megawatt SMR pow-er plant, to be located in West Kalimantan. In March 2023, the United States and Indonesia announced a strategic partnership to help Indonesia develop its nuclear clean energy program, supporting Indonesia's interest in deploying SMR technology to meet its energy security and climate goals. Under this engagement, USTDA awarded a grant to Indonesia Power to provide assistance to assess the technical and economic viability of the proposed nuclear power plant.

Industry Partners

Fluor

Fluor is a global engineering, procurement, fabrication, and construction (EPFC) compa-ny providing project services for) SMR tech-nologies, operations support for existing facilities, and waste management. Fluor is the major investor in NuScale Power and will pro-vide it's EPFC expertise and financial strength to support the deployment of NuScale's SMR technology.

Doosan Enerbility

Doosan, a Korean industrial and energy company, commenced its partnership with NuScale in 2019, and has since completed the design for manufacture of the NPM and performed manufacturing trials to reduce schedule risk and increase cost certainty. As of May 2023, Doosan began forging the first reactor pressure vessel (RPV) components for NuScale. As of September 2025, there are now 12 NuScale Power Modules being manufactured.

Framatome

Lynchburg, VA..... (434) 832-3000
Framatome signed an agreement with NuS-cale to manufacture fuel assemblies for its SMR based on conventional ceramic urani-um dioxide fuel and to provide testing and analyses needed for its Nuclear Regulatory Commission design certific tion application. In December 2022, NuScale and Framatome announced an additional partnership for Framatome to design fuel handling equip-ment and fuel storage racks.

Industry Partners (continued)

ENTRA1 Energy LLC

ENTRA1 Energy LLC is NuScale's exclusive global strategic partner for the commercialization and development of power plants utilizing NuScale's NPMs.

Oklo

Major Project
Aurora Powerhouse™
Advanced Fuel Center

Major Project Description
Fast Spectrum Solid Core Microreactor Fuel Recycling Facility

Project Location or Headquarters
HQ: Santa Clara, CA
Project Location: Idaho National Lab, Idaho Falls, ID; Piketon, Ohio; Oak Ridge, TN; Fair Banks, AK

Government Funding Status
ARPA-E ONWARDS, CURIE, and OPEN award winner, DOE TCF award winner, DOE is supplying first core load.

NRC Licensing Status
Completed pre-application readiness assessment for Phase 1 of the combined license application (COLA)

Expected Deployment
INL Demonstration: 2027
Southern Ohio Diversification Initiative Project: Late 2020s
EAFB (USA) Project: Late 2020s

Subsidiaries

Atomic Alchemy
Idaho Falls, ID
Oklo acquired Atomic Alchemy, a leading innovator in radioisotope production in early 2025. This acquisition enhances Oklo's capabilities to establish a reliable domestic supply chain for high-value radioisotopes critical to healthcare, research, and defense sectors and provides synergies to Oklo's fuel recycling and nuclear energy businesses

Partners

Centrus Energy Corp
Bethesda, MD …. (301) 564-3200
Oklo and Centrus have signed a non-binding Letter of Intent (LOI) to cooperate in the deployment of a production facility for high-assay low-enriched uranium (HALEU) to support the commercialization of advanced fission plants such as Oklo's Aurora.

Argonne National Laboratory (ANL)
Lemont, IL …. (630) 252-2000
Oklo and ANL are partnering on cutting-edge fuel recycling projects, through awards granted by the ARPA-E ONWARDS and OPEN programs, and the DOE's Technology Commercialization Fund. These projects include demonstrating end-to-end fuel recycling process to develop a secure and economic domestic fuel supply chain for advanced fission.

Idaho National Laboratory (INL)
Idaho Falls, ID … (866) 495-7440
INL has provided Oklo with the fuel for their first Aurora powerhouse core. Oklo will also be building their first Aurora powerhouse at INL, as well as their Aurora Fuel Fabrication Facility. Oklo's Atomic Alchemy has also begun site characterization work at a potential location for a commercial radioisotope production facility at INL.

Southern Ohio Diversification Initiative (SODI)
Piketon, OH … (740) 897-2122
Oklo and SODI have signed an agreement to deploy two commercial Aurora powerhouses in Southern Ohio.

Diamondback Energy
Midland, TX … (432) 221-7400
Oklo and Diamondback Energy signed a non-binding LOI to supply 50 megawatts over a 20-year power purchase agreement (PPA). Diamondback aims to use Oklo's Aurora powerhouses to power its operations in the Permian Basin.

Equinix
Redwood City, CA … (888) 892-0609
Oklo and Equinix signed a pre-agreement to procure up to 500 megawatts with a $25M pre-payment.

Siemens Energy
Munich, Germany … +49-911-6505-6505
Oklo signed a preferred supplier agreement with Siemens Energy to supply the power production side of the Aurora powerhouse.

Prometheus Hyperscale
Oklo and Prometheus Hyperscale signed a non-binding LOI to supply 100 megawatts over a 20-year PPA. Prometheus Hyperscale will aim to use Oklo's Aurora powerhouses to power a state-of-the-art data center campus.

Korea Hydro & Nuclear Power (KHNP)
Naju, South Korea … +82-54-704-2114
Oklo and KHNP signed a memorandum of understanding (MOU) with plans to collaborate on the development and global deployment of Oklo's advanced nuclear technology. Under the MOU, KHNP and Oklo will explore opportunities to jointly advance the standard design of development and verification of Oklo's Aurora powerhouse.

Switch
Las Vegas, NV … (877) 775-4774
Oklo and Switch signed a non-binding Master Power Agreement to deploy 12 gigawatts of Oklo powerhouse projects through 2044. Oklo will develop, construct, and operate powerhouses to provide power to Switch across the U.S. through a series of PPAs.

TVA
Knoxville, TN … (865) 632-2101
Oklo is exploring opportunities with TVA to recycle used fuel at the new Advanced Fuel Center facility in Oak Ridge, TN. The two are also evaluating the potential power sales from future Oklo powerhouses in the region to TVA.

Liberty Energy
Denver, CO … (303) 515-2800
Oklo and Liberty launched a strategic alliance to accelerate integrated power solutions for large-scale, high-demand customers, including data centers, industrial facilities, and utility-scale sites.

Vertiv
Columbus, OH … (614) 888-0246
Oklo and Vertiv announced a collaboration agreement focused on the co-development of advanced power and thermal management solutions tailored specifically for hyperscale and colocation data centers, powered by steam and electricity from Oklo's advanced nuclear power plants.

Lightbridge Corporation
Reston, VA … (571) 730-1200
Lightbridge Corporation and Oklo signed a MOU to explore the potential co-location of a Lightbridge fuel fabrication facility within Oklo's planned advanced fuel manufacturing facility. This initiative aims to accelerate the commercialization of advanced nuclear fuels through joint fuel fabrication and research and development, including manufacturing fuel using repurposed plutonium from legacy materials.

Kiewit Nuclear Solutions Co.
Idaho Falls, ID … (208) 970-4073
Oklo announced Kiewit Nuclear Solutions Co. (Kiewit), a subsidiary of Kiewit Corporation, as the lead constructor for its first commercial Aurora powerhouse in Idaho, at INL. Kiewit will begin to support the design, procurement, and construction of the Aurora-INL, with pre-construction expected to begin in 2025 and commercial operations targeted for late 2027 to early 2028.

Defense Logistics Agency Energy, Department of Air Force
Eielson Air Force Base, AK
Oklo was issued a Notice of Intent to Award (NOITA) by the Defense Logistics Agency Energy (DLA Energy), on behalf of the Department of the Air Force (DAF), and the U.S. Department of Defense. Under the terms of the anticipated agreement, Oklo would design, construct, own, and operate the power plant, delivering both electricity and heat to the DAF's preferred installation, Eielson Air Force Base in Alaska, under a long-term PPA.

City of Oak Ridge
Oak Ridge, TN … (865) 425-3400
Oklo announced plans to design, build, and operate a fuel recycling facility in Tennessee as the first phase of an advanced fuel center investment totaling up to $1.68B and aiming to create more than 800 high-quality jobs. The initial investment will be for the construction of a facility to recycle used nuclear fuel into fuel for fast reactors like Oklo's Aurora powerhouse.

ABB Group
Zurich, Switzerland … (800) 435-7365
Oklo signed a MOU with ABB to explore collaboration opportunities, including digitalization, automation, and electrification of future powerhouse sites, as well as joint R&D related to data center integration and advanced energy systems. ABB commissioned a digital monitoring room at Oklo's headquarters in Santa Clara, CA. The monitoring room is equipped with ABB technology, and will anchor Oklo's operator training and simulation center.

TerraPower
A Nuclear Innovation Company

TerraPower

Partners

Major Project
Natrium™

Major Project Description
Sodium Fast Reactor

Project Location or Headquarters
HQ: Bellevue, Washington
Demonstration Project Location: Kemmerer, Wyoming

Government Funding Status
DOE Demonstration Award Winner ($1.97 billion)

NRC Licensing Status

Construction Permit Application accepted in March 2024

Timeline
Demonstration Reactor Operation Expected: 2031

Utility Partner
PacifiCorp
Portland, OR..... (888) 740-6700
PacifiCorp is an electric power company in the western United States that will be the operator for the Natrium™ project. In March 2023, Pacificorp announced a forecast for two additional Natrium projects are performing site evaluations for an additional 4 plants.

Technology Partner
GE-Hitachi
Wilmington, NC
GE-Hitachi Nuclear Energy is a provider of advanced reactors and nuclear services. TerraPower's Natrium design is based off TerraPower's TWR and GE-Hitachi's PRISM reactor designs and TerraPower will collaborate with GE-Hitachi as a technology partner to build the Natrium™ project.

Industry Partners
Bechtel
Reston, VA..... (571) 392-6300
Bechtel Corporation is an American engineering, procurement, construction, and project management company. TerraPower chose Bechtel as its plant design, licensing, procurement, and construction partner in a

Industry Partners (continued)

Orano Federal Services
Bethesda, MD..... (301) 841-1600
Orano USA is a technology and services provider for decommissioning shutdown nuclear energy facilities, managing used nuclear fuel, conducting federal site clean-up and closure, and the sale of uranium, conversion, and enrichment services to the U.S. commercial and federal markets.

Global Nuclear Fuels Americas, LLC
Wilmington, NC
GNF, a GE-led joint venture, and TerraPower announced an agreement to build the Natrium Fuel Facility. The facility represents an investment of more than $200M.

Energy Northwest
Richland, WA..... (509) 372-5000
Energy Northwest is a public power joint operating agency in the northwest United States. They will provide licensing and operating experience to the TerraPower-GE Hitachi team to facilitate development of the concept, including the potential for future operation and maintenance of a plant.

Other Partners

Idaho National Laboratory (INL)
Idaho Falls, ID..... (866) 495-7440
INL a DOE national laboratory, is the nation's leading center for nuclear energy research and development.

Argonne National Laboratory (ANL)
Lemont, IL..... (630) 252-2000
ANLis a science and engineering research national laboratory operated by UChicago Argonne LLC for the United States Department of Energy.

Pacific No thwest National Laboratory (PNNL)
Richland, WA..... (509) 375-2121
Pacific No thwest National Laboratory is one of the United States Department of Energy national laboratories, managed by the Department of Energy's Office o Science.

Oak Ridge National Laboratory (ORNL)
Oak Ridge, TN..... (865) 576-7658
ORNL is one of the US DOE national laboratories, managed by the DOE Office o Science

Other Partners (continued)

Duke Energy
Charlotte, NC.....
Duke Energy is an electric utility serving more than 8.2 million people. Duke Energy has included advanced nuclear generation in their latest Integrated Resource Plan.

HD Hyundai
TerraPower and HD Hyundai announced a strategic collaboration to further scale the global manufacturing supply chain for Natrium reactor components. The agreement combines HD Hyundai's manufacturing expertise with TerraPower's frontier reactor technology, and will build new supply chain capacity to enable large-scale production and global deployment of Natrium plants.

TerraPower

Major Project
Molten Chloride Reactor Experiment™ (MCRE)

Major Project Description
Liquid Fueled Molten Chloride Salt Reactor (with Southern Company as a partner)

Project Location or Headquarters
HQ: Bellevue, Washington
MCRE Project Location: Idaho National Lab, Idaho Falls, Idaho

Government Funding Status
DOE Risk Reduction Award Winner ($136 million)

NRC Licensing Status
Preapplication Interaction

Timeline
Reactor Operation Expected: 2025

Partners

Utility Partner

Southern Company
Atlanta, GA..... (404) 506-5000
Southern Company is an American gas and electric utility holding company based in the southern United States. Southern Company's Research and Development branch is also developing low- and no-carbon generation technologies, advancing renewables, energy storage and distributed generation solutions, and modernizing the grid.

Industry Partners

CORE POWER
Washington, DC..... (202) 507-6375
CORE POWER works on the successful deployment of advanced reactor technologies for the maritime industries.

Orano Federal Services

Bethesda, MD..... (301) 841-1600
Orano Federal Services is a partner for environmental cleanup and advanced nuclear solutions with a corporate focus on climate change.

3M Company
St. Paul, MN..... (888) 364-3577
3M™ Stable Isotopes are used in a variety of nuclear power plant and research applications, including: reactor criticality control; both wet and dry, spent, and fresh fuel transportation and storage; nuclear waste containment; and neutron radiation control.

Other Partners

Idaho National Laboratory (INL)
Idaho Falls, ID..... (866) 495-7440
Idaho National Laboratory, a DOE national laboratory, is the nation's leading center for nuclear energy research and development.

Electric Power Research Institute
Charolotte, NC..... (650) 855-2121
The Electric Power Research Institute, Inc., is an American independent, nonprofit o ganization that conducts research and development related to the generation, delivery, and use of electricity.

Terrestrial Energy

Major Project(s)
Integral Molten Salt Reactor™ (IMSR)

Major Project Description
Liquid Fueled,Molten Salt Reactor

Project Location or Headquarters

HQ: Charlotte, North Carolina

Government Funding Status
DOE $3M award to support licensing and commercialization of IMSR

NRC and CNSC Licensing Status
NRC: Preapplication Interaction

CNSC: VDR Phase 1 complete, VDR Phase 2 complete

Timeline
2030s

Partners

Industry Partners

Hatch
Dallas, TX..... (972) 457-9006
The agreement with Hatch provides support for engineering, component procurement, project and construction management, and power plant cost estimation relating to the development and construction of an IMSR power plant.

BWXT Canada
Cambridge, ON, Canada..... (717) 235-5469
Terrestrial Energy has signed engineering design contracts with BWXT Canada for steam generators and heat exchangers for use in the IMSR.

Westinghouse
Cranberry, PA..... (717) 235-5469
Westinghouse and the UK National Nuclear Laboratory signed an agreement for nuclear fuel development and supply to advance the industrial scale up and commercial supply of enriched uranium fuel for use in Terrestrial Energy's IMSR.

Industry Partners (continued)

KBR
Houston, TX..... (822) 200-5080
KBR, Inc. is a U.S. based company operating in fields of science, technology and engineering. Terrestrial Energy has signed an agreement with KBR to investigate the application of zero-emission thermal energy for hydrogen and ammonia production.

ANTSO Synroc
Melbourne, Australia..... +61 3 8540 4100
ANSTO will provide technical consulting services to Terrestrial Energy for the conditioning of used reactor fuel from the operation of Integral Molten Salt Reactor heat and power plants in Canada, United Kingdom, United States, and other global markets.

L3Harris
Montreal, QC, Canada..... (450) 476-4000
Terrestrial Energy signed a contract with L3Harris to develop an engineering and operator training simulator for the IMSR.

Siemens Energy Canada
Oakville, ON, Canada..... (905) 465-8000
Siemens Energy Canada will manufacture and supply steam turbines and other balance-of-plant equipment, such as transformers, switchgear, and motor drive systems, for the IMSR.

Cameco
Saskatoon, SK, Canada..... (306) 956-6294
Cameco Corporation will examine potential partnership opportunities to deploy the IMSR in North America and worldwide, and will evaluate possible opportunities for the supply of uranium, fuel and other services. As part of these activities, Terrestrial and Cameco will investigate the potential of Cameco's Port Hope uranium conversion facility.

Orano
Saskatoon, SK, Canada..... (306) 343-4500
The agreement with Orano includes uranium enrichment, chemical conversion to IMSR fuel form, its production, transportation, packaging, and logistics. This scope covers analysis for full-scale commercial production and supply of IMSR fuel and applies to major markets for IMSR power plant deployment today, including Canada, the US, the UK, and Japan.

Industry Partners (continued)

ENGIE Laborelec
Linkebeek, Belgium
ENGIE Laborelec will perform confirm tory electrochemical and thermophysical measurements as well as confirm tory corrosion testing. The tests will be performed under conditions compliant with quality assurance protocols of nuclear codes and standards, as is required to advance a nuclear power plant design through the regulatory process. To perform this wide range of testing, ENGIE Laborelec will work in close collaboration with its partners, John Cockerill, CRM Group and IJCLab-CNRS.

Aecon Group
Calgary, AB, Canada..... (519) 740-7477
Aecon will review Terrestrial Energy's construction costs and schedules for IMSR, as well as undertake constructability, modularization, and supplier assessments for a broad range of activities including plans for site development and heavy civil construction.

KSB Pump
Mississauga, ON, Canada..... (905) 568-9200
KSB Pumps will supply, develop, and manu-facture primary pumps.

Other Partners

Argonne National Laboratory (ANL)
Lemont, IL..... (630) 252-2000

Terrestrial Energy USA, Inc. has extended its testing program at Argonne National Laboratory (ANL) for measurements of fuel sal properties used in the IMSR.

UK Nuclear National Laboratory
Sellafield UK..... +31 (0)224 56 4950

Westinghouse and the UK National Nuclear Laboratory signed an agreement for nuclear fuel development and supply to advance the industrial scale up and commercial supply of enriched uranium fuel for use in Terrestrial Energy's IMSR.

Other Partners (continued)

First Nations Power Authority (FNPA)
Regina, SK, Canada..... (408) 621-0337
Terrestrail Energy and First Nations Power Authority (FNPA) have signed a Memorandum of Understanding (MOU) to explore opportunities to build Indigenous capacity for the future advanced small modular reactor (SMR) industry. Potential collaborative activities include the development of skills training, employment and commercial opportunities that could spur multi-generational Indigenous economic wealth.

TerraPraxis
London, UK.....
TerraPraxis and Terrestrial have signed a Letter of Intent (LOI) to cooperate on Repowering Coal. Under development by TerraPraxis, Repowering Coal is a program to standardize and systematize the replacement of coal furnaces at existing coal-fi ed power plants with high-temperature heat

Canadian Nuclear Laboratories (CNL)
Deep River, ON, Canada..... (613) 584-3311
Terrestrial Energy has completed an evaluation of its Integral Molten Salt Reactor's (IMSR) nuclear material safeguards in collaboration with the Canadian Nuclear Laboratories (CNL) with support from CNL's Canadian Nuclear Research Initiative (CNRI).

Invest Alberta
Edmonton, AB, Canada.....
Terrestrial and Invest Alberta Corporation have signed a Memorandum of Understanding ("MOU") to jointly pursue activities to support commercialization of Terrestrial's IMSR in the province of Alberta.

Emirates Nuclear Energy Corporation
(ENEC) United Arab Emirates
Terrestrial Energy has signed a Memorandum of Understanding (MoU) with ENEC. The MOU is part of the recently launched ENEC ADVANCE Program, which will evaluate the latest advancements in nuclear energy technologies to strengthen the UAE's position as a leading nation in delivering climate action by accelerating the global clean energy transition to Net Zero.

Other Partners (continued)

Schneider Electric
Rueil-Malmaison, France.....(877)-342-5173
Terrestrial Energy and Schneider Electric, a Fortune Global 500 supplier of digital control systems for energy management, have signed a Memorandum of Understanding (MOU) to jointly develop commercial opportunities and advance the deployment of Integral Molten Salt Reactor (IMSR) plants.

Westinghouse

Major Project(s)
eVinci Microreactor™

Major Project Description
Thermal Spectrum TRISO Fueled Heat Pipe Microreactor

Project Location or Headquarters
HQ: Cranberry, PA

Government Funding Status
US: DOE Risk Reduction Award Winner ($9.3 million)
Canada: C$27.2 million from the Govern-ment of Canada's Strategic Innovation Fund (SIF)

NRC and CNSC Licensing Status

NRC: Principal Design Criteria (PDC) Topical Report approved March 2025

CNSC: VDR Phase 2 underway

Timeline
Deployment expected 2030

Partners

Industry Partners
Saskatchewan Research Council (SRC)
Saskatoon, SK, Canada..... (306) 933-5400
Westinghouse and SRC will jointly develop a project to locate an eVinci™ micro-reactor in Saskatchewan for the development and testing of industrial, research, and energy use applications.

Other Partners
Southern Company
Atlanta, GA..... (404) 506-5000
Southern Company is an American gas and electric utility holding company based in the southern United States. Southern Company's Research and Development branch is also developing low- and no-carbon generation technologies, advancing renewables, energy storage and distributed generation solutions, and modernizing the grid.

Idaho National Laboratory (INL)
Idaho Falls, ID..... (866) 495-7440

INL will qualify the fuel and will perform site assessments of the eVinci microreactor design from Westinghouse.

Penn State University
State College, PA..... (814) 865-4700
Penn State and Westinghouse will partner on research and development focused on exploring and applying nuclear engineering and science innovations to societal needs. They will also begin discussions about siting Westinghouse's eVinci™ micro-reactor at University Park.

Los Alamos National Laboratory
Los Alamos, NM..... (505) 667-4391
Westinghouse and LANL are jointly testing eVinci™ heat pipe technology.

West Virginia University
Morgantown, WV..... (304) 293-0111
West Virginia and Westinghouse will partner on research and development focused on exploring and applying nuclear engineering and science innovations to societal needs. They will also begin discussions about siting Westinghouse's eVinci™ micro-reactor at the university.

Carnegie Mellon University
Pittsburgh, PA.....(412)-268-2000
CMU and Westinghouse will partner on research and development focused on exploring and applying nuclear engineering and science innovations to societal needs.

University of Pittsburgh
Pittsburgh, PA.....(412)-624-4141
Pitt and Westinghouse will partner on research and development focused on exploring and applying nuclear engineering and science innovations to societal needs.

McMaster University
Hamilton, Ontario.....+1 (905)-525-9140
McMaster and Westinghouse will partner on research and development focused on exploring and applying nuclear engineering and science innovations to societal needs. They will also begin discussions about siting Westinghouse's eVinci™ microreactor at the university.

Shawflex
Vaughan, Ontario
Westinghouse and Shawflex signed an MOU to support nuclear new-build projects in Canada and globally. Shawflex has the potential to supply cables, connectors and assemblies for key eVinci projects.

X-energy

Major Project
Xe-100™

Major Project Description
Small Modular High Temperature Gas Reactor

Project Location or Headquarters
HQ: Rockville, MD
Project Location (ARDP): Dow Seadrift, Texas Facility, Richland, Washington (Energy Northwest)

Government Funding Status
DOE Demonstration Award Winner ($1.25 billion), 48C Tax Credit Recipient (Fuel Fabrication Facility, $148.5M)

NRC and CNSC Licensing Status

NRC: Construction Permit Application for Dow Seadrift docketed May 2025

Add TRISO-X Category II Fuel Fabrication Facility submitted (April 2022)

CNSC: VDR Phase 1 and 2 completed January 2024

Timeline
Demonstration Reactor Operation Expected: 2031

Energy Northwest Deployment Expected: 2031

Partners

Utility Partners

Energy Northwest
Richland, WA..... (509) 372-5000
In October 2024, Amazon and Energy Northwest announced that they would work together to move towards the development and deployment of X-energy's Xe-100 SMRs within Washington state. As a part of this agreement, Amazon invested $334m to fund early development work for an initial four-unit, 320 MWe project near the Columbia Generating Station in central Washington, with an option to increase that project to 12 units and 960 MWe

Ontario Power Generation (OPG)
Toronto, ON, Canada..... (416) 592-2555
Under the agreement, X-energy and OPG will pursue opportunities to deploy Xe-100 advanced reactors in Ontario at industrial sites and identify further opportunities throughout Canada.

Industry Partners

Dow Chemical

Midlands, MI..... (989) 636-1000
X-energy and Dow Chemical have entered a joint development agreement ("JDA") to demonstrate the first grid-scale advanced nu-clear reactor at Dow's Seadrift, Texas industrial facility as part of ARDP.

Amazon

Amazon and X-energy are collaborating to bring more than 5 gigawatts of new power projects online across the United States by 2039, representing the largest commercial deployment target of SMRs to date. The efforts will help meet growing energy demands in key locations through direct project investments and long-term power purchase agreements to help power Amazon operations.

Amstead Graphite Material (AGM)

Anmoore, WV..... 304-624-1200
AGM and X-energy announced a partnership to establish an integrated domestic supply chain for nuclear-grade graphite to reduce dependence on foreign sources, bolster advanced manufacturing capabilities, and secure the nuclear energy supply chain in the United States.

Kinectrics

Naperville, IL.....(416) 207-6000

X-energy and Kinectrics will collaborate on regulatory affairs, safety and licensing, and equipment qualification and testing, includ-ing the builing of the first commercial-scale Helium Test Facilities ("HTF") in North Amer-ica. This facility will test and verify perfor-mance of critical structures, systems, and components.

Curtiss-Wright

Davidson, NC.....(704) 869 4600

In 2021, Curtiss-Wright Corporation and X-energy jointly announced that Curtiss-Wright had been selected to develop the Reactivity Control and Shutdown System for the X-energy Xe-100. This effort will leverage Curtiss-Wright's capabilities in nuclear power generation technologies to develop an inclusive package of control rod drive mechanisms, control rods, and the associated power supply and control system.

Industry Partners (continued)

Paragon Energy Solutions

Fort Worth, TX.....(817) 284 0077
Paragon provides supply chain management solutions, manufacturing and services, and safety-related parts and components for the US commercial nuclear energy industry. X-energy selected Paragon Energy Solutions to provide the Reactor Protection System.

DL E&C

Seoul, South Korea
DL E&C, one of the world's leading power and energy sector engineering and construction firms, will work with X-energy to identify domestic and international opportunities to support the development of Xe-100 at scale.

Orano

Bethesda, MD.....(301) 841-1600
Orano provides customers with high-performing products and services throughout the nuclear fuel cycle.

Sargent and Lundy

Chicago, IL..... (312) 269-2000

Sargent & Lundy will provide joint marketing and design services. Sargent & Lundy is providing site selection, licensing, and environmental services for the implementation of four Xe-100 small modular reactors (SMR).

Day & Zimmerman

Philadelphia, PA..... (717) 391-3160

Under the agreement, will work on a team with Burns & McDonnell to support the de-sign, development and construction of the Xe-100 fleet.

Doosan

Changwon, South Korea
Doosan, a South Korean industrial and energy company, is partnering with X-energy to provide the reactor pressure vessel and the steam generator for the Xe-100 .

Industry Partners (continued)

Burns & McDonnell

Kansas City, Missouri.....(913) 909-1835
Under the agreement, Burns & McDonnell will work on a team with Day & Zimmermann to support the design, development and construction of the Xe-100 fleet.

Hatch

Dallas, TX..... (972) 457-9006
X-energy signed a collaboration agreement for engineering and project management with Hatch Ltd for projects in Canada and globally.

Zachry Group

San Antonio, TX..... (409) 960-5037
Under the agreement, Zachry will support the design, development and construction of the Xe-100 fleet.

Cavendish Nuclear

Birchwood, UK..... (571) 392-6300
Cavendish Nuclear, part of Babcock Interna-tional Group, has signed a Memorandum of Understanding (MoU) with X-energy to act as its deployment partner for High Temperature Gas Reactors in the UK. X-energy and Cavendish received a funding award from the UK Government's Future Nuclear Enabling Fund ("FNEF") to further develop Advanced Modular Reactors (AMRs) in the UK. The companies will use the funds to develop UK-specific deployment plans including an assessment of domestic manufacturing and supply chain opportunities, constructibility, modularization studies, and fuel management

Korea Hydro & Nuclear Power Corporation

Republic of Korea.....+82-54-704-2114
X-energy, Amazon, Korea Hydro & Nuclear Power Corporation ("KHNP"), and Doosan Enerbility today announced a strategic partnership to accelerate the deployment of Xe-100 fourth generation advanced small modular reactors (SMRs) and TRISO-X fuel in the United States to meet growing power demands from data centers and artificial intelligence.

Industry Partners (continued)

Clark Construction

X-energy and its wholly-owned subsidiary, TRISO-X LLC ("TRISO-X"), selected Clark Construction Group to complete the building construction phase of its first-in-the-nation advanced nuclear fuel fabrication facility ("TX-1") in Oak Ridge, Tennessee.

Other Partners

Invest Alberta

Edmonton, AB, Canada.....
X-energy and Invest Alberta Corporation have signed an MOU to jointly pursue activ-ities to support commercialization of ARC's advanced Small Modular Reactor in the province of Alberta.

Maryland Energy Administration

Baltimore, MD..... (908) 580-1119
MEA has awarded grants to X-energy and Frostburg State University to work together to evaluate the economic viability and social-economic advantages of re-purposing a specific Maryland coal-fired electric generat-ing facility with X-energy's Xe-100.

First Nations Power Authority

Regina, SK, Canada..... (408) 621-0337

X-energy Canada and First Nations Power Authority (FNPA) have signed a Memoran-dum of Understanding (MOU) to explore opportunities to build Indigenous capacity for the future advanced SMR industry.

Saskatchewan Industrial and Mining Sup-plier's Association (SIMSA)

Saskatoon, SK, Candada..... (306) 343-0019
X-energy Canada and SIMSA have signed a memorandum of understanding to support the potential deployment of Xe-100 SMRs.

Oak Ridge National Laboratory

Oak Ridge, TN..... (303) 751-0741

Through an ARC15 awards, X-energy was able to demonstrate a commercial-scale TRISO fuel line at ORNL to demonstrate their fuel technology. Now X-energy will be creat-ing their TRISO-X fuel fabrication facility near ORNL in Oak Ridge, TN.

X-energy

Major Project
XENITH Microreactor

Major Project Description
Transportable High Temperature Gas Microreactor

Project Location or Headquarters
HQ: Rockville, MD
XENITH Project Location: TBD

Government Funding Status
DOE Industry FOA Winner
DIU / ANPI awardee

NRC Licensing Status
Application docketed

Timeline
Reactor Operation Expected: 2031

Partners

Bosal Energy
Lummen, Belgium
BOSAL Energy has years of experience in de-velopment, testing and production of highly effective heat exchangers. Bosal will provide the conceptual designs of the intermediate heat exchanger.

Calnetix Technologies, LLC
Cerritos, CA..... (562) 293-1160
Calnetix designs, develops and manufactures high-speed permanent magnet motor gener-ators, magnetic bearings systems and power electronics. Calnetix will provide the concep-tual designs of the circulator.

Partners (continued)

Idaho National Laboratory (INL)

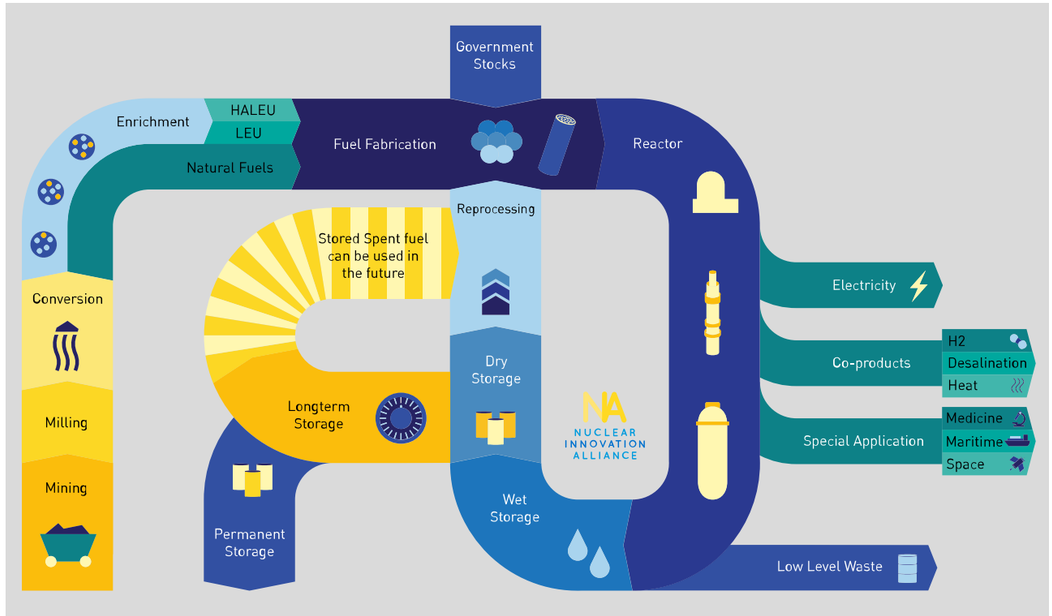
Idaho Falls, ID..... (866) 495-7440

INL, who led the ASME BPVC Section 3 Division 5 high temperature materials qualification campaign, provides guidance on inte-gration of these materials into this system, specifically regarding joining and weldment issues.

Oak Ridge National Laboratory (ARDP Partner)

Oak Ridge, TN..... (865) 576-7658

ORNL will apply their SCALE Code System to assess radiation shielding designs for these compact systems.



Fuel for Advanced Nuclear Reactors

Most advanced reactor companies will need to use HALEU fuel for their designs. This requires a mature, commercial HALEU market with adequate conversion, enrichment, and deconversion capabilities to meet fuel fabricator demands. These steps take mined and milled uranium ore and process it into a form that is suitable for use in fuel fabrication processes and eventual use in reactors.

Conversion is the process of taking uranium oxide and then reacting it with fluorine to create uranium hexafluoride gas (U_6). This gaseous uranium can then be used in different uranium enrichment operations. Conversion is identical for all nuclear reactor fuels, regardless of enrichment level or final fuel form. There is one commercial uranium conversion plant in the United States. The plant is Honeywell International Inc. and it is located in Metropolis, Illinois. This plant is currently in “idle-ready” status.

Enrichment is the process of raising the concentration of U-235, the fissile isotope o interest for advanced reactor fuels. The primary commercial technology to enrich uranium is gas centrifuge technology. The only gas centrifuge commercial production plant currently operating in the United States is the URENCO USA (UUSA) facility in Eunice, NM licensed as Louisiana Energy Services (LES). A small scale pilot plant developed and operated by Centrus was constructed to demonstrate scalable HALEU production. The facility has an initial production capacity of 600 kgU of HALEU per year and is expected to come online in 2023. Uranium enrichment using laser separation technology has been proposed as an alternative to gas centrifuge technology. Commercialization of uranium laser separation technology in the United States has been led by Global Laser Enrichment (GLE). This process has not yet been deployed at a commercial scale for the enrichment of uranium.

Deconversion is the process of taking gaseous UF_6 and chemically processing it into a solid form. These solid forms may include uranium metals, oxides, salts, or other solid forms. The deconversion process can facilitate simpler transportation of HALEU between facilities or prepare HALEU for use in a fuel fabrication process. Different advanced reactor designs will utilize a variety of different deconverted HALEU forms that will vary in both form and final enrichment Some advanced reactor developers may need additional processing facilities to downblend deconverted HALEU to decrease the concentration of U-235 if HALEU fuel is only enriched to higher than needed concentrations.