

Advanced Nuclear Milestones Monthly Update

Thanks for your interest in the Gateway for Accelerated Innovation in Nuclear's [Milestones In Advanced Nuclear website](#), an interactive website that provides the latest news in the U.S. nuclear power industry. We will update you monthly with newly identified milestones.

Newly Added Milestones:

- Eielson Air Force Base selected as location for DOD micro-reactor project pilot (10/15/2021)
- IL S.B. preserves Illinois nuclear (9/14/2021)
- Integrated Storage Partners receives NRC license for a consolidated interim storage facility (9/13/2021)
- X-Energy completes first CSNC-NRC joint regulatory review (8/6/2021)
- Kairos Power to establish low-power demonstration reactor in Oak Ridge (7/16/2021)
- Oklo secures 20-year partnership to power bitcoin mining (7/14/2021)
- Nebraska L.B.84 is signed, incentivizing advanced nuclear projects (5/20/2021)
- Deep Isolation awarded contract to assess feasibility of onsite deep horizontal borehole disposal (4/27/2021)
- BWXT restarts TRISO fuel manufacturing (11/10/2020)

Head over to [Milestones In Advanced Nuclear website](#) to learn more.

Is a Milestone Missing?

These milestones are curated from the advanced nuclear industry to represent an inclusive and technology agnostic viewpoint of the industry's development. Therefore, we are open and encourage suggestions for additional milestones. To suggest a milestone, please fill out this form: [Suggest a Milestone Form](#).

About the Milestones in Advanced Nuclear Milestones Website

The Gateway for Accelerated Innovation in Nuclear (GAIN) and Envoy Public Labs (EPL) developed the Milestones in Advanced Nuclear Timeline as the first unified tool that maps the development of AR by allowing potential users to learn and remain updated on AR industry milestones. Milestones are identified directly from experts within the industry and span subjects including technology development, policy, regulation, finance, and integrated energy systems. Each milestone provides a brief description of what happened and puts the event in context of the broader development and commercialization of AR technology.

DOE Awards \$8.5 Million to Advance Promising Nuclear Technologies

November 18, 2021

Washington, D.C. – The U.S. Department of Energy (DOE) today awarded \$8.5 million to help commercialize promising advanced nuclear technologies. The funding supports five industry-led projects across the country and leverages the latest modeling and simulation tools developed by DOE, in addition to siting analysis and other research activities that will inform the future deployment of advanced reactors on islands or for the potential use in maritime applications.

“Advanced reactors will completely change the way we engineer, build, and operate nuclear reactors,” said Dr. Kathryn Huff, Principal Deputy Assistant Secretary for Nuclear Energy. “These awards support technical and regulatory strides necessary for commercializing new carbon-free nuclear technologies poised to help our nation reach net-zero emissions by 2050.”

The awards are funded through the Office of Nuclear Energy’s U.S. Industry Opportunities for Advanced Nuclear Technology Development funding opportunity, which has invested more than \$215 million in advanced nuclear technologies since 2017. The solicitations are broken down into three funding pathways to support first-of-a-kind nuclear demonstration readiness projects, advanced reactor development projects, and direct regulatory assistance.

The following projects selected under the advanced reactor development projects pathway include:

Phase 2 - Site Suitability Study for Small Modular Reactor and Microreactors in Puerto Rico - The Nuclear Alternative Project (Sugar Land, TX)

Total Award Value: \$1,625,285

Off-Gas Modeling and Uncertainty Propagation to Support Molten Salt Reactor Licensing -

Terrestrial Energy USA, INC. (Charlotte, NC)

Total Award Value: \$2,998,325

Accelerating Commercial Maritime Demonstration Projects for Advanced Nuclear Reactor Technologies - American Bureau of Shipping (Spring, TX)

Total Award Value: \$793,999

On the Path to a Nuclear Fuel Digital Twin: Modeling and Simulation of Silicon Carbide Cladding for Accelerated Fuel Qualification - General Atomics Electromagnetic Systems (San Diego, CA)

Total Award Value: \$2,730,335

Advanced Modeling and Simulation to Characterize Advanced BWR Source Terms to Support a Regulatory Approval Pathway for Right-Sized Emergency Planning Zone – Pittsburgh Technical (Pittsburgh, PA)

Total Award Value: \$306,250

 [Read Entire NEWS RELEASE](#)

 [Industry FOA Awardees](#)

GAIN announces fourth round FY 2021 Nuclear Energy Voucher recipient

October 12, 2021

The Gateway for Accelerated Innovation in Nuclear (GAIN) announced today that one nuclear company will be provided a GAIN Nuclear Energy (NE) Voucher to accelerate the innovation and application of advanced nuclear technologies. NE vouchers provide advanced nuclear technology innovators with access to the extensive nuclear research capabilities and expertise available across the U.S. Department of Energy (DOE) national laboratory complex. This is the fourth and final award for FY 2021.

The business selected to receive a GAIN nuclear energy voucher for Round 4 FY 2021 is:

GAIN 2021 4th Round NE Voucher Recipient	Awarded Proposal	Partner Facility
Kinectrics AES Inc. Naperville, IL	Extension of Cable Electrical Assessment Techniques to Detect and Discriminate Radiation Aging on Cable Insulation Systems	Pacific Northwest National Laboratory

GAIN NE voucher recipients do not receive direct financial awards. The GAIN nuclear energy vouchers provide access to national laboratory capabilities at no cost to the voucher recipients. All awardees are responsible for a minimum 20 percent cost share, which could be an in-kind contribution.

The GAIN NE Voucher Program accepts applications on innovation that supports production and utilization of nuclear energy (e.g., for generation of electricity, supply of process heat, etc.) in the following general topic areas:

- Analysis and evaluation of, and for, advanced reactor concepts and associated designs, including development of R&D based licensing technical requirements or regulatory strategies
- Structural material and component development, testing and qualification
- Advanced nuclear fuel development, fabrication and testing (includes fuel materials and cladding)
- Development, testing, and qualification of instrumentation, controls, and sensor technologies that are hardened for harsh environments and secured against cyber intrusion
- Modeling and simulation, high-performance computing, codes and methods
- Technical assistance from subject matter experts and/or data/information to support technology development and/or confirm key technical or licensing issues

Further information on the GAIN nuclear energy voucher program as well as current and all past awards may be found [here](#).

The U.S. Department of Energy Office of Nuclear Energy (DOE-NE) established GAIN to provide the nuclear community with the technical, regulatory, and financial support necessary to move innovative nuclear energy technologies toward commercialization while ensuring the continued safe, reliable, and economic operation of the existing nuclear fleet. Through GAIN, DOE is making its state-of-the-art and continuously improving RD&D infrastructure available to stakeholders to achieve faster and cost-effective development of innovative nuclear energy technologies toward commercial readiness.

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Merits and Viability of Different Nuclear Fuel Cycles and Technology Options and the Waste Aspects of Advanced Nuclear Reactors: Meeting #10 (Public Session)

September 28, 2021

The tenth meeting of the Committee on Merits and Viability of Different Nuclear Fuel Cycles and Technology Options and the Waste Aspects of Advanced Nuclear Reactors will hear from experts on Generation IV and sodium fast-cooled reactors, aqueous separations, back-end fuel cycle issues, waste management and treatment, and a panel of utility executives.

The committee welcomes input and will host public comment sessions at the end of each public session. Attendance is open and free to the public. Both public sessions will be held exclusively online.

 [Full Article and Meeting Materials](#)

New website a gateway into nuclear energy

September 9, 2021

By Donna Kemp Spangler

GAIN Communications and Outreach

The latest information about advanced nuclear energy is now a mouse click away.

The **Gateway for Accelerated Innovation in Nuclear** (GAIN) just unveiled **Milestones in Advanced Nuclear**, an interactive website that provides the latest news in the U.S. nuclear power industry.

GAIN is industry's gateway into the national labs. Now GAIN is also the gateway into nuclear news.

"Advanced nuclear has been building momentum over the past five years and it is getting difficult to stay current with the latest developments from all facets of our industry," GAIN Director Christine King said.

"The website offers a concise description of each item, and why this milestone is important and links to the most recent news for that item."

The milestones were developed with the help of more than 100 people across the U.S. representing the nuclear energy industry, utility executives, and lawmakers.

"This website is a great tool to see our progress as an industry," said Peter Hastings, vice president of Kairos Power, an advanced nuclear reactor developer. "It is extremely helpful to show not only our company's progress but also that of other advanced reactor developers as well as the industry as a whole. This website makes it easy to see the immense opportunity advanced nuclear represents for our clean energy future."

 **Read Entire Announcement**

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If you have a regulatory question for NRC, please see the **GAIN Regulatory Tab** to submit your question.

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