Press Release
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Energy Department's Advanced Reactor Demonstration Program Awards $30 million in Initial Funding for Risk Reduction Projects

WASHINGTON, D.C. – The U.S. Department of Energy (DOE) today announced $30 million in initial funding for one of three programs under its new Advanced Reactor Demonstration Program (ARDP). DOE's Office of Nuclear Energy (NE) has selected five teams to receive $30 million in FY20 funding for Risk Reduction for Future Demonstration projects. The awards are cost-shared partnerships with industry, and companies were chosen through a funding opportunity announcement issued in May 2020.

ARDP is designed to help domestic private industry demonstrate advanced nuclear reactors in the United States. DOE expects to invest approximately $600 million over seven years with our industry partners providing at least 20 percent in matching funds.

"All of these projects will put the U.S. on an accelerated timeline to domestically and globally deploy advanced nuclear reactors that will enhance safety and be affordable to construct and operate," said U.S. Secretary of Energy Dan Brouillette. "Taking leadership in advanced technology is so important to the country's future because nuclear energy plays such a key role in our clean energy strategy."

Risk Reduction for Future Demonstration Projects

The goal of the Risk Reduction program is to design and develop safe and affordable reactor technologies that can be licensed and deployed over the next 10 to 14 years. DOE has selected these five U.S.-based teams to receive Risk Reduction funding:

- *Hermes Reduced-Scale Test Reactor*- Kairos Power, LLC (Alameda, CA) will design, construct, and operate its Hermes reduced-scale test reactor. Hermes is intended to lead to the development of Kairos Power's commercial-scale KP-FHR (Kairos Power Fluoride Salt-Cooled High Temperature Reactor), a novel advanced nuclear reactor technology that leverages Tri-structural ISOtropic particle fuel (TRISO) fuel in pebble form combined with a low-pressure fluoride salt coolant. Total award value over seven years: $629 million (DOE share is $303 million)
- *eVinci ™ Microreactor* – Westinghouse Electric Company, LLC (Cranberry Township, PA) will advance the design of a heat pipe-cooled microreactor to support a nuclear demonstration unit by 2024. The project will serve to reduce technical risks associated with the moderator canister design, improve the ability to manufacture heat pipe wicks, and develop an economically viable refueling process and licensing approach. Total award value over seven years: $9.3 million (DOE share is $7.4 million)
- *BWXT Advanced Nuclear Reactor (BANR)* – BWXT Advanced Technologies, LLC (Lynchburg, VA) will develop a commercially-viable transportable microreactor with the design focused on using TRISO fuel particles to achieve higher uranium loading and an improved core design using a silicon carbide (SiC) matrix. Total award value over seven years: $106.6 million (DOE share is $85.3 million)
- *Holtec SMR-160 Reactor* – Holtec Government Services, LLC (Camden, NJ) is receiving funding for early-stage design, engineering, and licensing activities to accelerate the development of Holtec's light water-cooled SMR-160 (small modular reactor). Total award value over seven years: $147.5 million (DOE share is $116 million)

- *Southern Molten Chloride Reactor Experiment* – Southern Company Services, Inc. (Birmingham, AL) will design, construct, and operate the Molten Chloride Reactor Experiment (MCRE) which is intended to demonstrate the high burnup capabilities of Southern's liquid salt-fueled Molten Salt Reactor. Total award value over seven years: $113 million (DOE share is $90.4 million)

Advanced Reactor Concepts-20 (ARC-20) Projects

The goal of the ARC-20 program is to assist the progression of advanced reactor designs in their earliest phases. DOE expects to announce awards for this funding pathway later this month.

Advanced Reactor Demonstration Projects

In October 2020, DOE announced the selections of TerraPower LLC (Bellevue, WA) and X-energy (Rockville, MD) to receive $160 million in initial funding for ARDP Demonstration projects to develop and construct two advanced nuclear reactors that can be operational within seven years. Funding for ARDP beyond the near-term is contingent on additional future appropriations, evaluations of satisfactory progress, and DOE approval of project continuation. More information on the Office of Nuclear Energy and its programs can be found here.

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