

CLEARPATH

DOE Announces Next Round of Advanced Reactor Demonstration Program Awards

Washington, DC – Wednesday, December 16, 2020 – Today, the U.S. Department of Energy’s (DOE) Office of Nuclear Energy (NE) [awarded](#) \$30 million in Fiscal Year 2020 (FY20) funding for Risk Reduction for Future Demonstration projects, the second pathway under its Advanced Reactor Demonstration Program (ARDP). The awards kickstart seven-year, public-private partnerships with Kairos Power, Westinghouse Electric Company, BWXT Advanced Technologies, Holtec Government Services, and Southern Company Services to develop reactors that can be licensed and deployed over the next 10 to 14 years.

The ARDP facilitates U.S. private industry advanced nuclear reactor demonstrations and provides funding for multiple advanced reactors with the capabilities of achieving reliable, cost effective, licensable, and commercially operational designs.

“The key to unlocking the exciting potential of advanced nuclear technology is through demonstrations – and in order for the U.S. to regain nuclear energy competitiveness globally, we need an affordable product,” said Rich Powell, Executive Director of ClearPath. “By supporting a variety of companies building test and demonstration reactors, the U.S. will be well on its way to reclaiming our role as the world’s most trusted nuclear energy leader.”

In FY20, Congress [appropriated](#) \$230 million in funding for the ARDP. In October, DOE [awarded](#) \$160 million in initial funding to TerraPower and X-energy for demonstrations of their reactors.

According to DOE, the [three pathways](#) for funding through the ARDP are as follows:

- **Advanced reactor demonstrations**, which are expected to result in a fully functional advanced nuclear reactor within seven years of the award.
- **Risk reduction for future demonstrations**, which will support up to five additional teams resolving technical, operational, and regulatory challenges to prepare for future demonstration opportunities.
- **Advanced reactor concepts 2020 (ARC-20)**, which will support innovative and diverse designs with potential to commercialize in the mid-2030s.

DOE expects to announce awards for the ARC-20 funding pathway later this month.

RISK REDUCTION AWARDS:

Kairos Power will design, construct, and operate its Hermes reduced-scale test reactor, which will support the development of its commercial-scale fluoride salt-cooled high temperature reactor (KP-FHR), a 140 MWe reactor that uses TRi-structural ISOtropic (TRISO) fuel utilizing high-assay, low-enriched uranium (HALEU). Kairos recently selected [Albuquerque, New Mexico](#) as its home for a new engineering center, and selected a site near [Oak Ridge, Tennessee](#) to build the Hermes test reactor. Total award value over seven years: \$629 million (DOE share is \$303 million).

Westinghouse Electric Company will advance the design of its [eVinci Microreactor](#), a heat pipe-cooled microreactor, to support a nuclear demonstration unit by 2024. The Westinghouse eVinci is a scalable 200 kWe to 25 MWe microreactor that operates at 600 degrees Celsius that can be used in remote locations. Westinghouse is also one of the three initial awardees of the Department of Defense's [Project Pele](#). Total award value over seven years: \$9.3 million (DOE share is \$7.4 million)

BWXT Advanced Technologies will develop a commercially viable transportable microreactor, the BWXT Advanced Nuclear Reactor (BANR), that uses TRISO fuel particles and a silicon carbide (SiC) matrix. BWXT is also developing TRISO fuel fabrication capabilities at its facility near Lynchburg, TN. They recently completed the [restart](#) of their TRISO fuel line and also received an award through Project Pele. Total award value over seven years: \$106.6 million (DOE share is \$85.3 million)

Holtec Government Services is developing the SMR-160, a 160 MWe light-water cooled small modular reactor that utilizes traditional light-water reactor fuel. Holtec recently announced that it entered the Nuclear Regulatory Commission's [licensing process](#) and noted that countries in Europe have expressed interest in the design. This award will support early-stage design, engineering, and licensing activities to accelerate the development of their design. Total award value over seven years: \$147.5 million (DOE share is \$116 million)

Southern Company Services 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. Southern Company has previously [partnered](#) with TerraPower. Total award value over seven years: \$113 million (DOE share is \$90.4 million)

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ABOUT CLEARPATH

ClearPath (501(c)(3)) was established by businessman Jay Faison in 2014. ClearPath's vision is that America leads in affordably powering the world with reliable clean energy. ClearPath's mission is to develop and advance conservative policies that accelerate clean energy innovation. To advance that mission, ClearPath develops cutting-edge policy and collaborates with academics and industry. Learn more at clearpath.org. Follow us on Twitter: @JayFaison1, @powellrich, @ClearPathAction