

The Advanced Reactor Demonstration Program

Demonstrating future U.S. nuclear technologies

The Advanced Reactor Demonstration Program (ARDP), within the U.S. Department of Energy's Office of Nuclear Energy, is designed to help domestic private industry demonstrate advanced nuclear reactors in the United States.

What is ARDP?

Under the Fiscal Year 2020 budget, DOE received \$230 million to start a new demonstration program for advanced reactors. ARDP elements include Advanced Reactor Demonstration (ARD), Risk Reduction for Future Demonstrations, Regulatory Development, and Advanced Reactor Safeguards.

Through cost-shared partnerships with industry, ARDP will provide \$160 million for initial funding to build two reactors that can be operational within the next 5 to 7 years. ARDP will leverage the National Reactor Innovation Center to

efficiently test and assess ARD technologies by engaging the world-renowned capabilities of the national laboratory system to move these reactors from blueprints to reality.

Why is ARDP needed?

Advanced nuclear energy systems hold enormous potential to lower emissions, create new jobs, and build a strong economy. Rapidly demonstrating advanced reactor designs is necessary to provide clean energy and expand market opportunities before access to key infrastructure and supply chain capabilities in the United States is lost.

How does ARDP work?

The primary implementing tool for ARDP is the ARD Funding Opportunity Announcement, issued in May 2020, which provides applicants three separate technology development and demonstration pathways.

Advanced Reactor Demonstration Pathways



Advanced Reactor Demonstrations

Supported projects must result in a fully-functional, advanced light-water or non-light water nuclear fission reactor to be licensed by the U.S. Nuclear Regulatory Commission (NRC). Demos are expected to be fully operational within 7 years of the award.



Risk Reduction for Future Demonstrations

ARDP plans to fund up to five additional teams to help improve the commercialization readiness of their reactor designs. Supported projects would focus on technical, operational and regulatory challenges to prepare for future demonstration opportunities.



Advanced Reactor Concepts 2020 (ARC 20)

Supported projects will focus on innovative and diverse designs that are lower on the technology readiness level scale and have a potential to commercialize in the mid-2030s.

