(i) an electric utility;

(ii) an entity that uses high-temperature process heat for manufacturing or industrial processing, such as a petrochemical or synthetic fuel company, a manufacturer of metals or chemicals, or a manufacturer of concrete;

(iii) an expert from the investment community;

(iv) a project management practitioner; and

(v) an environmental health and safety expert; and

(B) include a review of each demonstration project under this subsection which shall include consideration of cost-competitiveness and other value streams, together with the technology readiness level, the technical abilities and qualifications of teams desiring to demonstrate a proposed advanced nuclear reactor technology, the capacity to meet cost-share requirements of the Department, if Federal funding is provided, and environmental impacts;

(4) for federally funded demonstration projects, enter into cost-sharing agreements with private sector partners in accordance with section 16352 of this title for the conduct of activities relating to the research, development, and demonstration of advanced nuclear reactor designs under the program;

(5) consult with—

(A) National Laboratories;

(B) institutions of higher education;

(C) traditional end users (such as electric utilities);

(D) potential end users of new technologies (such as users of high-temperature process heat for manufacturing processing, including petrochemical or synthetic fuel companies, manufacturers of metals or chemicals, or manufacturers of concrete);

(E) developers of advanced nuclear reactor technology;

(F) environmental and public health and safety experts; and

(G) non-proliferation experts;

(6) seek to ensure that the demonstration projects carried out under this section do not cause any delay in the progress of an advanced reactor project by private industry and the Department of Energy that is underway as of December 27, 2020;

(7) establish a streamlined approval process for expedited contracting between awardees and the Department;

(8) identify technical challenges to candidate technologies;

(9) support near-term research and development to address the highest risk technical challenges to the successful demonstration of a selected advanced reactor technology, in accordance with—

(A) paragraph (8);

(B) the research and development activities under section 16272(b) of this title; and

(C) the research and development activities under section 16278 of this title; and

(10) establish such technology advisory working groups as the Secretary determines to be appropriate to advise the Secretary regarding the technical challenges identified under paragraph (8) and the scope of research and development programs to address the challenges, in accordance with paragraph (9), to be comprised of—

(A) private sector advanced nuclear reactor technology developers;

(B) technical experts with respect to the relevant technologies at institutions of higher education;

(C) technical experts at the National Laboratories;

(D) environmental and public health and safety experts;

(E) non-proliferation experts; and

(F) any other entities the Secretary determines appropriate.

(d) Milestone-based demonstration projects

The Secretary may carry out demonstration projects under subsection (c) as a milestone-based demonstration project under section 7256c of this title.

(e) Nonduplication

Entities may not receive funds under this program if receiving funds from another reactor demonstration program at the Department in the same fiscal year.

(f) Authorization of appropriations

There are authorized to be appropriated to the Secretary to carry out the program under this subsection—

(1) $405,000,000 for fiscal year 2021;
(2) $405,000,000 for fiscal year 2022;
(3) $420,000,000 for fiscal year 2023;
(4) $455,000,000 for fiscal year 2024; and
(5) $455,000,000 for fiscal year 2025.

(Pub. L. 109–58, title IX, §959A, as added Pub. L. 116–260, div. Z, title II, §2003(g)(1), Dec. 27, 2020, 134 Stat. 2467.)

§ 16279b. International nuclear energy cooperation

The Secretary shall carry out a program—

(1) to collaborate in international efforts with respect to research, development, demonstration, and commercial application of nuclear technology that supports diplomatic, financing, nonproliferation, climate, and international economic objectives for the safe, secure, and peaceful use of such technology; and

(2) to develop collaboration initiatives with respect to such efforts with a variety of countries through—

(A) preparations for research and development agreements;

(B) the development of coordinated action plans; and

(C) new or existing multilateral cooperation commitments including—

(i) the International Framework for Nuclear Energy Cooperation;

(ii) the Generation IV International Forum;

(iii) the International Atomic Energy Agency;

(iv) the Organization for Economic Cooperation and Development Nuclear Energy Agency; and

(v) any other international collaborative effort with respect to advanced nuclear reactor operations and safety.

(Pub. L. 109–58, title IX, § 959B, as added Pub. L. 116–260, div. Z, title II, § 2003(h)(1), Dec. 27, 2020, 134 Stat. 2470.)

§ 16279c. Organization and administration of programs

(a) Coordination

In carrying out this part, the Secretary shall coordinate activities, and effectively manage crosscutting research priorities across programs of the Department and other relevant Federal agencies, including the National Laboratories.

(b) Collaboration

(1) In general

In carrying out this part, the Secretary shall collaborate with industry, National Laboratories, other relevant Federal agencies, institutions of higher education, including minority-serving institutions and research reactors, Tribal entities, including Alaska Native Corporations, and international bodies with relevant scientific and technical expertise.

(2) Participation

To the extent practicable, the Secretary shall encourage research projects that promote collaboration between entities specified in paragraph (1).

(c) Dissemination of results and public availability

The Secretary shall, except to the extent protected from disclosure under section 552(b) of title 5, publish the results of projects supported under this part through Department websites, reports, databases, training materials, and industry conferences, including information discovered after the completion of such projects.

(d) Education and outreach

In carrying out the activities described in this part, the Secretary shall support education and outreach activities to disseminate information and promote public understanding of nuclear energy.

(e) Technical assistance

In carrying out this part, for the purposes of supporting technical, nonhardware, and information-based advances in nuclear energy development and operations, the Secretary shall also conduct technical assistance and analysis activities, including activities that support commercial application of nuclear energy in rural, Tribal, and low-income communities.

(f) Program review

At least annually, all programs in this part shall be subject to an annual review by the Nuclear Energy Advisory Committee of the Department or other independent entity, as appropriate.

(g) Sensitive information

The Secretary shall not publish any information generated under this part that is detrimental to national security, as determined by the Secretary.

(Pub. L. 109–58, title IX, § 959C, as added Pub. L. 116–260, div. Z, title II, § 2006(a), Dec. 27, 2020, 134 Stat. 2471.)

§ 16280. Advanced Nuclear Energy Licensing Cost-Share Grant Program

(a) Definitions

In this section:

(1) Commission

The term ''Commission'' means the Nuclear Regulatory Commission.

(2) Program

The term ''program'' means the Advanced Nuclear Energy Cost-Share Grant Program established under subsection (b).

(3) Secretary

The term ''Secretary'' means the Secretary of Energy.

(b) Establishment

The Secretary shall establish a grant program, to be known as the ''Advanced Nuclear Energy Cost-Share Grant Program'', under which the Secretary shall make cost-share grants to applicants for the purpose of funding a portion of the Commission fees of the applicant for pre-application review activities and application review activities.

(c) Requirement

The Secretary shall seek out technology diversity in making grants under the program.

(d) Cost-share amount

The Secretary shall determine the cost-share amount for each grant under the program in accordance with section 16352 of this title.

(e) Use of funds

A recipient of a grant under the program may use the grant funds to cover Commission fees, including those fees associated with—

(1) developing a licensing project plan;

(2) obtaining a statement of licensing feasibility;

(3) reviewing topical reports; and

(4) other—

(A) pre-application review activities;

(B) application review activities; and

(C) interactions with the Commission.

(Pub. L. 115–248, § 3, Sept. 28, 2018, 132 Stat. 3160.)

CODIFICATION

Section was enacted as part of the Nuclear Energy Innovation Capabilities Act of 2017, and not as part of the Energy Policy Act of 2005 which comprises this chapter.

§ 16281. Advanced nuclear fuel availability

(a) Program

(1) Establishment

The Secretary shall establish and carry out, through the Office of Nuclear Energy, a program to support the availability of HA–LEU for civilian domestic research, development, demonstration, and commercial use.

(2) Program elements

In carrying out the program under paragraph (1), the Secretary—