

nologies and components under paragraphs (2) through (4) of subsection (a);

(C) determine whether it is appropriate to combine electricity generation and hydrogen production in a single prototype nuclear reactor and plant; and

(D) carry out initial design activities for a prototype nuclear reactor and plant, including development of design methods and safety analytical methods and studies under subsection (a)(5).

(2) Second project phase

A second project phase shall be conducted to—

(A) continue appropriate activities under paragraphs (1) through (5) of subsection (a);

(B) develop, through a competitive process, a final design for the prototype nuclear reactor and plant;

(C) apply for licenses to construct and operate the prototype nuclear reactor from the Nuclear Regulatory Commission; and

(D) construct and start up operations of the prototype nuclear reactor and its associated hydrogen or electricity production facilities.

(c) Project requirements

(1) In general

The Secretary shall ensure that the Project is structured so as to maximize the technical interchange and transfer of technologies and ideas into the Project from other sources of relevant expertise, including—

(A) the nuclear power industry, including nuclear powerplant construction firms, particularly with respect to issues associated with plant design, construction, and operational and safety issues;

(B) the chemical processing industry, particularly with respect to issues relating to—

(i) the use of process energy for production of hydrogen; and

(ii) the integration of technologies developed by the Project into chemical processing environments; and

(C) international efforts in areas related to the Project, particularly with respect to hydrogen production technologies.

(2) International collaboration

(A) In general

The Secretary shall seek international cooperation, participation, and financial contributions for the Project.

(B) Assistance from international partners

The Secretary, through the Idaho National Laboratory, may contract for assistance from specialists or facilities from member countries of the Generation IV International Forum, the Russian Federation, or other international partners if the specialists or facilities provide access to cost-effective and relevant skills or test capabilities.

(C) Partner nations

The Project may involve demonstration of selected project objectives in a partner country.

(D) Generation IV International Forum

The Secretary shall ensure that international activities of the Project are coordi-

nated with the Generation IV International Forum.

(3) Review by Nuclear Energy Research Advisory Committee

(A) In general

The Nuclear Energy Research Advisory Committee of the Department (referred to in this paragraph as the “NERAC”) shall—

(i) review all program plans for the Project and all progress under the Project on an ongoing basis; and

(ii) ensure that important scientific, technical, safety, and program management issues receive attention in the Project and by the Secretary.

(B) Additional expertise

The NERAC shall supplement the expertise of the NERAC or appoint subpanels to incorporate into the review by the NERAC the relevant sources of expertise described under paragraph (1).

(C) Initial review

Not later than 180 days after August 8, 2005, the NERAC shall—

(i) review existing program plans for the Project in light of the recommendations of the document entitled “Design Features and Technology Uncertainties for the Next Generation Nuclear Plant,” dated June 30, 2004; and

(ii) address any recommendations of the document not incorporated in program plans for the Project.

(D) First project phase review

On a determination by the Secretary that the appropriate activities under the first project phase under subsection (b)(1) are nearly complete, the Secretary shall request the NERAC to conduct a comprehensive review of the Project and to report to the Secretary the recommendation of the NERAC concerning whether the Project is ready to proceed to the second project phase under subsection (b)(2).

(E) Transmittal of reports to Congress

Not later than 60 days after receiving any report from the NERAC related to the Project, the Secretary shall submit to the appropriate committees of the Senate and the House of Representatives a copy of the report, along with any additional views of the Secretary that the Secretary may consider appropriate.

(Pub. L. 109-58, title VI, §643, Aug. 8, 2005, 119 Stat. 795.)

§ 16024. Nuclear Regulatory Commission

(a) In general

In accordance with section 5842 of this title, the Nuclear Regulatory Commission shall have licensing and regulatory authority for any reactor authorized under this part.

(b) Licensing strategy

Not later than 3 years after August 8, 2005, the Secretary and the Chairman of the Nuclear Regulatory Commission shall jointly submit to the

appropriate committees of the Senate and the House of Representatives a licensing strategy for the prototype nuclear reactor, including—

(1) a description of ways in which current licensing requirements relating to light-water reactors need to be adapted for the types of prototype nuclear reactor being considered by the Project;

(2) a description of analytical tools that the Nuclear Regulatory Commission will have to develop to independently verify designs and performance characteristics of components, equipment, systems, or structures associated with the prototype nuclear reactor;

(3) other research or development activities that may be required on the part of the Nuclear Regulatory Commission in order to review a license application for the prototype nuclear reactor; and

(4) an estimate of the budgetary requirements associated with the licensing strategy.

(c) Ongoing interaction

The Secretary shall seek the active participation of the Nuclear Regulatory Commission throughout the duration of the Project to—

(1) avoid design decisions that will compromise adequate safety margins in the design of the reactor or impair the accessibility of nuclear safety-related components of the prototype reactor for inspection and maintenance;

(2) develop tools to facilitate inspection and maintenance needed for safety purposes; and

(3) develop risk-based criteria for any future commercial development of a similar reactor architectures.

(Pub. L. 109–58, title VI, §644, Aug. 8, 2005, 119 Stat. 797.)

§ 16025. Project timelines and authorization of appropriations

(a) Target date to complete the first project phase

Not later than September 30, 2011, the Secretary shall—

(1) select the technology to be used by the Project for high-temperature hydrogen production and the initial design parameters for the prototype nuclear plant; or

(2) submit to Congress a report establishing an alternative date for making the selection.

(b) Design competition for second project phase

(1) In general

The Secretary, acting through the Idaho National Laboratory, shall fund not more than 4 teams for not more than 2 years to develop detailed proposals for competitive evaluation and selection of a single proposal for a final design of the prototype nuclear reactor.

(2) Systems integration

The Secretary may structure Project activities in the second project phase to use the lead industrial partner of the competitively selected design under paragraph (1) in a systems integration role for final design and construction of the Project.

(c) Target date to complete project construction

Not later than September 30, 2021, the Secretary shall—

(1) complete construction and begin operations of the prototype nuclear reactor and associated energy or hydrogen facilities; or

(2) submit to Congress a report establishing an alternative date for completion.

(d) Authorization of appropriations

There is authorized to be appropriated to the Secretary for research and construction activities under this part (including for transfer to the Nuclear Regulatory Commission for activities under section 16024 of this title as appropriate)—

(1) \$1,250,000,000 for the period of fiscal years 2006 through 2015; and

(2) such sums as are necessary for each of fiscal years 2016 through 2021.

(Pub. L. 109–58, title VI, §645, Aug. 8, 2005, 119 Stat. 798.)

PART C—NUCLEAR SECURITY

§ 16041. Nuclear facility and materials security

(a) In general

(1), (2) Omitted

(3) Federal security coordinators

(A) Regional offices

Not later than 18 months after August 8, 2005, the Nuclear Regulatory Commission (referred to in this section as the “Commission”) shall assign a Federal security coordinator, under the employment of the Commission, to each region of the Commission.

(B) Responsibilities

The Federal security coordinator shall be responsible for—

(i) communicating with the Commission and other Federal, State, and local authorities concerning threats, including threats against such classes of facilities as the Commission determines to be appropriate;

(ii) monitoring such classes of facilities as the Commission determines to be appropriate to ensure that they maintain security consistent with the security plan in accordance with the appropriate threat level; and

(iii) assisting in the coordination of security measures among the private security forces at such classes of facilities as the Commission determines to be appropriate and Federal, State, and local authorities, as appropriate.

(b) Backup power for certain emergency notification systems

For any licensed nuclear power plants located where there is a permanent population, as determined by the 2000 decennial census, in excess of 15,000,000 within a 50-mile radius of the power plant, not later than 18 months after August 8, 2005, the Commission shall require that backup power to be available for the emergency notification system of the power plant, including the emergency siren warning system, if the alternating current supply within the 10-mile emergency planning zone of the power plant is lost.