

Secretary shall establish a research and development program on material science issues presented by advanced fission reactors and the fusion energy program of the Department.

(b) Administration

In carrying out the program, the Secretary shall develop—

- (1) a catalog of material properties required for applications described in subsection (a);
- (2) theoretical models for materials possessing the required properties;
- (3) benchmark models against existing data; and
- (4) a roadmap to guide further research and development in the area covered by the program.

(Pub. L. 109–58, title IX, §978, Aug. 8, 2005, 119 Stat. 904.)

§ 16319. Energy and water supplies

(a) In general

The Secretary shall carry out a program of research, development, demonstration, and commercial application to—

- (1) address energy-related issues associated with provision of adequate water supplies, optimal management, and efficient use of water;
- (2) address water-related issues associated with the provision of adequate supplies, optimal management, and efficient use of energy; and
- (3) assess the effectiveness of existing programs within the Department and other Federal agencies to address these energy and water related issues.

(b) Program elements

The program under this section shall include—

- (1) arsenic treatment;
- (2) desalination; and
- (3) planning, analysis, and modeling of energy and water supply and demand.

(c) Collaboration

In carrying out this section, the Secretary shall consult with the Administrator of the Environmental Protection Agency, the Secretary of the Interior, the Chief Engineer of the Army Corps of Engineers, the Secretary of Commerce, the Secretary of Defense, and other Federal agencies as appropriate.

(d) Facilities

The Secretary may utilize all existing facilities within the Department and may design and construct additional facilities as needed to carry out the purposes of this program.

(e) Advisory committee

The Secretary shall establish or utilize an advisory committee to provide independent advice and review of the program.

(f) Reports

Not later than 2 years after August 8, 2005, the Secretary shall submit to Congress a report on the assessment described in subsection (b) and recommendations for future actions.

(Pub. L. 109–58, title IX, §979, Aug. 8, 2005, 119 Stat. 905.)

§ 16320. Spallation Neutron Source

(a) Definitions

In this section:

(1) SING

The term “SING” means the Spallation Neutron Source Instruments Next Generation major item of equipment.

(2) SNS power upgrade

The term “SNS power upgrade” means the Spallation Neutron Source power upgrade described in the 20-year facilities plan of the Office of Science of the Department.

(3) SNS second target station

The term “SNS second target station” means the Spallation Neutron Source second target station described in the 20-year facilities plan of the Office of Science of the Department.

(4) Spallation Neutron Source Facility

The terms “Spallation Neutron Source Facility” and “Facility” mean the completed Spallation Neutron Source scientific user facility located at Oak Ridge National Laboratory, Oak Ridge, Tennessee.

(5) Spallation Neutron Source Project

The terms “Spallation Neutron Source Project” and “Project” means Department Project 99–E–334, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

(b) Spallation Neutron Source Project

(1) In general

The Secretary shall submit to Congress, as part of the annual budget request of the President submitted to Congress, a report on progress on the Spallation Neutron Source Project.

(2) Contents

The report shall include for the Project—

- (A) a description of the achievement of milestones;
- (B) a comparison of actual costs to estimated costs; and
- (C) any changes in estimated Project costs or schedule.

(c) Spallation Neutron Source Facility plan

(1) In general

The Secretary shall develop an operational plan for the Spallation Neutron Source Facility that ensures that the Facility is employed to the full capability of the Facility in support of the study of advanced materials, nanoscience, and other missions of the Office of Science of the Department.

(2) Plan

The operational plan shall—

- (A) include a plan for the operation of an effective scientific user program that—
 - (i) is based on peer review of proposals submitted for use of the Facility;
 - (ii) includes scientific and technical support to ensure that external users, including researchers based at institutions of higher education, are able to make full use