

(ii) pilot a transportable micro-reactor prototype;

(iii) direct an analysis of alternatives for personnel, regulatory, and technical requirements to inform future decisions with respect to nuclear power usage; and

(iv) direct an analysis of United States military uses for space nuclear power and propulsion technologies and an analysis of foreign adversaries' space power and propulsion programs.

SEC. 5. *Space Exploration.* (a) Nuclear power sources that use uranium fuel or plutonium heat sources are essential to deep space exploration and in areas where solar power is not practical. NASA uses radioisotope power systems, such as radioisotope thermoelectric generators and radioisotope heater units, to provide power and heat for deep space robotic missions. Nuclear power sources in the kilowatt range may be needed for demonstrating In-situ Resource Utilization (ISRU) and robotic exploration of permanently shadowed craters on the Moon that contain frozen water. Nuclear reactors up to 100 kilowatts may be needed to support human habitats, ISRU, other facilities, and rovers on both the Moon and Mars. Power sources in the megawatt range would be necessary for efficient, long-duration deep space propulsion. Affordable, lightweight nuclear power sources in space would enable new opportunities for scientific discovery. The sustainable exploration of the Moon, Mars, and other locations will be enhanced if small modular reactors can be deployed and operated remotely from Earth.

(b) Within 180 days of the date of this order, the NASA Administrator, in consultation with heads of other executive departments and agencies (agencies), as appropriate, shall define requirements for NASA utilization of nuclear energy systems for human and robotic exploration missions through 2040 and analyze the costs and benefits of such requirements. In defining these requirements, the NASA Administrator shall take into account considerations unique to the utilization of nuclear energy systems in space, such as:

- (i) transportability of a reactor prior to and after deployment;
- (ii) thermal management in a reduced- or zero-gravity environment in a vacuum or near-vacuum;
- (iii) fluid transfer within reactor systems in a reduced or zero-gravity environment;
- (iv) reactor size and mass that can be launched from Earth and assembled in space;
- (v) cooling of nuclear reactors in space;
- (vi) electric power requirements;
- (vii) space safety rating to enable operations as part of human space exploration missions;
- (viii) period of time for which a reactor can operate without refueling; and
- (ix) conditioning of reactor components for use in the space environment.

SEC. 6. *Domestic Fuel Supply.* (a) A thriving and secure domestic nuclear fuel supply chain is critical to the national interests of the United States. A viable domestic nuclear fuel supply chain not only supports defense and national security activities, but also enables the success of the commercial nuclear industry. Many advanced reactor concepts, however, will require high-assay, low-enriched uranium (HALEU), for which no domestic commercial enrichment capability currently exists. The United States must take steps to ensure a viable United States-origin HALEU supply.

(b) The Secretary of Energy shall complete the Department of Energy's ongoing 3-year, \$115 million demonstration of a United States-origin enrichment technology capable of producing HALEU for use in defense-related advanced reactor applications. Within funding available for the demonstration project, the Secretary of Energy should develop a plan to promote successful transition of this technology to the private sector for commercial adoption.

(c) The Secretary of Energy shall consult with the Secretary of Defense, the Director of the Office of Management and Budget, and the NASA Administrator regarding how advanced fuels and related technologies can best support implementation of sections 3, 4, and 5 of this order.

SEC. 7. *Common Technology Roadmap.* (a) The Secretary of State, the Secretary of Defense, the Secretary of Commerce, the Secretary of Energy, and the NASA Administrator shall develop a common technology roadmap through 2030 that describes potential development programs and that coordinates, to the extent practicable, terrestrial-based advanced nuclear reactor and space-based nuclear power and propulsion efforts. Agencies shall remain responsible for funding their respective mission-unique requirements. The roadmap shall also include, at a minimum:

- (i) assessments of foreign nations' space nuclear power and propulsion technological capabilities;
- (ii) pathways for transitioning technologies developed through Federally supported programs to private-sector activities; and
- (iii) other applications supporting the goals provided in section 1 of this order.

(b) The roadmap shall be submitted to the President by the Director of the Office of Management and Budget, the Assistant to the President for Domestic Policy, the Director of the Office of Science and Technology Policy, the Assistant to the President for National Security Affairs, the Assistant to the President for Economic Policy, and the Executive Secretary of the National Space Council before submissions of budget proposals by the Secretary of State, the Secretary of Commerce, the Secretary of Energy, and the NASA Administrator.

SEC. 8. *Definitions.* For purposes of this order:

(a) The term "small modular reactor" refers to an advanced nuclear reactor of electric generation capacity less than 300 megawatt-electric. Because of the smaller size, small modular reactors can generally be designed for factory fabrication and modular construction to take advantage of economies of serial production and shorter construction times.

(b) The term "micro-reactor" refers to a nuclear reactor of electric generation capacity less than 10 megawatt-electric that can be deployed remotely. Micro-reactors are a subset of small modular reactors and are also known as "very small modular reactors."

(c) The term "transportable micro-reactor" refers to a micro-reactor that can be moved by truck, ship, or large military transport aircraft and is capable of both rapid deployment and teardown or removal, typically with safe teardown or removal less than 1 week after 1 year of full-power operation.

(d) The term "space exploration" refers to in-space scientific and resource exploration, in-space economic and industrial development, and development of associated in-space logistical infrastructure.

(e) The term "national defense" refers to the protection of the United States and its interests from foreign attack or other natural danger, including phenomena occurring on Earth and in space.

SEC. 9. *General Provisions.* (a) Nothing in this order shall be construed to impair or otherwise affect:

- (i) the authority granted by law to an executive department or agency, or the head thereof; or
- (ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP.

## § 2912. Availability and use of energy cost savings

(a) AVAILABILITY.—An amount of the funds appropriated to the Department of Defense for a fiscal year that is equal to the amount of energy

cost savings realized by the Department, including financial benefits resulting from shared energy savings contracts entered into under section 2913 of this title, and, in the case of operational energy, from both training and operational missions, shall remain available for obligation under subsection (b) or (c), as the case may be, for that fiscal year and the succeeding fiscal year, without additional authorization or appropriation.

(b) **USE.**—Except as provided in subsection (c) with respect to operational energy cost savings, the Secretary of Defense shall provide that the amount that remains available for obligation under subsection (a) and the funds made available under section 2916(b)(2) of this title shall be used as follows:

(1) One-half of the amount shall be used for the implementation of additional energy resilience, mission assurance, weather damage repair and prevention, energy conservation, and energy security measures, including energy resilience and energy conservation construction projects, at buildings, facilities, or installations of the Department of Defense or related to vehicles and equipment of the Department, which are designated, in accordance with regulations prescribed by the Secretary of Defense, by the head of the department, agency, or instrumentality that realized the savings referred to in subsection (a).

(2) One-half of the amount shall be used at the installation at which the savings were realized, as determined by the commanding officer of such installation consistent with applicable law and regulations, for—

(A) improvements to existing military family housing units;

(B) any unspecified minor construction project that will enhance the quality of life of personnel; or

(C) any morale, welfare, or recreation facility or service.

(c) **USE OF OPERATIONAL ENERGY COST SAVINGS.**—The amount that remains available for obligation under subsection (a) that relates to operational energy cost savings realized by the Department shall be used for the implementation of additional operational energy resilience, efficiencies, mission assurance, energy conservation, or energy security within the department, agency, or instrumentality that realized that savings.

(d) **TREATMENT OF CERTAIN FINANCIAL INCENTIVES.**—Financial incentives received from gas or electric utilities under section 2913 of this title shall be credited to an appropriation designated by the Secretary of Defense. Amounts so credited shall be merged with the appropriation to which credited and shall be available for the same purposes and the same period as the appropriation with which merged.

(e) **TRANSFER OF AMOUNTS.**—(1) The Secretary of Defense may transfer amounts described in subsection (a) that remain available for obligation to other funding accounts of the Department of Defense if the purpose for which such amounts will be used is a purpose specified in subsection (b) or (c).

(2) Amounts transferred to a funding account of the Department under paragraph (1)

shall be available for obligation for the same period as amounts in that account.

(3) At the end of each fiscal year, the Secretary of Defense shall submit to Congress a report detailing any funds transferred pursuant to paragraph (1) during that fiscal year, including a detailed description of the purpose for which such amounts have been used.

(Added Pub. L. 109-364, div. B, title XXVIII, §2851(a)(1), Oct. 17, 2006, 120 Stat. 2491; amended Pub. L. 112-239, div. B, title XXVIII, §2822, Jan. 2, 2013, 126 Stat. 2152; Pub. L. 115-91, div. A, title X, §1051(a)(26), div. B, title XXVIII, §2832, Dec. 12, 2017, 131 Stat. 1562, 1858; Pub. L. 115-232, div. A, title III, §312(h), Aug. 13, 2018, 132 Stat. 1711; Pub. L. 116-92, div. A, title III, §317, Dec. 20, 2019, 133 Stat. 1304; Pub. L. 116-283, div. A, title III, §317, Jan. 1, 2021, 134 Stat. 3519; Pub. L. 117-81, div. A, title III, §315, Dec. 27, 2021, 135 Stat. 1630.)

### Editorial Notes

#### AMENDMENTS

2021—Subsec. (a). Pub. L. 117-81, §315(1), substituted “for that fiscal year and the succeeding fiscal year” for “until expended”.

Pub. L. 116-283 inserted “and, in the case of operational energy, from both training and operational missions,” after “under section 2913 of this title.”

Subsec. (e). Pub. L. 117-81, §315(2), added subsec. (e).

2019—Subsec. (a). Pub. L. 116-92, §317(1), substituted “subsection (b) or (c), as the case may be,” for “subsection (b)”.

Subsec. (b). Pub. L. 116-92, §317(2), substituted “Except as provided in subsection (c) with respect to operational energy cost savings, the Secretary of Defense” for “The Secretary of Defense” in introductory provisions.

Subsecs. (c), (d). Pub. L. 116-92, §317(3), (4), added subsec. (c) and redesignated former subsec. (c) as (d).

2018—Subsec. (b)(1). Pub. L. 115-232 inserted “, including energy resilience and energy conservation construction projects,” after “energy security measures”.

2017—Subsec. (b)(1). Pub. L. 115-91, §2832, substituted “energy resilience, mission assurance, weather damage repair and prevention, energy conservation, and” for “energy conservation and”.

Subsec. (d). Pub. L. 115-91, §1051(a)(26), struck out subsec. (d). Text read as follows: “The Secretary of Defense shall include in the budget material submitted to Congress in connection with the submission of the budget for a fiscal year pursuant to section 1105 of title 31 a separate statement of the amounts available for obligation under this section in that fiscal year.”

2013—Subsec. (b)(1). Pub. L. 112-239 inserted “and energy security” after “additional energy conservation”.

### Statutory Notes and Related Subsidiaries

#### TRANSFER OF FUNDS FOR ENERGY AND WATER EFFICIENCY IN FEDERAL BUILDINGS

Pub. L. 109-148, div. A, title VIII, §8054, Dec. 30, 2005, 119 Stat. 2710, provided that: “Appropriations available under the heading ‘Operation and Maintenance, Defense-Wide’ for the current fiscal year and hereafter for increasing energy and water efficiency in Federal buildings may, during their period of availability, be transferred to other appropriations or funds of the Department of Defense for projects related to increasing energy and water efficiency, to be merged with and to be available for the same general purposes, and for the same time period, as the appropriation or fund to which transferred.”

Similar provisions for specified fiscal years were contained in the following prior appropriation acts:

Pub. L. 108-287, title VIII, § 8058, Aug. 5, 2004, 118 Stat. 983.

Pub. L. 108-87, title VIII, § 8058, Sept. 30, 2003, 117 Stat. 1085.

Pub. L. 107-248, title VIII, § 8059, Oct. 23, 2002, 116 Stat. 1550.

Pub. L. 107-117, div. A, title VIII, § 8064, Jan. 10, 2002, 115 Stat. 2261.

Pub. L. 106-259, title VIII, § 8063, Aug. 9, 2000, 114 Stat. 688.

Pub. L. 106-79, title VIII, § 8066, Oct. 25, 1999, 113 Stat. 1245.

Pub. L. 105-262, title VIII, § 8066, Oct. 17, 1998, 112 Stat. 2312.

Pub. L. 105-56, title VIII, § 8072, Oct. 8, 1997, 111 Stat. 1235.

Pub. L. 104-208, div. A, title I, § 101(b) [title VIII, § 8081], Sept. 30, 1996, 110 Stat. 3009-71, 3009-104.

Pub. L. 104-61, title VIII, § 8097, Dec. 1, 1995, 109 Stat. 671.

Pub. L. 103-139, title VIII, § 8149, Nov. 11, 1993, 107 Stat. 1475.

### § 2913. Energy savings contracts and activities

(a) SHARED ENERGY SAVINGS CONTRACTS.—(1) The Secretary of Defense shall develop a simplified method of contracting for shared energy savings contract services that will accelerate the use of these contracts with respect to military installations and will reduce the administrative effort and cost on the part of the Department of Defense as well as the private sector.

(2) In carrying out paragraph (1), the Secretary of Defense may—

(A) request statements of qualifications (as prescribed by the Secretary of Defense), including financial and performance information, from firms engaged in providing shared energy savings contracting;

(B) designate from the statements received, with an update at least annually, those firms that are presumptively qualified to provide shared energy savings services;

(C) select at least three firms from the qualifying list to conduct discussions concerning a particular proposed project, including requesting a technical and price proposal from such selected firms for such project; and

(D) select from such firms the most qualified firm to provide shared energy savings services pursuant to a contractual arrangement that the Secretary determines is fair and reasonable, taking into account the estimated value of the services to be rendered and the scope and nature of the project.

(3) In carrying out paragraph (1), the Secretary may also provide for the direct negotiation, by departments, agencies, and instrumentalities of the Department of Defense, of contracts with shared energy savings contractors that have been selected competitively and approved by any gas or electric utility serving the department, agency, or instrumentality concerned.

(b) PARTICIPATION IN GAS OR ELECTRIC UTILITY PROGRAMS.—The Secretary of Defense shall permit and encourage each military department, Defense Agency, and other instrumentality of the Department of Defense to participate in programs conducted by any gas or electric utility for the management of energy demand or for energy conservation.

(c) ACCEPTANCE OF FINANCIAL INCENTIVE, GOODS, OR SERVICES.—The Secretary of Defense

may authorize any military installation to accept any financial incentive, goods, or services generally available from a State or local government or gas or electric utility, to adopt technologies and practices that the Secretary determines are in the interests of the United States and consistent with the energy performance goals for the Department of Defense.

(d) AGREEMENTS WITH GAS OR ELECTRIC UTILITIES.—(1) The Secretary of Defense may authorize the Secretary of a military department having jurisdiction over a military installation to enter into agreements with gas or electric utilities to design and implement cost-effective demand and conservation incentive programs (including energy management services, facilities alterations, and the installation and maintenance of energy saving devices and technologies by the utilities) to address the requirements and circumstances of the installation.

(2) If an agreement under this subsection provides for a utility to advance financing costs for the design or implementation of a program referred to in that paragraph to be repaid by the United States, the cost of such advance may be recovered by the utility under terms no less favorable than those applicable to its most favored customer.

(3) Subject to the availability of appropriations, repayment of costs advanced under paragraph (2) shall be made from funds available to a military department for the purchase of utility services.

(4) An agreement under this subsection shall provide that title to any energy-saving device or technology installed at a military installation pursuant to the agreement vest in the United States. Such title may vest at such time during the term of the agreement, or upon expiration of the agreement, as determined to be in the best interests of the United States.

(Added and amended Pub. L. 109-364, div. B, title XXVIII, §§ 2851(a)(1), 2853, Oct. 17, 2006, 120 Stat. 2491, 2496; Pub. L. 110-140, title V, § 511(c), Dec. 19, 2007, 121 Stat. 1658; Pub. L. 110-181, div. B, title XXVIII, § 2861, Jan. 28, 2008, 122 Stat. 559; Pub. L. 115-232, div. A, title III, § 312(g), Aug. 13, 2018, 132 Stat. 1711; Pub. L. 116-92, div. A, title III, § 320(a)(1)(A), title XVII, § 1731(a)(58), Dec. 20, 2019, 133 Stat. 1306, 1815.)

### Editorial Notes

#### AMENDMENTS

2019—Subsec. (c). Pub. L. 116-92, § 320(a)(1)(A), substituted “government or” for “government”.

Pub. L. 116-92, § 1731(a)(58), substituted “government gas or electric utility” for “government a gas or electric utility”. Amendment executed before amendment by section 320(a)(1)(A) of Pub. L. 116-92, see above, pursuant to section 1731(f) of Pub. L. 116-92, set out as a Coordination of Certain Sections of an Act With Other Provisions of That Act note under section 101 of this title.

2018—Subsec. (c). Pub. L. 115-232 inserted “a State or local government” after “generally available from”.

2008—Subsec. (e). Pub. L. 110-181, which directed the amendment of this section by striking out subsec. (e), could not be executed because subsec. (e) was previously repealed by Pub. L. 110-140, § 511(c). See 2007 Amendment note below.

2007—Subsec. (e). Pub. L. 110-140 struck out heading and text of subsec. (e). Text read as follows: “When a