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ENERGY TECHNOLOGY MATURATION ACT OF 2017

MAY 21, 2018.—Ordered to be printed

Ms. MURKOWSKI, from the Committee on Energy and Natural Resources, submitted the following

R E P O R T

[To accompany S. 1799]

The Committee on Energy and Natural Resources, to which was referred the bill (S.1799) to amend the Energy Policy Act of 2005 to facilitate the commercialization of energy and related technologies developed at Department of Energy facilities with promising commercial potential, having considered the same, reports favorably thereon without amendment, and recommends that the bill do pass.

PURPOSE

The purpose of S. 1799 is to facilitate the commercialization of energy and related technologies developed at Department of Energy (DOE) facilities with promising commercial potential.

BACKGROUND AND NEED

Congress directed technology transfer to be a part of the mission of federal government research agencies beginning in the 1980s. Since that time, DOE has led the federal government in transitioning technologies to outside entities for commercialization through the use of a variety of mechanisms, including Cooperative Research and Development Agreements, Strategic Partnership Project Agreements, and the licensing of intellectual property.

Improving the ability to transition technologies from DOE to the private sector continues to be a focus of Congress and the Department. S. 1799 provides another means to enable national laboratories to work with the private sector, and especially small businesses, to commercialize innovative energy technologies.

LEGISLATIVE HISTORY

On September 12, 2017, Senator Heinrich introduced S. 1799. The Senate Subcommittee on Energy conducted a hearing on S. 1799 on October 3, 2017.

Companion legislation, H.R. 3750, was introduced by Representative Grisham in the House of Representatives on the same day, and referred to the House Science, Space, and Technology Committee, as well as the House Armed Services Committee.

The Committee on Energy and Natural Resources met in open business session on March 8, 2018, and ordered S. 1799 favorably reported.

COMMITTEE RECOMMENDATION

The Senate Committee on Energy and Natural Resources, in open business session on March 8, 2018, by majority voice vote of a quorum present, recommends that the Senate pass S. 1799.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

Section 1 sets forth a short title for the bill.

Section 2. Energy Technology Maturation Program

Subsection (a) amends Title X of the Energy Policy Act of 2005 (Public Law 109–58) by adding a new section 1012 at the end.

The new section 1012(a) provides definitions.

The new section 1012(b) directs the Secretary to establish an “Energy Technology Maturation Program” to facilitate the commercialization of energy and related technologies that exhibit promising commercial potential and are developed at DOE facilities.

The new section 1012(c) requires the Secretary to use program funding for specific purposes, including carrying out additional development activities to advance the state of the technology, and supporting cooperative development of a technology for a specific commercial application.

The new section 1012(d) sets forth requirements for program applications; permits DOE facilities to submit applications for more than one project; and directs the Secretary to develop criteria for evaluating projects and give priority to projects submitted by partnerships between a Department facility and a small business.

The new section 1012(e) establishes limits on the funding amounts provided to a recipient.

The new section 1012(f) requires the Secretary to determine cost-sharing requirements of the program in accordance with section 988 of the underlying Act.

The new section 1012(g) authorizes the Secretary to carry out the program with funds in the Energy Technology Commercialization Fund established under section 1001(e) or other funds made available to support technology transfer within the Department.

The new section 1012(h) requires the Secretary to include a description of the results of the projects carried out under the

program in the annual report required under section 1001(g)(2) of the underlying Act.

Subsection (b) amends the table of contents of the Energy Policy Act of 2005.

COST AND BUDGETARY CONSIDERATIONS

The Congressional Budget Office estimate of the costs of this measure has been requested but was not received at the time the report was filed. When the report is available, it can be accessed at www.cbo.gov.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out the bill.

The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

Little, if any, additional paperwork would result from enactment of the bill, as ordered reported.

CONGRESSIONALLY DIRECTED SPENDING

S. 1799, as reported, does not contain any congressionally directed spending items, limited tax benefits, or limited tariff benefits as defined in rule XLIV of the Standing Rules of the Senate.

EXECUTIVE COMMUNICATIONS

The testimony provided by the Department of Energy at the October 3, 2017, hearing on S. 1799 follows:

TESTIMONY OF DEPUTY GENERAL COUNSEL BERNARD MCNAMEE, U.S. DEPARTMENT OF ENERGY, BEFORE THE U.S. SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES, SUBCOMMITTEE ON ENERGY, OCTOBER 3, 2017

S. 1799, Energy Technology Maturation Act of 2017

As a science agency, the Department of Energy plays an important role in the innovation economy. DOE's 17 National Laboratories engage in research that expands the frontiers of scientific knowledge and generates new technologies that address the Nation's greatest energy challenges.

Accelerating the transition of technologies from the laboratory bench to the marketplace is an important component of increasing America's economic prosperity and energy security. This mission is the focus of the Department of Energy's Office of Technology Transitions, which oversees the technology transfer programs across the National Laboratories, including industry and other stakeholder engagement for the purpose of private sector access to lab-

developed technologies and capabilities for the purpose of moving these to the marketplace.

DOE-funded energy R&D will continue to prioritize early-stage R&D where the federal role is strongest and reflect an increased reliance on the private sector to fund later-stage research, development and commercialization of energy technologies. DOE is actively working with the National Laboratories to reduce barriers to industry engagement with the laboratories to accelerate energy innovation in America. DOE has made it a priority to strengthen the engagement between National Laboratories and industry and other partners.

In response to investors and corporate partners, the DOE Office of Technology Transitions and its recently launched Energy Investor Center are streamlining industry-lab connections and access with a broad strategy of both live interaction through workshops and other events and with web-based tools to increase, improve and integrate information flow through the Lab Partnering Service.

DOE currently uses its Technology Commercialization Fund (TCF), to assist the private sector increase the commercial impact and number of National Laboratory-developed energy technologies transitioned into commercial development. Just last month the Department announced \$19.7 million in funding to help businesses move promising energy technologies from DOE's National Laboratories to the marketplace. This funding supported through the Office of Technology Transitions' TCF—which requires that government funds be matched by private sector capital—will support 54 projects across 12 National Laboratories involving more than 30 private-sector partners.

Through these efforts, DOE is fostering an environment that promotes responsible investment, increased efficiency and development of new technologies, as well as predictability and ease of access by the private sector to the National Laboratories and Facilities.

I look forward to continuing our dialogue on how to bring to market National Lab technologies.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the original bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in *italic*, existing law in which no change is proposed is shown in roman):

THE ENERGY POLICY ACT OF 2005

PUBLIC LAW 109–58

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SEC. 1. SHORT TITLE; TABLE OF CONTENTS.

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TITLE X—DEPARTMENT OF ENERGY MANAGEMENT

- Sec. 1001. Improved technology transfer of energy technologies.
- Sec. 1002. Technology Infrastructure Program.
- Sec. 1003. Small business advocacy and assistance.
- Sec. 1004. Outreach.
- Sec. 1005. Relationship to other laws.
- Sec. 1006. Improved coordination and management of civilian science and technology programs.
- Sec. 1007. Other transactions authority.
- Sec. 1008. Prizes for achievement in grand challenges of science and technology.
- Sec. 1009. Technical corrections.
- Sec. 1010. University collaboration.
- Sec. 1011. Sense of Congress.
- Sec. 1012. *Energy Technology Maturation Program*.

SEC. 1011. SENSE OF CONGRESS.

It is the sense of Congress that—

- (1) The Secretary should develop and implement more stringent procurement and inventory controls, including controls on the purchase card program to prevent waste, fraud, and abuse of taxpayer funds by employees and contractors of the Department; and
- (2) The Department's Inspector General should continue to closely review purchase card purchases and other procurement and inventory practices at the Department.

SEC. 1012. ENERGY TECHNOLOGY MATURATION PROGRAM.

(a) *DEFINITIONS.—In this section:*

(1) *DEPARTMENT FACILITY.—The term ‘Department facility’ includes—*

- (A) *a National Laboratory;*
- (B) *any plant or site of the Department (such as the Kansas City National Security Campus, the Nevada National Security Site, the Pantex Plant, and the Y-12 National Security Complex); and*
- (C) *any partnership of entities described in subparagraphs (A) and (B).*

(2) *PROGRAM.—The term ‘program’ means the Energy Technology Maturation Program established under subsection (b).*

(b) *ESTABLISHMENT.—The Secretary shall establish a program, to be known as the “Energy Technology Maturation Program”, under which the Secretary shall provide funding to Department facilities to facilitate the commercialization of energy and related technologies that—*

- (1) *exhibit promising commercial potential; and*
- (2) *are developed at Department facilities.*

(c) *USE OF FUNDS.—A Department facility shall use funding provided under the program—*

- (1) *to carry out additional development activities on any technology developed at the Department facility to advance the state of the technology to the degree that a private sector partner would be interested in supporting commercialization of the technology; or*
- (2) *in any case in which a private sector partner has been identified and the identified private sector partner has executed or will execute a technology partnership agreement, to support cooperative development of a technology developed at the De-*

partment facility for a specific commercial application of the technology.

(d) *APPLICATIONS.*—

(1) *IN GENERAL.*—To be eligible to receive funding under the program, a Department facility shall submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary may require.

(2) *INCLUSIONS.*—An application under this subsection shall—

(A) include a description of—

(i) the potential impact on markets if the applicable technology is successfully commercialized;

(ii) the intended accomplishments of the project proposed to be carried out using the funding with respect to advancing the maturity and commercial potential of the applicable technology; and

(iii) a project plan, including a description of each activity required to be carried out to accomplish the specific objectives of the project; and

(B) demonstrate to the satisfaction of the Secretary that each Department facility and private sector partner involved in the proposed project, and any other resource required to carry out the project, is qualified and capable of successfully completing, and is available to complete, the project, including a description of the roles and responsibilities proposed to be carried out.

(3) *MULTIPLE PROJECTS.*—A Department facility may submit to the Secretary an application for 1 or more technology maturation projects under the program.

(4) *APPROVAL BY SECRETARY.*—

(A) *IN GENERAL.*—The Secretary shall develop criteria for evaluating applications under this subsection, which may include—

(i) the potential that a proposed technology will result in a commercially successful product within a reasonable timeframe;

(ii) the relative maturity of a proposed technology for commercial application; and

(iii) the proposed technical approach and capability of the Department facilities and private sector partners to successfully implement a project.

(B) *PRIORITY.*—In selecting applicants to receive funding under the program, the Secretary shall give priority to an application submitted by a partnership between—

(i) a Department facility; and

(ii) a small business concern.

(e) *AMOUNT OF FUNDING.*—The amount provided to a recipient for a technology maturation project funded under the program shall be not more than—

(1) \$150,000 for an activity described in subsection (c)(1); and

(2) \$750,000 for an activity described in subsection (c)(2).

(f) *COST-SHARING REQUIREMENTS.*—The cost-sharing requirements of the program, including requirements relating to in-kind contributions, shall be determined by the Secretary in accordance with section 988.

(g) *FUNDING.*—*The Secretary may use to carry out the program—*

(1) amounts in the Energy Technology Commercialization Fund established under section 1001(e); or

(2) any other amounts made available to support technology transfer within the Department.

(h) *ANNUAL REPORT.*—*The Secretary shall include in the annual report required under section 1001(g)(2) a description of the results of the technology maturation projects carried out under the program.*

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