To require the Secretary of Energy to establish an energy storage research program, a demonstration program, and a technical assistance and grant program, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 22, 2019

Mr. CASTEN of Illinois (for himself, Mr. LUJÁN, Mr. MICHAEL F. DOYLE of Pennsylvania, Mr. McNERNEY, Mr. BACON, Mr. TONKO, Mr. FOSTER, and Mr. WELCH) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committee on Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To require the Secretary of Energy to establish an energy storage research program, a demonstration program, and a technical assistance and grant program, and for other purposes.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,
3
4 SECTION 1. SHORT TITLE.
5 This Act may be cited as the “Promoting Grid Stor-
6 age Act of 2019”.

verdate Mar 1, 2018
rel 2018
curr version
idh034e
timeStamp 2019-05-22T12:15:40-04:00
s:1
n:0
p:1
verdate Sep 11 2014 05:54 Jun 06, 2019 Jkt 089200 PO 00000 Frm 00001 Fmt 6652 Sfmt 6201 E:\BILLS\H2909.IH H2909kjohnson on DSK79L0C42 with BILLS
SEC. 2. DEFINITIONS.

In this Act:

(1) ENERGY STORAGE SYSTEM.—The term “energy storage system” means equipment or facilities relating to the electric grid that are capable of absorbing energy, storing the energy for a period of time, and dispatching the energy, that—

(A) use mechanical, electrochemical, biochemical, or thermal processes to store energy that was generated at an earlier time for use at a later time;

(B) use mechanical, electrochemical, biochemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time;

or

(C) store thermal energy for direct use for heating or cooling at a later time in a manner that avoids the need to use electricity at that later time, as is offered by grid-enabled water heaters.

(2) ISLANDING.—The term “islanding” means a distributed generator or energy storage device continuing to power a location in the absence of electric power from the primary source.
(3) MICROGRID.—The term “microgrid” means an integrated energy system consisting of inter-connected loads and distributed energy resources, including generators and energy storage devices, within clearly defined electrical boundaries that—

(A) acts as a single controllable entity with respect to the grid; and

(B) can connect and disconnect from the grid to operate in both grid-connected mode and island mode.

(4) SECRETARY.—The term “Secretary” means the Secretary of Energy.

SEC. 3. ENERGY STORAGE RESEARCH PROGRAM.

(a) IN GENERAL.—The Secretary shall establish a cross-cutting national program within the Department of Energy for the research of energy storage systems, components, and materials.

(b) ADDITIONAL REQUIREMENTS.—In establishing the program under subsection (a), the Secretary shall—

(1) identify and coordinate across all relevant program offices throughout the Department of Energy key areas of existing and future research with respect to a portfolio of technologies and approaches; and
(2) adopt long-term cost, performance, and im-
plementation targets for specific applications of en-
ergy storage systems.

SEC. 4. TECHNICAL ASSISTANCE AND GRANT PROGRAM.

(a) Establishment.—

(1) In general.—The Secretary shall establish a technical assistance and grant program (referred to in this section as the “program”)—

(A) to disseminate information and provide technical assistance directly to eligible entities so the eligible entities can identify, evaluate, plan, design, and develop processes to procure energy storage systems; and

(B) to make grants to eligible entities so that the eligible entities may contract to obtain technical assistance to identify, evaluate, plan, design, and develop processes to procure energy storage systems.

(2) Technical Assistance.—

(A) In general.—The technical assistance described in paragraph (1) shall include assistance with one or more of the following ac-
tivities relating to energy storage systems:

(i) Identification of opportunities to use energy storage systems.
(ii) Assessment of technical and economic characteristics.

(iii) Utility interconnection.

(iv) Permitting and siting issues.

(v) Business planning and financial analysis.

(vi) Engineering design.

(B) EXCLUSION.—The technical assistance described in paragraph (1) shall not include assistance relating to modification of Federal, State, or local regulations or policies relating to energy storage systems.

(3) INFORMATION DISSEMINATION.—The information disseminated under paragraph (1)(A) shall include—

(A) information relating to the topics described in paragraph (2), including case studies of successful examples;

(B) computer software for assessment, design, and operation and maintenance of energy storage systems; and

(C) public databases that track the operation of existing and planned energy storage systems.
(b) ELIGIBILITY.—Any not-for-profit or for-profit entity shall be eligible to receive technical assistance and grants under the program.

(c) APPLICATIONS.—

(1) IN GENERAL.—An eligible entity desiring technical assistance or grants under the program shall submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary may require.

(2) APPLICATION PROCESS.—The Secretary shall seek applications for technical assistance and grants under the program—

(A) on a competitive basis; and

(B) on a periodic basis, but not less frequently than once every 12 months.

(3) PRIORITIES.—In selecting eligible entities for technical assistance and grants under the program, the Secretary shall give priority to eligible entities with projects that have the greatest potential for—

(A) strengthening the reliability and resiliency of energy infrastructure to the impact of extreme weather events, power grid failures, and interruptions in supply of fossil fuels;
(B) reducing the cost of energy storage systems;

(C) facilitating the use of renewable energy resources;

(D) minimizing environmental impact, including regulated air pollutants and greenhouse gas emissions;

(E) improving the feasibility of microgrids or islanding, particularly in rural areas, including high energy cost rural areas; and

(F) maximizing local job creation.

(d) GRANTS.—On application by an eligible entity, the Secretary may award grants to the eligible entity to provide funds to cover not more than—

(1) 100 percent of the costs of the initial assessment to identify net system benefits of using energy storage systems;

(2) 75 percent of the cost of guidance relating to methods to assess energy storage in long-term resource planning and resource procurement;

(3) 60 percent of the cost of studies to assess the cost-benefit ratio of energy storage systems; and

(4) 50 percent of the cost of guidance on complying with State and local regulatory technical
standards, including siting and permitting standards.

(c) **RULES AND PROCEDURES.**—

(1) **RULES.**—Not later than 180 days after the date of enactment of this Act, the Secretary shall adopt rules and procedures for carrying out the program.

(2) **GRANTS.**—Not later than 120 days after the date of issuance of the rules and procedures for the program, the Secretary shall issue grants under this section.

(f) **REPORTS.**—The Secretary shall submit to Congress and make available to the public—

(1) not less frequently than once every 2 years, a report describing the performance of the program under this section, including a synthesis and analysis of any information the Secretary requires grant recipients to provide to the Secretary as a condition of receiving a grant; and

(2) on termination of the program under this section, an assessment of the success of, and education provided by, the measures carried out by eligible entities under the program.
SEC. 5. DEPARTMENT OF ENERGY WORKSHOPS.

The Secretary shall hold one or more workshops during each of calendar years 2021 and 2023 to facilitate the sharing, across the Department of Energy, the States, local and Tribal governments, industry, and the academic research community, of research developments and new technical knowledge gained in carrying out sections 3 and 4.

SEC. 6. ENERGY STORAGE SYSTEM DEMONSTRATION PROGRAM.

(a) Energy Storage Grant Program.—

(1) Establishment.—The Secretary shall establish a competitive grant program for pilot energy storage systems, as identified by the Secretary, that use either—

(A) a single system; or

(B) aggregations of multiple systems.

(2) Eligibility.—Entities eligible to receive a grant under paragraph (1) include—

(A) a State, territory, or possession of the United States;

(B) a State energy office;

(C) a tribal organization (as defined in section 3765 of title 38, United States Code);
(D) an institution of higher education (as defined in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001));

(E) an electric utility, including—

(i) a rural electric cooperative;

(ii) a political subdivision of a state, such as a municipally owned electric utility, or any agency, authority, corporation, or instrumentality of one or more state political subdivisions; and

(iii) an investor-owned utility; and

(F) a private energy storage company that is a small business concern (as defined in section 3 of the Small Business Act (15 U.S.C. 632)).

(3) SELECTION REQUIREMENTS.—In selecting eligible entities to receive a grant under this section, the Secretary shall, to the maximum extent practicable—

(A) ensure regional diversity among eligible entities that receive the grants, including participation by rural States and small States;

(B) ensure that specific projects selected for grants—
(i) expand on the existing technology
demonstration programs of the Depart-
ment of Energy; and
(ii) are designed to achieve one or
more of the objectives described in para-
graph (4);
(C) prioritize projects from eligible entities
that do not have an energy storage system;
(D) give consideration to proposals from
eligible entities for securing energy storage
through competitive procurement or contract
for service;
(E) prioritize projects that coordinate with
the local incumbent utility for in-front-of-the-
meter projects that do not formally involve a
utility; and
(F) prioritize projects that leverage match-
ing funds from non-Federal sources.
(4) OBJECTIVES.—Each demonstration project
selected for a grant under paragraph (1) shall in-
clude one or more of the following objectives:
(A) To improve the security of critical in-
frastructure and emergency response systems.
(B) To improve the reliability of the trans-
mission and distribution system, particularly in
rural areas, including high energy cost rural areas.

(C) To optimize transmission or distribution system operation and power quality to defer or avoid costs of replacing or upgrading electric grid infrastructure, including transformers and substations.

(D) To supply energy at peak periods of demand on the electric grid or during periods of significant variation of electric grid supply.

(E) To reduce peak loads of homes and businesses, particularly to defer or avoid investments in new electric grid capacity.

(F) To advance power conversion systems to make the systems smarter, more efficient, able to communicate with other inverters, and able to control voltage.

(G) To provide ancillary services for grid stability and management.

(H) To integrate a renewable energy resource production source at the source or away from the source.

(I) To increase the feasibility of microgrids or islanding.
(J) To enable the use of stored energy in forms other than electricity to support the natural gas system and other industrial processes.

(5) Restriction on Use of Funds.—Any eligible entity that receives a grant under paragraph (1) may only use the grant to fund programs relating to the demonstration of energy storage systems connected to the electric grid, including energy storage systems sited behind a customer revenue meter.

(6) Funding Limitations.—

(A) Federal Cost Share.—The Federal cost share of a project carried out with a grant under paragraph (1) shall be not more than 50 percent of the total costs incurred in connection with the development, construction, acquisition of components for, or engineering of a demonstration project.

(B) Maximum Grant.—The maximum amount of a grant awarded under paragraph (1) shall be $5,000,000.

(7) No Project Ownership Interest.—The United States shall hold no equity or other ownership interest in an energy storage system for which a grant is provided under paragraph (1).
(8) **Comparable Wage Rates.**—Each laborer and mechanic employed by a contractor or subcontractor in performance of construction work financed, in whole or in part, by the grant shall be paid wages at rates not less than the rates prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code.

(b) **Rules and Procedures; Awarding of Grants.**—

(1) **Rules and Procedures.**—Not later than 180 days after the date of enactment of this Act, the Secretary shall adopt rules and procedures for carrying out the grant program under subsection (a).

(2) **Awards of Grants.**—Not later than 1 year after the date on which the rules and procedures under paragraph (1) are established, the Secretary shall award the initial grants provided under this section.

(c) **Reports.**—The Secretary shall submit to Congress and make publicly available—

(1) not less frequently than once every 2 years for the duration of the grant program under subsection (a), a report describing the performance of
the grant program, including a synthesis and analysis of any information the Secretary requires grant recipients to provide to the Secretary as a condition of receiving a grant; and

(2) on termination of the grant program under subsection (a), an assessment of the success of, and education provided by, the measures carried out by grant recipients under the grant program.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated—

(1) for each of fiscal years 2020 through 2024, $175,000,000 to carry out section 3;

(2) for the period of fiscal years 2020 through 2024, $100,000,000 to carry out section 4, to remain available until expended; and

(3) for the period of fiscal years 2020 through 2024, $150,000,000 to carry out section 6, to remain available until expended.