

114TH CONGRESS
1ST SESSION

S. _____

To direct the Secretary of Energy to establish a grant program under which the Secretary shall make grants to eligible partnerships to provide for the transformation of the electric grid by the year 2030, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Ms. HIRONO introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To direct the Secretary of Energy to establish a grant program under which the Secretary shall make grants to eligible partnerships to provide for the transformation of the electric grid by the year 2030, 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 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Next Generation Elec-
5 tric Systems Act”.

1 **SEC. 2. GRANT PROGRAM FOR PROJECTS TO DESIGN AND**
2 **DEVELOP TRANSFORMATIVE NEXT GENERA-**
3 **TION ELECTRIC SYSTEMS.**

4 (a) IN GENERAL.—The Secretary of Energy (acting
5 through the Assistant Secretary of the Office of Electricity
6 Delivery and Energy Reliability) (referred to in this Act
7 as the “Secretary”) shall establish a grant program under
8 which the Secretary shall make grants to eligible partner-
9 ships to develop and carry out eligible projects related to
10 achieving the transformation of the future electric grid by
11 the year 2030 using a comprehensive approach to electric
12 system design and architecture.

13 (b) ELIGIBLE PROJECTS.—To be eligible for a grant
14 under subsection (a), a project—

15 (1) shall be designed to improve the perform-
16 ance and efficiency of the future electric grid, while
17 ensuring the continued provision of safe, secure, reli-
18 able, and affordable power; and

19 (2) may include projects to design, develop, and
20 test—

21 (A) feasible, optimal next generation elec-
22 tricity delivery systems, from generation
23 through consumption, including end-use appli-
24 cations;

25 (B) the role that regulated utilities and
26 market-driven entities, including third-party

1 nonregulated services providers, may play in an
2 electric system in which distributed energy re-
3 sources and retail and wholesale level ancillary
4 services expand;

5 (C) optimal and innovative, comprehensive
6 grid infrastructure designs that would ensure
7 reliable, cost-effective, safe, and secure integra-
8 tion and management of variable and distrib-
9 uted energy resources, including projects re-
10 lated to distributed generation, combined heat
11 and power, microgrids, energy storage, electric
12 vehicles, energy efficiency, demand response,
13 and intelligent loads;

14 (D) optimal grid design solutions to ensure
15 grid reliability and resiliency;

16 (E) the integration and interoperability of
17 telecommunications, information technology,
18 operational technologies, or other systems and
19 technologies with the electric grid to support
20 the management of the future, next generation,
21 dynamic and changing electric system; and

22 (F) solutions to overcoming technological,
23 regulatory, business model, and market barriers
24 to achieve the transition and transformation to
25 the future electric grid.

1 (c) DESCRIPTION OF ELIGIBLE PARTNERSHIP.—An
2 eligible partnership referred to in subsection (a) means a
3 group of 2 or more entities that—

4 (1) may include any institution of higher edu-
5 cation, National Laboratory, representative of a
6 State or local government, representative of an In-
7 dian tribe, Federal power marketing administration,
8 industry expert, or nonprofit industry trade associa-
9 tion; and

10 (2) shall include at least 1 of any of the fol-
11 lowing:

12 (A) An investor-owned electric utility.

13 (B) A publicly owned utility.

14 (C) A technology provider.

15 (D) A rural electric cooperative.

16 (E) A Regional Transmission Organiza-
17 tion.

18 (F) An Independent System Operator.

19 (d) APPLICATION.—In order to receive a grant under
20 this section, an eligible partnership shall submit to the
21 Secretary an application at such time, in such form, and
22 containing such information as the Secretary may pre-
23 scribe, including details about the partnership and pro-
24 posed project.

1 (e) SELECTION COMMITTEE.—Not later than 90 days
2 after the date of enactment of this Act, the Secretary shall
3 establish a selection committee, comprised of technical ex-
4 perts, to make recommendations, based on the criteria de-
5 scribed in subsection (f), to the Secretary for the award
6 of grants under this section to 2 or more eligible partner-
7 ships.

8 (f) SELECTION CRITERIA.—

9 (1) IN GENERAL.—The Secretary shall make
10 grants under subsection (a) based on the following
11 criteria:

12 (A) The scope and diversity of the eligible
13 partnership with respect to representation of
14 stakeholders and geographic locations.

15 (B) The demonstrated ability of the eligi-
16 ble partnership to provide leadership within the
17 industry in promoting transformative innova-
18 tion in electricity systems, using a comprehen-
19 sive or holistic approach, especially with respect
20 to system design or architecture.

21 (C) The extent to which a project would
22 develop and carry out commercially available or
23 emerging technologies that would be scalable
24 and replicable.

25 (D) The extent to which a project would—

- 1 (i) improve electric reliability, resil-
2 iency, security, and safety;
3 (ii) provide consumer benefits;
4 (iii) drive economic growth; or
5 (iv) achieve other grid modernization
6 policy or technical goals.

7 (E) The extent to which a project would
8 provide an innovative conceptual or technical
9 approach to the operation of the electric grid
10 looking to the year 2030 and beyond.

11 (F) The demonstrated ability of the eligible
12 partnership to leverage prior Federal or local
13 investments.

14 (G) The extent to which a project would
15 advance a financially viable future model for
16 electricity market participants, including utili-
17 ties and third-party entities, that provides all
18 consumers with fair and equitable options to
19 meet the electric energy needs of the con-
20 sumers, while balancing societal, and individual
21 consumer, interests.

22 (2) PRIORITY FOR PROJECTS PROVIDING COST
23 SHARE.—In selecting eligible partnerships to make
24 grants to under subsection (a), the Secretary shall

1 give priority to eligible partnerships proposing
2 projects for which a cost-share is to be provided.

3 **SEC. 3. AUTHORIZATION OF APPROPRIATIONS.**

4 There are authorized to be appropriated to the Sec-
5 retary such sums as are necessary to carry out this Act
6 for each of fiscal years 2016 through 2020.