

119TH CONGRESS
2D SESSION

S. 5159

To amend the Public Utility Regulatory Policies Act of 1978 to support microgrids, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 29, 2026

Mr. WELCH introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To amend the Public Utility Regulatory Policies Act of 1978 to support microgrids, 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 “Supporting Trans-
5 formative Resilience, Operations, and Next-Generation
6 Grid Innovation Deployment Act of 2026” or the
7 “STRONG GRID Act of 2026”.

1 **SEC. 2. CONSIDERATION OF INTERCONNECTION OF**
2 **MICROGRIDS AND THE BENEFITS OF INVEST-**
3 **MENTS IN RESILIENCE.**

4 (a) IN GENERAL.—Section 111(d) of the Public Util-
5 ity Regulatory Policies Act of 1978 (16 U.S.C. 2621(d))
6 is amended by adding at the end the following:

7 “(22) INTERCONNECTION OF MICROGRIDS.—

8 “(A) DEFINITION OF MICROGRID.—In this
9 paragraph, the term ‘microgrid’ means a group
10 of interconnected loads and distributed energy
11 resources (which may include energy generation
12 resources, energy storage, energy efficiency re-
13 sources, district heating and cooling, combined
14 heat and power, demand response and load con-
15 trol tools, and other management, forecasting,
16 and analytical tools) within clearly defined elec-
17 trical boundaries that—

18 “(i) acts as a single controllable entity
19 with respect to the electric grid; and

20 “(ii) has the ability—

21 “(I) to connect to the electric
22 grid;

23 “(II) to disconnect from the elec-
24 tric grid; or

1 “(III) to run in parallel to the
2 electric grid, whether connected to or
3 disconnected from the electric grid.

4 “(B) INTERCONNECTION.—Each State
5 shall consider establishing a regulatory frame-
6 work for the interconnection of microgrids,
7 which may include revising existing interconnec-
8 tion requirements for distributed energy re-
9 sources to better account for islanding, resource
10 availability and scheduling, resource protection,
11 and controls.

12 “(23) QUANTIFYING BENEFITS OF INVEST-
13 MENTS IN RESILIENCE.—

14 “(A) IN GENERAL.—Each State shall con-
15 sider establishing—

16 “(i) standards for evaluating and
17 quantifying the benefits of investments in
18 the resilience of the electric grid, includ-
19 ing—

20 “(I) the events, circumstances,
21 and essential services for which resil-
22 ience is required;

23 “(II) the level and duration of
24 service required to achieve resilience;
25 and

1 “(III) consideration of—

2 “(aa) whether critical cus-
3 tomers have on-site or behind-
4 the-meter generation capacity;
5 and

6 “(bb) whether information
7 relating to that capacity has been
8 shared with the applicable utility
9 and relevant regional entities, as
10 necessary; and

11 “(ii) a valuation methodology to quan-
12 tify the value of measures to improve the
13 resilience of the electric grid in order to
14 determine whether such investments are
15 justifiable, including a mechanism to deter-
16 mine—

17 “(I) the distribution of resilience
18 benefits to ratepayers; and

19 “(II) the scope over which resil-
20 ience benefits accrue.

21 “(B) DEFENSE INSTALLATIONS.—Military
22 installations (as defined in section 2801(c) of
23 title 10, United States Code) and other defense
24 installations and infrastructure operated by the
25 Department of Defense shall not be subject to

1 any standards or methodologies established pur-
2 suant to subparagraph (A).”.

3 (b) COMPLIANCE.—

4 (1) TIME LIMITATION.—Section 112(b) of the
5 Public Utility Regulatory Policies Act of 1978 (16
6 U.S.C. 2622(b)) is amended—

7 (A) by indenting paragraphs (4) through
8 (8), and any subparagraphs within those para-
9 graphs, appropriately; and

10 (B) by adding at the end the following:

11 “(9)(A) Not later than 1 year after the date of enact-
12 ment of this paragraph, each State regulatory authority
13 (with respect to each electric utility for which the State
14 has ratemaking authority) and each nonregulated electric
15 utility shall commence consideration under section 111, or
16 set a hearing date for consideration, with respect to the
17 standards established by paragraphs (22) and (23) of sec-
18 tion 111(d).

19 “(B) Not later than 2 years after the date of enact-
20 ment of this paragraph, each State regulatory authority
21 (with respect to each electric utility for which the State
22 has ratemaking authority), and each nonregulated electric
23 utility shall complete the consideration and make the de-
24 termination under section 111 with respect to the stand-

ards established by paragraphs (22) and (23) of section
111(d).”.

(2) FAILURE TO COMPLY.—Section 112(c) of
the Public Utility Regulatory Policies Act of 1978
(16 U.S.C. 2622(c)) is amended by adding at the
end the following: “In the case of the standards es-
tablished by paragraphs (22) and (23) of section
111(d), the reference contained in this subsection to
the date of enactment of this Act shall be deemed
to be a reference to the date of enactment of those
paragraphs.”.

(3) PRIOR STATE ACTIONS.—

(A) IN GENERAL.—Section 112 of the
Public Utility Regulatory Policies Act of 1978
(16 U.S.C. 2622) is amended—

(i) in each of subsections (d) through
(h), by redesignating paragraphs (1)
through (3) as subparagraphs (A) through
(C), respectively, and indenting appro-
priately;

(ii) in subsections (e) through (h), by
striking “enactment of this subsection”
and inserting “enactment of that para-
graph”;

1 (iii) in subsection (d), in the matter
 2 preceding subparagraph (A) (as so redesign-
 3 nated), by striking “Subsections” and in-
 4 serting the following:

5 “(1) IN GENERAL.—Subsections”;

6 (iv) in subsection (e), by striking the
 7 subsection designation and heading and all
 8 that follows through “Subsections” in the
 9 matter preceding subparagraph (A) (as so
 10 redesignated) and inserting the following:

11 “(2) TIME-BASED METERING AND COMMUNICA-
 12 TIONS.—Subsections”;

13 (v) in subsection (f), by striking the
 14 subsection designation and heading and all
 15 that follows through “Subsections” in the
 16 matter preceding subparagraph (A) (as so
 17 redesignated) and inserting the following:

18 “(3) INTERCONNECTION.—Subsections”;

19 (vi) in subsection (g), by striking the
 20 subsection designation and heading and all
 21 that follows through “Subsections” in the
 22 matter preceding subparagraph (A) (as so
 23 redesignated) and inserting the following:

24 “(4) DEMAND-RESPONSE PRACTICES.—Sub-
 25 sections”;

1 (vii) in subsection (h), by striking the
 2 subsection designation and heading and all
 3 that follows through “Subsections” in the
 4 matter preceding subparagraph (A) (as so
 5 redesignated) and inserting the following:

6 “(5) ELECTRIC VEHICLE CHARGING PRO-
 7 GRAMS.—Subsections”; and

8 (viii) in subsection (d) (as so amend-
 9 ed) by adding at the end the following:

10 “(6) INTERCONNECTION OF MICROGRIDS; BEN-
 11 EFITS OF INVESTMENTS IN RESILIENCE.—Sub-
 12 sections (b) and (c) shall not apply to the standard
 13 established by paragraph (22) or (23), as applicable,
 14 of section 111(d) in the case of any electric utility
 15 in a State if, before the date of enactment of that
 16 paragraph—

17 “(A) the State has implemented for the
 18 electric utility the applicable standard (or a
 19 comparable standard);

20 “(B) the State regulatory authority for the
 21 State or the relevant nonregulated electric util-
 22 ity has conducted a proceeding to consider im-
 23 plementation of the applicable standard (or a
 24 comparable standard) for the electric utility; or

1 “(C) the State legislature has voted on the
2 implementation of the applicable standard (or a
3 comparable standard) for the electric utility
4 during the 3-year period ending on that date of
5 enactment.”.

6 (B) CROSS REFERENCE.—Section 124 of
7 the Public Utility Regulatory Policies Act of
8 1978 (16 U.S.C. 2634) is amended by adding
9 at the end the following: “In the case of the
10 standards established by paragraphs (22) and
11 (23) of section 111(d), the reference contained
12 in this section to the date of enactment of this
13 Act shall be deemed to be a reference to the
14 date of enactment of those paragraphs.”.

15 **SEC. 3. STATE ENERGY PROGRAMS.**

16 Section 362 of the Energy Policy and Conservation
17 Act (42 U.S.C. 6322) is amended—

18 (1) in subsection (c)(7)(B), by inserting “, in-
19 cluding microgrids (as defined in section 367(a))”
20 before the semicolon at the end; and

21 (2) in subsection (d)(10), by inserting “, such
22 as distributed energy resources and virtual power
23 plants” before the semicolon at the end.

1 **SEC. 4. STATE-ADMINISTERED ASSISTANCE FOR**
 2 **MICROGRIDS.**

3 (a) IN GENERAL.—Part D of title III of the Energy
 4 Policy and Conservation Act (42 U.S.C. 6321 et seq.) is
 5 amended by adding at the end the following:

6 **“SEC. 367. STATE-ADMINISTERED ASSISTANCE FOR**
 7 **MICROGRIDS.**

8 “(a) DEFINITIONS.—In this section:

9 “(1) LOW-INCOME COMMUNITY.—The term
 10 ‘low-income community’ means any census block
 11 group in which 30 percent or more of the population
 12 are individuals with an annual household income
 13 equal to, or less than, the greater of—

14 “(A) an amount equal to 80 percent of the
 15 median income of the area in which the house-
 16 hold is located, as reported by the Department
 17 of Housing and Urban Development; and

18 “(B) 200 percent of the Federal poverty
 19 line.

20 “(2) MICROGRID.—The term ‘microgrid’ means
 21 a group of interconnected loads and distributed en-
 22 ergy resources (which may include energy generation
 23 resources, energy storage, energy efficiency re-
 24 sources, district heating and cooling, combined heat
 25 and power, demand response and load control tools,
 26 and other management, forecasting, and analytical

1 tools) within clearly defined electrical boundaries
2 that—

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

5 “(B) has the ability to connect to, dis-
6 connect from, or run in parallel to the electric
7 grid and operate in grid-connected mode or
8 islanded mode.

9 “(3) RURAL AREA.—The term ‘rural area’
10 means any area other than—

11 “(A) a city or town that has a population
12 of greater than 50,000 inhabitants; and

13 “(B) any urbanized area contiguous and
14 adjacent to a city or town described in subpara-
15 graph (A).

16 “(b) PROGRAM.—Not later than 1 year after the date
17 of enactment of the STRONG GRID Act of 2026, the Sec-
18 retary, in consultation with the Director of the Office of
19 Cybersecurity, Energy Security, and Emergency Re-
20 sponse, shall establish a program under which the Sec-
21 retary shall allocate funding to State energy offices to im-
22 plement an Electric Grid Resilience Program in accord-
23 ance with this section.

24 “(c) FUNDING ALLOCATION.—The Secretary shall al-
25 locate funding under subsection (b) in accordance with the

1 allocation formula in effect on December 31, 2024, for the
 2 State Energy Program established under this part.

3 “(d) ELECTRIC GRID RESILIENCE PROGRAMS.—

4 “(1) IN GENERAL.—An Electric Grid Resilience
 5 Program carried out by a State energy office using
 6 funds provided under this section shall award com-
 7 petitive grants to eligible entities to support the de-
 8 ployment of microgrids.

9 “(2) ELIGIBLE ACTIVITIES.—A grant awarded
 10 under an Electric Grid Resilience Program may be
 11 used for—

12 “(A) conducting a microgrid needs assess-
 13 ment or feasibility study;

14 “(B) designing and engineering a
 15 microgrid, including the solicitation of technical
 16 assistance—

17 “(i) to address permitting and siting
 18 challenges;

19 “(ii) to understand the technical char-
 20 acteristics and management of microgrids;

21 “(iii) to develop a maintenance plan
 22 for the microgrid; and

23 “(iv) to develop cybersecurity and
 24 data privacy measures unique to microgrid
 25 performance and operation;

1 “(C) construction of a microgrid and asso-
2 ciated energy resources, including—

3 “(i) energy generation assets;

4 “(ii) energy storage; and

5 “(iii) technologies to manage the oper-
6 ation and security of the microgrid;

7 “(D) implementation of advanced cyberse-
8 curity or operational controls for an existing
9 microgrid;

10 “(E) the technical and physical operation
11 and maintenance of a newly constructed
12 microgrid;

13 “(F) training existing staff on the real-
14 time systems specific to microgrids; and

15 “(G) other activities relating to microgrid
16 deployment, as the applicable State energy of-
17 fice determines to be appropriate.

18 “(3) PRIORITIES.—In awarding grants under
19 an Electric Grid Resilience Program, a State energy
20 office shall give priority to projects that—

21 “(A) improve energy resilience, such as by
22 reducing the frequency, duration, or scale of
23 blackouts or power system failures;

24 “(B) improve the reliability of electric serv-
25 ice;

1 “(C) generate multiple energy value
2 streams, including ancillary services;

3 “(D) address a need identified in a State
4 or local hazard mitigation or emergency pre-
5 paredness plan;

6 “(E) address a need identified in a State
7 energy security plan (as defined in section
8 366(a));

9 “(F) primarily benefit a rural area or low-
10 income community;

11 “(G) provide ancillary services to the grid,
12 such as demand management or congestion con-
13 trol; or

14 “(H) deploy distributed or renewable en-
15 ergy resources.

16 “(4) COST SHARE.—The recipient of a grant
17 under an Electric Grid Resilience Program shall be
18 required to provide not less than 25 percent of the
19 cost of the project carried out using the grant.

20 “(e) ADMINISTRATIVE EXPENSES.—A State may use
21 up to 10 percent of the amount allocated to the State
22 under this section for the costs of administering an Elec-
23 tric Grid Resilience Program.

24 “(f) FUNDING.—There is appropriated, out of any
25 funds in the Treasury not otherwise appropriated,

1 \$500,000,000 to carry out this section for the period of
 2 fiscal years 2027 through 2031.”.

3 (b) TECHNICAL AMENDMENT.—The table of contents
 4 for the Energy Policy and Conservation Act (Public Law
 5 94–163; 89 Stat. 872) is amended by inserting after the
 6 item relating to section 366 the following:

“Sec. 367. State-administered assistance for microgrids.”.

7 **SEC. 5. TECHNICAL ASSISTANCE FOR UTILITIES, UTILITY**
 8 **REGULATORS, AND OTHER STAKEHOLDERS.**

9 (a) IN GENERAL.—Title VI of the Public Utility Reg-
 10 ulatory Policies Act of 1978 is amended by inserting after
 11 section 609 (7 U.S.C. 918c) the following:

12 **“SEC. 610. TECHNICAL, EDUCATIONAL, AND OTHER ASSIST-**
 13 **ANCE ON MICROGRIDS.**

14 “(a) DEFINITIONS.—In this section:

15 “(1) ELIGIBLE ENTITY.—The term ‘eligible en-
 16 tity’ means—

17 “(A) an electric utility, including the board
 18 of an electric cooperative;

19 “(B) an electric utility regulator, including
 20 a State regulatory authority, such as a public
 21 utility commission;

22 “(C) a State or a State energy office;

23 “(D) an agency, authority, corporation, or
 24 instrumentality of a State or Indian Tribe;

1 “(E) a unit of local government or a polit-
2 ical subdivision of a State or Indian Tribe;

3 “(F) a policymaker having authority with
4 respect to—

5 “(i) an electric utility;

6 “(ii) the regulation of electric utilities
7 or the sale of electric energy; or

8 “(iii) any other matter relating to the
9 adoption or use of microgrids; and

10 “(G) any other relevant entity, as deter-
11 mined by the Secretary.

12 “(2) MICROGRID.—The term ‘microgrid’ has
13 the meaning given the term in section
14 111(d)(22)(A).

15 “(3) NATIONAL LABORATORY.—The term ‘Na-
16 tional Laboratory’ has the meaning given the term
17 in section 2 of the Energy Policy Act of 2005 (42
18 U.S.C. 15801).

19 “(4) STATE ENERGY OFFICE.—The term ‘State
20 energy office’ means the State agency responsible for
21 developing a State energy conservation plan under
22 section 362 of the Energy Policy and Conservation
23 Act (42 U.S.C. 6322).

24 “(b) TECHNICAL ASSISTANCE ON MICROGRID ADOP-
25 TION.—The Secretary, on request, shall provide to eligible

1 entities technical assistance to facilitate the adoption and
 2 deployment of microgrids, including technical assistance
 3 with respect to—

4 “(1) interconnection processes;

5 “(2) valuation and verification of microgrid
 6 benefits;

7 “(3) integrated distribution system and re-
 8 source planning, including behind-the-meter re-
 9 sources;

10 “(4) co-locating microgrid infrastructure and
 11 large industrial and commercial loads; and

12 “(5) other relevant considerations, as deter-
 13 mined by the Secretary.

14 “(c) TECHNICAL ASSISTANCE ON IMPLEMENTATION
 15 OF THE STRONG GRID ACT OF 2026.—

16 “(1) IN GENERAL.—The Secretary, on request,
 17 shall provide technical assistance to State agencies
 18 and other eligible entities, including State regulatory
 19 authorities, State regulated electric utilities, and
 20 nonregulated electric utilities, with respect to—

21 “(A) regulatory proceedings relating to
 22 paragraphs (22) and (23) of section 111(d);

23 “(B) the adoption or use of microgrids as
 24 part of the State Energy Program established
 25 under part D of title III of the Energy Policy

1 and Conservation Act (42 U.S.C. 6321 et seq.);

2 or

3 “(C) the grant program established under
4 section 367(b) of that Act.

5 “(2) NATIONAL LABORATORIES.—The Sec-
6 retary may provide technical assistance under para-
7 graph (1) through the National Laboratories, as the
8 Secretary determines to be appropriate.

9 “(d) BEST PRACTICES.—The Secretary, in coordina-
10 tion with the National Laboratories and in consultation
11 with State energy offices and other stakeholders, as deter-
12 mined by the Secretary, shall develop best practices for
13 the following matters with respect to microgrids and
14 microgrid components:

15 “(1) Interconnection processes.

16 “(2) Cybersecurity.

17 “(3) Personal data protection.

18 “(4) Ownership.

19 “(e) WORKSHOPS, ROUNDTABLES, AND OTHER AC-
20 TIVITIES.—The Secretary shall host workshops,
21 roundtables, information sessions, and other activities to
22 provide to eligible entities education and information
23 about microgrids, including with respect to—

24 “(1) the benefits of microgrids and the role of
25 microgrids in strengthening electric grid resilience,

1 reducing emissions, managing demand, and meeting
2 load growth and other energy industry challenges;

3 “(2) best practices, standards, and protocols for
4 the regulation, development, implementation, oper-
5 ation, and management of microgrids; and

6 “(3) resources and technical assistance opportu-
7 nities available to eligible entities from the Secretary
8 and other Federal agencies.”.

9 (b) CLERICAL AMENDMENT.—The table of contents
10 in section 1(b) of the Public Utility Regulatory Policies
11 Act of 1978 (Public Law 95–617; 92 Stat. 3118) is
12 amended by adding at the end of the items relating to
13 title VI the following:

“Sec. 609. Rural and remote communities electrification grants.

“Sec. 610. Technical, educational, and other assistance on microgrids.”.

14 **SEC. 6. PILOT PROGRAM FOR DEMONSTRATION OF INNO-**
15 **VATIVE MICROGRID APPLICATIONS.**

16 (a) DEFINITIONS.—In this section:

17 (1) ELIGIBLE ENTITY.—The term “eligible enti-
18 ty” means—

19 (A) an electric grid operator;

20 (B) an electricity storage operator;

21 (C) an electricity generator;

22 (D) a transmission owner or operator;

23 (E) a distribution provider;

24 (F) a fuel supplier;

1 (G) a State, a territory of the United
2 States, or an Indian Tribe;

3 (H) an agency, authority, corporation, or
4 instrumentality of a State or Indian Tribe;

5 (I) a unit of local government or a political
6 subdivision of a State or Indian Tribe;

7 (J) an institution of higher education; and

8 (K) any other relevant entity, as deter-
9 mined by the Secretary.

10 (2) PILOT PROGRAM.—The term “pilot pro-
11 gram” means the pilot program established under
12 subsection (b).

13 (3) SECRETARY.—The term “Secretary” means
14 the Secretary of Energy.

15 (b) ESTABLISHMENT.—Not later than 1 year after
16 the date of enactment of this Act, the Secretary shall es-
17 tablish a pilot program to award grants, on a competitive
18 basis, to eligible entities for projects to demonstrate inno-
19 vative microgrid deployment.

20 (c) APPLICATIONS.—An eligible entity seeking a
21 grant under the pilot program shall submit to the Sec-
22 retary an application at such time, in such manner, and
23 containing such information as the Secretary may require.

24 (d) PRIORITY.—In awarding grants under the pilot
25 program, the Secretary shall give priority to projects that

1 demonstrate innovative microgrid applications, emerging
2 technologies, and distributed energy resources manage-
3 ment systems, which may include microgrid projects
4 that—

5 (1) provide ancillary grid services and supply
6 and demand management;

7 (2) aggregate distributed energy resources into
8 virtual power plants;

9 (3) communicate between demand and genera-
10 tion resources;

11 (4) demonstrate effective cybersecurity manage-
12 ment;

13 (5) demonstrate methods to protect microgrids
14 and related energy resources during a grid or
15 microgrid fault;

16 (6) facilitate load transfers to alleviate trans-
17 mission congestion;

18 (7) manage voltage instability or collapses;

19 (8) demonstrate systems to support microgrid
20 and networked microgrid operations, including co-
21 ordination and resource sharing;

22 (9) demonstrate systems for multi-microgrid
23 control;

24 (10) demonstrate microgrid capabilities and op-
25 eration in black-start conditions;

1 (11) demonstrate successful operation of
2 microgrids where direct current systems are the pri-
3 mary basis of design;

4 (12) demonstrate successful microgrid operation
5 with a significant penetration of or complete reliance
6 on renewable energy resources, including storage; or

7 (13) adopt a flexible regulatory framework for
8 high-visibility projects that demonstrate advanced
9 microgrid concepts and technologies.

10 (e) COST SHARE.—The Federal share of the cost of
11 a project for which a grant is provided under the pilot
12 program shall not exceed 90 percent.

13 (f) TECHNICAL ASSISTANCE.—The Secretary may
14 provide technical assistance to recipients of grants under
15 the pilot program with respect to—

16 (1) the development of microgrid regulatory
17 frameworks;

18 (2) the design of microgrids; and

19 (3) the feasibility of microgrid projects.

20 (g) REPORTS.—

21 (1) REPORT ON MICROGRID BENEFITS AND
22 REGULATORY PROCESSES.—Not later than 5 years
23 after the date of enactment of this Act, the Sec-
24 retary, in coordination with the National Labora-
25 tories, shall submit to Congress and publish on a

1 publicly available website of the Department of En-
2 ergy a report that evaluates the outcomes of the
3 pilot program, including—

4 (A) the benefits, challenges, and risks of
5 microgrid deployment; and

6 (B) regulatory processes relating to the de-
7 ployment of microgrids.

8 (2) REPORT ON PILOT PROJECTS.—Annually,
9 the Secretary shall submit to Congress and publish
10 on a publicly available website of the Department of
11 Energy a report describing each project funded
12 under the pilot program as of the date of the report,
13 including the innovative microgrid deployment, appli-
14 cations, and technologies demonstrated by the
15 project.

16 (h) AUTHORIZATION OF APPROPRIATIONS.—There is
17 authorized to be appropriated to the Secretary to carry
18 out the pilot program \$200,000,000 for the period of fiscal
19 years 2027 through 2031.

○