

# Calendar No. 387

116TH CONGRESS  
1ST SESSION

# S. 2660

To establish a grant program for wind energy research, development, and demonstration, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

OCTOBER 22, 2019

Ms. SMITH (for herself and Ms. COLLINS) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

DECEMBER 18, 2019

Reported by Ms. MURKOWSKI, with amendments and an amendment to the title

[Omit the part struck through and insert the part printed in italic]

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## A BILL

To establish a grant program for wind energy research, development, and demonstration, 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 “Wind Energy Research  
5 and Development Act of 2019”.

1 **SEC. 2. DEFINITIONS.**

2 In this Act:

3 (1) **ELIGIBLE ENTITY.**—The term “eligible enti-  
4 ty” means—

5 (A) an institution of higher education;

6 (B) a National Laboratory;

7 (C) a Federal research agency;

8 (D) a State research agency;

9 (E) a nonprofit research organization;

10 (F) an industrial entity; and

11 (G) a consortium of two or more entities  
12 described in subparagraphs (A) through (F).

13 (2) **INSTITUTION OF HIGHER EDUCATION.**—The  
14 term “institution of higher education” has the  
15 meaning given the term in section 101 of the Higher  
16 Education Act of 1965 (20 U.S.C. 1001).

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

21 (4) **PROGRAM.**—The term “program” means  
22 the program established under section 3(a).

23 (5) **SECRETARY.**—The term “Secretary” means  
24 the Secretary of Energy.

25 (6) **SUPERSIZED TURBINE.**—The term “super-  
26 sized turbine” means a 12-megawatt or greater wind

1 turbine that typically has a tower height greater  
2 than 140 meters and blades greater than 75 meters.

3 **SEC. 3. WIND ENERGY TECHNOLOGY, RESEARCH, DEVELOP-**  
4 **MENT, AND TESTING GRANT PROGRAM.**

5 (a) ESTABLISHMENT.—

6 (1) IN GENERAL.—The Secretary shall establish  
7 a program under which the Secretary shall award  
8 grants on a competitive, merit-reviewed basis to eli-  
9 gible entities to conduct research, development, test-  
10 ing, and evaluation of wind energy technologies in  
11 accordance with this section.

12 (2) PURPOSES.—The purposes of the program  
13 are the following:

14 (A) To improve the energy efficiency, reli-  
15 ability, resilience, security, and capacity of wind  
16 energy generation.

17 (B) To optimize the design and control of  
18 wind energy systems for the broadest practical  
19 range of atmospheric conditions.

20 (C) To reduce the cost and risk of permit-  
21 ting, construction, operation, and maintenance  
22 of wind energy systems, including using tech-  
23 nologies to reduce environmental and commu-  
24 nity impacts, improve grid integration, and re-  
25 duce regulatory barriers.

1           (D) To improve materials, engineering,  
2           and manufacturing processes for turbines, in-  
3           cluding supersized turbines.

4           (E) To optimize wind plant performance  
5           and integration within hybrid energy systems to  
6           enhance cost efficiency and electric grid sta-  
7           bility and resilience.

8           (3) COORDINATION.—To the maximum extent  
9           practicable, the Secretary shall coordinate activities  
10          under the program with other relevant programs and  
11          capabilities of the Department of Energy and other  
12          Federal research programs.

13          (b) GRANT SUBJECT AREAS.—In addition to award-  
14          ing the grants described in subsections (c) through (e),  
15          the Secretary shall award grants under the program to  
16          eligible entities to carry out research, development, test-  
17          ing, and evaluation in the following subject areas:

18               (1) Wind power plant performance and oper-  
19               ations, including—

20                       (A) wind flows and turbine-to-turbine  
21                       interactions;

22                       (B) energy conversion potential;

23                       (C) turbine and wind plant control para-  
24                       digms;

25                       (D) turbine and wind plant security;

1           ~~(E)~~ turbine components; and

2           ~~(F)~~ integrated hybrid plant systems.

3           ~~(2)~~ New materials and designs relating to  
4 blades, rotors, towers, and drivetrains, including—

5           ~~(A)~~ higher tip speed rotor designs;

6           ~~(B)~~ low-noise rotor designs;

7           ~~(C)~~ advanced drivetrain and generator con-  
8 cepts;

9           ~~(D)~~ modular construction and onsite or  
10 near-site manufacturing and assembly tech-  
11 niques, including the use of additive manufac-  
12 turing;

13           ~~(E)~~ sustainable and recyclable materials,  
14 including thermoplastics, and manufacturing  
15 systems;

16           ~~(F)~~ supersized turbine design and installa-  
17 tion approaches; and

18           ~~(G)~~ lightweight materials.

19           ~~(3)~~ Offshore wind-specific projects, including—

20           ~~(A)~~ fixed and floating substructure con-  
21 cepts;

22           ~~(B)~~ projects to assess and mitigate the im-  
23 pacts of hurricane wind flow, freshwater ice,  
24 and other conditions specific to the United  
25 States;

1           (C) innovative operations and maintenance  
2 strategies;

3           (D) analysis of offshore meteorological, ge-  
4 ological, and oceanographic data collection;

5           (E) offshore infrastructure monitoring;  
6 and

7           (F) analysis of corrosion and fatigue for  
8 the purpose of extending the design life of off-  
9 shore wind turbine substructures.

10          (4) Recycling and reuse of wind energy compo-  
11 nents.

12          (5) Wind power forecasting and atmospheric  
13 measurement systems, including for turbines and  
14 plant systems of varying height.

15          (6) Distributed wind-specific projects, includ-  
16 ing—

17           (A) cost-effective turbine designs, compo-  
18 nents, and manufacturing; and

19           (B) microgrid applications.

20          (7) Advanced transportation mechanisms for  
21 wind turbine components.

22          (8) Transformational technologies for har-  
23 nassing wind energy, including airborne wind energy  
24 concepts.

1           (9) Methods to extend the operational lifetime  
2 of onshore and offshore wind turbines and systems.

3           (10) Other research areas, as determined by the  
4 Secretary.

5       (c) WIND ENERGY TECHNOLOGY VALIDATION AND  
6 MARKET TRANSFORMATION GRANTS.—

7           (1) DEMONSTRATION PROJECTS.—In carrying  
8 out the program, the Secretary shall award grants to  
9 eligible entities to carry out demonstration projects  
10 that demonstrate and validate new wind energy tech-  
11 nologies that have the potential to be cost-competi-  
12 tive for land-based, offshore, and distributed applica-  
13 tions.

14           (2) FACILITY FOR HYBRID ENERGY SYSTEM RE-  
15 SEARCH GRANTS.—In carrying out the program, the  
16 Secretary shall award grants to eligible entities to  
17 establish a facility or support an existing facility in  
18 conducting research and demonstration projects for  
19 wind turbines and plants in hybrid energy systems  
20 that incorporate diverse generation sources, loads,  
21 and storage technologies.

22           (3) OFFSHORE RESEARCH FACILITY GRANTS.—

23           (A) IN GENERAL.—In carrying out the  
24 program, the Secretary shall award grants to  
25 eligible entities to establish a facility to conduct

1 research, development, and demonstration  
2 projects, in coordination with the oceanic and  
3 atmospheric science communities, for ocean and  
4 atmospheric resource characterization relevant  
5 to offshore wind energy development.

6 (B) FACILITY REQUIREMENTS.—A facility  
7 established using a grant under subparagraph  
8 (A) shall be an offshore facility used to evalu-  
9 ate, test, and advance atmospheric, oceanic, bio-  
10 logic, and geologic monitoring technologies that  
11 improve offshore wind energy development, in-  
12 cluding the generation of benchmark data sets  
13 for testing offshore wind energy technologies  
14 and informing how those technologies may be  
15 financed, insured, and regulated.

16 (4) OFFSHORE SUPPORT STRUCTURE TESTING  
17 FACILITY GRANTS.—In carrying out the program,  
18 the Secretary shall award grants to eligible entities  
19 to establish a facility to conduct research, develop-  
20 ment, and demonstration projects for large-scale and  
21 full-scale offshore wind energy support structure  
22 components and systems, with an emphasis on inno-  
23 vative structures, including floating substructures.

24 (5) APPLICATIONS.—An eligible entity seeking  
25 a grant under this subsection shall submit to the



1 Secretary an application at such time, in such man-  
2 ner, and containing such information as the Sec-  
3 retary may require, including, in the case of an ap-  
4 plication for a grant under paragraph (1), a certifi-  
5 cation that the proposed demonstration project shall  
6 be—

7 (A) conducted in collaboration with indus-  
8 try and, as appropriate, with institutions of  
9 higher education and other Federal research  
10 programs; and

11 (B) of sufficient size and geographic diver-  
12 sity to measure wind energy system perform-  
13 ance under the full productive range of wind  
14 conditions in the United States.

15 (d) WIND ENERGY INCUBATOR GRANTS.—In ear-  
16 rying out the program, the Secretary shall award grants  
17 to eligible entities to support innovative technologies that  
18 are not significantly represented in—

19 (1) the portfolio of wind energy research activi-  
20 ties carried out by the Secretary as of the date of  
21 enactment of this Act; or

22 (2) technology roadmaps used by the Depart-  
23 ment of Energy as of that date.

24 (e) MITIGATING REGULATORY AND MARKET BAR-  
25 RIER GRANTS.—

1           (1) IN GENERAL.—In carrying out the program,  
2 the Secretary shall award grants to eligible entities  
3 to research, develop, test, and evaluate ways to re-  
4 duce regulatory and market barriers to the wide-  
5 spread adoption of wind power, including—

6           (A) grid transmission and integration chal-  
7 lenges; and

8           (B) permitting issues associated with the  
9 potential impacts of wind power systems on  
10 wildlife, radar systems, local communities, mili-  
11 tary operations, and airspace.

12          (2) WILDLIFE IMPACT MITIGATION.—Of the  
13 grants awarded under paragraph (1), the Secretary  
14 shall ensure that a substantial portion include the  
15 development, testing, and evaluation of wildlife im-  
16 pact mitigation technologies or strategies to reduce  
17 the potential impacts of wind energy facilities on—

18           (A) bald and golden eagles;

19           (B) bat species;

20           (C) marine wildlife; and

21           (D) other impacted species.

22          (f) EDUCATION AND OUTREACH.—In carrying out  
23 the program, the Secretary shall support education and  
24 outreach activities to disseminate information and pro-  
25 mote public understanding of wind technologies and the

1 wind energy workforce, including the Collegiate Wind  
2 Competition.

3 (1) *ECONOMICALLY DISTRESSED AREA*.—The  
4 term “economically distressed area” means an area  
5 described in section 301(a) of the Public Works and  
6 Economic Development Act of 1965 (42 U.S.C.  
7 3161(a)).

8 (2) *ELIGIBLE ENTITY*.—The term “eligible enti-  
9 ty” means—

10 (A) an institution of higher education;

11 (B) a National Laboratory;

12 (C) a Federal research agency;

13 (D) a State research agency;

14 (E) a research agency associated with a ter-  
15 ritory or freely associated state;

16 (F) a tribal energy development organiza-  
17 tion;

18 (G) an Indian tribe;

19 (H) a tribal organization;

20 (I) a Native Hawaiian community-based  
21 organization;

22 (J) a nonprofit research organization;

23 (K) an industrial entity;

24 (L) any other entity, as determined by the  
25 Secretary; and

1                   (M) a consortium of 2 or more entities de-  
2                   scribed in subparagraphs (A) through (L).

3                   (3) INDIAN TRIBE.—The term “Indian tribe” has  
4                   the meaning given the term in section 4 of the Indian  
5                   Self-Determination and Education Assistance Act (25  
6                   U.S.C. 5304).

7                   (4) INSTITUTION OF HIGHER EDUCATION.—The  
8                   term “institution of higher education” has the mean-  
9                   ing given the term in section 101 of the Higher Edu-  
10                  cation Act of 1965 (20 U.S.C. 1001).

11                  (5) NATIONAL LABORATORY.—The term “Na-  
12                  tional Laboratory” has the meaning given the term in  
13                  section 2 of the Energy Policy Act of 2005 (42 U.S.C.  
14                  15801).

15                  (6) NATIVE HAWAIIAN COMMUNITY-BASED ORGA-  
16                  NIZATION.—The term “Native Hawaiian community-  
17                  based organization” has the meaning given the term  
18                  in section 6207 of the Elementary and Secondary  
19                  Education Act of 1965 (20 U.S.C. 7517).

20                  (7) PROGRAM.—The term “program” means the  
21                  program established under section 3(a).

22                  (8) SECRETARY.—The term “Secretary” means  
23                  the Secretary of Energy.

24                  (9) TERRITORY OR FREELY ASSOCIATED  
25                  STATE.—The term “territory or freely associated

1       *state*” has the meaning given the term “insular area”  
 2       *in section 1404 of the Food and Agriculture Act of*  
 3       *1977 (7 U.S.C. 3103).*

4               (10) *TRIBAL ENERGY DEVELOPMENT ORGANIZA-*  
 5       *TION.—The term “tribal energy development organi-*  
 6       *zation” has the meaning given the term in section*  
 7       *2601 of the Energy Policy Act of 1992 (25 U.S.C.*  
 8       *3501).*

9               (11) *TRIBAL ORGANIZATION.—The term “tribal*  
 10       *organization” has the meaning given the term in sec-*  
 11       *tion 4 of the Indian Self-Determination and Edu-*  
 12       *cation Assistance Act (25 U.S.C. 5304).*

13   **SEC. 3. WIND ENERGY TECHNOLOGY PROGRAM.**

14       (a) *ESTABLISHMENT.—*

15               (1) *IN GENERAL.—The Secretary shall establish*  
 16       *a program to conduct research, development, testing,*  
 17       *evaluation, demonstration, and commercialization of*  
 18       *wind energy technologies in accordance with this sec-*  
 19       *tion.*

20               (2) *PURPOSES.—The purposes of the program*  
 21       *are the following:*

22                       (A) *To improve the energy efficiency, cost*  
 23       *effectiveness, reliability, resilience, security, inte-*  
 24       *gration, manufacturability, and recyclability of*  
 25       *wind energy technologies.*

1           (B) To optimize the performance and oper-  
2           ation of wind energy components, turbines, and  
3           systems, including through the development of  
4           new materials, hardware, and software.

5           (C) To optimize the design and adaptability  
6           of wind energy technologies to the broadest prac-  
7           tical range of geographic, atmospheric, offshore,  
8           and other site conditions, including—

9                   (i) at varying hub heights; and

10                   (ii) through the use of computer mod-  
11           eling.

12           (D) To support the integration of wind en-  
13           ergy technologies with—

14                   (i) the electric grid, including trans-  
15           mission, distribution, microgrids, and dis-  
16           tributed energy systems; and

17                   (ii) other energy technologies and sys-  
18           tems, such as—

19                           (I) other generation sources;

20                           (II) demand response technologies;

21                           (III) energy storage technologies;

22                           and

23                           (IV) hybrid systems.

24           (E) To reduce the cost and risk across the  
25           lifespan of wind energy technologies, including—

1                   (i) manufacturing, permitting, con-  
2                   struction, operations, maintenance, and re-  
3                   cycling; and

4                   (ii) through the development of solu-  
5                   tions to transportation barriers to wind  
6                   components.

7                   (F) To reduce and mitigate any potential  
8                   negative impacts of wind energy technologies  
9                   on—

10                   (i) human communities;

11                   (ii) military operations;

12                   (iii) aviation;

13                   (iv) radar; and

14                   (v) wildlife and wildlife habitats.

15                   (G) To address barriers to the commer-  
16                   cialization and export of wind energy tech-  
17                   nologies.

18                   (H) To support the domestic wind industry,  
19                   workforce, and supply chain.

20                   (3) TARGETS.—Not later than 180 days after the  
21                   date of enactment of this Act, the Secretary shall es-  
22                   tablish targets for the program relating to near-term  
23                   (up to 2 years), mid-term (up to 7 years), and long-  
24                   term (up to 15 years) challenges to the advancement

1 *of wind energy technologies, including onshore and*  
2 *offshore technologies.*

3 *(b) ACTIVITIES.—*

4 *(1) TYPES OF ACTIVITIES.—In carrying out the*  
5 *program, the Secretary shall carry out research, de-*  
6 *velopment, demonstration, and commercialization ac-*  
7 *tivities, including—*

8 *(A) awarding grants and awards, on a*  
9 *competitive, merit-reviewed basis;*

10 *(B) performing precompetitive research and*  
11 *development;*

12 *(C) establishing or maintaining demonstra-*  
13 *tion facilities and projects, including through*  
14 *stewardship of existing facilities such as the Na-*  
15 *tional Wind Test Center;*

16 *(D) providing technical assistance;*

17 *(E) entering into contracts and cooperative*  
18 *agreements;*

19 *(F) providing small business vouchers;*

20 *(G) conducting education and outreach ac-*  
21 *tivities;*

22 *(H) conducting workforce training activi-*  
23 *ties; and*

24 *(I) conducting analyses, studies, and re-*  
25 *ports.*



1           (2) *SUBJECT AREAS.*—*The Secretary shall carry*  
2           *out research, development, testing, evaluation, dem-*  
3           *onstration, and commercialization activities in the*  
4           *following subject areas:*

5                   (A) *Wind power plant performance, oper-*  
6                   *ations, and security.*

7                   (B) *New materials and designs relating to*  
8                   *all hardware, software, and components of wind*  
9                   *energy technologies, including alternatives to*  
10                   *minerals and other commodities from foreign*  
11                   *sources that are determined to be vulnerable to*  
12                   *disruption.*

13                   (C) *Advanced wind energy manufacturing*  
14                   *technologies and practices, including materials,*  
15                   *processes, and design.*

16                   (D) *Offshore wind-specific projects and*  
17                   *plants, including—*

18                           (i) *the deep water floating systems,*  
19                           *materials, components, and operation of off-*  
20                           *shore facilities; and*

21                           (ii) *the monitoring and analysis of site*  
22                           *and environmental considerations unique to*  
23                           *offshore sites.*

24                   (E) *Integration of wind energy technologies*  
25                   *with—*

1                   (i) the electric grid, including trans-  
2                   mission, distribution, microgrids, and dis-  
3                   tributed energy systems; and

4                   (ii) other energy technologies, includ-  
5                   ing—

6                               (I) other generation sources;

7                               (II) demand response technologies;

8                               and

9                               (III) energy storage technologies.

10                   (F) Methods to improve the lifetime, main-  
11                   tenance, recycling, and reuse of wind energy  
12                   components and systems.

13                   (G) Wind power forecasting and atmos-  
14                   pheric measurement systems, including for tur-  
15                   bines and plant systems of varying height.

16                   (H) Hybrid wind energy systems that in-  
17                   corporate diverse—

18                               (i) generation sources;

19                               (ii) loads; and

20                               (iii) storage technologies.

21                   (I) Reducing, including through education  
22                   and outreach activities, market barriers to the  
23                   adoption of wind energy technologies, such as  
24                   impacts on, or challenges relating to—

1           (i) *distributed wind technologies, in-*  
2           *cluding the development of best practices,*  
3           *models, and voluntary streamlined processes*  
4           *for local permitting of distributed wind en-*  
5           *ergy systems to reduce costs;*

6           (ii) *airspace;*

7           (iii) *military uses;*

8           (iv) *radar;*

9           (v) *local communities;*

10          (vi) *wildlife and wildlife habitats; and*

11          (vii) *any other appropriate matter, as*  
12          *determined by the Secretary.*

13          (J) *Advanced physics-based and data anal-*  
14          *ysis computational tools, in coordination with*  
15          *the high-performance computing programs of the*  
16          *Department of Energy.*

17          (K) *Transformational technologies for har-*  
18          *nessing wind energy.*

19          (L) *Other research areas that advance the*  
20          *purposes of the program, as determined by the*  
21          *Secretary.*

22          (3) *PRIORITIZATION.*—*In carrying out activities*  
23          *under the program, the Secretary shall give priority*  
24          *to projects that—*

1           (A) are located in geographically diverse re-  
2           gions of the United States;

3           (B) support the development or demonstra-  
4           tion of projects—

5                 (i) in collaboration with tribal energy  
6                 development organizations, Indian tribes,  
7                 tribal organizations, Native Hawaiian com-  
8                 munity-based organizations, or territories  
9                 or freely associated states; or

10                (ii) in economically distressed areas;

11           (C) can be replicated in a variety of regions  
12           and climates;

13           (D) include business commercialization  
14           plans that have the potential for—

15                 (i) domestic manufacturing and pro-  
16                 duction of wind energy technologies; or

17                 (ii) exports of wind energy tech-  
18                 nologies; and

19           (E) satisfy any other priority that the Sec-  
20           retary determines to be appropriate.

21           (4) COORDINATION.—To the maximum extent  
22           practicable, the Secretary shall coordinate activities  
23           under the program with other relevant programs and  
24           capabilities of the Department of Energy and other  
25           Federal research programs.

1           (c) *WIND TECHNICIAN TRAINING GRANT PROGRAM.*—  
 2   *The Secretary may award grants, on a competitive basis,*  
 3   *to eligible entities to purchase large pieces of wind compo-*  
 4   *nent equipment, such as nacelles, towers, and blades, for*  
 5   *use in training wind technician students in onshore or off-*  
 6   *shore wind applications.*

7           ~~(g)~~(d) *WAGES.*—Notwithstanding any other provision  
 8   of law, all laborers and mechanics employed by contractors  
 9   or subcontractors on projects funded by grants under this  
 10   section shall be paid wages at rates not less than those  
 11   prevailing on projects of a similar character in the locality,  
 12   as determined by the Secretary of Labor, in accordance  
 13   with subchapter IV of chapter 31 of title 40, United States  
 14   Code.

15           (h) *AUTHORIZATION OF APPROPRIATIONS.*—There  
 16   are authorized to be appropriated to the Secretary to carry  
 17   out the program—

18           (1) ~~\$103,692,000~~ for fiscal year 2020;

19           (2) ~~\$108,876,600~~ for fiscal year 2021;

20           (3) ~~\$114,320,430~~ for fiscal year 2022;

21           (4) ~~\$120,036,452~~ for fiscal year 2023; and

22           (5) ~~\$126,038,274~~ for fiscal year 2024.

1 **SEC. 4. CONFORMING AMENDMENTS.**

2 (1) Section 4 of the Renewable Energy and En-  
 3 ergy Efficiency Technology Competitiveness Act of  
 4 1989 (42 U.S.C. 12003) is amended—

5 (A) in subsection (a)—

6 (i) by striking paragraph (1); and

7 (ii) by redesignating paragraphs (2)  
 8 through (5) as paragraphs (1) through (4),  
 9 respectively; and

10 (B) in subsection (e), in the matter pre-  
 11 ceeding paragraph (1), by striking “the Wind  
 12 Energy Research Program.”

13 (2) Section 931(a)(2) of the Energy Policy Act  
 14 of 2005 (42 U.S.C. 16231(a)(2)) is amended—

15 (A) by striking subparagraph (B); and

16 (B) by redesignating subparagraphs (C)  
 17 through (E) as subparagraphs (B) through (D),  
 18 respectively.

19 (3) Section 636 of the Energy Independence  
 20 and Security Act of 2007 (42 U.S.C. 17215) is  
 21 amended by striking “section 931(a)(2)(E)(i)” and  
 22 all that follows through the period at the end and  
 23 inserting “subparagraph (D)(i) of section 931(a)(2)  
 24 of the Energy Policy Act of 2005 (42 U.S.C.  
 25 16231(a)(2)).”

26 (e) *WIND ENERGY PROGRAM STRATEGIC VISION.*—

1           (1) *IN GENERAL.*—Not later than September 1,  
 2           2021, and every 6 years thereafter, the Secretary shall  
 3           submit to Congress a report on the strategic vision,  
 4           progress, goals, and targets of the program, including  
 5           assessments of wind energy markets and manufac-  
 6           turing.

7           (2) *PREPARATION.*—The Secretary shall coordi-  
 8           nate the preparation of the report under paragraph  
 9           (1) with—

10                   (A) existing peer review processes;

11                   (B) studies conducted by the National Lab-  
 12           oratories; and

13                   (C) the multiyear program planning re-  
 14           quired under section 994 of the Energy Policy  
 15           Act of 2005 (42 U.S.C. 16358).

16           (f) *AUTHORIZATION OF APPROPRIATIONS.*—There is  
 17           authorized to be appropriated to the Secretary to carry out  
 18           the program \$120,000,000 for each of fiscal years 2020  
 19           through 2024.

20   **SEC. 4. CONFORMING AMENDMENTS.**

21           (a) Section 4 of the Renewable Energy and Energy Ef-  
 22           ficiency Technology Competitiveness Act of 1989 (42 U.S.C.  
 23           12003) is amended—

24                   (1) in the section heading, by striking “**WIND,**  
 25           **PHOTOVOLTAICS, AND SOLAR THERMAL**” and

1       inserting “**PHOTOVOLTAICS, SOLAR THERMAL,**  
2       **AND OTHER TECHNOLOGY**”;

3               (2) in subsection (a)—

4                       (A) in the matter preceding paragraph (1),  
5                       by striking “wind, photovoltaics, and solar ther-  
6                       mal energy” and inserting “photovoltaics, solar  
7                       thermal, and other energy technology”;

8                       (B) by striking paragraph (1); and

9                       (C) by redesignating paragraphs (2)  
10                      through (5) as paragraphs (1) through (4), re-  
11                      spectively; and

12               (3) in subsection (c), in the matter preceding  
13       paragraph (1), by striking “the Wind Energy Re-  
14       search Program,”.

15       (b) Section 931(a)(2) of the Energy Policy Act of 2005  
16       (42 U.S.C. 16231(a)(2)) is amended—

17               (1) by striking subparagraph (B); and

18               (2) by redesignating subparagraphs (C) through  
19       (E) as subparagraphs (B) through (D), respectively.

20       (c) Section 636 of the Energy Independence and Secu-  
21       rity Act of 2007 (42 U.S.C. 17215) is amended by striking  
22       “section 931(a)(2)(E)(i)” and all that follows through the  
23       period at the end and inserting “subparagraph (D)(i) of  
24       section 931(a)(2) of the Energy Policy Act of 2005 (42  
25       U.S.C. 16231(a)(2)).”.



Amend the title so as to read: “A bill to establish a program for wind energy research, development, and demonstration, and for other purposes.”.

Calendar No. 387

116<sup>TH</sup> CONGRESS  
1<sup>ST</sup> Session

**S. 2660**

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**A BILL**

To establish a grant program for wind energy research, development, and demonstration, and for other purposes.

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DECEMBER 18, 2019

Reported with amendments and an amendment to the  
title