

111<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

# S. 2773

To require the Secretary of Energy to carry out a program to support the research, demonstration, and development of commercial applications for offshore wind energy, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

NOVEMBER 16, 2009

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

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## A BILL

To require the Secretary of Energy to carry out a program to support the research, demonstration, and development of commercial applications for offshore wind energy, 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 “Offshore Wind Energy  
5        Research, Development, Demonstration, and Commercial  
6        Application Act of 2009”.

7        **SEC. 2. DEFINITIONS.**

8        In this Act:

1           (1) INSTITUTION OF HIGHER EDUCATION.—The  
2 term “institution of higher education” has the  
3 meaning given the term in section 101(a) of the  
4 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

5           (2) NATIONAL OFFSHORE WIND CENTER.—The  
6 term “national offshore wind center” means a na-  
7 tional offshore wind energy research, development,  
8 and demonstration center established under section  
9 4(a).

10          (3) PROGRAM.—The term “program” means a  
11 program—

12                 (A) that includes activities to support the  
13 research, demonstration, and development of  
14 commercial applications for offshore wind en-  
15 ergy; and

16                 (B) to be carried out by the Secretary  
17 under section 3(a).

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

20 **SEC. 3. OFFSHORE WIND ENERGY RESEARCH AND DEVEL-**  
21 **OPMENT PROGRAM.**

22          (a) IN GENERAL.—As soon as practicable after the  
23 date of enactment of this Act, in accordance with sub-  
24 section (b), the Secretary shall carry out the program—

1           (1) to improve the energy efficiency, reliability,  
2           and capacity of offshore wind turbines; and

3           (2) to reduce the cost of manufacturing, con-  
4           struction, deployment, generation, and maintenance  
5           of offshore wind energy systems.

6           (b) PROGRAM REQUIREMENTS.—The Secretary shall  
7           carry out the program to support—

8           (1) the design, demonstration, and deployment  
9           of advanced wind turbine foundations and support  
10          structures, blades, turbine systems, components, and  
11          supporting land- and water-based infrastructure for  
12          application in—

13                   (A) shallow water;

14                   (B) transitional depths; and

15                   (C) deep offshore water;

16          (2) the full-scale testing and establishment of  
17          regional demonstrations of offshore wind compo-  
18          nents and systems to validate technology and per-  
19          formance issues relating to the components;

20          (3) for inclusion in a publically accessible data-  
21          base, assessments of the offshore wind resources of  
22          the United States, including—

23                   (A) environmental impacts and benefits;

24                   (B) siting and permitting issues;

25                   (C) exclusion zones; and

1 (D) transmission needs;

2 (4) the design, demonstration, and deployment  
3 of integrated sensors, actuators, and advanced mate-  
4 rials (including composite materials);

5 (5) advanced blade manufacturing activity (in-  
6 cluding automation, materials, and the assembly of  
7 large-scale components) to stimulate the develop-  
8 ment of the blade manufacturing capacity of the  
9 United States;

10 (6) methods to assess and mitigate the effects  
11 of wind energy systems on marine ecosystems and  
12 marine industries; and

13 (7) other research areas, as determined to be  
14 appropriate by the Secretary.

15 **SEC. 4. NATIONAL OFFSHORE WIND ENERGY RESEARCH,**  
16 **DEVELOPMENT, AND DEMONSTRATION CEN-**  
17 **TERS.**

18 (a) DUTY OF SECRETARY.—As soon as practicable  
19 after the date of enactment of this Act, the Secretary shall  
20 award, on a competitive basis and with an emphasis on  
21 technical merit, grants to institutions of higher education  
22 to establish 1 or more national offshore wind centers.

23 (b) SELECTION CRITERIA.—In selecting institutions  
24 of higher education under subsection (a), the Secretary

1 shall give preference to institutions of higher education  
2 that—

3           (1) agree to cover transitional depth tech-  
4 nologies to complement the activities of a national  
5 offshore wind center;

6           (2) agree to host an offshore wind energy re-  
7 search and development program funded by the De-  
8 partment of Energy in coordination with an engi-  
9 neering program of the institution of higher edu-  
10 cation;

11           (3) employ individuals who have proven exper-  
12 tise relating to the development of novel materials  
13 for commercial applications; and

14           (4) have access to, and use the resources of—

15                   (A) the Atlantic Ocean;

16                   (B) the Gulf of Mexico; or

17                   (C) the Pacific Ocean.

18           (c) REQUIREMENTS.—A national offshore wind cen-  
19 ter established with funds provided by the Secretary  
20 through a grant under subsection (a) shall be designed—

21           (1) to focus on deepwater floating offshore wind  
22 energy technologies; and

23           (2) to facilitate the conduct of initiatives to ad-  
24 vance 1 or more activities described in section 3(b).

1 **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

2       There is authorized to be appropriated to the Sec-  
3 retary to carry out this Act \$50,000,000 for each of fiscal  
4 years 2011 through 2021.

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