111TH CONGRESS 1ST SESSION H.R.3165

To provide for a program of wind energy research, development, and demonstration, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 9, 2009

Mr. TONKO introduced the following bill; which was referred to the Committee on Science and Technology

A BILL

To provide for a program of 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 2009".

6 SEC. 2. WIND ENERGY RESEARCH AND DEVELOPMENT PRO-

- 7 **GRAM.**
- 8 (a) IN GENERAL.—The Secretary of Energy shall
 9 carry out a program of research and development to—

1	(1) improve the energy efficiency, reliability,
2	and capacity of wind turbines;
3	(2) optimize the design and adaptability of wind
4	energy systems to the broadest practical range of at-
5	mospheric conditions; and
6	(3) reduce the cost of construction, generation,
7	and maintenance of wind energy systems.
8	(b) PROGRAM.—The program under this section shall
9	focus on research and development of—
10	(1) new materials and designs to make larger,
11	lighter, less expensive, and more reliable rotor
12	blades;
13	(2) technologies to improve gearbox perform-
14	ance and reliability;
15	(3) automation, materials, and assembly of
16	large-scale components to reduce manufacturing
17	costs;
18	(4) low-cost transportable towers greater than
19	100 meters in height to capitalize on improved wind
20	conditions at higher elevations;
21	(5) advanced computational modeling tools to
22	improve—
23	(A) the reliability of aeroelastic simulations
24	of wind energy systems; and

1	(B) understanding of the interaction be-
2	tween each wind turbine component;
3	(6) advanced control systems and blade sensors
4	to improve performance and reliability under a wide
5	variety of wind conditions;
6	(7) advanced generators, including—
7	(A) medium-speed and low-speed genera-
8	tors;
9	(B) direct-drive technology; and
10	(C) the use of advanced magnets in gener-
11	ator rotors;
12	(8) wind technology for offshore applications;
13	(9) methods to assess and mitigate the effects
14	of wind energy systems on radar and electro-
15	magnetic fields; and
16	(10) wind turbines with a maximum electric
17	power production capacity of 100 kilowatts or less.
18	SEC. 3. WIND ENERGY DEMONSTRATION PROGRAM.
19	(a) IN GENERAL.—The Secretary of Energy shall
20	conduct a wind energy demonstration program. In car-
21	rying out this section, the Secretary shall ensure that—
22	(1) the program is of sufficient size to measure
23	wind energy system performance under the full pro-
24	ductive range of wind conditions in the United
25	States;

(2) demonstration projects carried out under
 this program are conducted in collaboration with in dustry; and

4 (3) data collected from demonstration projects
5 carried out under this program is useful for carrying
6 out section 2(b).

7 (b) COST-SHARING.—The Secretary shall carry out
8 the program under this section in compliance with section
9 988(a) through (d) and section 989 of the Energy Policy
10 Act of 2005 (42 U.S.C. 16352(a) through (d) and 16353).

11 SEC. 4. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Secretary of Energy to carry out this Act \$200,000,000 for
each of the fiscal years 2010 through 2014.

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