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.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ‘Wind Energy Research and Development Act of 2009’.

SEC. 2. WIND ENERGY RESEARCH AND DEVELOPMENT PROGRAM.

(a) In General- The Secretary of Energy shall carry out a program of research and development to--

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

(2) optimize the design and adaptability of wind energy systems to the broadest practical range of atmospheric conditions; and

(3) reduce the cost of construction, generation, and maintenance of wind energy systems.

(b) Program- The program under this section shall focus on research and development of--

(1) new materials and designs to make larger, lighter, less expensive, and more reliable rotor blades;

(2) technologies to improve gearbox performance and reliability;
(3) automation, materials, and assembly of large-scale components to reduce manufacturing costs;

(4) low-cost transportable towers greater than 100 meters in height to capitalize on improved wind conditions at higher elevations;

(5) advanced computational modeling tools to improve--

(A) the reliability of aeroelastic simulations of wind energy systems; and

(B) understanding of the interaction between each wind turbine component;

(6) advanced control systems and blade sensors to improve performance and reliability under a wide variety of wind conditions;

(7) advanced generators, including--

(A) medium-speed and low-speed generators;

(B) direct-drive technology; and

(C) the use of advanced magnets in generator rotors;

(8) wind technology for offshore applications;

(9) methods to assess and mitigate the effects of wind energy systems on radar and electromagnetic fields; and

(10) wind turbines with a maximum electric power production capacity of 100 kilowatts or less.

SEC. 3. WIND ENERGY DEMONSTRATION PROGRAM.

(a) In General- The Secretary of Energy shall conduct a wind energy demonstration program. In carrying out this section, the Secretary shall ensure that--

(1) the program is of sufficient size to measure wind energy system performance under the full productive range of wind conditions in the United States;

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

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

(b) Cost-Sharing- The Secretary shall carry out the program under this section in compliance with section 988(a) through (d) and section 989 of the Energy Policy Act of 2005 (42 U.S.C. 16352(a) through (d) and 16353).
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.

END