115TH CONGRESS
1ST SESSION

S. _____

To promote research, development, and demonstration of marine and hydrokinetic renewable energy technologies, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. WYDEN (for himself, Mr. KING, Mr. MERKLEY, Mr. SCHATZ, and Ms. HIRONO) introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To promote research, development, and demonstration of marine and hydrokinetic renewable energy technologies, 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 ''Marine Energy Act''.

SEC. 2. DEFINITION OF MARINE AND HYDROKINETIC RENEWABLE ENERGY.

Section 632 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17211) is amended in the matter preceding paragraph (1) by striking ''electrical''.

SEC. 3. MARINE AND HYDROKINETIC RENEWABLE ENERGY RESEARCH AND DEVELOPMENT.

Section 633 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17212) is amended to read as follows:

"SEC. 633. MARINE AND HYDROKINETIC RENEWABLE ENERGY RESEARCH AND DEVELOPMENT.

''The Secretary, in consultation with the Secretary of the Interior, the Secretary of Commerce, and the Federal Energy Regulatory Commission, shall carry out a program of research, development, demonstration, and commercial application to accelerate the introduction of marine and hydrokinetic renewable energy production into the United States energy supply, giving priority to fostering accelerated research, development, and commercialization of technology, including programs—

''(1) to assist technology development to improve the components, processes, and systems used for power generation from marine and hydrokinetic renewable energy resources;

''(2) to establish critical testing infrastructure necessary—

''(A) to cost effectively and efficiently test and prove marine and hydrokinetic renewable energy devices; and

''(B) to accelerate the technological readiness and commercialization of those devices;

''(3) to support efforts to increase the efficiency of energy conversion, lower the cost, increase the use, improve the reliability, and demonstrate the applicability of marine and hydrokinetic renewable energy technologies by participating in demonstration projects;

''(4) to investigate variability issues and the efficient and reliable integration of marine and hydrokinetic renewable energy with the utility grid;

''(5) to identify and study critical short- and long-term needs to create a sustainable marine and hydrokinetic renewable energy supply chain based in the United States;

''(6) to increase the reliability and survivability of marine and hydrokinetic renewable energy technologies;

''(7) to verify the performance, reliability, maintainability, and cost of new marine and hydrokinetic renewable energy device designs and system components in an operating environment, and consider the protection of critical infrastructure, such as adequate separation between marine and hydrokinetic devices and projects and submarine telecommuni-

cations cables, including consideration of established industry standards;

''(8) to coordinate and avoid duplication of activities across programs of the Department and other applicable Federal agencies, including National Laboratories and to coordinate public-private collaboration in all programs under this section;

''(9) to identify opportunities for joint research and development programs and development of economies of scale between—

''(A) marine and hydrokinetic renewable energy technologies; and

''(B) other renewable energy and fossil energy programs, offshore oil and gas production activities, and activities of the Department of Defense;

''(10) to support in-water technology development with international partners using existing cooperative procedures (including memoranda of understanding)—

''(A) to allow cooperative funding and other support of value to be exchanged and leveraged; and

''(B) to encourage the participation of international research centers and companies

within the United States and the participation of United States research centers and companies in international projects;

''(11) to identify, in conjunction with the Secretary of Commerce and other relevant Federal agencies, the potential environmental impacts, including potential impacts on fisheries and other marine resources, of marine and hydrokinetic renewable energy technologies, measures to prevent adverse impacts, and technologies and other means available for monitoring and determining environmental impacts; and

''(12) to identify, in conjunction with the Commandant of the United States Coast Guard and other relevant Federal agencies, the potential navigational impacts of marine and hydrokinetic renewable energy technologies and measures to prevent adverse impacts on navigation.''.

SEC. 4. NATIONAL MARINE RENEWABLE ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION CENTERS.

Section 634 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17213) is amended by striking subsection (b) and inserting the following:

''(b) PURPOSES.—The Centers (including each Center that has been established as of the date of enactment of the Marine Energy Act), in coordination with the Department and the National Laboratories, shall—

''(1) advance research, development, demonstration, and commercial application of marine and hydrokinetic renewable energy technologies;

''(2) support in-water testing and demonstration of marine and hydrokinetic renewable energy technologies, including facilities capable of testing—

''(A) marine and hydrokinetic renewable energy systems of various technology readiness levels and scales;

''(B) a variety of technologies in multiple test berths at a single location; and

''(C) arrays of technology devices; and

''(3) serve as information clearinghouses for the marine and hydrokinetic renewable energy industry by collecting and disseminating information on best practices in all areas relating to developing and managing marine and hydrokinetic renewable energy resources and energy systems.''.

SEC. 5. AUTHORIZATION OF APPROPRIATIONS.

Section 636 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17215) is amended by striking

''$50,000,000 for each of the fiscal years 2008 through 2012'' and inserting ''$60,000,000 for each of fiscal years 2018 through 2022''.