

112TH CONGRESS
1ST SESSION

H. R. 2994

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

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 21, 2011

Mr. INSLEE (for himself, Mr. YOUNG of Alaska, and Mr. DEUTCH) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To promote marine and hydrokinetic renewable energy research and development, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Marine and Hydrokinetic Renewable Energy Promotion
6 Act of 2011”.

7 (b) TABLE OF CONTENTS.—The table of contents of
8 this Act is as follows:

- Sec. 1. Short title; table of contents.
 Sec. 2. Marine and hydrokinetic renewable energy research and development program.
 Sec. 3. Test facilities.
 Sec. 4. National Marine and Hydrokinetic Renewable Energy Research, Development, and Demonstration Centers.
 Sec. 5. Marine-based energy device verification program.
 Sec. 6. Adaptive management and environmental grant program.
 Sec. 7. Administration.
 Sec. 8. Authorization of appropriations.

1 **SEC. 2. MARINE AND HYDROKINETIC RENEWABLE ENERGY**
 2 **RESEARCH AND DEVELOPMENT PROGRAM.**

3 Section 633(a) of the Energy Independence and Se-
 4 curity Act of 2007 (42 U.S.C. 17212(a)) is amended—

5 (1) in paragraph (13), by striking “; and” and
 6 inserting a semicolon;

7 (2) in paragraph (14), by striking the period at
 8 the end and inserting “; and”; and

9 (3) by adding at the end the following:

10 “(15)(A) apply advanced systems engineering
 11 and system integration methods to identify critical
 12 interfaces and develop open standards for marine
 13 and hydrokinetic renewable energy;

14 “(B) transfer the resulting environmental data
 15 to industry stakeholders as public information
 16 through published interface definitions, standards,
 17 and demonstration projects; and

18 “(C) develop incentives for industry to comply
 19 with the standards.”.

1 **SEC. 3. TEST FACILITIES.**

2 Section 633 of the Energy Independence and Security
3 Act of 2007 (42 U.S.C. 17212) is amended by adding at
4 the end the following:

5 “(c) TEST FACILITIES.—

6 “(1) IN GENERAL.—In carrying out this sec-
7 tion, not later than 180 days after the date of enact-
8 ment of this subsection, the Secretary shall award
9 competitive grants to support 4 or more geographi-
10 cally dispersed marine and hydrokinetic renewable
11 energy technology research, development, and dem-
12 onstration test facilities for the demonstration of
13 multiple technologies in actual operating marine en-
14 vironments (including industry demonstrations).

15 “(2) PREFERENCE.—In awarding competitive
16 grants under this subsection, the Secretary shall give
17 preference to existing marine and hydrokinetic test-
18 ing facilities and existing Centers established under
19 section 634.

20 “(3) FACILITIES.—Grants under this subsection
21 may support—

22 “(A) modification of an existing facility
23 (including a Center established under section
24 634); or

25 “(B) construction of a new test facility.

1 “(4) PROGRAM OBJECTIVES.—In awarding
2 grants under this subsection, the Secretary shall
3 provide for the demonstration of—

4 “(A) a variety of technologies at each test
5 facility;

6 “(B) a variety of technologies among all of
7 the test facilities established; and

8 “(C) technologies on a variety of scales.

9 “(5) ACTIVITIES.—Each test facility established
10 under this subsection shall—

11 “(A) provide infrastructure and resources
12 for the evaluation and technical viability testing
13 of marine and hydrokinetic renewable energy
14 technologies; and

15 “(B) conduct and support research, devel-
16 opment, and demonstration activities with re-
17 spect to marine and hydrokinetic renewable en-
18 ergy technologies.

19 “(6) ELIGIBILITY.—To be eligible for a grant
20 under this subsection, an applicant for a grant
21 shall—

22 “(A) be—

23 “(i) a nonprofit institution;

24 “(ii) a State or local government;

1 “(iii) an institution of higher edu-
2 cation;

3 “(iv) university consortia;

4 “(v) a National Laboratory; or

5 “(vi) a Center established under sec-
6 tion 634; and

7 “(B) demonstrate to the satisfaction of the
8 Secretary the ability and intention to—

9 “(i) combine expertise from relevant
10 academic fields, including fields relating
11 to—

12 “(I) the environment;

13 “(II) marine and riverine
14 sciences;

15 “(III) energy;

16 “(IV) ocean engineering; and

17 “(V) electrical, mechanical, and
18 civil engineering; and

19 “(ii) partner with other entities (in-
20 cluding industry) that have expertise in ad-
21 vancing marine and hydrokinetic renewable
22 energy technologies.”.

1 **SEC. 4. NATIONAL MARINE AND HYDROKINETIC RENEW-**
2 **ABLE ENERGY RESEARCH, DEVELOPMENT,**
3 **AND DEMONSTRATION CENTERS.**

4 Section 634 of the Energy Independence and Security
5 Act of 2007 (42 U.S.C. 17213) is amended—

6 (1) in the section heading, by inserting “**AND**
7 **HYDROKINETIC**” after “**MARINE**”;

8 (2) in the first sentence of subsection (a), by in-
9 sserting “and Hydrokinetic” after “Marine”; and

10 (3) by striking subsection (b) and inserting the
11 following:

12 “(b) PURPOSES.—The Centers—

13 “(1) shall—

14 “(A) advance research, development, dem-
15 onstration, and commercial application of ma-
16 rine and hydrokinetic renewable energy tech-
17 nologies; and

18 “(B) serve as information clearinghouses
19 for the marine and hydrokinetic renewable en-
20 ergy industry by collecting and disseminating
21 information on best practices in all areas relat-
22 ing to developing and managing marine and
23 hydrokinetic renewable energy technologies; and

24 “(2) may serve as technology test facilities es-
25 tablished under section 633(c).”.

1 **SEC. 5. MARINE-BASED ENERGY DEVICE VERIFICATION**
2 **PROGRAM.**

3 The Energy Independence and Security Act of 2007
4 (42 U.S.C. 17211 et seq.) is amended—

5 (1) by redesignating sections 635 and 636 (42
6 U.S.C. 17214, 17215) as sections 638 and 639, re-
7 spectively; and

8 (2) by inserting after section 634 (42 U.S.C.
9 17213) the following:

10 **“SEC. 635. MARINE-BASED ENERGY DEVICE VERIFICATION**
11 **PROGRAM.**

12 “(a) ESTABLISHMENT.—The Secretary shall estab-
13 lish a marine-based energy device verification program to
14 provide a bridge from the marine and hydrokinetic renew-
15 able energy capture device design and development efforts
16 underway across the industry to commercial deployment
17 of marine and hydrokinetic renewable energy devices.

18 “(b) PURPOSES.—The purposes of the program are
19 to fund, facilitate the development and installation of, and
20 evaluate marine and hydrokinetic renewable energy
21 projects, in partnership with Federally Funded Research
22 and Development Centers, and in conjunction with Cen-
23 ters established under section 634, universities and other
24 institutions of higher education, private business entities,
25 and other appropriate organizations, in order—

1 “(1) to increase marine and hydrokinetic renew-
2 able energy experience; and

3 “(2) to build and operate enough candidate de-
4 vices to obtain statistically significant operating and
5 maintenance data.

6 “(c) OBJECTIVES.—The objectives of the program
7 shall include—

8 “(1) verifying the performance, reliability,
9 maintainability, and cost of new marine and
10 hydrokinetic renewable energy device designs and
11 system components in an operating environment;

12 “(2) providing States, regulators, utilities, and
13 other stakeholders with a valid opportunity to test
14 and evaluate marine and hydrokinetic renewable en-
15 ergy technology in new areas;

16 “(3) documenting and communicating the expe-
17 rience from those projects for the benefit of utilities,
18 independent power producers, other nonutility gen-
19 erators, device suppliers, and others in the marine
20 and hydrokinetic renewable energy development com-
21 munity; and

22 “(4) resolving environmental issues through ro-
23 bust characterization, reliable impact prediction, ef-
24 fective monitoring, development, and use of adaptive

1 management, and informing engineering design to
2 improve environmental performance.”.

3 **SEC. 6. ADAPTIVE MANAGEMENT AND ENVIRONMENTAL**
4 **GRANT PROGRAM.**

5 The Energy Independence and Security Act of 2007
6 (42 U.S.C. 17211 et seq.) (as amended by section 5) is
7 amended by inserting after section 635 the following:

8 **“SEC. 636. ADAPTIVE MANAGEMENT AND ENVIRONMENTAL**
9 **GRANT PROGRAM.**

10 “(a) FINDINGS.—Congress finds that—

11 “(1) the use of marine and hydrokinetic renew-
12 able energy technologies can reduce contributions to
13 global warming;

14 “(2) marine and hydrokinetic renewable energy
15 technologies can be produced domestically;

16 “(3) marine and hydrokinetic renewable energy
17 is a nascent industry; and

18 “(4) the United States must work to promote
19 new renewable energy technologies that reduce con-
20 tributions to global warming gases and improve do-
21 mestic energy production.

22 “(b) GRANT PROGRAM.—

23 “(1) IN GENERAL.—As soon as practicable
24 after the date of enactment of this subsection, the

1 Secretary shall establish a program under which the
2 Secretary shall award grants to eligible entities—

3 “(A) to advance the development of marine
4 and hydrokinetic renewable energy;

5 “(B) to help fund the costs of environ-
6 mental analysis affecting the deployment of ma-
7 rine hydrokinetic devices;

8 “(C) to help enable the eligible entities—

9 “(i) to gather and collect the types of
10 environmental data that are required when
11 working in a public resource (including the
12 waterways and oceans of the United
13 States); and

14 “(ii) to monitor the impacts of dem-
15 onstration projects and make the resulting
16 information available for widespread dis-
17 semination to aid future projects; and

18 “(D) to help fund the cost of advancing re-
19 newable marine and hydrokinetic technologies
20 in ocean and riverine environments from dem-
21 onstration projects to development and deploy-
22 ment.

23 “(2) APPLICATION.—To be eligible to receive a
24 grant under this paragraph, an entity shall submit
25 to the Secretary an application at such time, in such

1 manner, and containing such information as the Sec-
2 retary may require.”.

3 **SEC. 7. ADMINISTRATION.**

4 The Energy Independence and Security Act of 2007
5 (42 U.S.C. 17211 et seq.) (as amended by section 6) is
6 amended by inserting after section 636 the following:

7 **“SEC. 637. ADMINISTRATION.**

8 “(a) IN GENERAL.—In carrying out this subtitle, the
9 Secretary shall—

10 “(1) coordinate and avoid duplication of activi-
11 ties across programs of the Department and other
12 applicable Federal agencies, including the National
13 Laboratories;

14 “(2) collaborate with (as applicable)—

15 “(A) industry;

16 “(B) stakeholders;

17 “(C) other Federal agencies, including the
18 National Laboratories;

19 “(D) academic institutions; and

20 “(E) international bodies with relevant sci-
21 entific expertise; and

22 “(3) obtain from the recipient of assistance and
23 make available to the public, through Web sites, re-
24 ports, and databases of the Department, any re-
25 search, development, demonstration, and commercial

1 application information produced with respect to
2 supported technology, including information obtained
3 after the completion of supported activities, except
4 to the extent that the information is protected from
5 disclosure under section 552(b) of title 5, United
6 States Code.

7 “(b) REPORTS.—Not later than 1 year after the date
8 of enactment of this section and at least once every 2 years
9 thereafter, the Secretary shall submit to Congress a report
10 on findings and activities conducted under this subtitle.”.

11 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

12 Section 639 of the Energy Independence and Security
13 Act of 2007 (42 U.S.C. 17215) (as redesignated by section
14 5(1)) is amended to read as follows:

15 **“SEC. 639. AUTHORIZATION OF APPROPRIATIONS.**

16 “(a) IN GENERAL.—There is authorized to be appro-
17 priated to carry out this subtitle, to remain available until
18 expended—

19 “(1) \$70,000,000 for fiscal year 2012; and

20 “(2) \$75,000,000 for fiscal year 2013.

21 “(b) RENEWABLE ENERGY FUNDS.—No funds shall
22 be appropriated under this section for activities that are
23 receiving funds under section 931(a)(2)(E)(i) of the En-
24 ergy Policy Act of 2005 (42 U.S.C. 16231(a)(2)(E)(i)).”.

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