

110TH CONGRESS  
1ST SESSION

# S. 1511

To promote the development and use of marine and hydrokinetic renewable energy technologies, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

MAY 24, 2007

Mr. AKAKA (for himself, Ms. MURKOWSKI, and Ms. SNOWE) introduced the following bill; which was read twice and referred to the Committee on Finance

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## A BILL

To promote the development and use of marine and hydrokinetic renewable energy technologies, 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 “Marine and  
5 Hydrokinetic Renewable Energy Promotion Act of 2007”.

6 **SEC. 2. DEFINITION.**

7 For purposes of this Act, the term “marine and  
8 hydrokinetic renewable energy” means electrical energy  
9 from—

1           (1) waves, tides, and currents in oceans, estu-  
2           aries, and tidal areas;

3           (2) free flowing water in rivers, lakes, and  
4           streams;

5           (3) free flowing water in man-made channels,  
6           including projects that utilize nonmechanical struc-  
7           tures to accelerate the flow of water for electric  
8           power production purposes; and

9           (4) differentials in ocean temperature (ocean  
10          thermal energy conversion).

11 The term shall not include energy from any source that  
12 utilizes a dam, diversionary structure, or impoundment for  
13 electric power purposes, except as provided in paragraph  
14 (3).

15 **SEC. 3. RESEARCH AND DEVELOPMENT.**

16          (a) PROGRAM.—The Secretary of Energy, in con-  
17 sultation with the Secretary of Commerce and the Sec-  
18 retary of the Interior, shall establish a program of marine  
19 and hydrokinetic renewable energy research focused on—

20           (1) developing and demonstrating marine and  
21           hydrokinetic renewable energy technologies;

22           (2) reducing the manufacturing and operation  
23           costs of marine and hydrokinetic renewable energy  
24           technologies;

1           (3) increasing the reliability and survivability of  
2 marine and hydrokinetic renewable energy facilities;

3           (4) integrating marine and hydrokinetic renew-  
4 able energy into electric grids;

5           (5) identifying opportunities for cross fertiliza-  
6 tion and development of economies of scale between  
7 offshore wind and marine and hydrokinetic renew-  
8 able energy sources;

9           (6) identifying, in consultation with the Sec-  
10 retary of Commerce and the Secretary of the Inte-  
11 rior, the environmental impacts of marine and  
12 hydrokinetic renewable energy technologies and ways  
13 to address adverse impacts, and providing public in-  
14 formation concerning technologies and other means  
15 available for monitoring and determining environ-  
16 mental impacts; and

17           (7) standards development, demonstration, and  
18 technology transfer for advanced systems engineer-  
19 ing and system integration methods to identify crit-  
20 ical interfaces.

21       (b) AUTHORIZATION OF APPROPRIATIONS.—There  
22 are authorized to be appropriated to the Secretary of En-  
23 ergy for carrying out this section \$50,000,000 for each  
24 of the fiscal years 2008 through 2017.

1 **SEC. 4. ADAPTIVE MANAGEMENT AND ENVIRONMENTAL**  
2 **FUND.**

3 (a) FINDINGS.—The Congress finds that—

4 (1) the use of marine and hydrokinetic renew-  
5 able energy technologies can avoid contributions to  
6 global warming gases, and such technologies can be  
7 produced domestically;

8 (2) marine and hydrokinetic renewable energy  
9 is a nascent industry; and

10 (3) the United States must work to promote  
11 new renewable energy technologies that reduce con-  
12 tributions to global warming gases and improve our  
13 country's domestic energy production in a manner  
14 that is consistent with environmental protection,  
15 recreation, and other public values.

16 (b) ESTABLISHMENT.—The Secretary of Energy  
17 shall establish an Adaptive Management and Environ-  
18 mental Fund, and shall lend amounts from that fund to  
19 entities described in subsection (f) to cover the costs of  
20 projects that produce marine and hydrokinetic renewable  
21 energy. Such costs include design, fabrication, deploy-  
22 ment, operation, monitoring, and decommissioning costs.  
23 Loans under this section may be subordinate to project-  
24 related loans provided by commercial lending institutions  
25 to the extent the Secretary of Energy considers appro-  
26 priate.

1           (c) REASONABLE ACCESS.—As a condition of receiv-  
2 ing a loan under this section, a recipient shall provide rea-  
3 sonable access, to Federal or State agencies and other re-  
4 search institutions as the Secretary considers appropriate,  
5 to the project area and facilities for the purposes of inde-  
6 pendent environmental research.

7           (d) PUBLIC AVAILABILITY.—The results of any as-  
8 sessment or demonstration paid for, in whole or in part,  
9 with funds provided under this section shall be made avail-  
10 able to the public, except to the extent that they contain  
11 information that is protected from disclosure under sec-  
12 tion 552(b) of title 5, United States Code.

13           (e) REPAYMENT OF LOANS.—

14           (1) IN GENERAL.—The Secretary of Energy  
15 shall require a recipient of a loan under this section  
16 to repay the loan, plus interest at a rate of 2.1 per-  
17 cent per year, over a period not to exceed 20 years,  
18 beginning after the commercial generation of electric  
19 power from the project commences. Such repayment  
20 shall be required at a rate that takes into account  
21 the economic viability of the loan recipient and en-  
22 sures regular and timely repayment of the loan.

23           (2) BEGINNING OF REPAYMENT PERIOD.—No  
24 repayments shall be required under this subsection  
25 until after the project generates net proceeds. For

1 purposes of this paragraph, the term “net proceeds”  
2 means proceeds from the commercial sale of elec-  
3 tricity after payment of project-related costs, includ-  
4 ing taxes and regulatory fees that have not been  
5 paid using funds from a loan provided for the  
6 project under this section.

7 (3) TERMINATION.—Repayment of a loan made  
8 under this section shall terminate as of the date that  
9 the project for which the loan was provided ceases  
10 commercial generation of electricity if a govern-  
11 mental permitting authority has ordered the closure  
12 of the facility because of a finding that the project  
13 has unacceptable adverse environmental impacts, ex-  
14 cept that the Secretary shall require a loan recipient  
15 to continue making loan repayments for the cost of  
16 equipment, obtained using funds from the loan that  
17 have not otherwise been repaid under rules estab-  
18 lished by the Secretary, that is utilized in a subse-  
19 quent project for the commercial generation of elec-  
20 tricity.

21 (f) ADAPTIVE MANAGEMENT PLAN.—In order to re-  
22 ceive a loan under this section, an applicant for a Federal  
23 license or permit to construct, operate, or maintain a ma-  
24 rine or hydrokinetic renewable energy project shall provide  
25 to the Federal agency with primary jurisdiction to issue

1 such license or permit an adaptive management plan for  
2 the proposed project. Such plan shall—

3           (1) be prepared in consultation with other par-  
4 ties to the permitting or licensing proceeding, includ-  
5 ing all Federal, State, municipal, and tribal agencies  
6 with authority under applicable Federal law to re-  
7 quire or recommend design or operating conditions,  
8 for protection, mitigation, and enhancement of fish  
9 and wildlife resources, water quality, navigation,  
10 public safety, land reservations, or recreation, for in-  
11 corporation into the permit or license;

12           (2) set forth specific and measurable objectives  
13 for the protection, mitigation, and enhancement of  
14 fish and wildlife resources, water quality, navigation,  
15 public safety, land reservations, or recreation, as re-  
16 quired or recommended by governmental agencies  
17 described in paragraph (1), and shall require moni-  
18 toring to ensure that these objectives are met;

19           (3) provide specifically for the modification or,  
20 if necessary, removal of the marine or hydrokinetic  
21 renewable energy project based on findings by the li-  
22 censing or permitting agency that the marine or  
23 hydrokinetic renewable energy project has not at-  
24 tained or will not attain the specific and measurable  
25 objectives set forth in paragraph (2); and

1           (4) be approved and incorporated in the Fed-  
2           eral license or permit.

3           (g) SUNSET.—The Secretary of Energy shall trans-  
4           mit a report to the Congress when the Secretary of Energy  
5           determines that the technologies supported under this Act  
6           have achieved a level of maturity sufficient to enable the  
7           expiration of the programs under this Act. The Secretary  
8           of Energy shall not make any new loans under this section  
9           after the report is transmitted under this subsection.

10 **SEC. 5. PROGRAMMATIC ENVIRONMENTAL IMPACT STATE-**  
11 **MENT.**

12           The Secretary of Commerce and the Secretary of the  
13           Interior shall, in cooperation with the Federal Energy  
14           Regulatory Commission and the Secretary of Energy, and  
15           in consultation with appropriate State agencies, jointly  
16           prepare programmatic environmental impact statements  
17           which contain all the elements of an environmental impact  
18           statement under section 102 of the National Environ-  
19           mental Policy Act of 1969 (42 U.S.C. 4332), regarding  
20           the impacts of the deployment of marine and hydrokinetic  
21           renewable energy technologies in the navigable waters of  
22           the United States. One programmatic environmental im-  
23           pact statement shall be prepared under this section for  
24           each of the Environmental Protection Agency regions of  
25           the United States. The agencies shall issue the pro-



1           “(10) MARINE AND HYDROKINETIC RENEW-  
2 ABLE ENERGY.—

3           “(A) IN GENERAL.—The term ‘marine and  
4 hydrokinetic renewable energy’ means energy  
5 derived from—

6           “(i) waves, tides, and currents in  
7 oceans, estuaries, and tidal areas,

8           “(ii) free flowing water in rivers,  
9 lakes, and streams,

10           “(iii) free flowing water in man-made  
11 channels, including projects that utilize  
12 nonmechanical structures to accelerate the  
13 flow of water for electric power production  
14 purposes, or

15           “(iv) differentials in ocean tempera-  
16 ture (ocean thermal energy conversion).

17           “(B) EXCEPTIONS.—Such term shall not  
18 include any energy which is—

19           “(i) described in subparagraphs (A)  
20 through (H) of paragraph (1), or

21           “(ii) derived from any source that uti-  
22 lizes a dam, diversionary structure, or im-  
23 poundment for electric power production  
24 purposes, except as provided in subpara-  
25 graph (A)(iii).”.

1 (b) DEFINITION OF FACILITY.—Subsection (d) of  
 2 section 45 of such Code (relating to qualified facilities)  
 3 is amended by adding at the end the following new para-  
 4 graph:

5 “(11) MARINE AND HYDROKINETIC RENEW-  
 6 ABLE ENERGY FACILITIES.—In the case of a facility  
 7 producing electricity from marine and hydrokinetic  
 8 renewable energy, the term ‘qualified facility’ means  
 9 any facility owned by the taxpayer which is origi-  
 10 nally placed in service after the date of the enact-  
 11 ment of this paragraph and before January 1,  
 12 2009.”.

13 (c) EFFECTIVE DATE.—The amendments made by  
 14 this section shall apply to electricity produced and sold  
 15 after the date of the enactment of this Act, in taxable  
 16 years ending after such date.

17 **SEC. 7. INVESTMENT CREDIT AND 5-YEAR DEPRECIATION**  
 18 **FOR EQUIPMENT WHICH PRODUCES ELEC-**  
 19 **TRICITY FROM MARINE AND HYDROKINETIC**  
 20 **RENEWABLE ENERGY.**

21 (a) IN GENERAL.—Subparagraph (A) of section  
 22 48(a)(3) of the Internal Revenue Code of 1986 (relating  
 23 to energy property) is amended—

24 (1) by striking “or” at the end of clause (iii),

1           (2) by inserting “or” at the end of clause (iv),  
2           and

3           (3) by adding at the end the following new  
4           clause:

5                         “(v) equipment which uses marine  
6                         and hydrokinetic renewable energy (as de-  
7                         fined in section 45(c)(10)) but only with  
8                         respect to periods ending before January  
9                         1, 2018,”.

10          (b) 30 PERCENT CREDIT.—Clause (i) of section  
11 48(a)(2)(A) of such Code (relating to 30 percent credit)  
12 is amended—

13           (1) by striking “and” at the end of subclause  
14           (II), and

15           (2) by adding at the end the following new sub-  
16           clause:

17                         “(IV) energy property described  
18                         in paragraph (3)(A)(v), and”.

19          (c) CREDITS ALLOWED FOR INVESTMENT AND PRO-  
20 DUCTION.—Paragraph (3) of section 48(a) of such Code  
21 (relating to energy property) is amended by inserting  
22 “(other than property described in subparagraph (A)(v))”  
23 after “any property” in the last sentence thereof.

24          (d) DENIAL OF DUAL BENEFIT.—Paragraph (9) of  
25 section 45(e) of such Code (relating to coordination with

1 credit for producing fuel from a nonconventional source)  
 2 is amended—

3 (1) in subparagraph (A), by striking “shall not  
 4 include” and all that follows and inserting “shall not  
 5 include—

6 “(i) any facility which produces elec-  
 7 tricity from gas derived from the bio-  
 8 degradation of municipal solid waste if  
 9 such biodegradation occurred in a facility  
 10 (within the meaning of section 45K) the  
 11 production from which is allowed as a  
 12 credit under section 45K for the taxable  
 13 year or any prior taxable year, or

14 “(ii) any marine and hydrokinetic fa-  
 15 cility for which a credit is claimed by the  
 16 taxpayer under section 48 for the taxable  
 17 year.”, and

18 (2) in the header—

19 (A) by striking “CREDIT” and inserting  
 20 “CREDITS”, and

21 (B) by inserting “AND INVESTMENT IN MA-  
 22 RINE AND HYDROKINETIC RENEWABLE EN-  
 23 ERGY” after “NONCONVENTIONAL SOURCE”.

24 (e) EFFECTIVE DATE.—The amendments made by  
 25 this section shall apply to property placed in service after

- 1 the date of the enactment of this Act, in taxable years
- 2 ending after such date.

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