

such information the Secretary considers appropriate.

(2) As necessary, the Secretary shall report to the Congress on any legal, regulatory, or other barriers encountered that hinder economic development of these resources, and provide recommendations on legislative or other actions needed to address such impediments.

(Pub. L. 110-140, title VI, §621, Dec. 19, 2007, 121 Stat. 1684.)

#### CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

#### § 17201. Applicability of other laws

Nothing in this part shall be construed as waiving, modifying, or superseding the applicability of any requirement under any environmental or other Federal or State law. To the extent that activities authorized in this part take place in coastal and ocean areas, the Secretary shall consult with the Secretary of Commerce, acting through the Under Secretary of Commerce for Oceans and Atmosphere, regarding the potential marine environmental impacts and measures to address such impacts.

(Pub. L. 110-140, title VI, §622, Dec. 19, 2007, 121 Stat. 1684.)

#### § 17202. Authorization of appropriations

There are authorized to be appropriated to the Secretary to carry out this part \$90,000,000 for each of the fiscal years 2008 through 2012, of which \$10,000,000 for each fiscal year shall be for carrying out section 17195 of this title. There are also authorized to be appropriated to the Secretary for the Intermountain West Geothermal Consortium \$5,000,000 for each of the fiscal years 2008 through 2012.

(Pub. L. 110-140, title VI, §623, Dec. 19, 2007, 121 Stat. 1684.)

#### § 17203. International geothermal energy development

##### (a) In general

The Secretary of Energy, in coordination with other appropriate Federal and multilateral agencies (including the United States Agency for International Development) shall support international collaborative efforts to promote the research, development, and deployment of geothermal technologies used to develop hydrothermal and enhanced geothermal system resources, including as partners (as appropriate) the African Rift Geothermal Development Facility, Australia, China, France, the Republic of Iceland, India, Japan, and the United Kingdom.

##### (b) United States Trade and Development Agency

The Director of the United States Trade and Development Agency may—

- (1) encourage participation by United States firms in actions taken to carry out subsection (a); and

- (2) provide grants and other financial support for feasibility and resource assessment studies conducted in, or intended to benefit, less developed countries.

#### (c) Authorization of appropriations

There are authorized to be appropriated to carry out this section \$5,000,000 for each of fiscal years 2008 through 2012.

(Pub. L. 110-140, title VI, §624, Dec. 19, 2007, 121 Stat. 1684.)

#### § 17204. High cost region geothermal energy grant program

##### (a) Definitions

In this section:

##### (1) Eligible entity

The term “eligible entity” means—

- (A) a utility;
- (B) an electric cooperative;
- (C) a State;
- (D) a political subdivision of a State;
- (E) an Indian tribe; or
- (F) a Native corporation.

##### (2) High-cost region

The term “high-cost region” means a region in which the average cost of electrical power exceeds 150 percent of the national average retail cost, as determined by the Secretary.

##### (b) Program

The Secretary shall use amounts made available to carry out this section to make grants to eligible entities for activities described in subsection (c).

##### (c) Eligible activities

An eligible entity may use grant funds under this section, with respect to a geothermal energy project in a high-cost region, only—

- (1) to conduct a feasibility study, including a study of exploration, geochemical testing, geomagnetic surveys, geologic information gathering, baseline environmental studies, well drilling, resource characterization, permitting, and economic analysis;
- (2) for design and engineering costs, relating to the project; and
- (3) to demonstrate and promote commercial application of technologies related to geothermal energy as part of the project.

##### (d) Cost sharing

The cost-sharing requirements of section 16352 of this title shall apply to any project carried out under this section.

##### (e) Authorization of appropriations

There are authorized to be appropriated such sums as are necessary to carry out this section.

(Pub. L. 110-140, title VI, §625, Dec. 19, 2007, 121 Stat. 1685.)

#### PART C—MARINE AND HYDROKINETIC RENEWABLE ENERGY TECHNOLOGIES

#### § 17211. Definition

For purposes of this part, the term “marine and hydrokinetic renewable energy” means electrical energy from—

- (1) waves, tides, and currents in oceans, estuaries, and tidal areas;
- (2) free flowing water in rivers, lakes, and streams;
- (3) free flowing water in man-made channels; and
- (4) differentials in ocean temperature (ocean thermal energy conversion).

The term “marine and hydrokinetic renewable energy” does not include energy from any source that uses a dam, diversionary structure, or impoundment for electric power purposes.

(Pub. L. 110–140, title VI, § 632, Dec. 19, 2007, 121 Stat. 1686.)

#### SHORT TITLE

This part known as the “Marine and Hydrokinetic Renewable Energy Research and Development Act”, see Short Title note set out under section 17001 of this title.

### § 17212. Marine and hydrokinetic renewable energy research and development

#### (a) In general

The Secretary, in consultation with the Secretary of the Interior and the Secretary of Commerce, acting through the Under Secretary of Commerce for Oceans and Atmosphere, shall establish a program of research, development, demonstration, and commercial application to expand marine and hydrokinetic renewable energy production, including programs to—

- (1) study and compare existing marine and hydrokinetic renewable energy technologies;
- (2) research, develop, and demonstrate marine and hydrokinetic renewable energy systems and technologies;
- (3) reduce the manufacturing and operation costs of marine and hydrokinetic renewable energy technologies;
- (4) investigate efficient and reliable integration with the utility grid and intermittency issues;
- (5) advance wave forecasting technologies;
- (6) conduct experimental and numerical modeling for optimization of marine energy conversion devices and arrays;
- (7) increase the reliability and survivability of marine and hydrokinetic renewable energy technologies, including development of corrosive-resistant materials;
- (8) identify, in conjunction with the Secretary of Commerce, acting through the Under Secretary of Commerce for Oceans and Atmosphere, and other Federal agencies as appropriate, 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;
- (9) identify, in conjunction with the Secretary of the Department in which the United States Coast Guard is operating, acting through the Commandant of the United States Coast Guard, the potential navigational impacts of marine and hydrokinetic renewable energy technologies and measures to prevent adverse impacts on navigation;

(10) develop power measurement standards for marine and hydrokinetic renewable energy;

(11) develop identification standards for marine and hydrokinetic renewable energy devices;

(12) address standards development, demonstration, and technology transfer for advanced systems engineering and system integration methods to identify critical interfaces;

(13) identifying<sup>1</sup> opportunities for cross fertilization and development of economies of scale between other renewable sources and marine and hydrokinetic renewable energy sources; and

(14) providing<sup>2</sup> public information and opportunity for public comment concerning all technologies.

#### (b) Report

Not later than 18 months after December 19, 2007, the Secretary, in conjunction with the Secretary of Commerce, acting through the Under Secretary of Commerce for Oceans and Atmosphere, and the Secretary of the Interior, shall provide to the Congress a report that addresses—

- (1) the potential environmental impacts, including impacts to fisheries and marine resources, of marine and hydrokinetic renewable energy technologies;
- (2) options to prevent adverse environmental impacts;
- (3) the potential role of monitoring and adaptive management in identifying and addressing any adverse environmental impacts; and
- (4) the necessary components of such an adaptive management program.

(Pub. L. 110–140, title VI, § 633, Dec. 19, 2007, 121 Stat. 1686.)

### § 17213. National Marine Renewable Energy Research, Development, and Demonstration Centers

#### (a) Centers

The Secretary shall award grants to institutions of higher education (or consortia thereof) for the establishment of 1 or more National Marine Renewable Energy Research, Development, and Demonstration Centers. In selecting locations for Centers, the Secretary shall consider sites that meet one of the following criteria:

- (1) Hosts an existing marine renewable energy research and development program in coordination with an engineering program at an institution of higher education.
- (2) Has proven expertise to support environmental and policy-related issues associated with harnessing of energy in the marine environment.
- (3) Has access to and utilizes the marine resources in the Gulf of Mexico, the Atlantic Ocean, or the Pacific Ocean.

The Secretary may give special consideration to historically black colleges and universities and land grant universities that also meet one of

<sup>1</sup> So in original. Probably should be “identify”.

<sup>2</sup> So in original. Probably should be “provide”.