

110TH CONGRESS
1ST SESSION

S. 1543

To establish a national geothermal initiative to encourage increased production of energy from geothermal resources, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 5, 2007

Mr. BINGAMAN introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To establish a national geothermal initiative to encourage increased production of energy from geothermal resources, 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 “National Geothermal
5 Initiative Act of 2007”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

8 (1) domestic geothermal resources have the po-
9 tential to provide vast amounts of clean, renewable,
10 and reliable energy to the United States;

1 (2) Federal policies and programs are critical to
2 achieving the potential of those resources;

3 (3) Federal tax policies should be modified to
4 appropriately support the longer lead-times of geo-
5 thermal facilities and address the high risks of geo-
6 thermal exploration and development;

7 (4) sustained and expanded research programs
8 are needed—

9 (A) to support the goal of increased energy
10 production from geothermal resources; and

11 (B) to develop the technologies that will
12 enable commercial production of energy from
13 more geothermal resources;

14 (5) a comprehensive national resource assess-
15 ment is needed to support policymakers and industry
16 needs;

17 (6) a national exploration and development
18 technology and information center should be estab-
19 lished to support the achievement of increased geo-
20 thermal energy production; and

21 (7) implementation and completion of geo-
22 thermal and other renewable initiatives on public
23 land in the United States is critical, consistent with
24 the principles and requirements of the Federal Land

1 Policy and Management Act of 1976 (43 U.S.C.
2 1701 et seq.) and other applicable law.

3 **SEC. 3. NATIONAL GOAL.**

4 Congress declares that it shall be a national goal to
5 achieve 20 percent of total electrical energy production in
6 the United States from geothermal resources by not later
7 than 2030.

8 **SEC. 4. DEFINITIONS.**

9 In this Act:

10 (1) INITIATIVE.—The term “Initiative” means
11 the national geothermal initiative established by sec-
12 tion 5(a).

13 (2) NATIONAL GOAL.—The term “national
14 goal” means the national goal of increased energy
15 production from geothermal resources described in
16 section 3.

17 (3) SECRETARY.—The term “Secretary” means
18 the Secretary of Energy.

19 **SEC. 5. NATIONAL GEOTHERMAL INITIATIVE.**

20 (a) ESTABLISHMENT.—There is established a na-
21 tional geothermal initiative under which the Federal Gov-
22 ernment shall seek to achieve the national goal.

23 (b) FEDERAL SUPPORT AND COORDINATION.—In
24 carrying out the Initiative, each Federal agency shall give
25 priority to programs and efforts necessary to support

1 achievement of the national goal to the extent consistent
2 with applicable law.

3 (c) ENERGY AND INTERIOR GOALS.—

4 (1) IN GENERAL.—In carrying out the Initia-
5 tive, the Secretary and the Secretary of the Interior
6 shall establish and carry out policies and pro-
7 grams—

8 (A) to characterize the complete geo-
9 thermal resource base (including engineered
10 geothermal systems) of the United States by
11 not later than 2010;

12 (B) to sustain an annual growth rate in
13 the use of geothermal power, heat, and heat
14 pump applications of at least 10 percent;

15 (C) to demonstrate state-of-the-art energy
16 production from the full range of geothermal
17 resources in the United States;

18 (D) to achieve new power or commercial
19 heat production from geothermal resources in
20 at least 25 States; and

21 (E) to develop the tools and techniques to
22 construct an engineered geothermal system
23 power plant.

24 (2) REPORT TO CONGRESS.—Not later than 1
25 year after the date of enactment of this Act, and

1 every 3 years thereafter, the Secretary and the Sec-
2 retary of the Interior shall jointly submit to the ap-
3 propriate Committees of Congress a report that de-
4 scribes—

5 (A) the proposed plan to achieve the goals
6 described in paragraph (1); and

7 (B) a description of the progress during
8 the period covered by the report toward achiev-
9 ing those goals.

10 (d) GEOTHERMAL RESEARCH, DEVELOPMENT, DEM-
11 ONSTRATION, AND COMMERCIAL APPLICATION.—

12 (1) IN GENERAL.—The Secretary shall carry
13 out a program of geothermal research, development,
14 demonstration, outreach and education, and com-
15 mercial application to support the achievement of
16 the national goal.

17 (2) REQUIREMENTS OF PROGRAM.—In carrying
18 out the geothermal research program described in
19 paragraph (1), the Secretary shall—

20 (A) prioritize funding for the discovery and
21 characterization of geothermal resources;

22 (B) expand funding for cost-shared drill-
23 ing;

24 (C)(i) establish, at a national laboratory or
25 university research center selected by the Sec-

1 retary, a national geothermal exploration re-
2 search and information center;

3 (ii) support development and application of
4 new exploration and development technologies
5 through the center; and

6 (iii) in cooperation with the Secretary of
7 the Interior, disseminate geological and geo-
8 physical data to support geothermal exploration
9 activities through the center;

10 (D) support cooperative programs with and
11 among States, including with the Great Basin
12 Center for Geothermal Energy, the Inter-
13 mountain West Geothermal Consortium, and
14 other similar State and regional initiatives, to
15 expand knowledge of the geothermal resource
16 base of the United States and potential applica-
17 tions of that resource base;

18 (E) improve and advance high-temperature
19 and high-pressure drilling, completion, and in-
20 strumentation technologies benefiting geo-
21 thermal well construction;

22 (F) demonstrate geothermal applications in
23 settings that, as of the date of enactment of
24 this Act, are noncommercial;

1 (G) research, develop, and demonstrate en-
2 gineered geothermal systems techniques for
3 commercial application of the technologies, in-
4 cluding advances in—

5 (i) reservoir stimulation;

6 (ii) reservoir characterization, moni-
7 toring, and modeling;

8 (iii) stress mapping;

9 (iv) tracer development;

10 (v) 3-dimensional tomography; and

11 (vi) understanding seismic effects of
12 deep drilling and reservoir engineering;
13 and

14 (H) support the development and applica-
15 tion of the full range of geothermal technologies
16 and applications.

17 (3) AUTHORIZATION OF APPROPRIATIONS.—

18 There are authorized to be appropriated to the Sec-
19 retary to carry out this subsection—

20 (A) \$75,000,000 for fiscal year 2008;

21 (B) \$110,000,000 for each of fiscal years
22 2009 through 2012; and

23 (C) for fiscal year 2013 and each fiscal
24 year thereafter through fiscal year 2030, such
25 sums as are necessary.

1 (e) GEOTHERMAL ASSESSMENT, EXPLORATION IN-
2 FORMATION, AND PRIORITY ACTIVITIES.—

3 (1) INTERIOR.—In carrying out the Initiative,
4 the Secretary of the Interior—

5 (A) acting through the Director of the
6 United States Geological Survey, shall, not later
7 than 2010—

8 (i) conduct and complete a com-
9 prehensive nationwide geothermal resource
10 assessment that examines the full range of
11 geothermal resources in the United States;
12 and

13 (ii) submit to the appropriate commit-
14 tees of Congress a report describing the re-
15 sults of the assessment; and

16 (B) in planning and leasing, shall consider
17 the national goal established under this Act.

18 (2) AUTHORIZATION OF APPROPRIATIONS.—

19 There are authorized to be appropriated to the Sec-
20 retary of the Interior to carry out this subsection—

21 (A) \$15,000,000 for fiscal year 2008;

22 (B) \$25,000,000 for each of fiscal years
23 2009 to 2012; and

1 (C) for fiscal year 2013 and each fiscal
2 year thereafter through fiscal year 2030, such
3 sums as are necessary.

4 **SEC. 6. INTERMOUNTAIN WEST GEOTHERMAL CONSOR-**
5 **TIUM.**

6 Section 237 of the Energy Policy Act of 2005 (42
7 U.S.C. 15874) is amended by adding at the end the fol-
8 lowing:

9 “(d) AUTHORIZATION OF APPROPRIATIONS.—There
10 are authorized to be appropriated to carry out this sec-
11 tion—

12 “(1) \$5,000,000 for each of fiscal years 2008
13 through 2013; and

14 “(2) such sums as are necessary for each of fis-
15 cal years 2014 through 2020.”.

16 **SEC. 7. INTERNATIONAL MARKET SUPPORT FOR GEO-**
17 **THERMAL ENERGY DEVELOPMENT.**

18 (a) UNITED STATES AGENCY FOR INTERNATIONAL
19 DEVELOPMENT.—The United States Agency for Inter-
20 national Development, in coordination with other appro-
21 priate Federal and multilateral agencies, shall support
22 international and regional development to promote the use
23 of geothermal resources, including (as appropriate) the Af-
24 rican Rift Geothermal Development Facility.

1 (b) UNITED STATES TRADE AND DEVELOPMENT
2 AGENCY.—The United States Trade and Development
3 Agency shall support the Initiative by—

4 (1) encouraging participation by United States
5 firms in actions taken to carry out subsection (a);
6 and

7 (2) providing grants and other financial support
8 for feasibility and resource assessment studies.

9 (c) AUTHORIZATION OF APPROPRIATIONS.—There
10 are authorized to be appropriated such sums as are nec-
11 essary to carry out this section.

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