

Union Calendar No. 655

119TH CONGRESS
2^D SESSION**H. R. 8790****[Report No. 119–752, Part I]**

To amend the Energy Independence and Security Act of 2007 to direct research, development, demonstration, and commercial application activities in support of next-generation geothermal and closed-loop geothermal systems in various conditions, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 13, 2026

Mr. HARRIGAN (for himself and Ms. SALINAS) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Natural Resources, 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

JULY 16, 2026

Reported from the Committee on Science, Space, and Technology with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

JULY 16, 2026

Committee on Natural Resources discharged; committed to the Committee of the Whole House on the State of the Union and ordered to be printed

[For text of introduced bill, see copy of bill as introduced on May 13, 2026]

A BILL

To amend the Energy Independence and Security Act of 2007 to direct research, development, demonstration, and commercial application activities in support of next-generation geothermal and closed-loop geothermal systems in various conditions, 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 “Next-Generation Geo-*
 5 *thermal Research and Development Act”.*

6 **SEC. 2. GEOTHERMAL ENERGY.**

7 *(a) IN GENERAL.—The Energy Independence and Se-*
 8 *curity Act of 2007 (Public Law 110–140) is amended—*

9 *(1) in section 612 (42 U.S.C. 17191; relating to*
 10 *definitions)—*

11 *(A) by redesignating paragraphs (1), (2),*
 12 *(3), (4), (5), (6), (7), and (8) as paragraphs (2),*
 13 *(3), (4), (5), (6), (7), (8), and (11), respectively;*

14 *(B) by inserting before paragraph (2), as so*
 15 *redesignated, the following new paragraph:*

16 *“(1) CLOSED-LOOP GEOTHERMAL SYSTEMS.—The*
 17 *term ‘closed-loop geothermal systems’ means a*
 18 *wellbore or subsurface circuit of wellbores containing*
 19 *a fluid heated through contact with the borehole*
 20 *wall.”; and*

21 *(C) by inserting after paragraph (8), as so*
 22 *redesignated, the following new paragraphs:*

23 *“(9) NEXT-GENERATION GEOTHERMAL SYS-*
 24 *TEMS.—The term ‘next-generation geothermal sys-*
 25 *tems’ means—*

1 “(A) enhanced geothermal systems;

2 “(B) closed-loop geothermal systems;

3 “(C) in supercritical conditions—

4 “(i) enhanced geothermal systems; or

5 “(ii) closed-loop geothermal systems;

6 and

7 “(D) other innovative energy technologies.

8 “(10) *SUPERCritical GEOTHERMAL*.—The term
9 ‘supercritical geothermal’ means energy derived from
10 a subsurface rock resource in-situ existing at or above
11 the supercritical conditions, whether relating to tem-
12 perature or pressure, of the primary fluid present.”;

13 (2) in section 613(b)(1) (42 U.S.C. 17192(b)(1);
14 relating to hydrothermal research and development),
15 by striking “advanced geologic tools to assist” and in-
16 serting “advanced tools, including machine learning
17 algorithms, to assist”;

18 (3) in section 614 (42 U.S.C. 17193; relating to
19 general geothermal systems research and develop-
20 ment)—

21 (A) in subsection (d)(1), by striking
22 “among the Office of Fossil Energy, the Office of
23 Energy Efficiency and Renewable Energy,” and
24 inserting “across the Department”; and

25 (B) in subsection (h)—

(i) in paragraph (1), by inserting
“and publicly available subsurface data, including data reported as part of fossil fuel and mining operations,” after “geothermal drilling information”; and

(ii) in paragraph (2), by adding at the end the following new subparagraphs:

“(C) *UPDATES.*—The repository established under paragraph (1) shall be periodically updated in order to carry out the following:

“(i) *Standardize data in a uniform manner to the maximum extent practicable and enable analysis across different projects.*

“(ii) *Enhance the accessibility and usability of data to increase analysis of geothermal energy and next-generation geothermal systems on regional, local, and site-specific scales.*

“(iii) *Increase uses of data, including data viewable by map and organization by common attributes, such as region.*

“(iv) *Make other improvements in functionality and usability, as determined by the Secretary.*

“(D) *MEMORANDUM OF UNDERSTANDING.*—

1 “(i) *IN GENERAL.*—*The Secretary shall*
2 *enter into a memorandum of understanding*
3 *with the Secretary of the Interior, and with*
4 *the heads of other relevant Federal depart-*
5 *ments, for notifying, sharing, and providing*
6 *opportunities for additional data collection*
7 *regarding shared geothermal development*
8 *data from projects funded by the Depart-*
9 *ment of the Interior and each such other rel-*
10 *evant department, including data from*
11 *mining, critical minerals, and energy*
12 *projects, such as subsurface heat data, seis-*
13 *mic data, lithology data, boundaries of*
14 *State and federally protected areas, and ex-*
15 *isting transmission capacity.*

16 “(ii) *PRIORITIZATION.*—*To the max-*
17 *imum extent practicable, activities con-*
18 *ducted pursuant to a memorandum of un-*
19 *derstanding under clause (i) shall prioritize*
20 *heat, lithology, and strain profiles through*
21 *deep exploration boreholes and control*
22 *points for deep heat mapping and geo-*
23 *thermal development.*

24 “(E) *REGIONAL DATA PROBES.*—*The Sec-*
25 *retary of the Interior may, in consultation with*

the Secretary, commission the drilling of supercritical geothermal exploration boreholes in representative geological provinces in the United States to provide control points for deep heat mapping and geothermal development. The resulting data shall include an exploration of heat, lithology, and strain profiles, and shall be shared publicly on the repository established under paragraph (1).

“(F) *STUDY ON SITE SELECTION CHARACTERISTICS FOR SUPERCRITICAL GEOTHERMAL.*—The Secretary of the Interior shall, in consultation with the Secretary, conduct a study on site selection characteristics in representative geological provinces in the United States, including the United States territories of American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands, for supercritical geothermal.”;

(4) in section 615 (42 U.S.C. 17194; relating to enhanced geothermal systems research and development)—

(A) in the section heading, by striking “**ENHANCED**” and inserting “**NEXT-GENERATION**”;

1 (B) in subsection (a), by striking “en-
2 hanced” and inserting “next-generation”;

3 (C) in subsection (b)—

4 (i) in the heading, by inserting “AND
5 CLOSED-LOOP” after “ENHANCED”;

6 (ii) in the matter preceding paragraph
7 (1), by inserting “and closed-loop” after
8 “enhanced”;

9 (iii) in paragraph (11), by striking
10 “and” after the semicolon;

11 (iv) in paragraph (12), by striking the
12 period and inserting “; and”; and

13 (v) by adding at the end the following
14 new paragraph:

15 “(13) the research topics specified in paragraphs
16 (1) through (12) in supercritical conditions.”;

17 (D) in subsection (c)—

18 (i) by redesignating paragraph (7) as
19 paragraph (8); and

20 (ii) by inserting after paragraph (6)
21 the following new paragraph:

22 “(7) NEXT-GENERATION GEOTHERMAL TEST-
23 ING.—Not later than one year after the date of the en-
24 actment of this paragraph, the Secretary shall take
25 such actions as may be necessary to ensure that at

1 *least one FORGE site has the capabilities to include*
 2 *next-generation geothermal testing, including in*
 3 *supercritical conditions.”; and*

4 *(E) by adding at the end the following new*
 5 *subsections:*

6 *“(e) NEXT-GENERATION GEOTHERMAL RESEARCH AND*
 7 *DEVELOPMENT PROGRAM.—*

8 *“(1) IN GENERAL.—Within the Geothermal Tech-*
 9 *nologies Office of the Department, the Secretary shall*
 10 *support a program of next-generation geothermal re-*
 11 *search, development, demonstration, and commercial*
 12 *application activities, including in supercritical con-*
 13 *ditions.*

14 *“(2) FOCUS AREAS.—*

15 *“(A) IN GENERAL.—The program described*
 16 *in paragraph (1) shall focus on the following*
 17 *topics:*

18 *“(i) Well completion.*

19 *“(ii) Permeability creation and man-*
 20 *agement, including proppants and packers.*

21 *“(iii) Materials development and*
 22 *equipment design, including power produc-*
 23 *tion, specific to supercritical geothermal*
 24 *systems.*

25 *“(iv) Sensor development.*

1 “(v) *Water-rock geochemistry.*

2 “(vi) *Rock properties.*

3 “(vii) *Hard rock and deep drilling.*

4 “(viii) *Any other topics the Secretary*
5 *determines necessary.*

6 “(B) *PRIORITIZATION.—In carrying out*
7 *next-generation geothermal research under the*
8 *program described in paragraph (1), the Sec-*
9 *retary shall prioritize projects best able to*
10 *produce iterative data for deep drilling projects*
11 *in unique geodynamic settings on the following*
12 *topics:*

13 “(i) *Characterization and crustal*
14 *stress.*

15 “(ii) *Lab work.*

16 “(iii) *Drilling.*

17 “(iv) *Stimulation.*

18 “(v) *Power production.*

19 “(C) *ADMINISTRATION.—The Secretary may*
20 *administer grants to institutions of higher edu-*
21 *cation and private sector entities to carry out*
22 *activities on the topics specified in subparagraph*
23 *(A) and, to the maximum extent practicable,*
24 *share data, results, and information publicly.*

1 “(3) *REPORT ON WATER USE.*—Not later than
2 *five years after the date of the enactment of this sub-*
3 *section, the Secretary shall submit to the Committee*
4 *on Natural Resources and the Committee on Science,*
5 *Space, and Technology of the House of Representa-*
6 *tives and the Committee on Energy and Natural Re-*
7 *sources of the Senate a report on the following:*

8 “(A) *Water use and estimated needs of en-*
9 *hanced geothermal systems.*

10 “(B) *Water use and estimated needs for*
11 *closed-loop, and next-generation geothermal en-*
12 *ergy production.*

13 “(C) *The ability of next-generation geo-*
14 *thermal systems to use brackish and nonpotable*
15 *water.*

16 “(D) *The withdrawal and consumption of*
17 *water per megawatt hour of next-generation geo-*
18 *thermal systems, as compared to other power-*
19 *generation technologies.*

20 “(E) *Technological and operational im-*
21 *provements that could lead to decreases in water*
22 *withdrawal and consumption of next-generation*
23 *geothermal systems.*

24 “(4) *NEXT-GENERATION GEOTHERMAL CENTER*
25 *OF EXCELLENCE.*—

1 “(A) *ESTABLISHMENT.*—*The Secretary shall*
2 *award grants through a competitive, merit-re-*
3 *viewed process, to National Laboratories (as such*
4 *term is defined in section 2 of the Energy Policy*
5 *Act of 2005 (42 U.S.C. 15801)), multi-institu-*
6 *tional collaborations, public-private partner-*
7 *ships, or institutes of higher education (or con-*
8 *sortia thereof) for the following:*

9 “(i) *The continuation and expansion of*
10 *research, development, demonstration, test-*
11 *ing, and commercial application activities*
12 *applicable to FORGE sites, including ac-*
13 *tivities in supercritical conditions.*

14 “(ii) *The establishment of a next-gen-*
15 *eration geothermal systems center of excel-*
16 *lence.*

17 “(B) *LOCATION.*—*In selecting National*
18 *Laboratories, multi-institutional collaborations,*
19 *public-private partnerships, or institutions of*
20 *higher education (or a consortia thereof) for a*
21 *center of excellence referred to in subparagraph*
22 *(A), the Secretary shall consider the following*
23 *criteria:*

1 “(i) *Whether the entity hosts an exist-*
2 *ing geothermal energy research and develop-*
3 *ment program.*

4 “(ii) *Whether the entity has proven*
5 *technical expertise to support geothermal*
6 *energy research.*

7 “(iii) *Whether the entity has access to*
8 *geothermal resources.*

9 “(C) *PURPOSE.—The center of excellence re-*
10 *ferred to in subparagraph (A) shall coordinate*
11 *among existing FORGE sites, the Department,*
12 *and National Laboratories to carry out the fol-*
13 *lowing:*

14 “(i) *Advance research, development,*
15 *demonstration, and commercial application*
16 *of next-generation geothermal energy tech-*
17 *nologies, including supercritical geothermal*
18 *technologies, in response to industry and*
19 *commercial needs, including by partnering*
20 *with other academic or research institu-*
21 *tions, industry, non-governmental organiza-*
22 *tions, and State, local, or Tribal govern-*
23 *ments.*

24 “(ii) *Foster collaboration for edu-*
25 *cation, research, and partnership initiatives*

1 *in order to support the technology, deploy-*
2 *ment, and workforce needs of the United*
3 *States geothermal energy industry, includ-*
4 *ing a focus on next-generation geothermal*
5 *systems.*

6 “(iii) *Support workforce development*
7 *across the next-generation geothermal sys-*
8 *tems energy development lifecycle.*

9 “(iv) *Provide educational, technical,*
10 *and analytical assistance on next-genera-*
11 *tion geothermal systems to Federal agencies,*
12 *industry, and State, local, and Tribal gov-*
13 *ernments.*

14 “(v) *Collect and disseminate informa-*
15 *tion on best practices in all areas relating*
16 *to developing and managing geothermal en-*
17 *ergy resources and energy systems, includ-*
18 *ing next-generation geothermal systems.*

19 “(5) *COMMERCIAL-READINESS INNOVATION*
20 *GRANTS.—*

21 “(A) *IN GENERAL.—The Secretary shall*
22 *award grants to accelerate the development, test-*
23 *ing, and implementation of innovative tech-*
24 *nologies identified as areas for improving the*
25 *performance of commercial geothermal energy*

1 *projects using next-generation geothermal sys-*
2 *tems.*

3 “(B) *FOCUS AREAS.*—Grants may be
4 *awarded under this paragraph for innovative*
5 *technologies, including the following:*

6 “(i) *Hardrock drilling equipment,*
7 *components, and systems, including bit de-*
8 *sign and vibration control.*

9 “(ii) *Reservoir characterization, well*
10 *design and spacing, and completions.*

11 “(iii) *Data acquisition and analysis,*
12 *including fiber optic sensing tools and*
13 *methodologies.*

14 “(C) *APPLICATIONS.*—

15 “(i) *IN GENERAL.*—An entity seeking a
16 *grant under this paragraph shall submit to*
17 *the Secretary an application at such time,*
18 *in such manner, and containing such infor-*
19 *mation as the Secretary may require.*

20 “(ii) *PRIORITIZATION.*—In awarding
21 *grants under this paragraph, the Secretary*
22 *shall give priority to the following:*

23 “(I) *Applicants, including for-*
24 *profit entities and public-private part-*
25 *nerships, with demonstrated expertise*

1 relating to in-field development and
2 commercial operations for geothermal
3 energy projects.

4 “(II) Projects with the greatest
5 ability to advance near-term commer-
6 cial deployment of enhanced geo-
7 thermal systems and closed-loop geo-
8 thermal systems.

9 “(III) Projects that advance the
10 commercialization of geothermal en-
11 ergy projects in diverse geological con-
12 ditions or supercritical conditions.

13 “(D) *COST SHARING.*—The Federal share of
14 the cost of a project carried out with a grant
15 under this paragraph shall be not more than 80
16 percent.

17 “(f) *AUTHORIZATION OF APPROPRIATIONS.*—There is
18 authorized to be appropriated to the Secretary to carry out
19 this section \$150,000,000 for each of fiscal years 2027
20 through 2031. Such amounts shall be derived from amounts
21 otherwise authorized to be appropriated to the Office of En-
22 ergy Efficiency and Renewable Energy of the Department.”;
23 and

24 (5) in section 617 (42 U.S.C. 17196; relating to
25 organization and administration of programs)—

1 (A) in subsection (e), by striking “Com-
 2 mittee on Science and Technology” and inserting
 3 “Committee on Science, Space, and Technology”;
 4 and

5 (B) by amending subsection (f) to read as
 6 follows:

7 “(f) *PROGRESS REPORTS.*—Not later than one year
 8 after the date of the enactment of this subsection and every
 9 two years thereafter, the Secretary shall submit to the Com-
 10 mittee on Science, Space, and Technology of the House of
 11 Representatives and the Committee on Energy and Natural
 12 Resources of the Senate a report that contains the following:

13 “(1) A description of the maximum potential of
 14 geothermal resources in the United States, including
 15 a consideration of next-generation geothermal systems.

16 “(2) Information relating to the results of
 17 projects undertaken under this section.

18 “(3) An assessment of the barriers to commer-
 19 cialization of next-generation geothermal technologies.

20 “(4) Such other information as the Secretary
 21 considers appropriate.”.

22 (b) *UPDATE TO GEOTHERMAL RESOURCE ASSESS-*
 23 *MENT.*—

24 (1) *IN GENERAL.*—Section 2501 of the Energy
 25 Policy Act of 1992 (30 U.S.C. 1028) is amended—

1 (A) in subsection (c)—

2 (i) in the matter preceding paragraph
3 (1), by inserting “quadrennially” before
4 “update”;

5 (ii) in paragraph (1)(D)(ii), by strik-
6 ing “and” at the end;

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

10 (iv) by adding at the end the following
11 new paragraph:

12 “(3) to the maximum extent practicable, by as-
13 sessing regions of the United States, including the
14 United States territories of American Samoa, Guam,
15 Northern Mariana Islands, Puerto Rico, and the U.S.
16 Virgin Islands, with significant potential for super-
17 critical geothermal (as such term is defined in section
18 612 of the Energy Independence and Security Act of
19 2007 (42 U.S.C. 17191)).”; and

20 (B) by striking subsection (d).

21 (2) *FIRST UPDATE.*—The first quadrennial up-
22 date to the geothermal resource assessment carried out
23 by the United States Geological Survey under sub-
24 section (c) of section 2501 of the Energy Policy Act
25 of 1992, as amended by paragraph (1), shall be com-

1 *pleted by not later than two years after the date of*
2 *the enactment of this Act.*

3 *(c) CLERICAL AMENDMENT.—The table of contents in*
4 *section 1(b) of the Energy Independence and Security Act*
5 *of 2007 is amended by amending the item relating to sec-*
6 *tion 615 to read as follows:*

“Sec. 615. Next-generation geothermal systems research and development.”.

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