

Committee on Natural Resources

Rob Bishop Chairman
Mark-Up Memorandum

December 11, 2017

To: All Natural Resources Committee Members

From: Majority Committee Staff – Rebecca Konolige
Subcommittee on Energy and Mineral Resources

Mark-Up: **H.R. 4568 (Rep. Raúl Labrador)**, To amend the Geothermal Steam Act of 1970 to promote timely exploration for geothermal resources under geothermal leases, and for other purposes.
December 12, 2017; 1324 Longworth HOB

H.R. 4568, *Enhancing Geothermal Production on Federal Lands Act*

Summary of the Bill

Introduced on December 6, 2017 by Representative Raúl Labrador (R-ID), H.R. 4568 amends the Geothermal Steam Act of 1970 to incentivize new production of geothermal resources on federal lands, and support increased development on lands already leased for that purpose. This bill will boost geothermal resource development by creating a Categorical Exclusion (CX) under the National Environmental Policy Act of 1969 (NEPA) for geothermal exploration test projects, permitting coproduction of geothermal resources on land leased for oil and gas, and allowing for noncompetitive leasing on federal lands adjacent to other lands currently leased for geothermal energy production.

Cosponsors

Rep. Paul Gosar (R-AZ), original cosponsor

Background

Reliable and affordable domestic energy sources are essential for our economic health at the local, state, and federal level. Increasing the accessibility and affordability of renewable energy on federal lands is a critical component in an all-of-the-above energy strategy, which bolsters our nation's energy security and diminishes our reliance on foreign sources.

Geothermal energy, naturally produced from the immense heat of the earth's core, is a clean, sustainable energy source. Unlike other renewables such as wind and solar, geothermal is not an intermittent source of energy, and therefore not reliant on a backup power source.¹ As it

¹ Verdolini, Elena, Francesco Vona, and David Popp. "Bridging the Gap: Do Fast Reacting Fossil Technologies Facilitate Renewable Energy Diffusion?" *The National Bureau of Economic Research* (2016).
<http://www.nber.org/papers/w22454.pdf>

requires no fossil fuels, it acts as an economic stabilizer in the energy market.² Despite its usefulness and potential, geothermal energy is hampered by an unpredictable regulatory process, discouraging development.

The Enhancing Geothermal Production on Federal Lands Act begins by easing the regulatory hurdles at the very beginning of development – the exploration of a potential resource. Ninety percent of viable geothermal resources in the United States are on federally managed lands, making almost all geothermal projects subject to the NEPA review.³ Conceivably, it may take as long as seven to ten years for a geothermal project to begin production from its initial land use planning stage.⁴

While the general presence of a geothermal resource can be estimated by seismic surveys and other technologies, pinpointing the precise location requires an exploration well to test what is beneath the surface.⁵ Currently, most geothermal exploration wells require an Environmental Assessment (EA) to be filed before exploration begins. As an EA for geothermal projects averages 10 months, interested parties must wait nearly a year to determine if a viable geothermal resource even exists.⁶ Permitting testing sites without an extensive, lengthy NEPA analysis would greatly mitigate the risk of investing the high up-front capital costs that geothermal development requires.⁷

The bill further allows for geothermal development on lands already leased for oil and gas development. This would encourage utilization of a valid geothermal resource if discovered on an existing federal oil and gas lease.

Finally, this bill permits noncompetitive leasing on adjacent federal lands for geothermal energy production. This enables a current leaseholder to acquire neighboring lands at fair market value, so that the geothermal resource may be fully accessed. Without this provision, the boundaries of a lease could conceivably cut a resource in two, and thereby limit the amount of resources the leaseholder may access. If the adjoining land where the resource extends were leased for another purpose, the geothermal resource there would be rendered completely inaccessible.

The Enhancing Geothermal Production on Federal Lands Act alleviates the highly burdensome NEPA review requirements for geothermal testing sites, permits geothermal coproduction with oil and gas, and allows for noncompetitive leasing on adjoining lands.

² Geothermal Energy Association. Potential Use (updated 2014). <http://geo-energy.org/PotentialUse.aspx> (Accessed November 13, 2017).

³ *Supra*.

⁴ Young, *et al.*, 894.

⁵ Young, Katherine R., Kermit Witherbee, Aaron Levine, Adam Keller, Jeremy Balu, and Mitchell Bennett. “Geothermal Permitting and NEPA Timelines.” *Geothermal Resources Council Transactions* 38 (2014): 893-904. <https://www.geothermal-library.org/index.php?mode=pubs&action=view&record=1033639>

⁶ Young, *et al.*, 900.

⁷ *Supra*, 893.

Major Provisions/Analysis of H.R. 4568

Section 1: Short title

- “Enhancing Geothermal Production on Federal Lands Act.”

Section 2: Geothermal Production on Federal Lands

- Defines what qualifies as a geothermal exploration test project.
- Creates a categorical exclusion for any qualifying geothermal exploration test project. Maintains the definition under NEPA of “extraordinary circumstances” as applied to categorical exclusions, which stipulates that a categorical exclusion cannot be granted for a specific test project if extraordinary circumstances apply to that project.
- Requires a leaseholder to provide notice to the Secretary of the Interior at least 30 days prior to the start of drilling under the project; requires the Secretary to review this notice of intent within 10 days after its receipt. If the Secretary determines that a categorical exclusion would not apply to the proposed project, the Secretary shall provide the leaseholder the opportunity to remedy the deficiencies described in their initial notice.

Section 3: Geothermal Leasing Priority Areas

- Defines “covered land” as land that is 1) federal land, and 2) not excluded for development of geothermal energy under the Federal Land Policy and Management Act of 1976 (FLPMA) or any other federal law.
- The Secretary of the Interior will coordinate with the Secretary of Energy to designate portions of covered land as priority areas for geothermal leasing within 5 years of enactment of this section.
- The designated priority areas must be determined as 1) preferable for geothermal leasing, 2) economically viable for geothermal energy production, and 3) in compliance with section 202 of FLPMA.
- At least once every 10 years, the Secretary of the Interior will review covered land and priority area designations, and add or remove such designations as appropriate.
- Within 5 years of enactment of this section, the Secretary shall prepare a supplement to the most recent final programmatic environmental impact statement for geothermal leasing to contain designations of geothermal leasing priority areas. Subsequent designations shall also be included in a programmatic environmental impact statement or supplement thereof.
- In developing any programmatic environmental impact statement or supplement, the Secretary of the Interior will consult with state, local, and tribal governments and other appropriate entities.
- The Secretary may not delay issuing a permit or holding a lease sale under this Act because a supplement to a programmatic impact statement has not yet been finalized.
- If the Secretary determines that a priority area has been sufficiently analyzed by a programmatic environmental impact statement, no further NEPA review for lease sales for that priority area is required.

Section 4: Facilitation of Coproduction of Geothermal Energy on Oil and Gas Leases

- Permits coproduction of geothermal resources on land currently leased under the Mineral Leasing Act or the Mineral Leasing Act for Acquired Lands where oil and gas production is occurring.

Section 5: Noncompetitive Leasing of Adjoining Areas for Development of Geothermal Resources

- Permits noncompetitive leases, at fair market value per acre, of federal land adjoining other land where a qualified lessee holds a legal right to develop geothermal resources.
- The Secretary shall determine fair market value for the purposes of noncompetitive leases, and provide that determination to the qualified lessee seeking a lease under this section, as well as opening an opportunity for public comment for a period of 30 days.
- The Secretary shall provide an opportunity to appeal the final determination of fair market value by the lessee and any adversely affected party.
- Annual rental shall be determined as if the lease were awarded in a competitive lease sale.
- Regulations to carry out this section must be issued by the Secretary within 270 days of enactment.

Cost

Unknown at this time.

Administration Position

Unknown at this time.

Effect on Current Law

**Showing Existing Law as Amended by the Discussion Draft titled
“Enhancing Geothermal Production on Federal Lands Act” dated 11/15/17
4:54pm**

[text to be added highlighted in yellow; text to be deleted bracketed and highlighted in blue]

The Geothermal Steam Act of 1970 (30 U.S.C. 1001 et seq.)

* * * * *

§1003. Leasing procedures

(a) Nominations

The Secretary shall accept nominations of land to be leased at any time from qualified companies and individuals under this chapter.

(b) Competitive lease sale required

(1) In general

Except as otherwise specifically provided by this chapter, all land to be leased that is not subject to leasing under subsection (c) shall be leased as provided in this subsection to the highest responsible qualified bidder, as determined by the Secretary.

(2) Competitive lease sales

The Secretary shall hold a competitive lease sale at least once every 2 years for land in a State that has nominations pending under subsection (a) if the land is otherwise available for leasing.

(3) Lands subject to mining claims

Lands that are subject to a mining claim for which a plan of operations has been approved by the relevant Federal land management agency may be available for noncompetitive leasing under this section to the mining claim holder.

(4) LAND SUBJECT TO OIL AND GAS LEASE.—Land under an oil and gas lease issued pursuant to the Mineral Leasing Act (30 U.S.C. 181 et seq.) or the Mineral Leasing Act for Acquired Lands (30 U.S.C. 351 et seq.) that is subject to an approved application for permit to drill and from which oil and gas production is occurring may be available for noncompetitive leasing under subsection (c) by the holder of the oil and gas lease—

(A) on a determination that geothermal energy will be produced from a well producing or capable of producing oil and gas; and

(B) in order to provide for the coproduction of geothermal energy with oil and gas.

(5) ADJOINING LAND.—

(A) DEFINITIONS.—In this paragraph:

(i) FAIR MARKET VALUE PER ACRE.—The term “fair market value per acre” means a dollar amount per acre that—

(I) except as provided in this clause, shall be equal to the market value per acre (taking into account the determination under subparagraph (B)(iii) regarding a valid discovery on the adjoining land) as determined by the Secretary under regulations issued under this paragraph;

(II) shall be determined by the Secretary with respect to a lease under this paragraph, by not later than the end of the 180-day period beginning on the date the Secretary receives an application for the lease; and

(III) shall be not less than the greater of—

(aa) 4 times the median amount paid per acre for all land leased under this Act during the preceding year; or

(bb) \$50.

(ii) INDUSTRY STANDARDS.—The term “industry standards” means the standards by which a qualified geothermal professional assesses whether downhole or flowing temperature measurements with indications of permeability are sufficient to produce energy from geothermal resources, as determined through flow or injection testing or measurement of lost circulation while drilling.

(iii) QUALIFIED FEDERAL LAND.—The term “qualified Federal land” means land that is otherwise available for leasing under this Act.

(iv) QUALIFIED GEOTHERMAL PROFESSIONAL.—The term “qualified geothermal professional” means an individual who is an engineer or geoscientist in good professional standing with at least 5 years of experience in geothermal exploration, development, or project assessment.

(v) QUALIFIED LESSEE.—The term “qualified lessee” means a person who may hold a geothermal lease under this Act (including applicable regulations).

(vi) VALID DISCOVERY.—The term “valid discovery” means a discovery of a geothermal resource by a new or existing slim hole or production well, that exhibits downhole or flowing temperature measurements with indications of permeability that are sufficient to meet industry standards.

(B) AUTHORITY.—An area of qualified Federal land that adjoins other land for which a qualified lessee holds a legal right to develop geothermal resources may be available for a noncompetitive lease under this section to the qualified lessee at the fair market value per acre, if—

(i) the area of qualified Federal land—

(I) consists of not less than 1 acre and not more than 640 acres; and

(II) is not already leased under this Act or nominated to be leased under subsection (a);

(ii) the qualified lessee has not previously received a noncompetitive lease under this paragraph in connection with the valid discovery for which data has been submitted under clause (iii)(I); and

(iii) sufficient geological and other technical data prepared by a qualified geothermal professional has been submitted by the qualified lessee to the applicable Federal land management agency that would lead individuals who are experienced in the subject matter to believe that—

(I) there is a valid discovery of geothermal resources on the land for which the qualified lessee holds the legal right to develop geothermal resources; and

(II) that geothermal feature extends into the adjoining areas.

(C) DETERMINATION OF FAIR MARKET VALUE.—

(i) IN GENERAL.—The Secretary shall—

(I) publish a notice of any request to lease land under this paragraph; (II) determine fair market value for purposes of this paragraph in accordance with procedures for making those determinations that are established by regulations issued by the Secretary;

(III) provide to a qualified lessee and publish, with an opportunity for public comment for a period of 30 days, any proposed determination under this subparagraph of the fair market value of an area that the qualified lessee seeks to lease under this paragraph; and

(IV) provide to the qualified lessee and any adversely affected party the opportunity to appeal the final determination of fair market value in an administrative proceeding before the applicable Federal land management agency, in accordance with applicable law (including regulations).

(ii) **LIMITATION ON NOMINATION.**— After publication of a notice of request to lease land under this paragraph, the Secretary may not accept under subsection (a) any nomination of the land for leasing unless the request has been denied or withdrawn.

(iii) **ANNUAL RENTAL.**—For purposes of section 5(a)(3), a lease awarded under this paragraph shall be considered a lease awarded in a competitive lease sale.

(D) **REGULATIONS.**—Not later than 270 days after the date of enactment of this paragraph, the Secretary shall issue regulations to carry out this paragraph.

(c) Noncompetitive leasing

The Secretary shall make available for a period of 2 years for noncompetitive leasing any tract for which a competitive lease sale is held, but for which the Secretary does not receive any bids in a competitive lease sale.

(d) Pending lease applications

(1) In general

It shall be a priority for the Secretary, and for the Secretary of Agriculture with respect to National Forest Systems land, to ensure timely completion of administrative actions, including amendments to applicable forest plans and resource management plans, necessary to process applications for geothermal leasing pending on August 8, 2005.¹ All future forest plans and resource management plans for areas with high geothermal resource potential shall consider geothermal leasing and development.

(2) Administration

An application described in paragraph (1) and any lease issued pursuant to the application-

(A) except as provided in subparagraph (B), shall be subject to this section as in effect on the day before August 8, 2005; or

(B) at the election of the applicant, shall be subject to this section as in effect on August 8, 2005.

(e) Leases sold as a block

If information is available to the Secretary indicating a geothermal resource that could be produced as 1 unit can reasonably be expected to underlie more than 1 parcel to be offered in a competitive lease sale, the parcels for such a resource may be offered for bidding as a block in the competitive lease sale.

(f) Leasing for direct use of geothermal resources

Notwithstanding subsection (b), the Secretary may identify areas in which the land to be leased under this chapter exclusively for direct use of geothermal resources, without sale for purposes other than commercial generation of electricity, may be leased to any qualified applicant that first applies for such a lease under regulations issued by the Secretary, if the Secretary-

(1) publishes a notice of the land proposed for leasing not later than 90 days before the date of the issuance of the lease;

(2) does not receive during the 90-day period beginning on the date of the publication any nomination to include the land concerned in the next competitive lease sale; and

(3) determines there is no competitive interest in the geothermal resources in the land to be leased.

(g) Area subject to lease for direct use

(1) In general

Subject to paragraph (2), a geothermal lease for the direct use of geothermal resources shall cover not more than the quantity of acreage determined by the Secretary to be reasonably necessary for the proposed use.

(2) Limitations

The quantity of acreage covered by the lease shall not exceed the limitations established under [section 1006 of this title](#).

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SEC. 30. GEOTHERMAL EXPLORATION TEST PROJECTS.

(a) DEFINITION OF GEOTHERMAL EXPLORATION TEST PROJECT.—In this section, the term “geothermal exploration test project” means the drilling of a well to test or explore for geothermal resources on lands for which the Secretary has issued a lease under this Act, that—

(1) is carried out by the holder of the lease;

(2) causes—

(A) less than 5 acres of soil or vegetation disruption at the location of each geothermal exploration well; and

(B) not more than an additional 5 acres of soil or vegetation disruption during access or egress to the test site;

(3) is developed—

(A) 8 inches or less in diameter;

(B) in a manner that does not require off-road motorized access other than to and from the well site along an identified off-road route;

(C) without construction of new roads other than upgrading of existing drainage crossings for safety purposes; and

(D) with the use of rubber-tired digging or drilling equipment vehicles;

(4) is completed in less than 90 days, including the removal of any surface infrastructure from the site; and

(5) requires the restoration of the project site within 3 years of the date of first exploration drilling to approximately the condition that existed at the time the project began, unless the site is subsequently used as part of energy development under the lease.

(b) CATEGORICAL EXCLUSION.—

(1) IN GENERAL.—Unless extraordinary circumstances exist, a project that the Secretary determines under subsection (c) is a geothermal exploration test project shall be categorically excluded from the requirements of an environmental assessment or an

environmental impact statement under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) or section 1508.4 of title 40, Code of Federal Regulations (or a successor regulation).

(2) EXTRAORDINARY CIRCUMSTANCES DEFINITION.—In this subsection, the term “extraordinary circumstances” has the same meaning given such term in the Department of the Interior Departmental Manual, 516 DM 2.3A(3) and 516 DM 2, Appendix 2 (or successor provisions).

(c) PROCESS.—

(1) REQUIREMENT TO PROVIDE NOTICE.—A leaseholder shall provide notice to the Secretary of the leaseholder’s intent to carry out a geothermal exploration test project at least 30 days before the start of drilling under the project.

(2) REVIEW AND DETERMINATION.—Not later than 10 days after receipt of a notice of intent under paragraph (1), the Secretary shall, with respect to the project described in the notice of intent—

(A) determine if the project qualifies for a categorical exclusion under subsection (b); and

(B) notify the leaseholder of such determination.

(3) OPPORTUNITY TO REMEDY.—

(A) IN GENERAL.—If the Secretary determines under paragraph (2)(A) that the project does not qualify for a categorical exclusion under subsection (b), the Secretary shall—

(i) include in such notice clear and detailed findings on any deficiencies in the project that resulted in such determination; and

(ii) allow the leaseholder to remedy any such deficiencies and resubmit the notice of intent under paragraph (1).

SEC. 31. GEOTHERMAL LEASING PRIORITY AREAS.

(a) DEFINITION OF COVERED LAND.—IN this section, the term “covered land” means land that is—

(1) Federal land; and

(2) not excluded from the development of geothermal energy under—

(A) a land use plan established under the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.); or

(B) any other Federal law.

(b) DESIGNATION OF GEOTHERMAL LEASING PRIORITY AREAS.—The Secretary, in consultation with the Secretary of Energy, shall designate portions of covered land as geothermal leasing priority areas as soon as practicable, but not later than 5 years, after the date of the enactment of this section.

(c) CRITERIA FOR SELECTION.—In determining which covered lands to designate as geothermal leasing priority areas under subsection (b), the Secretary, in consultation with the Secretary of Energy, shall consider if—

(1) the covered land is preferable for geothermal leasing;

(2) production of geothermal energy on such land is economically viable, including if such land has access to methods of energy transmission; and

(3) the designation would be in compliance with section 202 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1712), including subsection (c)(9) of that section.

(d) REVIEW AND MODIFICATION.—Not less frequently than once every 10 years, the Secretary shall—

(1) review covered land and, if appropriate, make additional designations of geothermal leasing priority areas; and

(2) review each area designated as a geothermal leasing priority area under this section, and, if appropriate, remove such designation.

(e) PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT.—

(1) INITIAL DESIGNATIONS.—Not later than 5 years after the date of the enactment of this section, the Secretary shall prepare a supplement to any final programmatic environmental impact statement for geothermal leasing that is the most recently finalized such statement with respect to covered land designated as a geothermal leasing priority area under subsection (b).

(2) SUBSEQUENT DESIGNATIONS.—Each designation of a geothermal leasing priority area under subsection (d) shall be included in a programmatic environmental impact statement for geothermal leasing or in a supplement to such statement.

(3) CONSULTATIONS.—In developing any programmatic environmental impact statement for geothermal leasing or supplement to such statement under this section, the Secretary shall consult, on an ongoing basis, with appropriate State, Tribal, and local governments, transmission infrastructure owners and operators, developers, and other appropriate entities.

(4) PROCEDURE.—The Secretary may not delay issuing a permit or holding a lease sale under this Act because the supplement required under paragraph (1) has not been finalized by the Secretary.

(f) COMPLIANCE WITH NEPA.—If the Secretary determines that the designation of a geothermal leasing priority area has been sufficiently analyzed by a programmatic environmental impact statement, the Secretary shall not prepare any additional analysis under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) with respect to geothermal lease sales for such geothermal leasing priority area.