SENATE COMMITTEE ON NATURAL RESOURCES AND WATER
Senator Monique Limón, Chair
2025 - 2026 Regular

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Author:	Papan		
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Consultant:	Katharine Moore		

Subject: California Environmental Quality Act: geothermal exploratory projects: geothermal field development projects

SUMMARY
This bill would provide an exemption from the California Environmental Quality Act (CEQA) for geothermal exploratory projects that meet certain criteria, as provided.

BACKGROUND AND EXISTING LAW
Geothermal energy
Geothermal energy comes from heat stored in rocks and fluids in the Earth's crust, according to the Geologic Energy Management Division (CalGEM). Geothermal fluids include both hot water and steam[1]. There are more than 650 active, high temperature wells in the state's geothermal fields. Fluids from these wells are used to generate electricity at adjacent power plants.

California is the single largest generator of electricity from geothermal energy in the country. As of 2018, there were 43 operating geothermal power plants in the state with an installed capacity of about 2.7 gigawatts (GW). In 2022, about 5% of the state's electrical energy came from geothermal resources.

Geothermal energy is considered to be a renewable energy resource, and is anticipated to be an important clean energy-producing component of the state meeting its 2045 carbon neutrality target. Geothermal energy provides baseload renewable energy which can help fill in the evening and winter gaps in renewable power generation capacity when solar and wind are not generating sufficient energy to meet the state's needs. Advances in technology suggest that many more locations will have sufficient subsurface geothermal resources in the near future to viably produce energy. New technology may also allow geothermal power plants to provide more than baseload services.

Geothermal wells in the state – except for those on federal leases – are permitted, drilled, operated, and permanently sealed under CalGEM's auspices. Any proposed well must demonstrate compliance CEQA prior to CalGEM permitting the well. Surface activities that are supported by geothermal wells are regulated primarily by the local jurisdiction where the well is located if the power plant is less than 50 megawatts (MW) in size. The California Energy Commission (CEC) provides additional oversight for the permitting of power plants larger than 50 MW in size. Other agencies, such as the State Water Resources Control Board and Regional Water Quality Control Boards, may also have a permitting role for a geothermal project.

[1] Fluids at temperatures higher than the boiling point of water are considered "high temperature."

Geothermal energy projects generally have two phases. There is an exploratory phase – where the resource is evaluated and mapped – and a field development phase. A geothermal exploratory project is limited to wells and certain necessary surface support equipment. A geothermal field development project would be much larger in scope and include a power plant.

Next generation geothermal energy development

Conventional geothermal energy wells depend upon very specific geology – comparatively hot, permeable rock formations relatively near the surface. The geothermal brine is heated by the formation, and pumped up to the surface by a well. The heat is used to generate electricity.

There are at least two "next generation" geothermal energy techniques which are less limited geologically than conventional geothermal energy development:

- "Enhanced geothermal" typically uses hydraulic fracturing (i.e. fracking) of comparatively hot geologic formations relatively near the surface to make them permeable for the working fluid. Thermal or chemical stimulation can also be used to improve the permeability of the geologic reservoir/formation. Once the reservoir permeability is improved, the geothermal working fluid (typically water) is injected into the reservoir/formation by one well and pumped out by another after heating. Fervo Energy has reported successful pilot projects in Utah that use enhanced geothermal as has the U.S. Department of Energy backed "Frontier Observatory for Research in Geothermal Energy" (FORGE) project, similarly located in Utah.

- "Advanced geothermal" is a broad category and includes additional methods to fracture the geologic formation than hydraulic fracturing, such as microwave technology; closed-loop systems; or the drilling of very deep wells. Drilling very deep wells has technological challenges, but can result in conditions that are relatively more efficient for subsequent energy production.

The U.S. Department of Energy estimates these next generation geothermal systems can produce up to 90 GW of renewable power by 2050, and up to 300 GW depending upon storage and other emerging technologies. The recent federal budget reconciliation bill – the "One Big Beautiful Bill" – cut some renewable energy tax credits and support, but left those for geothermal energy intact.

CEQA

CEQA provides a process for evaluating the environmental effects of applicable projects undertaken or approved by public agencies. If a project is not exempt from CEQA, an initial study is prepared to determine whether the project may have a significant effect on the environment. If the initial study shows that there would not be a significant effect on the environment, the lead agency must prepare a negative declaration (ND). If the initial study shows that the project may have a significant effect on the environment, the lead agency must prepare an environmental impact report (EIR).

Generally, an EIR must accurately describe the proposed project, identify and analyze each significant environmental impact expected to result from the proposed project, identify mitigation measures to reduce those impacts to the extent feasible, and evaluate a range of reasonable alternatives to the proposed project. If mitigation

measures are required or incorporated into a project, the agency must adopt a reporting or monitoring program to ensure compliance with those measures.

CEQA streamlining for energy projects

According to the Senate Environmental Quality Committee, the Legislature has taken several measures in recent years to streamline environmental review for clean energy projects. In 2023, the Legislature passed SB 149 (Caballero, Chapter 60, Statutes of 2023), which offered CEQA judicial streamlining for certain clean energy and infrastructure projects. The CEQA judicial streamlining caps the amount of time it takes for CEQA lawsuits to move through the courts to 270 days, with all appeals, as feasible.

In the 2022 budget, the Legislature established a new, opt-in environmental review certification program at the CEC that offered streamlined CEQA environmental review of just 270 days ("AB 205"). Under existing law, EIRs much be completed in one year, except in extenuating circumstances. AB 205 only applies to certain clean energy projects, including for solar photovoltaic, terrestrial wind, geothermal, and other non-fossil, non-nuclear power plants with a generating capacity of 50 MW or more, for energy storage systems capable of storing 200-megawatt hours or more of electricity, and for transmission lines from those facilities to a point of connection with an electrical transmission system. Before AB 205, the CEC's siting authority was limited to thermal power plants with capacities of 50 MW or more.

Geothermal projects are eligible for both CEQA judicial and environmental streamlining established in SB 149 and AB 205, respectively, if the specific projects meet the eligibility criteria established in those laws.

Existing law:

1) Establishes CalGEM within the Department of Conservation as the state's geothermal well regulator. The State Oil and Gas Supervisor (supervisor) leads CalGEM.

2) Proclaims that Californians have a direct and primary interest in the development of geothermal resources, and the state should exercise its power and jurisdiction to require that wells for the discovery and production of geothermal resources be drilled, operated, maintained and abandoned in such manner as to safeguard life, health, property, and the public welfare, and to encourage maximum economic recovery. (Public Resources Code (PRC) §3700)

3) Requires the supervisor to so supervise the drilling, operation, maintenance and abandonment of geothermal resources wells as to encourage the greatest economic recovery of geothermal resources, to prevent damage to life, health, property, and natural resources, and to prevent damage to, and waste from, the underground geothermal deposits, and to prevent damage to underground and surface waters suitable for irrigation or domestic purposes by reason of the drilling, operation, maintenance, and abandonment of geothermal resources wells. (PRC §3714)

4) Requires the supervisor to also supervise the drilling, operation, maintenance, and abandonment of wells so as to permit the owners or operators of such wells to

utilize all methods and practices known to the industry for the purpose of increasing the ultimate recovery of geothermal resources, and to allow the operator to do what a prudent operator using reasonable diligence would do, as provided. (PRC §3715)

5) Requires an owner or operator before drilling or re-drilling, abandoning or deepening or altering the casing of a well to file with the supervisor or CalGEM district deputy a written notice of intention to drill the well containing certain information and pay a fee. (PRC §3724)

6) Requires, upon the completion or abandonment of any geothermal well, that true copies of the log, core record, history, and other materials, as specified, be provided to the CalGEM district deputy, as provided. (PRC §3735)

7) Defines geothermal resources to mean the natural heat of the earth, the energy, in whatever form, below the surface of the earth present in, resulting, from, or created by, or which may be extracted from, such natural heat, and all minerals in solution or other products obtained from naturally heated fluids, brines, associated gases, and steam, in whatever form, below the surface of the earth, but excluding oil, hydrocarbon gas, or other hydrocarbon substances. (PRC §6903)

8) Defines a geothermal exploratory project to be not more than six wells and for the purpose of evaluating the presence and characteristics of geothermal resources prior to starting a geothermal field development project. For purposes of preparing an environmental document the environmental impacts shall be limited to the proposed drill sites, the proposed wells, and any roads or other facilities that may be required before the exploratory wells can be drilled. Application requirements include a narrative description including the probable short-term and long-term impacts of the project, and acceptable mitigation measures. (see PRC §21065.6; Title 14, California Code of Regulations, §§1680 *et seq*.)

9) CEQA requires a lead agency to spearhead an EIR for a project that may have a significant effect on the environment. CEQA also requires a lead agency to prepare an ND for a project that will have no significant effects on the environment, or a mitigated negative declaration (MND) for projects that have no significant effects after mitigation. (PRC §§21000 *et seq*.)

10) Specifies that CalGEM shall be the default lead agency under CEQA for geothermal exploratory projects, but that CalGEM can delegate its lead agency responsibility to a county that has adopted a geothermal element as part of its general plan.

11) Defines “geothermal field development project” as a development project composed of geothermal wells, resource transportation lines, production equipment, roads, and other facilities which are necessary to supply geothermal energy to any particular heat utilization equipment for its productive life, all within an area delineated by the applicant. (Government Code §65928.5)

PROPOSED LAW

This bill would provide an exemption from CEQA for geothermal exploratory projects that meet certain criteria, as provided.

Specifically, this bill would:

1) Provide that CEQA does not apply to a geothermal exploratory project for which a county is the lead agency, if the lead agency determines that the project meets all of the following conditions:

    a) The project does not include the production of geothermal resources in commercial quantities;

    b) The project does not disturb more than 12 acres of previously undisturbed ground;

    c) The project's footprint does not include, or lie within 100 feet of, any of the following:

        i) Wetlands;

        ii) Rivers, streams, or riparian corridors, except temporary road or electric distribution line crossings;

        iii) Lands identified for conservation in an adopted natural community conservation plan, habitat conservation plan, or other adopted natural resource protection plan;

        iv) Identified habitat for species of special status identified by state or federal agencies; or

        v) Lands with a conservation easement unless determined consistent with the terms or requirements of the easement;

    d) Unusual circumstances do not exist that would cause the project to have a significant impact on the environment;

    e) The project site is not on the "Cortese List" (i.e., known contaminated sites);

    f) The project will not cause a substantial adverse change in the significance of a historical resource or a tribal cultural resource;

    g) The project includes full reclamation of all well pads, temporary routes, and other disturbances, including the reestablishment of vegetative cover with native plants, unless those disturbances are incorporated into a subsequent geothermal field development project; and

    h) The project applicant has certified to the lead agency that either the entirety of the project is a "public work" or all construction workers will be paid prevailing wages, as specified.

2) Require the applicant to submit to the lead agency a preliminary description of anticipation composition of the well stimulation fluids to be used in the geothermal exploratory project, and disclose certain additional records when well drilling has been completed, as provided.

3) Require the project developer to provide the lead agency with a survey that includes, but is not limited to, all of the following:

   a) The identification of natural resources including sensitive species of flora and fauna, sensitive habitats and hydrological resources including groundwater wells, springs, and aquifers.

   b) The identification of any tribal, historical, and other cultural resources.

4) Authorize the lead agency to require the project applicant file an indemnity bond in an amount sufficient to secure any supplemental costs beyond the applicant's bonding requirements with CalGEM to secure full reclamation of the project site.

5) Require the lead agency to post a written notice of the intent to apply the exemption on its internet website and at the project site at least 30 days before making a determination to approve or carry out a change in use.

6) Require the lead agency to file a notice of exemption with the State Clearinghouse in the Office of Land Use and Climate Innovation (LCI) and with the county clerk of the county in which the project is located.

7) Sunset the exemption on January 1, 2031.

8) Revise the definition of "geothermal exploratory project" to include "equipment and activities necessary to establish interconnectivity between wells and reservoirs, temporary roads, electric distribution lines, and infrastructure to provide power for drilling and testing equipment" and eliminate the requirement that exploratory project wells must be "located at least one-half mile from geothermal development wells which are capable of producing geothermal resources in commercial quantities."

9) Make relevant legislative findings and declarations.

ARGUMENTS IN SUPPORT

According to the author, “AB 527 will accelerate the development of geothermal resources and advance California's climate goals by expediting exploratory well projects which have a de minimis impact on the environment. In order to gather essential subsurface data to determine the viability of a potential geothermal field, developers must drill exploratory wells. Currently, this exploratory endeavor is treated as a separate project, subject to its own environmental review process. The federal government has previously allowed latitude concerning exploratory wells. In October 2024, the Biden Administration created a new categorical exclusion under [National Environmental Protection Act] for these de minimis exploration projects. AB 527 seeks to align California’s approach with this federal exclusion, allowing carefully vetted exploratory geothermal projects to be exempt from CEQA. This alignment will eliminate redundant regulatory hurdles, ensuring projects move forward more quickly and efficiently bringing us that much closer to our renewable energy goals.”

ARGUMENTS IN OPPOSITION
According to the Planning and Conservation League in a joint sign-on letter note "While the background document mentions 'perceived regulatory challenges' and discusses the competitive advantage that may shift siting to other states, there is no detailed information about any actual regulatory roadblocks to permitting geothermal exploration in California."

"Further, the need for this CEQA exemption is premature. Just last year, the Legislature passed AB 1359 (Papan). This bill removed CalGEM as the lead agency under CEQA for geothermal exploratory projects […] and transferred that responsibility to counties upon the request of an applicant. We do not understand how there could be 'regulatory challenges' to a law that was enacted at the beginning of this year."
"Instead, it is our experience that many of these projects go through lead agency review in a timely manner and with few challenges. Complying with California's important environmental laws is critical to protecting public health, the environment and cultural resources while developing energy projects."

The opposition additionally notes the author's willingness to work with them and calls for improved natural resources and cultural protections, a reduced footprint, and notes the use of fracking for enhanced geothermal development.

COMMENTS
This bill is double referred. This bill has been referred to both the Senate Committee on Environmental Quality and this Committee for hearing. This Committee is the second Committee of referral. This bill was heard in the Senate Committee on Environmental Quality on July 2, 2025, and passed out with a vote of 6 – 1 (1 DNV). Elements of this bill under the jurisdiction of the Senate Committee on Environmental Quality are included here for completeness and context only.

Jimmy Carter was President and Disco was King. CalGEM promulgated its geothermal well regulations in 1976 with some limited updates in 1979. The regulations call for certain information about well depth and construction to be disclosed to CalGEM, and provides for certain information – such as the observed temperature profile with depth – to be treated as confidential information. While well stimulation – i.e. fracturing treatments performed above the fracture pressure of the reservoir formation to increase or restore the permeability of the formation and provide for fluid flow – is utilized in some reservoirs by operators, and allowed under the supervisor's existing authority, the existing regulations do not require disclosure of well stimulation operations or the materials used. This is reminiscent of CalGEM's insistence that it regulated fracking on oil and gas wells prior to the passage of SB 4 (Pavley, Chapter 313, Statutes of 2013), which provided the statutory framework to explicitly regulate fracking of oil and gas wells, without actually collecting any data or requiring the disclosure of data about the operations performed. It is unclear how a regulator can regulate if it does not have records of all that is performed under its auspices.

CalGEM has recognized that its geothermal regulations are outdated. In 2018, a discussion draft of updated geothermal regulations was circulated for comment and a revised version was circulated in 2022. It is more than overdue to finish that effort and ensure that CalGEM is well poised to regulate the new techniques used for geothermal energy development.

Further, while amendments taken in the Senate Committee on Environmental Quality Committee provide for certain surveys to be performed, it is relevant to this Committee's jurisdiction that there be documentation that species subject to protection under state and federal law not be found at the project site.

In view of this, the Committee may wish to amend the bill as follows:

- Require CalGEM to finish updating its geothermal well regulations by January 1, 2029 while specifically authorizing that well permitting can continue with additional disclosures regarding well stimulation and seismic activity provided to CalGEM when applying to obtain a notice of intention to drill or rework an enhanced geothermal system well as part of a geothermal exploratory project subject to the CEQA exemption proposed herein, as specified.

- Provide a savings clause for the supervisor's authority to permit geothermal wells.

- Specify that the log for an enhanced geothermal system well that is part of a geothermal exploratory project subject to the CEQA exemption proposed herein includes the chemical and physical characteristics of the well stimulation fluid, and amounts used for well stimulation, as provided. The log is part of the formal recordkeeping for a well.

- Specify which categories of protected species the natural resources survey conducted for the lead agency should include, as provided.

- Require the lead agency to post online the project application for a geothermal exploratory project seeking a CEQA exemption. Require the lead agency to provide a copy of the notice of exemption filed with the State Clearinghouse to the Department of Fish and Wildlife and regional water quality board.

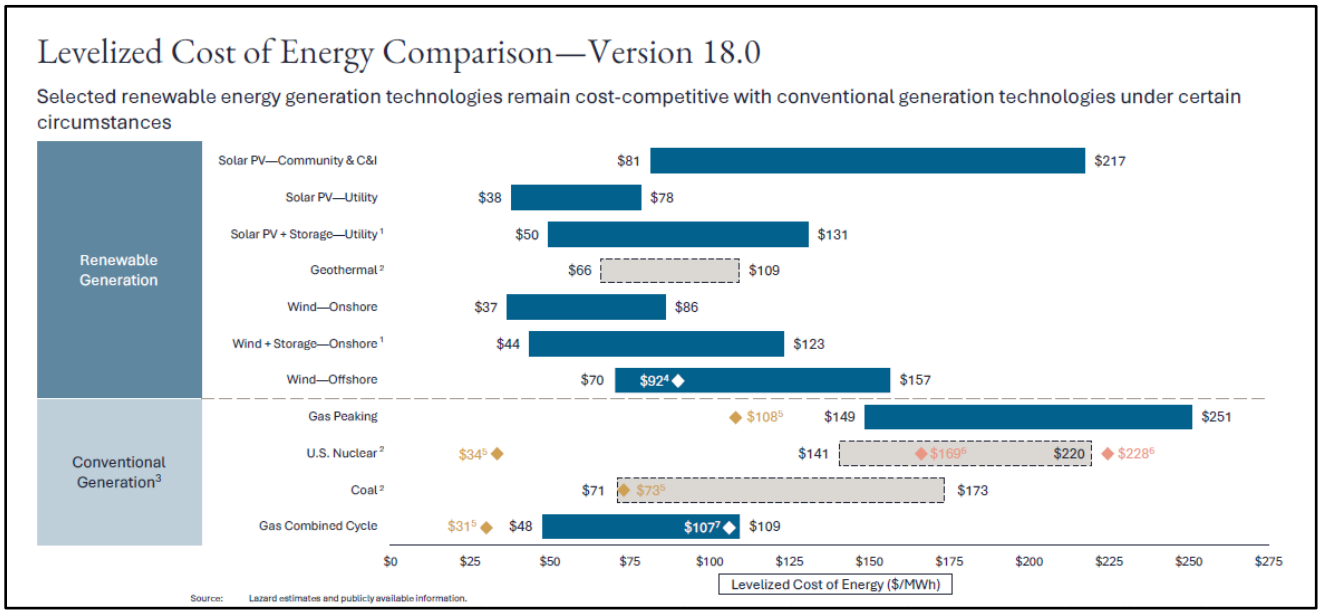
- Specify that wells that are part of a geothermal exploratory project subject to the CEQA exemption must be setback 300 feet from the project site boundary, a building open to the public, or property line of an adjacent property, as provided, and 100 feet from a public road necessary to access the project site.

- Make various additional technical and conforming changes to address geothermal exploratory project wells subject to the CEQA exemption. [Amendment #1]

Geothermal is increasingly cost-competitive

The figure[2] below indicates that geothermal energy development has become cost-competitive with other energy generation sources even without taking federal subsidies into consideration.

[2] Figure excerpted from Lazard's Levelized Cost of Energy+ analysis, published June 2025



Recent related legislation

AB 531 (Rogers, 2025) would expand the definition of "facility" for purposes of prescribing the types of projects for which the project proponent may request the CEC permit on an expedited basis, to include a geothermal powerplant or a geothermal field development project. (*This bill is pending hearing in the Senate Environmental Quality Committee*.)

AB 1359 (Papan, Chapter 678, Statutes of 2024) authorizes CalGEM to delegate lead agency authority under CEQA for geothermal exploratory projects, as provided.

SB 149 (Caballero, Chapter 60, Statutes of 2023) makes a broad swath of energy, transportation, water, and semiconductor projects eligible for expedited judicial review under CEQA. Projects must meet certain environmental and labor criteria to be eligible for certification. The streamlining certification ends January 1, 2033.

SUGGESTED AMENDMENTS

AMENDMENT 1
Delete Section 1 (legislative findings and declarations)

Revise Section 2 (PRC §21065.5) to read as follows:
21065.5. "Geothermal exploratory project" means a project as defined in Section 21065 composed of not more than six wells and associated drilling and testing equipment, including equipment and activities necessary to establish interconnectivity between wells and reservoirs, temporary roads, electric distribution lines, and infrastructure to provide power for drilling and testing equipment, whose chief and original purpose is to evaluate the presence and characteristics of geothermal resources before commencement of a geothermal field development project as defined in Section 65928.5 of the Government Code. Wells included within a geothermal exploratory project, excluding wells connecting to geothermal reservoirs whose permeability has been increased from their natural or original state through stimulation, horizontal drilling, or other

techniques, must be located at least one-half mile from geothermal development wells which are capable of producing geothermal resources in commercial quantities.

Revise Section 3 (PRC §21080.67) to read as follows:
21080.67. (a) This division does not apply to a geothermal exploratory project, as defined in Section 21065.5, for which a county is the lead agency pursuant to Section 3715.5, including any permit, funding, or other approval by a state or local agency for the geothermal exploratory project as may be required by this division, if the lead agency determines that the geothermal exploratory project meets all of the following conditions:

(1) The project does not include the production of geothermal resources in commercial quantities.

(2) The project does not disturb more than 12 acres of previously undisturbed ground at the surface and no more than 20 acres total at the surface. The calculation of the 20 acre total does not include existing roads used to access the project site. "Undisturbed" means in a natural state without industrial or other development.

(3) The project's footprint does not include, or lie within 100 feet of, any of the following, except as noted:

(A) 300 feet of Wetlands as defined in subdivision (l) of section 21067.5.

(B) Rivers, streams, or riparian corridors, except temporary road or electric distribution line crossings undertaken pursuant to an agreement issued by the Department of Fish and Wildlife pursuant to Chapter 6 (commencing with Section 1600) of Division 2 of the Fish and Game Code.

(C) Lands identified for conservation in an adopted natural community conservation plan pursuant to the Natural Community Conservation Planning Act (Chapter 10 (commencing with Section 2800) of Division 3 of the Fish and Game Code), a habitat conservation plan pursuant to the federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), or other adopted natural resource protection plan.

(D) Identified habitat for species of special status identified by state or federal agencies, including fully protected species designated by the federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code), or the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of Division 2 of the Fish and Game Code).

(E) Lands with a conservation easement unless determined consistent with the terms or requirements of the easement.

(4) Unusual circumstances do not exist that would cause the project to have a significant impact on the environment.

(5) The project is not located on a site that is included on any list compiled pursuant to Section 65962.5 of the Government Code.

(6) The project will not cause a substantial adverse change in the significance of a historical resource or a tribal cultural resource.

(7) The project will not adversely impact any species designated for protection under the following state and federal laws: fully protected species (Fish and Game Code sections 3511, 5050, 5515, 4700), the federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code), or the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of Division 2 of the Fish and Game Code) as determined by the baseline biological resources survey pursuant to (b)(1).

(8) ~~(7)~~ The project includes full reclamation of all well pads, temporary routes, and other disturbances, including the reestablishment of vegetative cover with native plants, unless those disturbances are incorporated into a subsequent geothermal field development project, as defined in Section 65928.5 of the Government Code.

(9) ~~(8)~~ The project applicant has provided to the lead agency a legally binding commitment to comply with Section 21183.5.

(10)(A) ~~(9) (1)~~ The applicant has submitted to the lead agency a preliminary description of the anticipated composition of fluids to be used for any hydraulic fracturing operations expected to occur in the geothermal exploratory project.

(B) ~~(2)~~ When making a filing pursuant to Section 3735 to the Geologic Energy Management Division of the Department of Conservation, the applicant shall include a disclosure of the composition of fluids used in all relevant operations, and shall file a copy of this disclosure with the lead agency.

(b) Before the lead agency determines that a project is not subject to this division pursuant to this section, the project developer shall supply the lead agency with a survey that includes, but is not limited to, all of the following:

(1) The identification of natural resources including sensitive species of flora and fauna, sensitive habitats and hydrological resources including groundwater wells, springs, and aquifers.

(A) In order to comply with paragraph (1), the project developer shall have a biological resources survey conducted in order to, at a minimum, identify any species protected pursuant to the federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code), the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of Division 2 of the Fish and Game Code), or identified as fully protected species (Fish and Game Code sections 3511, 5050, 5515, 4700) or species of special

concern. The survey shall be conducted using best practices, including the identification of the relevant protocols and guidelines used.

(2) The identification of any tribal, historical, and other cultural resources.

(c) If the lead agency determines that a project is not subject to this division pursuant to this section, the requirements of Section 21183.5 shall apply.

(d) The lead agency may require the project applicant to file an indemnity bond before it makes its determination pursuant to subdivision (a). The bond, in a form and manner prescribed by the lead agency, shall be in an amount sufficient to secure any supplemental costs beyond the applicant's bonding requirements with the Geologic Energy Management Division, pursuant to Section 3725, to secure full reclamation of the project site.

(e) At least 30 days before making a determination to approve or carry out a change in use pursuant to this section, the lead agency shall post a written notice of the intent to apply the exemption on its internet website and at the project site. The project application shall also be posted online in its entirety.

(f) If the lead agency determines that a project is not subject to this division pursuant to this section, and the lead agency determines to approve or carry out the project, the lead agency shall file a notice with the State Clearinghouse in the Office of Land Use and Climate Innovation and with the county clerk of the county in which the project is located in accordance with subdivisions (b), (c), and (d) of Section 21152. The lead agency shall provide a copy of the notice filed with the State Clearinghouse to the Department of Fish and Wildlife and the California regional water quality control board.

(g) This section shall remain in effect only until January 1, 2031, and as of that date is repealed.

Add 2 sections in Chapter 4 of Division 3 of the Public Resources Code:
37XX. (a) On or by January 1, 2029, the division shall promulgate regulations for enhanced geothermal system wells as part of an update to regulations for geothermal wells, that explicitly include and address:
(1) seismic risks
(2) well construction, including required material composition and construction design for the entire range of anticipated subsurface conditions, including the chemical composition and physical properties off the geologic formations, including any fluids.
(3) fracture propagation from well stimulation
(4) geologic and hydrologic isolation of the geothermal fluids and reservoir
(b) It is the intent of the Legislature that the division incorporate the development of regulations pursuant to this section in its existing effort to update geothermal regulations, previously workshopped by the division in 2018 and 2022, already underway in order to support the development of enhanced geothermal systems.
(c) Prior to the promulgation and implementation of enhanced geothermal system well regulations, the operator shall provide the following information to the supervisor when filing a written notice of intention pursuant to section 3724 for a

well in a geothermal exploratory project subject to 21080.67 employing enhanced geothermal system technology as follows:
(1) a plan for seismic monitoring consistent with US Department of Energy published "Protocol for Addressing Induced Seismicity Associated with Enhanced Geothermal Systems" published January 2012 that meets or exceeds the seismic monitoring requirements of 14 CCR 1785.1.
(2) Full disclosure of the anticipated composition and disposition of well stimulation fluids, if planned to be used, and shall, at a minimum, include:
(A) The anticipated date of the well stimulation treatment.
(B) A complete list of the names, Chemical Abstract Service (CAS) numbers, and maximum concentration, in percent by mass, of each and every chemical constituent of the well stimulation fluids anticipated to be used. If a CAS number does not exist for a chemical constituent, the owner or operator may provide another unique identifier, if available.
(C) The trade name, the supplier, concentration, and a brief description of the intended purpose of each additive (as defined in section 3150), including any proppants (as defined in section 3154), contained in the anticipated well stimulation fluid.
(D) The location of the portion of the well subject to the well stimulation treatment and the extent of the fracturing or other modification, if any, in the geologic formation surrounding the well induced by the treatment.
(3)(A) The information provided in paragraphs (1) and (2) is not confidential information pursuant to section 3752.
(B) The information provided in paragraphs (1) and (2) may be provided to the supervisor with the first application for a written notice of intention pursuant to section 3724 for a well in a geothermal exploratory project subject to 21080.67 and may be referenced in subsequent applications for the same project if the same information applies to all wells.
(d) (1)Nothing in this section prohibits the supervisor from asking for additional pertinent data in considering the notice of intention pursuant to subdivision (d) of section 3724.
(2) Nothing in this section prohibits the supervisor, pursuant to the supervisor's existing authority under this chapter, to approve wells that utilize all methods and practices known to the industry for the purpose of increasing the ultimate recovery of geothermal resources, and which, in the opinion of the supervisor, are suitable for such purpose in each case, prior to the promulgation of the regulations pursuant to subdivision (a).

37XZ. (a) Except as provided in subdivision (b), Any well that is included in a geothermal exploratory project pursuant to 21080.67 shall be setback at least 300 feet from the boundary of the project site, building open to the public, if present or property line of an adjacent property that is not part of the project.
(b) Any well that is included in a geothermal exploratory project pursuant to section 21080.67 shall be setback at least 100 feet from a public road necessary to accessing the project site.

Amend PRC §3731 to read as follows:
3731. (a) The log shall show the character and depth of the formation passed through or encountered in the drilling of the well, the amount, size and weight of casing used, and particularly the location, depth and temperature of waterbearing

strata, together with the temperature, chemical composition, and other chemical and physical characteristics of fluid encountered from time to time, so far as ascertained.
(b). For a well that is part of a geothermal exploratory project pursuant to 21080.67 employing enhanced geothermal system technology, the log shall include the chemical and physical characteristics of well stimulation fluids, including additives and proppants, if any, and amounts used for any well stimulation.

SUPPORT
Sonoma Clean Energy (sponsor)
Cal-Neva International Union of Operating Engineers
California Community Choice Association
California State Association of Electrical Workers
California State Pipe Trades Council
Citizens' Climate Lobby Santa Rosa and North.
City of Cloverdale
County of Sonoma
Eavor, Inc.
Fervo Energy
Geothermal Rising
Northern Sonoma County Air Pollution Control District
Ormat Technologies
San Jose Clean Energy
Solano County Democratic Central Committee
USGBC California
Western State Council Sheet Metal, Air, Rail and Transportation
XGS Energy

OPPOSITION
Associated Builders and Contractors of California (unless amended)
California Native Plant Society (unless amended)
Center for Biological Diversity (unless amended)
Defenders of Wildlife (unless amended)
Mount Shasta Bioregional Ecology Center (unless amended)
Planning and Conservation League (unless amended)

-- END --