SENATE COMMITTEE ON NATURAL RESOURCES AND WATER
Senator Josh Becker, Chair
2025 - 2026 Regular

Bill No:	SB 940	**Hearing Date:**	April 21, 2026
Author:	Grove		
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Urgency:	No	**Fiscal:**	Yes
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Subject: Geothermal resources: oil and gas reservoirs

SUMMARY
This bill would revise the definition of geothermal resources under the jurisdiction of the Geologic Energy Management Division in the Department of Conservation (CalGEM) to include an oil or gas reservoir that is used principally for thermal energy storage or geothermal energy generation.

BACKGROUND AND EXISTING LAW
Geothermal Energy
Geothermal energy comes from heat stored in rocks and fluids in the Earth's crust according to CalGEM. California is the single largest generator of electricity from geothermal energy in the country.

Traditional geothermal wells work by helping to circulate naturally-heated brines from the subsurface to the surface where the heat in the fluids are used to generate electricity. Historically, the best locations for geothermal energy generation from wells was where there were particularly hot sections of the Earth's crust near the surface. Driven in part by efforts to further develop renewable energy sources, advances in drilling, stimulation, and well construction in the oil industry, and increasing electricity demands, there is increasing interest in developing additional types of "non-conventional" geothermal resources – such as enhanced or advanced geothermal resources. Another factor is the increasing interest in re-purposing existing oil and gas wells and related infrastructure where the oil and gas reservoir is depleted for energy storage. Some of these take advantage of the natural heat of the Earth's subsurface or its ability to store heat. The US Department of Energy and the California Energy Commission[1] have funded pilot programs and research to develop "non-conventional" geothermal resources.

CalGEM and wells under its jurisdiction
CalGEM is the state's regulator of both oil and gas wells and geothermal wells. Oil and gas wells and geothermal wells are largely governed by different provisions in state law and regulation (see Public Resources Code (PRC) §§3000 – 3473, and §§3700 – 3776, and Title 14, California Code of Regulations, §§1712 *et seq*., and §§1900 – 1982). The later geothermal resources law is largely modeled on, but distinct from, oil and gas conservation law. The State Oil and Gas Supervisor, CalGEM's leader, exercises broad authority over both oil and gas wells and geothermal wells.

[1] Formally the California Energy Resources Conservation and Development Commission.

In addition, oil and gas injection wells and geothermal resources wells are under the jurisdiction of the US Environmental Protection Agency (US EPA) and its Underground Injection Control (UIC) Program regulations promulgated to protect underground sources of drinking water following the federal Safe Drinking Water Act (SDWA) becoming law in 1974. CalGEM received "primacy" from the US EPA for Class II[2] UIC wells for oil and gas-related injection wells as its regulations were deemed essentially as protective as federal requirements. Injection wells for enhanced oil recovery are generally used to inject water, steam, or other fluid into the oil reservoir to help mobilize the oil and facilitate its production, particularly when a reservoir is increasingly depleted. Geothermal wells are a different UIC class (Class V), which the state does not have primacy delegated to it for. However, the US EPA and CalGEM have a Memorandum of Agreement governing their cooperation on geothermal wells.

UIC aquifer exemptions

As part of its primacy application for Class II wells, CalGEM asked to exempt certain aquifers from protection under the SDWA. These "exempt aquifers" were not or could not become underground sources of drinking water (USDWs), as defined (see Title 40, Code of Federal Regulations (40 CFR), §146.4). In general, these aquifers were co-located within the then-existing boundaries of an oil and gas field; were hydrocarbon-producing, mineral-producing, or geothermal resources-producing; or were already being used for oil and gas wastewater injection. The US EPA must approve any additional requests for aquifer exemption status, and no injection is allowed into an aquifer containing potentially good quality water without first obtaining exempt status, among other provisions.

CalGEM and the State Water Resources Control Board (SWRCB) are required to work closely together on aquifer exemptions. After CalGEM and the applicant have developed an aquifer exemption package, the SWRCB reviews it and may recommend modifications. CalGEM and the SWRCB seek consensus, and then a public process is required to occur prior to submittal to the US EPA for approval. The aquifer exemption process is a multi-year process. Since the 2015 scandal when it became public that 1,000s of oil and gas wells were injecting into aquifers that had not yet received exemptions, dozens of aquifer exemptions have been approved to bring the Class II UIC program into compliance with federal requirements.

Existing federal regulation:

1) Establishes the UIC program pursuant to the SDWA (40 CFR §§144 *et seq*.). Class II wells are those used for oil and gas production and related activities. Class V wells include geothermal wells.

2) Authorizes the US EPA to identify, and requires the protection of, USDWs and provides for the exemption of certain aquifers from protection (40 CFR §144.7).

    a) An USDW means an aquifer or its portion which supplies any public water system or which contains a sufficient quantity of groundwater to supply a public water system and currently supplies drinking water for human consumption or

[2] Class II UIC wells are those related to oil and gas production and related activities.

contains fewer than 10,000 milligrams per liter total dissolved solids (TDS) and is not an exempted aquifer (40 CFR §144.3).

b) An exempt aquifer means an aquifer or its portion that meets the criteria in the definition of an USDW but which has been exempted according to the procedures in 40 CFR §144.7 (40 CFR §144.3).

3) Establishes criteria for designating an aquifer or portion thereof as exempt if it does not currently serve as a source of drinking water, cannot now and will not serve as a source of drinking water for specified reasons, including that it is mineral, hydrocarbon or geothermal energy producing or contains minerals or hydrocarbons in commercially producible quantities, and has a TDS content of more than 3,000 and less than 10,000 milligrams per liter, as provided (40 CFR §146.4).

4) Requires that Class II wells be constructed to prevent migration into USDWs (40 CFR §146.22). Class V wells also must not cause the degradation of USDWs.

Existing state law:

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

2) Provides that the supervisor shall so supervise the drilling, operation, maintenance, and abandonment of wells and the operation, maintenance, and removal or abandonment of tanks and facilities attendant to oil and gas production, so as to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil and gas deposits from infiltrating water and other causes; loss of oil, gas, or reservoir energy; and damage to underground and surface waters suitable for irrigation or domestic purposes by the infiltration of, or the addition of, detrimental substances (PRC §3106a).

3) Further provides that the supervisor shall also supervise the drilling, operation, maintenance, and abandonment of wells so as to permit the owners or operators of the wells to utilize all methods and practices known to the oil industry for the purpose of increasing the ultimate recovery of underground hydrocarbons, as provided. Additionally, establishes the "prudent operator" standard for the use of various techniques to produce and remove hydrocarbons from the productive strata, as specified (PRC §3106b).

4) Requires the supervisor to administer the state's oil and gas conservation laws to encourage the wise development of oil and gas resources (PRC §3106d).

5) Defines "well" to mean any oil or gas well or well for the discovery of oil or gas; any well on lands producing or reasonably presumed to contain oil or gas; any well drilled for the purpose of injecting fluids or gas for stimulating oil or gas recovery, among other definitions related to oil and gas production and related activities (PRC §3008).

6) 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 (PRC §3700).

7) 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).

8) 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).

9) 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).

10) 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).

11) Requires CalGEM and the SWRCB to follow certain required procedures – including public disclosure of materials, holding a public comment period, and convening a public hearing after a 30 day public notice period – where CalGEM and the SWRCB concur that the proposed exemption proposal has merit prior to submitting an aquifer exemption package to the US EPA for approval (PRC §3131).

12) Provides that the SWRCB may seek primacy from the US EPA for UIC well classes other than those for wells under the supervision or regulation of CalGEM, as specified (WAT §13263.5).

PROPOSED LAW

This bill would revise the definition of geothermal resources under the jurisdiction of CalGEM to include an oil or gas reservoir that is used principally for thermal energy storage or geothermal energy generation.

ARGUMENTS IN SUPPORT

According to the author, “California has long led the nation in renewable energy innovation. SB 940 ensures that emerging geothermal technologies, including repurposing depleted oil and gas reservoirs for thermal energy storage, are recognized within state law. This bill supports grid reliability, complements intermittent renewable

generation, and encourages investment in clean energy solutions without creating new regulatory hurdles."

ARGUMENTS IN OPPOSITION
None received

COMMENTS
Technology and ideas are well ahead of law and regulation.
The federal UIC regulations governing injection wells were initially promulgated in 1980. By existing law and regulation, CalGEM treats geothermal and oil and gas wells entirely separately. As a result, at least the following requirements for the two classes of wells are different: Notice of Intention disclosures; information protected from disclosure by confidentiality status and the length of time protected; reporting; testing; well construction; funding; well bonding; the treatment of idle wells, and more. It is not clear that CalGEM would collect the appropriate information to inform its oversight under the bill's proposed language. According to CalGEM, no oil has been produced from a geothermal resources well, but using a depleted oil and gas reservoir for geothermal purposes would lead to at least some oil production, if not in commercial quantities. Additionally, an oil and gas well and a geothermal well have some common federal requirements, but not all. The proposed language muddies the distinction between geothermal and oil and gas without addressing how to resolve these issues. Further, it is unclear what the potential ramifications of the proposed change are to CalGEM's existing agreements with the US EPA and the SWRCB.

The author's goal is well-taken, however. There is tremendous interest in trying new approaches to renewable energy development, including geothermal and energy storage. Federal and state law and regulations, when originally promulgated, largely did not anticipate this re-purposing. There is merit in ensuring that there is a framework developed in state law for trying new ideas. One step was taken last year when the gravity-based energy storage well pilot program became law as CalGEM did not have the existing authority to regulate them (SB 567 (Limón, Chapter 419, Statutes of 2025)). There is more to do.

In view of this, the Committee may wish to re-frame this bill to:

- Create a New Technology program (program) at CalGEM with the goal to facilitate the evaluation of the repurposing of oil and gas or geothermal wells for renewable energy storage or generation purposes.

- Authorize up to 250 experimental wells for projects in the program.

- Authorize the CalGEM supervisor to approve or deny submitted projects to the program.

- Require the program to issue public guidelines on the types of projects eligible to participate in the program.

- Require CalGEM to develop guidelines for transitioning wells between UIC classes.

- Require CalGEM to coordinate with the SWRCB and regional water quality control boards. Invite the participation of federal agencies (i.e. US EPA) in the development of the program.

- Require CalGEM to provide annual legislative reports on program activities.

- Provide that the program will be supported by charges to the operators of experimental wells participating in the program.

- Define "synthetic geothermal resources," as provided.

- Add relevant legislative findings and declarations. [Amendment #1]

Work in progress. This bill is a work in progress, and, as the bill moves through the legislative process, there are remaining details about how the New Technology program will interact within the existing statutory and regulatory structure remain to be determined.

The author may wish to continue working on the further development of the New Technology program. The Committee may wish to direct Committee staff to continue working with the author's office to this end.

Efforts in other states.
Colorado has "geothermal science" wells which appear to apply to the development of at least some unconventional geothermal resources. There is a bill pending (HB 3173) in the Oklahoma Legislature that would explicitly allow for the repurposing of oil wells for energy storage or geothermal energy development, as defined.

Aquifer exemptions.
These involve federal approval, and information from the required legislative report on the UIC program suggest that an application at the US EPA can be pending review for as long as four years or more.[3]

Existing regulatory pathways.
Storing superheated steam, whether generated by solar energy or other method, underground in an oil and gas reservoir to be used, when extracted, for electricity generation is akin to the traditional steamflood method for enhanced oil generation, and any wells involved can be permitted as Class II UIC wells (and the project permitted through a Class II UIC project approval letter). Permitting would require an aquifer exemption if the water quality at the depth of the injection necessitates it. There is at least one company that manufactures equipment for use in the oil field to take advantage of waste heat from the oil production process to produce electricity.

[3] In reference to the status of the Lynch Canyon (Lanigan) aquifer exemption as of March 31, 2024 according to the Underground Injection Control Program report by CalGEM for April 1, 2023 – March 31, 2024, released November 2025.

Recent related legislation
SB 567 (Limón, Chapter 419, Statutes of 2025) established the Gravity-Based Energy Storage Well Pilot Program at CalGEM which involves the re-purposing of oil and gas wells, as provided.

AB 527 (Papan, 2025) would have provided for the development of regulations by CalGEM specific to enhanced geothermal resources and provided an exemption from the California Environmental Quality Act for certain geothermal exploratory projects, among other provisions. (*This bill was vetoed by Governor Newsom*.)

SB 1433 (Limón, 2024) would have established the Gravity-Based Energy Storage Well Pilot Program at CalGEM, as provided. (*This bill was held on suspense in the Assembly Appropriations Committee*.)

SB 1304 (Limón, Chapter 467, Statutes of 2025) revised the statutory process conducted by CalGEM and the SWRCB for aquifer exemptions, including public disclosure and public meeting requirements, as provided.

SUGGESTED AMENDMENTS

AMENDMENT 1

- Remove section 3701
- Add new chapter to Division 3 of the Public Resources Code (within CalGEM)

Section 1. Legislative findings and declarations (uncodified)
The Legislature finds and declares the following:
(a) It is imperative that all potential technologies to generate or store renewable energy be evaluated.
(b) Federal and state law and regulations for the development of oil and gas or geothermal resources were largely written decades ago, and do not anticipate that an oil and gas or geothermal well will be used for any other purpose.
(c) The repurposing of existing oil and gas or geothermal wells for new energy generation or storage uses is of increasing interest. Multiple ideas are being explored by both academia and industry. However, well repurposing is held back by outdated law and regulation.
(c) This is a missed opportunity. New uses of these existing wells, reservoirs and associated infrastructure – if they prove out – have the potential to help reduce the cost of energy for Californians.
(d) Providing the framework to the Geologic Energy Management Division to authorize the evaluation of these new uses of wells under its jurisdiction is a much needed step.

Chapter XX New Technology Program
XXXA. There is a New Technology Program at the Geologic Energy Management Division. The goal of the program is to facilitate the evaluation of the repurposing of oil and gas or geothermal wells for renewable energy storage or generation purposes.

XXXB. There shall be no more than 250 experimental wells at any time.

XXXC. The program shall issue public guidelines on the types of projects involving repurposed oil and gas or geothermal wells that may be eligible to participate in the program. Projects including Class VI UIC wells are not eligible to participate in the program.

XXXD. The program shall accept proposals from operators to repurpose oil and gas or geothermal wells for energy storage or renewable energy generation, including synthetic geothermal resources.

XXXE. Program personnel shall evaluate the submitted proposals and determine if the proposal can be implemented as a UIC project under the division's jurisdiction and authority. The supervisor shall approve or deny project proposals. Upon approval of a project, oil and gas wells or geothermal wells that are part of the project shall be designated experimental wells for the duration of the project.

XXXF. Upon approval of a project by the supervisor, program personnel shall facilitate obtaining any necessary permits for the project under the division's authority and jurisdiction.

XXXG. Except as otherwise specified, an experimental well shall meet all requirements applicable to an oil and gas well or geothermal well in this division. An oil and gas well designated as an experimental well is not an idle well for the purposes of section 3206.

XXXH. On or by _____, the division shall develop and make publicly available guidelines on requirements for transitioning an oil and gas well to a geothermal well, and for transitioning a geothermal well to an oil and gas well, including, but not limited to, well construction requirements.

XXXI. Commencing on or by _____, the division shall provide a report to the applicable legislative policy and budget committees on program activities for the preceding calendar year, highlighting accomplishments and including recommendations for statutory and regulatory changes to more readily achieve program goals.

XXXJ. The program shall be implemented in coordination with the Water Boards.

XXXK. The division shall invite the participation of federal agencies with relevant jurisdiction in the development of the program.

XXXL. For the purposes of this chapter, the following terms have the following meanings:
(a) an experimental well means an existing oil and gas well or geothermal well utilized for a renewable energy storage or generation purpose pursuant to this chapter.
(b) a geothermal well means a well as defined by section 3703.
(c) an oil and gas well means a well as defined by section 3008.
(d) the program means the new technology program established by this chapter.

(e) Synthetic geothermal resources means an oil or gas reservoir, including a depleted oil or gas reservoir, that is used primarily for thermal energy storage.
(f) The water board means the State Water Resources Control Board and any applicable regional water quality control board.

Add PRC §3403.7.
To support the regulatory effort of the supervisor, there shall be imposed an annual charge on operators of experimental wells, as defined in section XXXX, that are oil and gas wells to defray the regulatory costs incurred by the state in maintaining surveillance of these wells, ensuring that testing is conducted properly, and ensuring that no damage occurs to the environment by reason of conversion. Each experimental well operator shall pay a proportionate share of the total regulatory costs for each fiscal year based on the operator's number of experimental wells. For each experimental well, the portion owed by the operator shall be computed by dividing the statewide sum of reasonably incurred regulatory costs across all experimental wells by the number of experimental wells.

Add PRC §3724.55.
To support the regulatory effort of the supervisor, there shall be imposed an annual charge on operators of experimental wells, as defined in section XXXX, that are geothermal wells to defray the regulatory costs incurred by the state in maintaining surveillance of these wells, ensuring that testing is conducted properly, and ensuring that no damage occurs to the environment by reason of conversion. Each experimental well operator shall pay a proportionate share of the total regulatory costs for each fiscal year based on the operator's number of experimental wells. For each experimental well, the portion owed by the operator shall be computed by dividing the statewide sum of reasonably incurred regulatory costs across all experimental wells by the number of experimental wells.

SUPPORT
City of Reedley
County of Fresno
Premier Resource Management, LLC.

A few individuals

OPPOSITION
None received

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