

Date of Hearing: May 14, 2025

ASSEMBLY COMMITTEE ON APPROPRIATIONS

Buffy Wicks, Chair

AB 526 (Papan) – As Amended April 10, 2025

Policy Committee: Utilities and Energy
Natural Resources

Vote: 18 - 0
14 - 0

Urgency: No

State Mandated Local Program: No

Reimbursable: No

SUMMARY:

This bill directs the California Energy Commission (CEC) to develop a strategic plan for new in-state geothermal energy.

Specifically, this bill, among other things:

- 1) Requires the CEC, in coordination with specified state agencies and any other relevant federal, state and local agencies, to develop a strategic plan, subject to public review and comment, for new in-state geothermal energy that includes conventional hydrothermal resources and nascent technologies, and to submit the strategic plan to the Natural Resources Agency and the Legislature by June 30, 2027.
- 2) Requires the CEC, in coordination with the Department of Conservation (Conservation), the Department of Fish and Wildlife (DFW), the State Lands Commission (SLC), stakeholders, other governmental entities as needed, interested Native American tribes, California load-serving entities (such as an electric utility) and the geothermal industry, to develop a permitting roadmap for geothermal energy development.
- 3) Directs the CEC, in coordination with specified state agencies, to work with stakeholders, other relevant federal, state and local agencies, as needed, interested Native American tribes, California load-serving entities and the geothermal industry, to identify suitable and recommended locations for new in-state geothermal energy.
- 4) Directs the SLC, in coordination with many of the same entities listed above, to establish state lands leasing goals for new in-state geothermal energy development, based on the state's energy resource needs and related requirements and goals.
- 5) Requires (a) the CEC, in consultation with the California Public Utilities Commission (CPUC), the California Independent System Operator (CAISO) and the Department of Water Resources (DWR), to assess the transmission investments and upgrades needed to support in-state geothermal energy and (b) the CPUC, in consultation with the CEC, CAISO and DWR, to designate new in-state geothermal energy as a long lead-time resource in the CPUC's recurring input to CAISO's transmission planning processes.
- 6) Requires the CEC, in coordination with SLC, the Department of Conservation, and the Governor's Office of Business and Economic Development (GO-Biz), to assess the level at which new and existing geothermal rentals and royalties would best support California's

long-term renewable energy and greenhouse gas emissions reduction goals, while maintaining competitiveness with rentals and rates on federal lands and in other states.

FISCAL EFFECT:

This bill will require significant new analytical work of several state agencies—the CEC, the CPUC, Conservation, DFW, GO-Biz, and the SLC, at least—over the period needed to develop and produce the strategic plan; therefore, related costs will be significant.

The following agencies provided cost estimates:

CEC:

- 1) ***The CEC.*** The CEC estimates it will need six limited-term positions, for one-year, which would include a supervisor, two environmental planners, two electrical generation system program specialists and one senior attorney, for a total one-year cost of \$1.4 million. The appropriate funding sources would be the Energy Resources Programs Account (ERPA), which faces an ongoing structural deficit.
- 2) ***The Department of Conservation.*** Conservation estimates it would need approximately several million over five years (Oil, Gas, and Geothermal Account, which is funded by fees assessed on geothermal operators). According to Conservation, year-one costs would total approximately \$3.25 million—\$2.05 million in contracts, \$1 million for four in-house positions and \$200,000 for equipment

In addition, Conservation would incur costs of \$6 million to acquire geological data needed to complete the suitability assessment, which would include aeromagnetic surveying and airborne gravity surveying over three years.

Conservation also contends it would require the use of a laboratory over two years to analyze data gathered from geothermal spring locations, at an estimated cost of \$60,000.

- 3) ***GO-Biz:*** GO-Biz estimates costs of ranging between \$500,000 and \$750,000 (General Fund) to pay for contracts with a third-party to undertake research and investigation related “economic and workforce development.”
- 4) ***SLC.*** SLC estimates needing four permanent positions—two mineral resources engineers, an attorney and analyst—to develop a statewide leasing strategy and, should it be required, fulfill the requirements of the California Environmental Quality Act (CEQA), to assess the geothermal mineral potential of lands throughout California and to process and manage new geothermal leasing applications, at a cost of approximately \$6 million in the first year—to develop an Environmental Impact Report and master geothermal leasing plan—and approximately \$1 million annually ongoing (General Fund).

COMMENTS:

- 1) **Purpose.** The author intends this bill to require the up-front planning that will eventually lead to the development of substantial amounts of geothermal energy resources. According to the author:

Geothermal energy is essential to California's carbon-free and renewable future. Unfortunately, the state does not have enough geothermal facilities. They require substantial investment and infrastructure. Without state direction as to a geothermal plan, these challenges are hindering the growth of geothermal and developers are shifting their attention to other states. AB 526 is about doing the necessary planning to facilitate the growth of geothermal energy. It requires the Energy Commission to develop a statewide strategic plan that will guide the expansion of geothermal energy. By setting clear objectives and providing a roadmap for future geothermal projects, the plan will help attract investment, spur job creation, and stimulate economic development in California's clean energy sector.

- 2) **Background.** State law requires the 100 percent of retail electricity sales and state agency electricity use to come from renewable and zero-carbon resources by the year 2045. Electricity produced from geothermal energy is such a resource—both renewable, according to the definition in state law, and zero carbon. In addition, geothermal energy can be a “firm” resource, generally meaning it can be called upon to produce electricity when needed, 24 hours a day.

The state agencies planning for achievement of the state's clean energy goals have called for the procurement of considerable amounts of electricity generated from geothermal energy resources. It's this call that seems to be motivating supporters of this bill. So, too, are technological developments that could make geothermal resources much more widely available and economic. A coalition of environmental organization write in support of the bill:

Recent advances in deep and/or horizontal drilling using hydraulic fracturing, closed loop systems, and other geothermal-related technologies, collectively referred to as “Advanced Geothermal Energy Systems,” present new opportunities for geothermal resources to be tapped in regions where the resource was previously out of reach. These advances also include technologies that can increase efficiency, reduce water use, and minimize local impacts...California has mandated that all retail electricity sales in the state must come from carbon-free energy sources by 2045. Pursuant to this policy, the California Public Utilities Commission recently directed California's load-serving entities to procure significant amounts of new geothermal energy over the years to come. If developed and deployed thoughtfully at scale, new in-state geothermal energy can provide significant energy affordability benefits to the state and to local communities, in addition to advancing California's progress toward its statutory renewable energy and climate mandates and providing air quality benefits. That is what AB 526 aims to ensure.