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ACP-California Comments on Workshop

Additional submitted attachment is included below.



July 23, 2026

California Energy Commission
Docket Unit, MS-4
Docket No. 26-IEPR-04
715 P Street
Sacramento, California 95814

RE: IEPR Commissioner Two-Day Workshop on California’s Geothermal Energy Resources

American Clean Power – California (“ACP-CA”) appreciates this opportunity to provide the following comments to the California Energy Commission (“CEC” or “Commission”) on the IEPR Commissioner Two-Day Workshop on California’s Geothermal Energy Resources, held June 19, 2026, and July 9, 2026, as part of the 2026 Integrated Energy Policy Report (“IEPR”) Update. Geothermal is a firm, dispatchable, zero-carbon resource that is increasingly central to California’s planning for reliability and affordability, and the workshop provided a valuable venue for examining the benefits, challenges, and strategies for developing this resource further.

ACP-CA’s comments focus on the resource planning, permitting, and financing topics within the workshop’s scope.

I. The Importance of Geothermal Resources to California’s Clean Energy Portfolio

Recent CPUC Integrated Resource Planning (“IRP”) assessments, including the portfolio underlying the 2026-2027 Transmission Planning Process (“TPP”), have indicated a need for over 5 gigawatts (“GW”) of geothermal resources by 2036 to achieve the state’s affordability, GHG reduction, and reliability goals. This scale of build-out confirms that geothermal is no longer a marginal contributor to state planning, but should be a core component of an affordable, reliable long-term portfolio for the state.¹

ACP-CA reiterates the position we took in our comments on the CEC’s SB 100 Joint Agency Report: geothermal’s firm, high-capacity-factor generation profile makes it a valuable complement to solar, wind, and storage resources, reducing overall portfolio risk and enabling deeper decarbonization at lower cost than a strategy reliant on any single resource type.

¹See CPUC Decision (D.) 26-02-057, p. 60.

Geothermal resources will be important to a diversified California portfolio. Different technologies and geographies — conventional, EGS, and closed-loop; Utah, Nevada, IID, and Northern California— may warrant different forms of support given their distinct benefits, cost, timeline, and risk profiles. The state’s policies should encourage development, foster competition, and expand overall supply across the full range of viable geothermal resources.

In addition, as noted in the CEC’s opening presentation, geothermal in California has stalled with over 350 MW of projects requesting suspensions in 2025 and only ~139 MW coming online in California since 2000. We encourage the CEC to work with developers to investigate why geothermal projects have stalled and to develop a multi-agency approach toward accelerating existing and new developments to serve the state. In addition, we note that many of California’s geothermal facilities are at least 30 years old; existing geothermal resources may need support to reliably serve California long-term power portfolio.

II. Energy Modeling Considerations

Although the geothermal scope of this IEPR does not directly inform the CPUC’s Inputs and Assumptions process for Integrated Resource Planning, we nevertheless emphasize the importance of California energy agencies incorporating the best available data on geothermal resources into its planning and procurement processes. The CPUC has made progress on this front,² but its Inputs and Assumptions may not reflect the latest commercial information given the rapid evolution of geothermal resources and developments. For example, Fervo’s latest well design is achieving efficiency gains that will substantially reduce EGS capital costs.³ The CEC and CPUC should develop a process for receiving best-available data from developers and LSEs to incorporate into its long-term planning efforts.

III. Land-Use, Environmental, and Resource Potential Considerations

Workshop presenters highlighted the relatively low land-use and environmental impact of geothermal development as compared to other generation technologies, a point the CEC should carry forward into its resource potential and land-use screening analyses. At the same time, more work remains to characterize the best available near-field and deep-field development potential across the state; an update to CEC – Public Interest Energy Research Program’s report, *New*

² The CPUC IRP team has incorporated new information on EGS potential, profiles, and costs over the last two IRP cycles, utilizing NREL 2024 ATB data for Hydrothermal–Binary, EGS–NF–Binary, and EGS–Deep–Binary in the most recent cycle.

³ See: <https://fervoenergy.com/fervo-energy-learning-curve-continues-on-3rd-generation-well-design-boosting-drilling-rates-by-143-since-its-first-cape-station-well/> “With this momentum from initial Phase II drilling, we expect Fervo’s 3.0 well design to produce substantially more megawatts per well and significantly improve the unit economics of future GeoBlocks™. Based on our performance to date, we believe Cape Phase II is on track to deliver at \$5,500 per kilowatt, and we remain firmly committed to our goal of achieving \$3,000 per kilowatt.”

Geothermal Site Identification and Qualification (2004) and the associated geothermal database is overdue.

Most importantly, the CEC’s land-use screens should not understate the development potential of geothermal systems which can access substantial subsurface geothermal resources with minimal surface impact, allowing continued co-location with agriculture and other land uses. That footprint gives developers flexibility to select sites with favorable permitting, environmental review, transmission access, and land-use conditions, while avoiding areas of greater biological or cultural resource sensitivity.

The state’s IRP Inputs and Assumptions already recognize this potential, projecting that near-field next-generation geothermal could roughly double the output of existing geothermal resource areas.⁴ The CEC’s land-use screens, utilized in Integrated Resource Planning and busbar mapping, should reflect this same benefit to ensure that transmission access — currently one of geothermal’s greatest barriers — is not compounded by an overly conservative land-use assumption.

IV. Policy Recommendations: Transmission

California’s procurement support for geothermal through multiple IRP-based “clean firm” procurement orders has been transformative for the geothermal market in the west. However, procurement orders have not yet overcome the transmission constraints that continue to limit development, and in turn, have resulted in extended deadlines or alternative compliance to “clean firm” procurement orders.⁵ Transmission access remains one of geothermal’s greatest impediments, and the CEC should work to ensure consistent signals flow through the CPUC to the California Independent System Operator (“CAISO”) so that its planning reflects and enables access to the most commercially viable geothermal resources in the region.⁶ Without proactive transmission development, California could miss out on some of the best geothermal resources it helped to stimulate through its procurement orders.

As stated above, successful planning starts with accurate Inputs and Assumptions. In recent comments to the CPUC on its busbar mapping workshop, ACP-CA noted that the adjusted assumed 10-year development horizon for most geothermal resources does not reflect the streamlining and acceleration benefits of advanced geothermal technology, nor the active development of some conventional geothermal that has been underway for years. As a result, California-based geothermal is currently limited to just 62 MW before 2036 — compared to nearly 5 GW of generic geothermal reflected in the 2026-2027 TPP base case for that same year. When resources show up “too late” in a TPP portfolio, transmission approvals will also be

⁴See CPUC 2024-2026 IRP Cycle, Final IRP Inputs and Assumptions Report (Feb. 10, 2026), p. 74.

⁵ See CPUC D.23-02-040, D.24-02-047, D.25-09-007

⁶ See Fervo presentation from Day 1, slide 6

delayed, thereby guaranteeing the resource cannot come online sooner. We also took issue with the large reduction in geothermal resources from 500 MW to 30 MW in the SCE Eastern study area, as compared to the 2025-2026 TPP, which is not warranted in light of the recent federal lease auction⁷ and broader Imperial Valley geothermal resource potential. Imperial County has a vast quantity of untapped, known geothermal resources in the Western US.

The CEC should plan for multiple geothermal resource regions in a manner responsive to commercial activity and that triggers timely transmission development. Given the expanding opportunities for geothermal development across multiple regions, and the growing quantities of geothermal reflected in the base case as compared to prior TPP cycles, ACP-CA believes it is prudent to plan for multiple geothermal resource zones to preserve optionality. In that regard, we would support additional EGS quantities mapped from Utah and Nevada and additional geothermal resources mapped from Imperial County, given the commercial interest and transmission expansion potential in those areas.⁸ We also supported the CPUC's intention to incorporate the High West Transmission line into its latest inputs and assumptions update to provide earlier access to a larger quantity of EGS in Utah.

Finally, ACP-CA refers the CEC to our comments filed in the CPUC's busbar mapping workshop process regarding the assessment of commercial viability, and the ongoing issues with interconnection and gaps in the TPP's treatment of geothermal resources, and would be pleased to provide those comments to the record in this proceeding upon request.

V. Policy Recommendations: Permitting

The CEC should ensure that state resource agencies with jurisdiction over geothermal development are sufficiently staffed and resourced to review applications on a timeline that matches the pace of development contemplated by state planning goals.

As XGS explained in its presentation, geothermal projects can require a dozen permits, with some reviews separated by surface or subsurface scope or duplicated between exploratory and development phases. Fragmented processes can cause delays that increase project risks and costs. State agencies should work to consolidate permitting processes so that geothermal permitting timelines are brought on par with those of other clean energy technologies. This effort could mirror the permitting roadmap initiatives the CEC led for offshore wind under AB 525.

The CEC should also evaluate how regulatory fees, such as those from the Department of Toxic Substances Control ("DTSC")'s generation and handling fees, affect geothermal economics and development potential. Fee structures designed with oil and gas production in mind do not always translate appropriately to geothermal projects, and the CEC should consider a fee-relief

⁷ See <https://www.blm.gov/press-release/blm-geothermal-lease-sales-california-net-over-27-million>

⁸ See for example: <https://www.canarymedia.com/articles/climatetech-finance/fervo-energy-geothermal-ipo-filing>

or cost-share mechanism to remove this barrier to continued conventional geothermal development in the state.

VI. Policy Recommendations: Financing

ACP-CA appreciated the presentation from the Mountain West Geothermal Consortium, which is advancing regional collaboration on geothermal resource development, transmission planning, and financing across California, Nevada, Utah, and neighboring states. We encourage the CEC to engage in initiatives to reduce upfront financing risks that are inhibiting geothermal development, such as a risk-sharing program to finance appraisal drilling.⁹

ACP-CA also supports the inclusion of \$10 million to support exploration, mapping, characterization, and development of geothermal resources as part of the 2026 Budget Act¹⁰ and continued funding of the CEC's Geothermal Grant & Loan program. Targeted state financing support can help de-risk early-stage geothermal development can be an effective complement to the federal incentives currently available to the industry.

Finally, ACP-CA recommends that the CEC works with the CPUC and California Department of Water Resources to implement the Central Procurement Entity ("CPE"), established by AB 1373, which provides a pathway to address the development and financing challenges that have persisted under conventional procurement models. Advancing the CPE should be a central focus of the Commission's geothermal development efforts, as it represents one of the most meaningful opportunities to address the market barriers. The CPE could also potentially facilitate public and shared investment in transmission upgrades to known geothermal resource areas.

Conclusion

Geothermal is poised to play an important future role in California's clean, firm resource portfolio. ACP-CA urges the CEC to work with its sister agencies update its modeling inputs, land-use screens, and transmission planning assumptions to reflect geothermal's full commercial potential across the western region, and to evaluate permitting and financing programs that could continue to foster the market for geothermal development in state. ACP-CA appreciates the CEC's attention to these issues and looks forward to continued engagement in the 2026 IEPR Update.

Respectfully Submitted,

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⁹ See Mike O'Connor presentation, Day 2 workshop

¹⁰ See SB 111 Sec 13