



## Staff Report - Item 02

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**To:** Sonoma Clean Power Authority Community Advisory Committee

**From:** Ryan Tracey, Director of Planning & Analytics  
Geof Syphers, Chief Executive Officer

**Issue:** Receive Geothermal Opportunity Zone Update

**Date:** December 21, 2023

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### Background

The Geothermal Opportunity Zone (GeoZone) is SCP's initiative to guide the development of local geothermal power that is compatible with community values and enables SCP to phase-out its dependence on natural gas power plants for reliability. The Community Advisory Committee (Committee) meetings are a regularly scheduled public forum for the community to receive updates and provide input on the GeoZone. The updates provided to the CAC each month, and minutes from any discussion are posted on SCP's website at <https://sonomacleanpower.org/geozone-public-updates>. Staff incorporates any feedback received from the Committee presentation into the monthly updates to the Board of Directors. Additional background on the GeoZone can be found on the GeoZone webpage at <https://sonomacleanpower.org/geozone>.

### Exploration Well Permitting Delegation

A critical project risk to Eavor and Chevron New Energies is the permitting timeline for exploration activities. Before designing, contracting, and permitting a power plant project Eavor and Chevron New Energies will need to drill exploration wells to confirm subsurface conditions are conducive to a pilot project and commercial scale-up. Although new technologies greatly expand the envelope of conditions that can accommodate development relative to a conventional geothermal project, there is still uncertainty in the thermal conductivity of rock, mechanical properties, and drilling execution that can only be resolved through drilling an exploration well. State law defines geothermal exploration wells as a separate activity from geothermal development that is subject to the California Environmental Quality Act (CEQA) with the California Geologic Energy Management Division (CalGEM) as the lead agency.

In initial discussions with CalGEM, SCP and its partners have learned that the agency is severely resource constrained due to the demands of CEQA permitting and litigation for oil and gas projects. As an example, CalGEM has been working on a CEQA permit for an exploration well in Inyo County for over two years. Results from exploratory drilling will be a critical path for both Eavor and Chevron New Energies, and that length of delay could greatly reduce momentum and ultimately risk the project moving forward.

The Geothermal Program Manager from CalGEM has recommended that Sonoma County pursue a request for CalGEM to delegate lead agency responsibilities to the county. Imperial County has successfully petitioned CalGEM for delegation and demonstrates much higher responsiveness to geothermal exploration permitting. State law allows a county to petition for delegation if they have a geothermal element in their General Plan.

Sonoma County does not yet have a geothermal element in their General Plan but is currently starting the process of a General Plan update. SCP submitted comments to the Board of Supervisors December 12<sup>th</sup> kick-off requesting that the county include adding a geothermal element as in-scope for the update to give Sonoma County the option of pursuing the delegation process in the future. Unfortunately, the timing of the General Plan update is not short—so SCP is also looking at other opportunities to reduce the timing constraints and increase local involvement in the exploration well permitting process.

### **Partner Quarterly Updates**

SCP's partners provided their quarterly updates on GeoZone progress to staff in November. These updates demonstrate partners continue to progress efforts to assess the geothermal resource and identify land opportunities to site pilot projects and scale-up development. Chevron New Energies, Eavor, and Cyrq are all still forecasting that they will be able to satisfy the requirements of their cooperation agreements by the agreed-to completion date. Additionally, data and analysis completed thus far continue to support that the GeoZone area has the appropriate conditions to support their proposed development strategies. As soon as partners succeed in securing land and necessary commercial agreements for pilot projects, the focus will turn to exploration well permitting and design and transmission planning.

### **Grant Funding**

The Department of Energy Geothermal Technology Office is expected to announce the recipients of the Bi-partisan Infrastructure Law's Enhanced Geothermal Systems Demonstration grant imminently. Chevron New Energies applied for the grant for their GeoZone project. Notifications were originally scheduled to be sent in October 2023.

SCP and partners are actively monitoring other grant opportunities for GeoZone from the Department of Energy and California Energy Commission.

## **Transmission Planning**

SCP staff continues to invest considerable time in advocacy for transmission planning and interconnection process reforms that are supportive of local resource development. The CAISO has provided a preliminary list of policy-driven upgrades expected in its 2023-24 Transmission Planning Process and the scope is far smaller than SCP expected—particularly in PG&E territory. Like dozens of other critical California renewable energy efforts, scaling-up local geothermal development will likely require upgrades to PG&E’s high-voltage system in the Central Valley to provide a path for local resources to contribute to peak statewide conditions (which is a requirement for obtaining deliverability and eligibility for resource adequacy credit). SCP believes that the CPUC’s portfolio supports investing in these strategic upgrades and has submitted comments in both the CPUC and CAISO processes to stress their importance. SCP is also beginning to explore and socialize a new approach the state should consider for transmission planning—looking at investments from a “least regrets” or “least risk” perspective rather than focusing on a short-term “least cost” for a very specific set of assumptions. Staff believe this approach will reduce the long-term costs of California’s energy transition by enabling a more flexible set of technologies to contribute and provide much greater assurance of California’s climate progress by lowering the risk of indefinitely extending the operation of natural gas power plants.

Meanwhile, the CAISO and stakeholders have shown increased receptiveness to the proposal of incorporating interest from load serving entities (LSE) in their process for gatekeeping applications to the interconnection queue. SCP has been actively participating in CAISO’s interconnection process enhancements process and pushing back against proposals to solely evaluate interconnection applications on their readiness (permitting status, site control, financial strength) and instead asking for a process that can reflect LSE interest in more strategic projects as well—such as the geothermal development SCP is supporting in the GeoZone. CAISO is expected to release a revised straw proposal for their interconnection process reforms in December and expects to finalize reforms for approval in a May 2024 Board of Governors meeting.

## **Attachments**

- Letter on General Plan Update - 12.08.2023



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Santa Rosa, CA 95404  
[sonomacleanpower.org](http://sonomacleanpower.org)

December 8, 2023

Sonoma County Board of Supervisors  
575 Administration Drive  
Room 100A  
Santa Rosa, CA 95403

**RE: Sonoma Clean Power Comments on December 12, 2023  
Meeting Item #50: Sonoma County General Plan Kick-Off**

Chair Coursey and Supervisors,

I'm writing to ask the Board of Supervisors to add a Geothermal element to the upcoming General Plan to enable local permitting oversight of new geothermal power facilities.

This would enable timely review of the early-stage geothermal exploration projects that are critical to the County's climate progress, since the state's lead agency has a multi-year backlog of oil and gas work. Currently, Sonoma County's existing General Plan does not meet the requirements for local geothermal exploration permitting, hence the request for a new element (which can be included inside of a larger element, such as Climate or Open Space & Resource Conservation).

Should the County agree in principle to develop a Geothermal element, Sonoma Clean Power staff are prepared to support the effort in any way needed. Additional background information is provided as an appendix to this letter.

Thank you.

Sincerely,

A handwritten signature in black ink that reads "Geof Syphers". The signature is fluid and cursive, with a large loop at the end.

Geof Syphers, CEO

## Background

On February 8, 2022, this Board unanimously approved a resolution joining Sonoma Clean Power's (SCP) Geothermal Opportunity Zone (GeoZone) to explore opportunities to accelerate development of local geothermal resources. By joining the GeoZone, Sonoma County has demonstrated leadership in driving solutions to provide clean, reliable, and affordable energy resources that will prove essential to meeting California's climate goals.

A key focus of GeoZone is early stakeholder engagement to guide local geothermal development that is compatible with the values of the local community. SCP has organized GeoZone-specific community events and provides the public with updates and an opportunity to comment on GeoZone activities at monthly committee meetings. SCP believes proactive engagement and open communication is critical to the ultimate success of GeoZone projects. Through these activities, SCP has appreciated the ability of Sonoma County residents to engage on the climate crisis, energy reliability concerns, environmental justice, and the right ways to host needed new development.

In planning for new local geothermal power sources, SCP and its GeoZone partners have identified permitting geothermal exploration wells as a critical project risk. State law identifies geothermal exploratory projects as a distinct activity that is subject to CEQA that is administered by the California Geologic Energy Management Division (CalGEM). CalGEM's Geothermal Program Manager has provided feedback that they are unable to process geothermal permitting in a reasonable timeframe because of staff time dedicated to oil and gas industry projects.

CalGEM is very supportive of other counties pursuing lead agency delegation for geothermal exploratory projects. Importantly, even if a county pursues delegation, CalGEM would continue to provide expertise on well construction, subsurface risks, and approve drilling permits after the CEQA is complete.

Sonoma County does not currently have a Geothermal element in its General Plan and is therefore ineligible for petitioning CalGEM for lead agency status. SCP strongly encourages Sonoma County to add a Geothermal element as part of its General Plan update to provide the county the option to pursue lead agency delegation—which provides the local and GeoZone project benefits described above. A Geothermal element would also provide an opportunity to address land use considerations for a potential larger scale-up of geothermal development in the region. The definition of a Geothermal element in the California Public Resources Code (Section 25133) is provided below for reference:

*“Geothermal element” means an element of a county general plan consisting of a statement of geothermal development policies, including a diagram or diagrams and text setting forth objectives, principles,*

*standards, and plan proposals, including a discussion of environmental damages and identification of sensitive environmental areas, including unique wildlife habitat, scenic, residential, and recreational areas, adopted pursuant to Section 65303 of the Government Code.*

SCP has connected with Permit Sonoma on the delegation process and possibility of adding a Geothermal element to the General Plan. Permit Sonoma staff have advised that the kick-off discussion today is a good forum to introduce the idea. CalGEM has provided materials from Imperial County's petition for delegation and suggested that the Imperial County Geothermal element has been recently updated and a good template for developing a Sonoma County geothermal element. Neighboring Lake County, which shares the existing Geysers resource with Sonoma, also includes a Geothermal element in its General Plan.

SCP is committed to progressing the GeoZone initiative and increasing the opportunity for the local community to engage in early project development. Adding a geothermal element to Sonoma County's General Plan is an important opportunity to support both ambitions. Given the importance, SCP is committed to supporting the county in this effort.