



## Staff Report - Item 05

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

**From:** Ryan Tracey, Director of Planning & Analytics  
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**Issue:** Receive Geothermal Opportunity Zone Update

**Date:** September 19, 2024

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### Background

The Geothermal Opportunity Zone (GeoZone) is SCP's initiative to secure affordable, reliable clean energy for our customers by building 600 megawatts of new geothermal power capacity in Sonoma and Mendocino Counties. This will enable 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 Committee each month, and minutes from any discussion are posted on SCP's website at <https://sonomacleanpower.org/geozone-public-updates>. Staff incorporate 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>.

### Assembly Bill 1359

As noted in the legislative update, as well, SCP sponsored legislation ([Assembly Bill 1359](#)) this year to enable geothermal developers to elect local counties to serve the role of lead agency for CEQA in permitting geothermal exploratory projects. The bill passed the Senate and Assembly in August with bipartisan support and is currently awaiting the Governor's signature. If signed, SCP's GeoZone partners can immediately start the permitting process with Sonoma and Mendocino counties, as opposed to relying on the California Geologic Energy Management Division (CalGEM)—which is currently backlogged with oil and gas litigation. Staff appreciates the support

provided by the local governments, environmental groups, labor unions, and the geothermal industry in passing the legislation as well as the commitment from the bill's author, Assemblymember Diane Papan.

## **July 25<sup>th</sup> Town Hall**

SCP hosted a GeoZone town hall at the Customer Center on July 25<sup>th</sup>, 2024, offering participants an overview of the GeoZone as well as the opportunity to hear from a panel including Vice Chair of the Regional Climate Protection Authority Melanie Bagby, Department of Energy Manager and Strategy Lead for the Frontier Observatory for Research in Geothermal Energy (FORGE) Kevin Jones, and California Council on Environmental and Economic Balance Climate Change Program Manager Mikhael Škvarla. Attendance for the event surpassed staff's expectations, with 80 people showing-up in-person and 40 online from a variety of local communities and stakeholder groups. The event included live Spanish translation and was recorded and posted on the [GeoZone webpage](#).

The panel answered a variety of questions on the challenges in decarbonizing the state's electric sector, the opportunities and risks of geothermal development, involvement of the oil and gas industry, and the application of enhanced geothermal systems technology derived from the hydraulic fracturing industry. Staff were gratified to see a deep level of engagement and enthusiasm from meeting participants. The next town hall event is tentatively planned for early next year in Cloverdale.

## **GeoZone Project Updates**

Chevron New Energies is working on finalizing negotiations with the Department of Energy on the grant they were awarded for demonstrating Enhanced Geothermal Systems (EGS) in the GeoZone. Meanwhile, Chevron is working on finalizing the location of an exploration well to collect the data necessary for executing its demonstration. In the next few months, based on the Governor's approval of AB 1359 and its conversations with permitting authorities, Chevron can either start the permitting process for an exploration well with Sonoma County or CalGEM. Chevron expects project-specific community engagement, which will be coordinated with SCP, to shortly follow selection of a lead permitting agency.

Eavor has completed an updated technical feasibility study to guide its prioritization of potential sites to host a demonstration project. Eavor is committed to meeting its contractual milestone of securing a site and being prepared to start the permitting and

interconnection processes next year.

SCP submitted an abstract for a project to demonstrate Cyrq's thermal energy storage system to the California Energy Commission's [Energy Storage Innovations to Support Grid Reliability funding opportunity](#). SCP expects to learn if the abstract was approved to move to the second round in late September, which would require submission of a full application by November 7<sup>th</sup>. The project team is meeting with the potential site host, as a commitment will be required to move forward. Meanwhile, the team is considering responding to the [Department of Energy's Long-Duration Energy Storage Pilot Program solicitation](#).

### **Catalyzing Next-Generation Geothermal Workshop**

Staff participated in an invite-only workshop the Department of Energy hosted at its headquarters in Washington D.C. on August 26<sup>th</sup> to discuss opportunities to catalyze at-scale investment in next-generation geothermal projects. The workshop included Deputy Energy Secretary David Turk, CEOs from leading geothermal companies, leaders of utility commissions and utilities, venture capital firms, and banks.

Staff shared their perspective of the market for geothermal power in California and its approach to overcoming commercial, regulatory, and community support hurdles in progressing GeoZone projects. By and large, participants expressed skepticism that next-generation geothermal can flourish in California given the risk posed by existing permitting and interconnection processes. Staff left the meeting with a sense of urgency in addressing industry concerns to avoid a future where California ratepayers rely predominantly on out-of-state resources that are more costly and provide no economic benefit to the state. Staff are beginning to formulate a comprehensive legislative package for 2025 to address industry concerns.

While in Washington D.C., staff also had the opportunity to meet staff from the offices of Congressman Huffman, Congressman Thompson, and Senator Padilla. The staff meetings provided an opportunity to share progress on the GeoZone and identify federal policy opportunities to support local geothermal development.

### **Enhanced Geothermal System Breakthroughs**

In early September, the Department of Energy [announced the results](#) of a commercial scale circulation test at its Frontier Observatory for Research in Geothermal Energy (FORGE). The month-long test achieved a consistent circulation rate of 420 gallons per minute at a temperature of 370 degrees Fahrenheit. Importantly, the test

demonstrated that more than 90% of the injected fluid was recovered during the test—which is an important data point in calibrating the potential leak-off from EGS.

Also in early September, Fervo Energy, a leading developer of EGS, [announced the results of their own 30-day circulation test](#) at a nearby project called Cape Station. The test achieved a maximum flow rate of 107 kg per second (1,700 gallons per minute) which is sufficient to enable over 10 MW of electricity generation from a well pair. It's triple the flow rate Fervo achieved in a similar test at their Project Red demonstration in Nevada and aligned with the most ambitious projections from the National Renewable Energy Laboratory on the metrics EGS needs to achieve to be scalable.