



Staff Report - Item 02

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: March 16, 2023

Background

The Geothermal Opportunity Zone (GeoZone) was established by the SCP Board of Directors and the Boards of Supervisors in Sonoma and Mendocino Counties to explore expanding local geothermal power capacity. The purpose of the GeoZone is to develop the resources necessary to allow SCP to stop relying on natural gas power plants altogether. To that end, the GeoZone is seeking to sustain existing local geothermal production and add 600 MW of new geothermal capacity.

Ongoing updates, information, and materials about the GeoZone can be found at <https://sonomacleanpower.org/geozone>.

Cooperation Agreements

The Board of Directors approved moving forward with all three selected private partners: Chevron New Energies, Cyrq Energy, and Eavor Inc. The agreements have been fully executed, allowing early project development to proceed. SCP staff holds bi-weekly meetings with each partner to coordinate on site hosting opportunities, grant funding, stakeholder engagement and interconnection. SCP staff is expecting to host public stakeholder sessions in spring when additional details on the demonstration project locations and configurations will be available. A key focus in the interim is building relationships with early project stakeholders, including labor, NGOs, and the surrounding community.

Presentation to Secretary Granholm

SCP had the opportunity to present the GeoZone to Secretary of Energy Jennifer

Granholt on March 7, 2023, as part of a panel organized by the geothermal industry trade association Geothermal Rising. The Department of Energy will be an important partner in funding geothermal technologies that will be deployed in the GeoZone. Staff shared its enthusiasm for geothermal as a load serving entity: that clean firm resources like geothermal are important in providing winter reliability, which is essential to retiring California's dirtiest natural gas power plants, and are expected to provide 40% of SCP's energy needs by the end of the next decade. SCP also stressed the importance of minimizing water usage and echoed other industry comments that federal funding is not commensurate with the opportunity for geothermal technologies.

Grant Opportunities

On March 3, 2023, GeoZone partner Cyrq Energy submitted its application for funding from the Department of [Energy's Long-Duration Energy Storage Demonstrations](#) grant. Cyrq Energy proposed equipping an existing unit at the Geysers with a 20-hour duration thermal storage system that can increase plant capacity by 6 MW during high-need hours. The grant application team included SCP, the National Renewable Energy Laboratory, Babcock and Wilcox, and EthosEnergy. SCP staff provided input on the commerciality of the proposed project, proposed a framework for community benefits and a community engagement strategy, and provided letters of support from the community. SCP and Cyrq Energy are greatly appreciative of the many jurisdictions, local NGOs, and elected officials that supported the grant application. Award notifications for the grant are expected in June.

The Department of Energy released their [Bipartisan Infrastructure Law Enhanced Geothermal System Demonstration](#) grant on February 8, 2023. The grant offers federal cost share in deployment of new subsurface geothermal technologies. SCP is working with both Eavor and Chevron New Energies on potential grant applications, which are due in June.

Transmission Planning

SCP does not expect any GeoZone partners to participate in CAISO's Cluster 15 interconnection study, which requires applications by this April. However, both SCP and its partners are evaluating various interconnection strategies for GeoZone projects, including distribution service through PG&E's Wholesale Distribution Access Tariff. Staff is hopeful projects will be ready to enter PG&E's distribution queue later this year or CAISO's Cluster 16 at the latest.

At the end of last year, CAISO, CPUC, and the CEC signed a [memorandum of understanding \(MOU\)](#) to better coordinate transmission planning, the interconnection process, CEC load forecasts, and CPUC resource planning. The agreement is a good first step towards addressing the current issues with transparency, backlog of interconnection requests, and costly transmission upgrades that are impeding deployment of renewable and storage resources and risk the success of the GeoZone.

Staff is monitoring the Federal Energy Regulatory Commission's [proposed rulemaking on interconnection improvements](#) that could provide much-needed modernizations for the interconnection process. Another issue not addressed by the MOU is the performance of investor-owned utilities in delivering required transmission upgrades in a timely and cost-effective manner. CalCCA is exploring the scope of this problem and potential legislative solutions alongside the alarming issues with unusually long delays in service connections to new homes, hospitals and businesses.

The MOU demonstrates that CPUC's statewide resource portfolios are extremely influential in guiding CAISO transmission planning. In February, the CPUC [transmitted portfolios to the CAISO](#) to guide its 2023-2024 Transmission Planning Process. Although the transmitted portfolio included 2,037 MW of new geothermal resources by 2035, only 139 MW were located in the GeoZone. SCP provided comments on the CPUC's proposed mapping that requested more capacity in the GeoZone, but the CPUC did not see sufficient evidence of commerciality (although they did add 50 MW in response). Advocating the CEC and CPUC to reassess geothermal potential with new technologies, maturing GeoZone projects, submitting interconnection requests, and recruiting other load serving entities to include GeoZone capacity in their resource plans will be important strategies for achieving the required consideration in statewide transmission planning.