April 14, 2025

To: Lake County Board of Supervisors: Supervisor Crandell (Chair), Supervisor Rasmussen (Vice Chair), Supervisor Sabatier, Supervisor Owen, Supervisor Pyska

Re Board Agenda Item for 4/15/2025 Sonoma Clean Power Presentation

As part time residents of Fort Bragg, we currently participate in Sonoma Clean Power's (SCP) Community Choice Aggregation power plan, and we support expansion of this program into Lake County. We understand that the cities of Clearlake and Lakeport are also seeking plans.

We do have concerns and questions about the proposed GeoZone, which would allow development of enhanced geothermal systems (EGS) - using hydraulic fracturing - in Lake County.

At the SCP Board Meeting on March 6th, 2025, Mr. Syphers said that "Clearlake and the surrounding region have some potential geothermal resources that are interesting" as well as "lots of transmission lines." The new technologies could "expand the envelope of viability beyond current geologic, land, and water constraints."

Recall in January 2022, the North Bay Business Journal quoted Geoff Syphers, CEO of Sonoma Clean Power, as focusing on "GeoZone opportunities across more than three-quarters of the land area of Lake County." (Article attached.)

At that time, SCP had completed a preliminary assessment of county-controlled parcels of land in Lake County that were promising for new geothermal development.

The Lake County Board of Supervisors (BOS) unanimously approved Geothermal Setback Ordinance 2379 to protect the Clear Lake shoreline, ridgeline and Mt. Konocti from geothermal development, where past drilling has occurred.

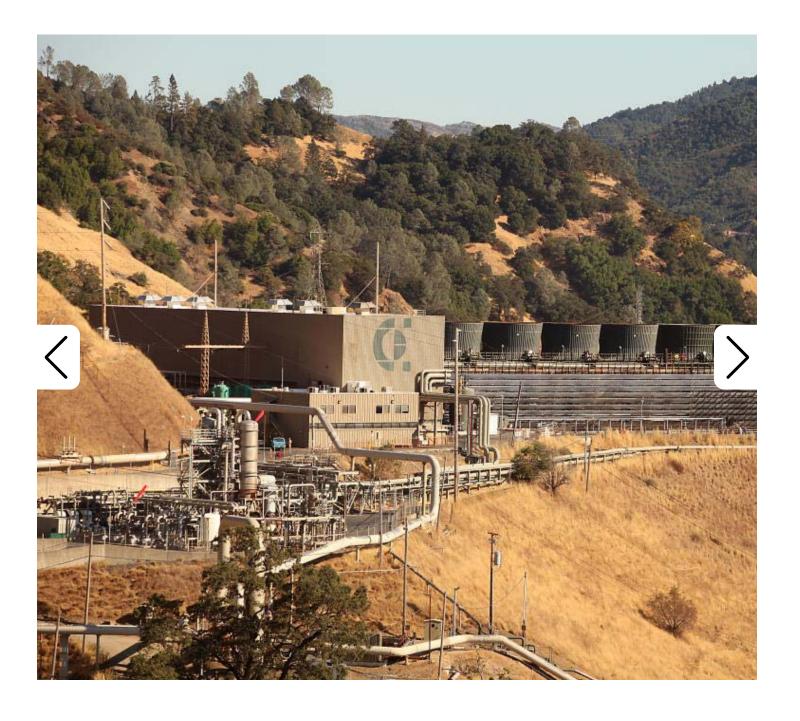
The communities surrounding the Geysers have been forced to live with induced seismicity for decades. Additional environmental issues have included emissions, waste, groundwater contamination, noise, light pollution and water use, while subsidence has been a potential issue in other areas. The technologies may have changed, but the impacts are still unknown.

If the BOS elects to continue exploration of a GeoZone, we would request further details on potential locations be made public as well as assurances that any proposed geothermal development does not occur within the Geothermal Setback.

Respectfully, Holly Harris / Chuck Lamb - Clearlake Oaks

## Lake, Mendocino, Sonoma counties considering big geothermal power expansion

Mendocino County is the first to join an effort led by Sonoma Clean Power to double production of 24/7 clean electricity in Lake, Mendocino and Sonoma counties to backstop solar and wind energy.



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One of Calpine's 15 geothermal power plants in The Geysers region. Calpine is the nation's largest renewable geothermal power producer. Sonoma Clean Power is proposing widespread installation in the area of smaller geothermal plants that require much less water.



## JEFF QUACKENBUSH NORTH BAY BUSINESS JOURNAL

January 10, 2022 5 minute read

A plan to significantly expand geothermal electricity production in the North Bay — in a bid to create more 24/7 renewable production to ease California's move into a zero-emissions energy over the next 24 years — is getting more buy-in from local officials.

The area already is home to the world's largest geothermal power station, The Geysers, which produces almost half of California's electricity production from that energy source, according to Calpine Corp., which runs most of the plants there. Now, Sonoma Clean Power, a community choice aggregation utility that serves upwards of 230,000 customers in Sonoma and Mendocino counties, wants to nearly double that output.

It hopes to spur more investment in smaller-sized, low-water-usage plants, scattering them across much of Lake County and parts of Mendocino and Sonoma counties to bring power production closer to residential and business customers.

To accomplish the plan, Sonoma Clean Power is proposing a geothermal opportunity zone, or GeoZone. On Dec. 7, the Mendocino County Board of Supervisors unanimously voted to join the zone.

Geof Syphers, CEO of Sonoma Clean Power, said the goal is to finish presentations to the counties by next month and by the end of February open a request for proposals from private partners to help with new technology and identify specific sites for pilot projects.

Setting up the zones allows project investors to secure federal tax credits for grid infrastructure and research of new technologies.

"This is a great opportunity for our Mendocino County planning staff to learn about projects like this," said Supervisor Dan Gjerde, who represents Mendocino County on the

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Sonoma Clean Power board, made up of officials from the cities and counties the utility serves.

The Geysers field straddles northeastern Sonoma and southwest Lake counties in the Mayacamas range. In considering any new geothermal plant construction, Mendocino County's planning department is expected to draw from the geothermal project permitting experience of agencies in the other two counties that have been involved with the plant's construction and expansion over the decades.

"Geothermal is hopeful for carbon-free power for all Sonoma Clean Power customers," Gjerde said.

He personally is enrolled in the utility's EverGreen rate program, which sources all its electricity from local renewable sources: The Geysers and six solar projects. The program has a premium 2.5 cents per kilowatt-hour, or about \$13 extra dollars monthly for the average residential customer. Gjerde hopes that the utility will be able to hit 100% renewable for all its customers, and it reached 94% in 2021.

The county has established a priority of lowering its carbon footprint. Toward that goal, it is putting \$2 million of the \$18 million it received from the legal settlements with Pacific Gas & Electric toward reducing emissions from public buildings, according to Gjerde.

A first step toward the goal will be to switch county buildings outside Ukiah, which has its own electrical utility, to the EverGreen program. A target project is to include solar with battery backup as part of the planned roof replacement at the museum and library in Willits. One goal is to provide emergency off-the-grid power for Willits area residents, Gjerde said.

Next, the county will look at shifting its vehicle fleet in Ukiah to electric or plug-in hybrid, installing charging stations at departmental offices. This could happen as part of the city of Ukiah's plan to incorporate more renewable energy sources as early as this year.

In Lake County, a consensus of the Board of Supervisors after the GeoZone presentation Nov. 2 opted to explore it further. A presentation to the Sonoma County Board of Supervisors is anticipated in February, according to Syphers.

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Sonoma Clean Power is focusing on GeoZone opportunities across more than threequarters of the land area of Lake County because of existing data over the decades from test wells allow for rapid action on identifying pilot sites, he said. Other potential areas could be in portions of Sonoma County (Sonoma Valley, northeast of Windsor and southeast of Cloverdale) and Mendocino County's Potter Valley.

The reason why there are more potential North Bay geothermal sites is better technology has come along.

Being explored is tech that can generate power from ground rock that is less than half as hot (100-200 degrees Celsius, or 212-392 degrees Fahrenheit) as what's used for the drysteam plants The Geysers (over 235 degrees C, or 455 degrees F). The newer closed-loop system moves water vertically or horizontally, compared with the dry-steam system at The Geysers. The latter necessitates addition of more water to what's recondensed, and that called for the running of a recycled-wastewater pipeline from west Santa Rosa to refill the hot rock.

The closed-loop technology, also called binary cycle systems, Sonoma Clean Power wants to pursue could result in pilot plants less than the size of a house, allowing for locations closer to populated areas and requiring less stringing of electrical transmission lines, Syphers said. Potential pilot sites will be those near existing transmission lines, he said.

As the Business Journal reported in September, one of the Golden State's key replacements for baseline (always producing) power generation from decommissioned nuclear and natural-gas power plants is geothermal. To make up for the 2.5 gigawatts of potentially always running production from the Diablo Canyon plant, set to go off line in 2025, the California Public Utilities Commission has called for about 1.2 gigawatts of additional geothermal power by 2030 — including 1 gigawatt by 2026 — and 2.3 gigawatts by 2045.

Sonoma Clean Power's GeoZone hopes to produce over 600 megawatts of that by expanding The Geysers geothermal production area, which currently straddles Sonoma and Lake counties. Sonoma Clean Power board, made up of public officials from city and county governments the utility serves, in September voted unanimously to create a

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geothermal opportunity zone that would cover a sizable portion of southeast Mendocino, northeast Sonoma and much of Lake counties.

Plants at The Geysers field currently generate around 700 megawatts of power, after energy needed to pump recycled wastewater from Lake and Sonoma counties is considered.

Jeff Quackenbush covers wine, construction and real estate. Before the Business
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