

The Geysers

Calpine and Community Partners
Celebrating 65 Years of Geothermal Power

October 9, 2025



Calpine's Operations at The Geysers

725 MW of stable, baseload renewable energy The largest geothermal operation in the United States



Enough to power about 725,000 homes



90%+ availability, with the flexibility to maintain high output even during major outages or maintenance



Produces nearly 50% of the geothermal power in the state of California



Prevent emissions of ~2.4 million tons of carbon dioxide - equivalent to removing ~432,500 cars from the road



3% of California in-state generation, 8% of California's renewable electric generation



Utilizes up to 20 million gallons of recycled water per day daily from neighboring communities for steam generation

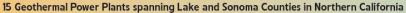


The Geysers by the Numbers



THE GEYSERS: NORTH AMERICA'S LARGEST GEOTHERMAL OPERATION THE GEYSERS BY THE NUMBERS

The Geysers Geothermal Field 2024 Statistics



The Geysers, spanning nearly 45 square miles along the Sonoma and Lake County border, is the largest complex of geothermal power plants in the world. Today, there are 15 geothermal power plants operating at The Geysers and Calpine Corporation, the largest geothermal power producer in the U.S., owns and operates 13 power plants with a net generating capacity of up to 725 megawatts of electricity - enough to power 725,000 homes and businesses

- Calpine's Lake County power plants: Calistoga U-19, Big Geysers U-13, Quicksilver U-16
- Calpine's Sonoma County power plants: Aidlin U-1, McCabe U-5/6, Ridge Line U-7/8, Eagle Rock U-11, Cobb Creek U-12, Lake View U-17, Sulphur Springs U-14, Sonoma U-3, Grant U-20, Socrates U-18
- Northern California Power Agency's Sonoma County power plants: Unit 1 & Unit 2

Calpine's Geothermal Operations:

- · 28,447 acres, about 44.5 square miles
- · Located 75 miles north of San Francisco in the Mayacamas Mountain Range
- 13 Operating Geothermal Power Plants
- 10 Power Plants in Sonoma County: 3 Power Plants in Lake County
- Steam Pipelines = 92.2 miles
- Injection Waterlines = 72 miles
- 21kV Power Lines = 75 miles
- Project Roads = Over 171 miles



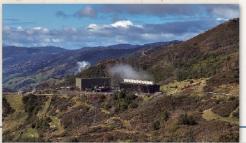
Geothermal Wells:

- Calpine Active Steam Wells: 322
- · Calpine Active Injection Wells: 60
- · Average Well Depth: 8,500 ft
- · Deepest Well: 12,900 ft
- · Total Calpine Geysers wells drilled to date: 616
- · Today's average grassroots drilling time: 77 days (65 days drilling + 7 rig up/down)
- 2024 Average Steam Production Per Well: 36,083 Pounds Per Hour
- · Flow Weighted Average Well Head Temperature: 366.6 Deg F
- Flow Weighted Average Well Head Pressure: 81.1 psig
- Most Recent Steam Well Drilled: Prati State 66 completed on January 7, 2025
- Most Recent Injection Well Drilled: GDC36 completed on January 30, 2024



Power Generation:

- · First Exploratory Well Drilled in 1920; First Modern Well Drilled in 1955, and is still in production today
- 1960: PG&E Geysers Unit 1 began operation, the first large-scale geothermal power plant in the
- · 2024 Max Capacity: 694 Net Megawatts
- 2024 Generation: 5,471,562 Net Megawatt Hours
- 2024 Average Unit Availability: 93.6631%





Calpine Corporation is America's largest generator of electricity from natural gas and geothermal resources with operations in competitive power markets. Our fleet of 79 energy facilities in operation represents over 27,000 megawatts of generation capacity. Through wholesale power operations and our retail businesses, we serve customers in 22 states and Canada. Our clean, efficient, modern and flexible fleet uses advanced technologies to generate power in a lowcarbon and environmentally responsible manner. We are uniquely positioned to benefit from the secular trends affecting our industry, including the abundant and affordable supply of clean natural gas, environmental regulation, aging power generation infrastructure and the increasing need for dispatchable power plants to successfully integrate intermittent renewables into the grid.





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July 2025

Battery Energy Storage at The Geysers



THE GEYSERS: CALPINE'S BATTERY ENERGY STORAGE ENHANCING GRID RELIABILITY ACROSS CALIFORNIA

Battery Energy Storage System (BESS) at The Geysers

In 2024, Calpine added two projects at The Geysers totaling 38-megawatts. Bear Canyon Energy Storage is a 13-megawatt BESS and the West Ford Flat Energy Storage is a 25-megawatt BESS project, both located on repurposed geothermal power plant sites.

Both are a typical BESS design, with equipment "containerized" in various units, and use direct current (DC) Lithium-ion batteries. These projects will utilize the existing 230kV interconnection equipment and transmission lines that had been previously used by the geothermal facilities.

Installation for both projects was performed under a Project Labor Agreement with the appropriate building trades providing additional civil, electrical and mechanical construction jobs. The projects are front-of-the-meter and charge from the grid, and are not connected or impactful to The Geysers geothermal energy output. They provide critical Northern California grid reliability.







SAFETY IS A CORE VALUE AT CALPINE

We put safety first in everything we do. Together, these projects comprise 42 Tesla Megapacks, battery energy storage systems designed with integrated software controls and safety systems-operating safely, as certified and tested-to support grid reliability.



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July 2025

Geothermal - Clean, Reliable, Renewable Power



North Geysers Incremental Development

25 MW Expansion Project



Calpine is completing a 25 MW expansion project at The Geysers. The North Geysers Incremental Development ("NGID") will help meet mid-term reliability needs for the California electricity system.

Currently, with 13 power plants in operation at The Geysers, Calpine Corporation reliably supports California with up to 725 megawatts of clean, geothermal energy every hour of every day. The NGID project will expand Calpine's operations by drilling eleven new production and two new injection wells within the Northern portion of The Geysers resource. Utilizing existing steam field infrastructure, the wells will be drilled on four well pads with piping to transfer the superheated steam to nearby operating geothermal power plants to increase overall output.

NGID is a multi-year project that Calpine will bring on-line in phases, anticipated to be fully completed by June 2026. In operation for 65 years, geothermal from The Geysers is a proven consistent source of renewable energy and the NGID project is the next step in Calpine's sustainable management approach of the resource while adding to the many community and environmental benefits to local region.





Calpine's Commitment to Community



Employing - Contributes to its local economy by providing over 300 full-time and 150 contractor jobs



Recycling - Environmental steward, recycling up to millions of gallons of recycled water daily from neighboring communities for steam generation



Supporting - Largest property taxpayer in Lake County and 2nd largest in Sonoma County. Royalties on geothermal generation at The Geysers results in both Lake & Sonoma Counties receiving a portion of federal royalty payments as well as royalties paid to area landowners & State of California that benefits the California State Teachers Retirement Fund.



Engaging - Community engagement through sponsorships, donations and volunteerism. Calpine promotes energy education through the Geothermal Visitors Center and free community tours: www.geysers.com.





The Partnership - History & Benefits

The History - what led to the Santa Rosa Geysers Recharge Project's Partnership

1960 PG&E begins operating an 11 MW power plant

1970s-80s Additional plants are built by developers 1987 Generation peaks at 2,000 MW, enough to power 2,000,000 homes 1989
Calpine enters
the Geothermal
business;
meanwhile
production was
dropping
significantly as
the reservoir was
being depleted

1990
The Geysers, Lake
County, and
California Energy
Commission
identify Lake
County recycled
water as source
of water

1997 Southeast Geysers Effluent Pipeline commenced 2003
Santa Rosa
Geysers
Recharge
Pipeline, 41mile-long
pipeline is
completed

The Shared Benefits from the Long-standing Partnership

- Provides an affordable, environmentally friendly, and weather independent recycled water disposal system
- Replenishes The Geysers' steam fields, ensuring reliable, clean energy for generations to come
- This recycled water sustains geothermal production, generating federal royalties for the region
- Dramatically reduces water footprint and saves ratepayers treatment costs





The Geysers - Clean Energy from Recycled Water

The Geysers is sustained by reinjecting water molecules from steam generation and by injecting cleansed municipal recycled water into the reservoir

Injection water is sourced from...

Steam Generation

Reinjection - water molecules from steam are reinjected after being cooled, with the remainder of the water evaporating back into the atmosphere Recycled water & Lake Water

Southeast Geysers Effluent Pipeline (SEGEP) - Since 1997, SEGEP has delivered recycled water to the The Geysers

In Lake County, **85**% of recycled water is transported to The Geysers, providing a consistent source of clean, renewable energy

Recycled Water

Santa Rosa Geysers Recharge Project (SRGRP) - Since 2003, SRGRP has delivered recycled water to Calpine's geothermal operations at The Geysers





Santa Rosa Geysers Recharge Pipeline



<u>Geysers Pipeline 20th Anniversary sizzle reel v6e - YouTube</u>







