

AGENDA

SEISMIC MONITORING ADVISORY COMMITTEE

May 12, 2022 at 9:30 A.M.
Calpine Geothermal Visitors Center
15500 Central Park Road, Middletown

Join Zoom Meeting

<https://us06web.zoom.us/j/86398274023?pwd=bVNVTHV1SVZOVys1NVVtLytQU2M1dz09>

Meeting ID: 863 9827 4023

Passcode: 606173

- I. Introductions
- II. Approval of SMAC minutes from **November 8, 2021 meeting**
- III. Southeast Geysers Effluent Pipeline (SEGEP) Operations & Northern California Power Agency Update – Ed Voge, NCPA
- IV. Santa Rosa Geysers Recharge Project (SRGRP) Update & Calpine Update - Craig Hartline, Calpine Corporation
- V. Report from CALGEM – California Geologic Energy Management Division – Amar Rao
- VI. Report on US Geothermal - Western Geo Power– Scott Nichols
- VII. Anderson Springs Community Service District – Rose Knudsen
- VIII. Anderson Springs Public Input – Jacquelyn Bartlett
- IX. Cobb Area Water –
- X. Cobb Area Public Input – Robert Stark
- XI. Middletown Community Input – Linda Diehl Darms
- XII. General Public Input
- XIII. Schedule Next Meeting for _____
- XIV. Adjournment

SEISMIC MONITORING ADVISORY COMMITTEE (SMAC)

November 8, 2021 meeting

Virtual Meeting Due to COVID-19 Concerns

<https://us06web.zoom.us/j/89199006968?pwd=cHNpeWVzcTduMld5bWNXZTFBNEcrdz09>

Meeting ID: 891 9900 6968 Passcode: 838137

One tap mobile

+16699006833,,89199006968#,,, *838137# US (San Jose)

Find your local number: <https://us06web.zoom.us/j/koXQF3lpw>

MINUTES

Meeting Called to order by Scott Harter, Committee Chair (Lake County Special Districts) at 9:30 A.M.

Minutes recorded via Zoom and transcribed to Draft Minutes by Lori Baca.

I. Introductions

Introductions conducted by Scott Harter:

Present: Scott Harter, Committee Chair (Lake County Special Districts), Craig Hartline (Calpine/Geysers Power Company, LLC), Bill King (Calpine), Ed Voge (Northern California Power Agency), Danielle Matthews Seperas (Calpine)

II. Approval of SMAC minutes from Monday, May 10, 2021

Motion made by Bill King to approve the minutes, second by Amar Rao, all in favor. Motion carried.

III. Update of SE Geyser Pipeline Operations, Ed Voge (Figures 1-7)

- Historical SE Geysers Effluent Pipeline Deliveries to The Geysers since 1997
 - Total Daily Delivery = 63.2 billion gallons at an average rate of 5,003 gpm

Reporting period, April 1, 2021 through September 30, 2021

- Average Daily Injection = 2.71 MGD or 1,880 gpm
- SEGEP Availability = 70.5%
- Observed Seismicity
 - The USGS Recorded 34 Seismic Events of Magnitude 1.5 and Greater, this is down from the previous six month reporting period.
 - Steam Production for the area in the reporting period was 17.7 billion pounds mass for this reporting period.
- Seismic Activity in The Geysers (KCGRA)
 - 319 events of magnitude 1.50 were recorded for this reporting period. There were 6 events of magnitude 3.0 or greater. The largest three events were all magnitude 3.98 which all occurred on April 19. Figure 6 shows the trends of seismic events for the Geysers since 2010 while Figure 7 shows the locations of the events for the last six months.

There was more discussion on each figure noted above. Please

see presentation on Calpine website for additional data details

**IV. Geysers Power Company, LLC Report, Craig Hartline (Figures 1-38)
Reporting period, April 1, 2021 through September 30, 2021**

- Seismic Monitoring Networks
 - USGS/ Northern California Seismic Network
 - LBNL/ Geysers Power Company, LLC Seismic Monitoring Networks
 - LBNL/ Geysers Power Company, LLC Calpine Strong Motion Network
- Fieldwide Seismicity Analysis
- Strong Motion Data Analysis
 - Peak Ground Acceleration
 - Energy/Distance/Modified Mercalli Intensity
- Community Hotline
- Water Injection and Induced Seismicity Animations
- Calpine 3D Structural Model
 - Fracture/Fault Analysis
 - Local Seismicity Analysis
 - 3D Pre-Drilling Project Analysis (Well Planning)
- Seismic Events Occurring Near Anderson Springs Reporting Period
- Summary

**side note – not noted in packet - Oct 26th event and also mention of the Forge Project.

There was much discussion on each figure noted above. Please see presentation on Calpine website for additional data details.

V. Report on CALGEM, Amar Rao

Amar was present and mentioned four permits for the year so far, two of them were supplemental for injection well #17.

VI. Report on US Geothermal – Western Geo Power, Scott Nichols

Scott Nichols was not present

VII. Anderson Springs Community Service District, Rose K

Rose Knudsen was not present

VIII. Anderson Springs Public Input – Jacquelyn Bartlett

Jacquelyn Bartlett was not present

IX. Cobb Area Water, Ben Murphy

Ben Murphy was not present and has been removed

X. Cobb Area Public Input, Robert Stark

Robert Stark was present and commented on the thoroughness of the Committee and thanked Craig and NCPA.

- XI. Middletown Community Input - Linda Darms**
Was present earlier in the meeting but did not respond when called.
- XII. General Public Input** – Craig mentions needing a new representative and possibly adding a potential person, Chet Hotp. Charlene Wardlaw also mentions a possible contact as well.
- XIII. Schedule Next Meeting for May 12, 2022.** Scott Harter confirms next meeting date.
- XIV. Adjournment**
Motion– Robert Stark, all in favor (everyone)
Meeting Adjourned at approx. 11:12 AM

Next Meeting for Thursday May 12, 2022

Meeting Agenda and Full Presentations are available online at:
<http://www.geysers.com/smac.aspx>