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CALIFORNIA ENERGY COMMISSION

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STAFF APPROVAL OF PROPOSED CHANGE

CALISTOGA GEOTHERMAL PROJECT UNIT 19

(81-AFC-01C)

On April 11, 2019, Geysers Power Company, LLC, filed a petition for post-certification change with the California Energy Commission requesting to modify the Calistoga Geothermal Power Plant (CGP). The change would replace the existing underground 21-kilovolt (kV) standby circuit with an aboveground line. The 80-megawatt (MW) facility was certified by the Energy Commission on February 1, 1982 and began commercial operation on April 10, 1984. The CGP is located on the east side of the Mayacmas Mountains at approximately 3,660 foot elevation, in the headwaters of Anderson Creek, in the Lake County portion of the Geysers Known Geothermal Resources Area.

DESCRIPTION OF PROPOSED CHANGE

This petition for a post-certification project change includes the following changes:

- Install a replacement line, consisting of new conduit and cable that would be installed through a new underground route from Pole 00403 outside the plant yard to a new pole.
- The replacement line would then transition to an aerial primary attached to poles for four spans and directly feed the existing transformer from overhead at the north end of the switchyard.

The petition is available on the Energy Commission's CGP webpage at:

https://ww2.energy.ca.gov/sitingcases/pre1999_page/index.php?xkm=ajdkha2385duhkasd201dsasjd5598fhajkhs

ENERGY COMMISSION STAFF REVIEW

Title 20, California Code of Regulations, section 1769 states that a project owner shall petition the commission for approval of any change it proposes to the project design, operation, or performance requirements.

Energy Commission technical staff reviewed the petition for potential environmental effects and consistency with applicable laws, ordinances, regulations, and standards (LORS). Staff has determined that the technical or environmental areas of: Biological Resources, Efficiency, Hazardous Materials Management, Land Use, Public Health, Reliability, Soil and Water Resources, Transmission System Engineering, and Visual Resources are not affected by the proposed changes.

For the technical areas of: Air Quality, Cultural Resources, Facility Design, Geological/Paleontological Resources, Noise and Vibration, Socioeconomics, Traffic and Transportation,

Transmission Line Safety and Nuisance, Waste Management, and Worker Safety and Fire Protection, staff has determined the project changes would not cause significant effects on the environment and the project would continue to comply with applicable LORS. Staff notes the following for these technical areas:

AIR QUALITY

The construction equipment is expected to comply with all applicable air quality laws, ordinances, regulations, and standards. Staff is not expecting serpentine in soils at the project site. However, if the responsible parties find serpentine during any ground disturbance, the local air district would need to be notified and a Serpentine Dust Mitigation Plan would need to be implemented. This request is not expected to cause a significant impact to air quality due the limited scope and duration of the construction activities.

CULTURAL RESOURCES

Cultural resources have not been identified in the area of the proposed new line, nor are impacts on cultural resources expectable here during ground disturbance because of the age of the existing grade. In the unlikely event that cultural resources are encountered during construction of the line, the conditions of certification in the Energy Commission Final Decision (Commission Decision) would mitigate such an impact.

FACILITY DESIGN

The construction of the new circuit must comply with the California Building Code and related engineering laws, ordinances, regulations, and standards. Implementation of the existing Facility Design conditions of certification in the Commission Decision would ensure this.

GEOLOGICAL/PALEONTOLOGICAL RESOURCES

The proposed 21-kV standby circuit would not result in additional significant environmental impacts in terms of geologic resources, paleontologic resources, or geologic hazards in comparison with the original analysis for the approved project, provided the project owner complies with Geotechnical Engineering Finding 4, and Geotechnical Engineering Condition 1 in the Commission Decision.

The proposed construction would not require any change to the findings or conditions of certification related to geologic resources, paleontological resources, or geologic hazards in the Decision. Staff also concludes that compliance with current geologic resources, paleontological resources, or geologic hazards LORS, findings, and conditions specified by the Decision would ensure mitigation of the project effects at the site.

NOISE AND VIBRATION

Construction work associated with this petition would be temporary and would occur during the daytime hours. Any noise generated during these activities would result in a less-than-

significant impact with implementation of the existing Noise conditions of certification in the Commission Decision. The changes proposed in this petition would have no effect on the plant's operational noise.

SOCIOECONOMICS

The proposed change to replace the existing underground 21-kV standby circuit with an aboveground line would require approximately four contractors and take approximately four to five weeks to complete. From a socioeconomics standpoint, the proposed change would have insignificant workforce-related impacts on housing and community services.

TRAFFIC AND TRANSPORTATION

The proposed change to replace the existing underground 21-kV standby circuit with an aboveground line would generate a negligible amount of temporary traffic trips and would result in less than significant impacts to transportation.

TRANSMISSION LINE SAFETY AND NUISANCE

Condition 13-2 requires that the project owner "Construct, operate and maintain the transmission lines in accordance with Title 14..." essentially requiring compliance with vegetative clearance requirements both after construction and through at least annual inspections. Compliance with this condition is verified by a signed statement from a civil engineer submitted to both the Energy Commission and the California Department of Forestry. This condition would apply to the new 21 kV transmission line.

Condition 13-5 requires that the design and construction of the transmission line comply with California Public Utilities Commission General Order 95. Compliance with this condition is met through a signed statement from a registered electrical engineer verifying compliance with GO 95. This condition would apply to the new 21 kV transmission line.

WASTE MANAGEMENT

Ground disturbing activities would consist of excavating a 100-foot trench that is 12-inches wide and 48-inches deep. There would also be excavation by auguring for installation of power poles and guy anchors for 5 new power poles (PP2 through PP6). All of these excavations would take place in previously disturbed material. During the exchange/installation of the 21kV standby circuit, waste produced may include but is not limited to: replaced parts (e.g. wiring, connectors, valves, gaskets, etc.), packing materials, and empty containers. Waste generated would be handled and disposed of in accordance with Findings 1, 2, 8, and 9 of the Commission Decision. Compliance with these existing Waste Management Findings would mitigate any impacts.

WORKER SAFETY AND FIRE PROTECTION

Activities performed during construction of the transmission line would include the excavation and pouring of new foundations for six poles, and would be performed in compliance with the worker safety and fire life safety requirements of the conditions of certification in the Commission Decision. Staff determined that by continuing to comply with existing conditions of certification and LORS, the project owner’s proposed installation of an above ground transmission line would not have a significant effect on worker safety or the environment.

Staff’s conclusions for each technical or environmental area are summarized in the table below.

Summary of Staff Responses to Petition

TECHNICAL / ENVIRONMENTAL AREAS REVIEWED	STAFF RESPONSE	
	Technical Area Not Affected	No Significant Environmental Impact or LORS Inconsistency
Air Quality		X
Biological Resources	X	
Cultural Resources		X
Efficiency	X	
Facility Design		X
Geological Resources		X
Hazardous Materials Management	X	
Land Use	X	
Noise & Vibration		X
Paleontological Resources		X
Public Health	X	
Reliability	X	
Socioeconomics		X
Soil & Water Resources	X	
Traffic & Transportation		X
Transmission Line Safety & Nuisance		X
Transmission System Engineering	X	
Visual Resources	X	
Waste Management		X
Worker Safety & Fire Protection		X

ENVIRONMENTAL JUSTICE

The **Environmental Justice – Figure 1** shows 2010 census blocks in the six-mile radius of the Calistoga Geothermal Power Plant with a minority population greater than or equal to 50 percent. The population in these census blocks represents an environmental justice (EJ) population based on race and ethnicity as defined in the United States Environmental Protection Agency's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*. Staff conservatively obtains demographic data within a six-mile radius around a project site based on the parameters for dispersion modeling used in staff's air quality analysis. Air quality impacts are generally the type of project impacts that extend the furthest from a project site. Beyond a six-mile radius, air emissions have either settled out of the air column or mixed with surrounding air to the extent the potential impacts are less than significant. The area of potential impacts would not extend this far from the project site for most other technical areas included in staff's EJ analysis.

Based on California Department of Education data in the **Environmental Justice – Table 1**, staff concluded that the percentage of those living in the Cloverdale Unified School District and Geyserville Unified School District (in a six-mile radius of the project site) and enrolled in the free or reduced price meal program is larger than those in the reference geography, and thus are considered an EJ population based on low income as defined in *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*.

Environmental Justice – Figure 2 shows where the boundaries of the school district are in relation to the six-mile radius around the Calistoga Geothermal Power Plant site.

Environmental Justice – Table 1
Low Income Data within the Project Area

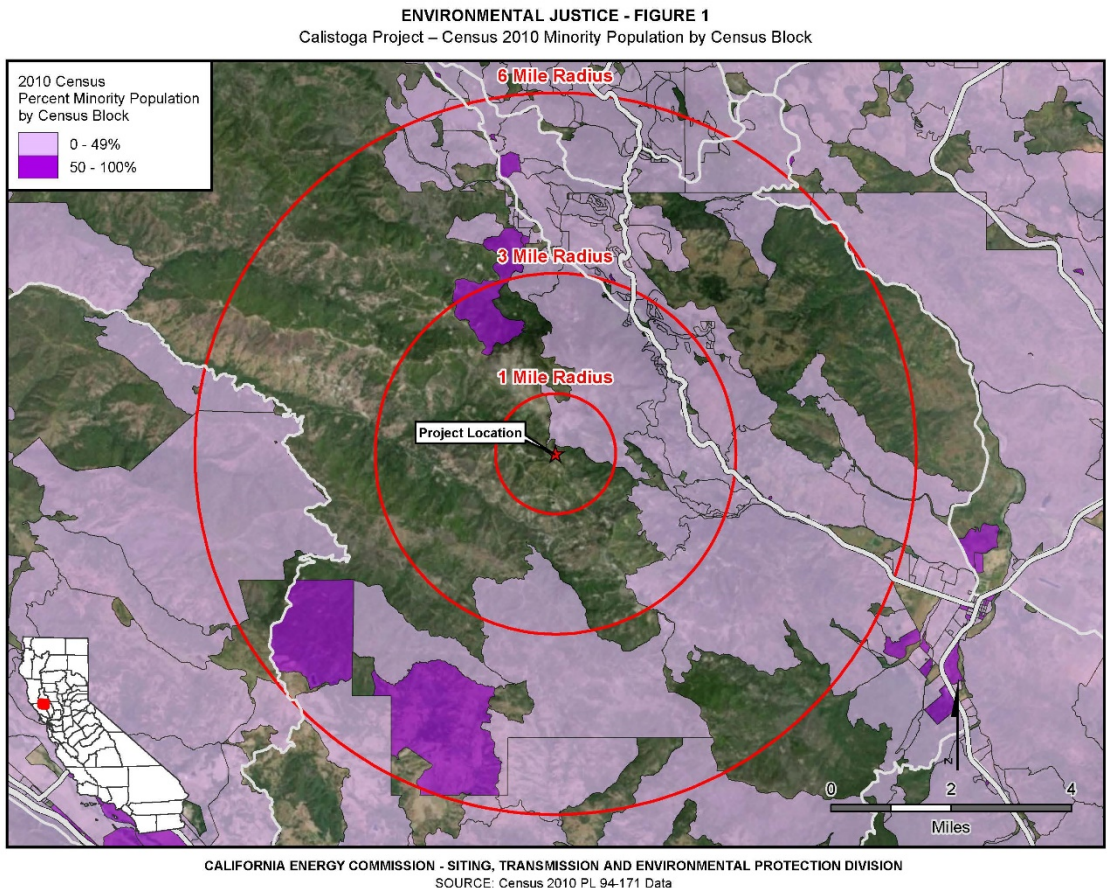
LAKE COUNTY SCHOOL DISTRICTS IN SIX-MILE RADIUS	Enrollment Used for Meals	Free or Reduced Price Meals	
Middletown Unified	1,712	1,061	62.0%
REFERENCE GEOGRAPHY			
Lake County	9,549	7,324	76.7%
SONOMA COUNTY CCHOOL DISTRICTS IN SIX-MILE RADIUS	Enrollment Used for Meals	Free or Reduced Price Meals	
Cloverdale Unified	1,440	866	60.1%
Geyserville Unified	237	138	58.2%
REFERENCE GEOGRAPHY			
Sonoma County	70,445	33,570	47.6%
Source: CDE 2018. California Department of Education, DataQuest, Free or Reduced Price Meals, District level data for the year 2017-2018, < http://dq.cde.ca.gov/dataquest/ >.			

The following technical areas (if affected) consider impacts to EJ populations: Air Quality, Cultural Resources (indigenous people), Hazardous Materials Management, Land Use, Noise

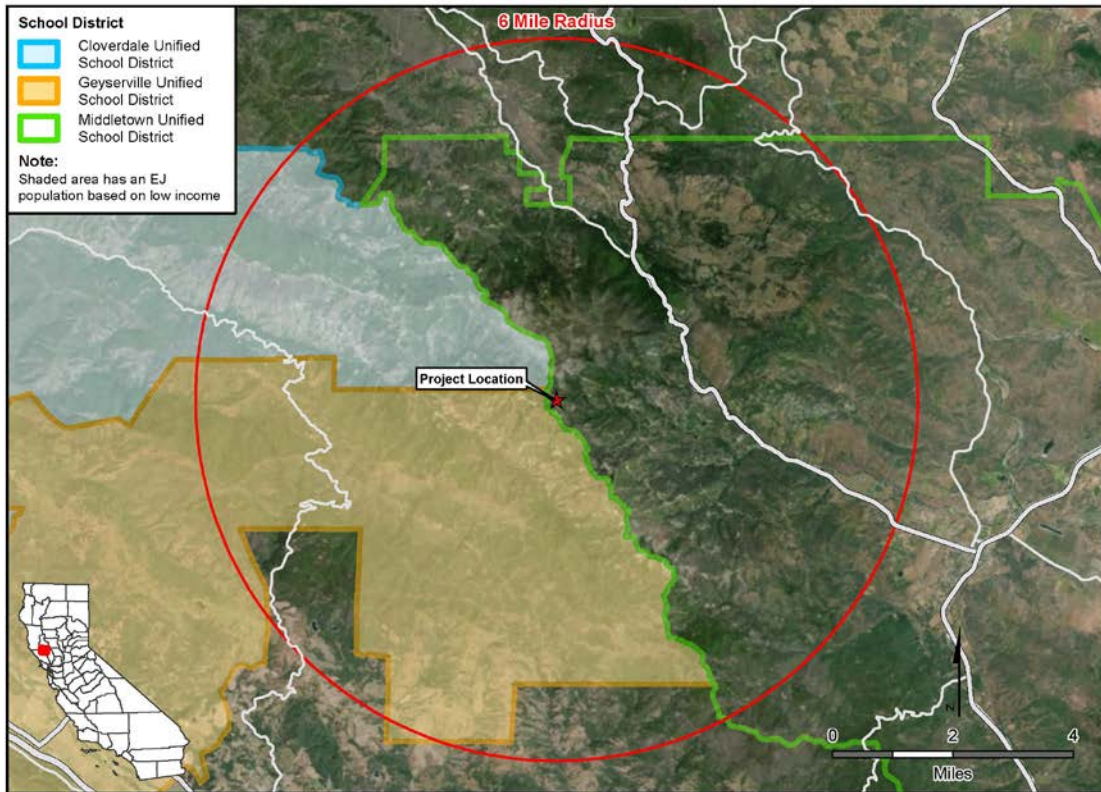
and Vibration, Public Health, Socioeconomics, Soil and Water resources, Traffic and Transportation, Transmission Line Safety and Nuisance, Visual Resources, and Waste Management.

Environmental Justice Conclusions

For the technical areas affected by the project changes – Air Quality, Cultural Resources, Noise and Vibration, Socioeconomics, Traffic and Transportation, and Transmission Line Safety and Nuisance – staff concludes that impacts would be less than significant, and thus would be less than significant on the EJ population represented in **Environmental Justice – Figure 1 and Figure 2 and Environmental Justice – Table 1.**



ENVIRONMENTAL JUSTICE - FIGURE 2
Calistoga Project – Environmental Justice Population Based on Low Income



CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION
SOURCE: Census 2010 PL 94-171 Data; California Department of Education Data, DataQuest

ENERGY COMMISSION STAFF DETERMINATION

Pursuant to Title 20, California Code of Regulations, section 1769(a)(3)(A), Energy Commission staff has determined for this petition that approval by the Commission at a noticed business meeting or hearing is not required and the proposed changes meet the criteria for approval by staff because:

- i. there is no possibility that the change may have a significant impact on the environment, or the change is exempt from the California Environmental Quality Act;
- ii. the change would not cause the project to fail to comply with any applicable laws, ordinances, regulations, or standards; and
- iii. the change will not require a change to, or deletion of a condition of certification adopted by the commission in the final decision or subsequent amendments.

WRITTEN COMMENTS

This statement of staff approval of the proposed project changes has been filed in the docket for this project. Pursuant to section 1769(a)(3)(C), any person may file an objection to staff's determination within 14 days of the filing of this statement on the grounds that the project change does not meet the criteria set forth in section 1769(a)(3)(A). Absent any objections as specified in 1769(a)(3)(C), this petition will be approved 14 days after this statement is filed.

Written comments or objections to staff's determination may be submitted using the Energy Commission's e-Commenting feature, as follows: Go to the Energy Commission's Calistoga Geothermal Power Plant webpage and click on either the "Comment on this Proceeding," or "Submit e-Comment" link. When your comments are filed, you will receive an email with a link to them.

Written comments or objections may also be mailed or hand-delivered to:

California Energy Commission
Dockets Unit, MS-4
Docket No. 81-AFC-01C
1516 Ninth Street
Sacramento, CA 95814-5512

All comments and materials filed with the Dockets Unit will be added to the facility Docket Log and be publically accessible on the Energy Commission's webpage for the facility.

If you have questions about this statement, please contact Christine Root, Compliance Office Manager, at (916) 654-4745, or by fax to (916) 654-3882, or via e-mail at Christine.Root@energy.ca.gov.

For information on participating in the Energy Commission's review of the CGP petition, please contact the Energy Commission's Public Adviser at (916) 654-4489, or at (800) 822-6228 (toll-free in California). The Public Adviser's Office can also be contacted via e-mail at publicadviser@energy.ca.gov. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.ca.gov.

List Serve: Calistoga Geothermal Project listserv