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Docket Number:	80-AFC-01C
Project Title:	Sacramento Municipal Utility District SMUDGEO #1
TN #:	210184
Document Title:	Sonoma (Unit 3) Petition to Amend for Low Pressure Rotor Replacement
Description:	N/A
Filer:	Camile Remy-Obad
Organization:	Geysers Power Company, LLC
Submitter Role:	Applicant
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GEYSERS POWER COMPANY, LLC
10350 SOCRATES MINE ROAD
MIDDLETOWN, CA 95461

January 21, 2016

Ms. Camille Remy-Obad Compliance Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

RE: Geysers Power Company Sonoma (Unit 3) Geothermal Project: 80-AFC-01C Low Pressure Rotors (LPR)

Dear Ms. Remy-Obad:

Pursuant to Section 1769 of the California Energy Commission ("CEC") Siting Regulations, Geysers Power Company, LLC ("GPC") hereby submits the attached Petition for a Staff Approved Modification ("Petition") for the replacement of low pressure steam turbine rotors at the Sonoma (Unit 3) power plant ("Project").

GPC plans to replace the original steam turbine rotors designed for 100 psig steamfield pressures with lower pressure turbine rotors designed for the current steamfield pressures of 50 to 60 psig. The schedule for installation of the rotors would be fourth quarter of 2016 during a maintenance overhaul. The efficiency of the LPR will still be lower than the original design but we expect an efficiency gain of approximately 18% in our current steamfield conditions.

Replacement of the rotors will not result in a significant effect on the environment. Because the new rotors will be located on the same site as the rotors replaced and will have substantially the same purpose and capacity as the rotors replaced, this Project is categorically exempt from CEQA, under section 15032 of the CEQA guidelines. The Project will continue to comply with all applicable laws, ordinances, regulations, and standards ("LORS"). The proposed LP rotors will allow the facility to operate closer to its permitted output and will not cause the facility to operate outside its design operation conditions (Table 1). The facility will continue to meet all existing emissions limits established in the existing permits.

The NSCAPCD will be consulted to determine if an Authority to Construct (ATC) permit is necessary based upon the description of the planned work. The fact that there will be no significant changes to the equipment descriptions or operating conditions of the Permits to Operate for the Project will be taken into consideration during their review. Should an ATC be required, copies of the air permit application will be provided to the CEC.

In summary, the proposed rotor replacements will not result in any significant environmental

effects and there are no changes required to the Conditions of Certification as set forth in the 1980 Commission Decision. Further, the proposed replacement will not affect the Project's compliance with all applicable LORS.

Please do not hesitate to contact me if you have any further questions.

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Bruce Carlsen
Director, Environmental Services

Sonoma Geothermal Power Project (Geysers Unit 3)

(80-AFC-1C)

Petition for Modification

Submitted by

Geysers Power Company, LLC

January 2016

GEYSERS POWER COMPANY, LLC

SOCRATES (UNIT 18) GEOTHERMAL POWER PLANT

PETITION FOR A STAFF APPROVED MODIFICATION

Pursuant to Section 1769 of the California Energy Commission's Siting Regulations, Geysers Power Company, LLC (GPC) hereby submits the following information in support of a staff approved modification.

Section 1769 (a)(l)(A) and (B) requires a description of the proposed modifications, including new language for affected conditions and the necessity for the modifications.

GPC plans to replace the original steam turbine rotors designed for 100 psig steamfield pressures with lower pressure turbine rotors designed for the current steamfield pressure s of 50 to 60 psig. The original rotors will serve as spares and could be utilized in the future. The efficiency of the LPR will still be lower than the original design but we expect an efficiency gain of approximately 18% in our current steamfield conditions.

Approval of the Petition will not result in a significant effect on the environment. The Project will continue to comply with all applicable laws, ordinances, regulations, and standards ("LORS"). The proposed LP rotors will allow the facility to operate closer to its permitted output and will not cause the facility to operate outside its design operation conditions. The facility will continue to meet all existing emissions limits established in the existing permits. There are no conditions that need to be changed for this project.

Section 1769(a)(l)(C) requires a discussion of whether the modification is based on information that was known by the petitioner during the certification proceeding, and an explanation of why the issue was not raised at that time.

The proposed modification is not based upon information that was known during the certification proceeding for the Project. This project is a result of declining steamfield pressures.

Section 1769(a)(l)(D) requires a discussion of whether the modification is based on new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision, and explanation of why the change should be permitted.

The modification does not change or undermine the assumptions, rationale, findings, or other bases of the Commission's decision certifying the Project.

Section 1769(a)(l)(E) requires an analysis of the impacts the modifications may have on the environment and proposed measures to mitigate any significant adverse impacts.

There is no possibility that the proposed modification will result in any significant adverse

environmental impacts; thus, no mitigation measures are required. The proposed rotor replacements will not cause the facility to operate outside its design parameters. The Project will continue to meet all existing emissions limits established in the existing permits. Because the new rotors will be located on the same site as the rotors replaced and will have substantially the same purpose and capacity as the rotors replaced, this Project is categorically exempt from CEQA, under section 15032 of the CEQA guidelines.

Section 1769(a)(l)(F) requires a discussion of the impact of the modification on the facility's ability to comply with applicable laws, ordinances, regulations, and standards.

The proposed modification will not impact the Project's ability to comply with applicable laws, ordinances, regulations, and standards ("LORS").

Section 1769(a)(l)(G) requires a discussion of how the modifications affect the public.

The proposed modification will not adversely affect the public. The modification will not require physical changes to the environment, and will not negatively impact air quality or public health. Therefore, there are no significant adverse effects on property owners that will result from the proposed modification.

Section 1769(a)(l)(H) requires a list of property owners potentially affected by the modification is required.

The proposed modification will have no significant environmental effects and will be in compliance with applicable LORS. Therefore no property owners will be affected by the modifications.

Section 1769(a)(l)(I) requires a discussion of the potential effect on nearby property owners, the public and the parties in the application proceeding.

The proposed modification will have no significant environmental effects and will be in compliance with applicable LORS. Therefore, the proposed changes will have no impact on property owners, the public, or any other parties.

Table 1. Geysers Power Company Sonoma (Unit 3) Comparison of the 1982 Original Rotor and the 2016 Low Pressure Rotor

	1982 Original Rotors		2016 Low Pressure Rotors(LPR)			
	1981 Design [1]	2015 Normal Operation	2017 Normal Operation	2017 Normal Unit 4[2] shutdown	2017 Off Normal Unit 20 off line	2017 Off Normal Unit 20 & 19 off line
Steam flow K#/hour[3]	950	742	858	917	942	1082
Pressure psig	101.3	59.5	53.4	58.4	60.4	72.3
MW (net)[4]	64.2	37	50.4	55.0	57.0	67.5
K#/MW	14.9	20.1	17.0	16.7	16.5	16.0
Potential operating days/year	365	365	0	365	0-60	0-60

Notes:

1. Data from Stone and Webster Cycle Balance, SMUDGEO#1, Sacramento Municipal Utility District, Drawing 13400-EJ-0108-2
2. Unit 4 is the West Ford Flat Power Plant, a non-CEC facility with a steamfield cross-tie steam pipeline.
3. NSCAPCD 2010 Title V permit lists 1,100K#/hr steam flow.
4. NSCAPCD 2010 Title V permit generator nameplate rating is 78 MW gross. Typical house load is 5 MW.