

Record of Categorical Exclusion for

San Emidio Geothermal Power Plant Energy Efficiency Upgrades

USG Nevada, LLC (a U.S. Geothermal Inc., subsidiary)

Description of Proposed Action:

The Department of Energy's (DOE) proposed action is to issue a loan guarantee to USG Nevada LLC (USGN) for the proposed upgrades to the San Emidio Geothermal Power Plant (the Project), pursuant to Title XVII of the Energy Policy Act of 2005. This Project is located at an existing geothermal power plant, which has been operating since 1988 in Washoe County, Nevada, approximately 90 miles north-northeast of Reno, 12 miles south of Empire, and 3.5 miles west of State Highway 447. The Project is comprised of two phases to provide a nominal 17.2 megawatts (MW) of renewable energy electric power. Phase 1 would involve the completion of a repowering action already undertaken by USGN to replace an existing 2.5 MW net geothermal power unit with a nominal 8.6 MW power unit using existing production and injection wells. Phase 2 would involve installation of an additional nominal 8.6 MW geothermal repowering unit, and drilling of three new geothermal production wells and up to two new injection wells.

In October 2010, DOE and the U.S. Department of Interior, Bureau of Land Management, (BLM) completed a joint Environmental Assessment (EA) (DOI-BLM-NV-W030-2010-0006-EA: DOE/EA-1810) documenting site-specific analysis of potential impacts from proposed drilling activities by USGN. The EA analyzed the drilling of six geothermal wells, including two of the production wells for Phase 2 of this Project, to test the San Emidio geothermal reservoir. The EA evaluated geothermal power development on BLM-administered public lands, and described the cumulative impacts of nine wells drilled on private lands in the vicinity of the site. On December 17, 2010, DOE wrote a Finding of No Significant Impact related to issuing financial assistance (grant) under the American Recovery and Reinvestment Act of 2009 to USGN to validate innovative geothermal exploration technologies and drill two production-diameter geothermal wells in the San Emidio resource area.

The Phase 1 and Phase 2 power units that constitute the San Emidio upgrades would be located on previously graded and disturbed land on a heavily-developed industrial site. There are buildings on this site that were once part of a geothermal-powered onion and garlic dehydration facility, which the Project would use for office and administrative purposes. New equipment to be installed and upgraded includes heat exchangers, turbines, generators, a cooling tower, and approximately 1,200 feet of pipeline and transmission line. The project area has existing roads, pipelines, transmission lines and geothermal wells that would be used by the Project. The production and injection wells are on or adjacent to the project site. The Project would employ a binary Rankine power cycle to extract heat from geothermal brine for electric power production using a closed loop process. All the geothermal brine would be re-injected below ground. Electricity produced by the power plant would be transmitted over an existing private 60-kV power line to a substation four miles away. The Project would not emit air or water pollutants.

Number and Title of Categorical Exclusion:

The actions that would be taken pursuant to the proposed loan guarantee for USGN, as described above, are consistent with and covered by categorical exclusions B5.1 for the upgrades and installation of the energy-efficient geothermal systems, and B.3.7 for drilling the new geothermal production and injection wells. The full text of these categorical exclusions is as follows:

B 5.1 as provided in 10 CFR § 1021, Appendix B to Subpart D, Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

B3.7 as provided in 10 CFR § 1021, Appendix B to Subpart D, B3.7 Siting, construction, and operation of new infill exploratory and experimental (test) oil, gas, and geothermal wells, which are to be drilled in a geological formation that has existing operating wells.

Regulatory Requirements Defined in 10 CFR § 1021.410 (b):

The proposed loan guarantee and related actions described above were subjected to an environmental due diligence review by Loan Program Office (LPO) staff to ensure they are consistent with the specific categories of actions (categorical exclusions) contained in Appendix B of 10 CFR Part 1021 and the conditions for applying categorical exclusions specified in Section 410 of Part 1021. To ensure that the requirements of Appendix B were met, a variety of source materials were reviewed by LPO staff including the Environmental Report submitted with the loan guarantee application dated January 6, 2011, and supplemental information to the Environmental Report (e.g., aerial photographs and schematic drawings) submitted on February 12, 16, and 17, 2011. Also, the National Environmental Policy Act Environmental Assessment for the San Emidio project jointly prepared by DOE's Golden Field Office and the U.S. Bureau of Land Management (DOI-BLM-NV-W030-2010-0006-EA; DOE/EA-1810) was reviewed as well as DOE's Finding of No Significant Impact dated December 17, 2010. In addition, the Washoe County, NV, Special Use Permit dated July 1, 2010, and supporting documentation describing the project in detail was reviewed. LPO staff also participated in various telephone conference calls with USGN staff to ensure a full understanding of the proposed San Emidio project.

The results of the environmental due diligence review produced the following findings:

- The proposed loan project does not threaten a violation of applicable statutory, regulatory or permit requirements for environmental, safety and health, including DOE and /or Executive Orders;
- The proposed loan project does not require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities;
- The proposed loan project does not disturb hazardous substance, pollutants, contaminants or CERCLA-excluding petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases;
- The proposed action is not a connected action as set forth in 40 CFR § 1508.25(a)(2)); and
- The proposed action is not part of a DOE proposal for which an EIS is being prepared and therefore a CE is not precluded by 40 CFR § 1506.1 or 10 CFR § 1021.211.

The environmental due diligence review also determined that the proposed project associated with the loan guarantee does not adversely affect any environmentally sensitive resources, including the following:

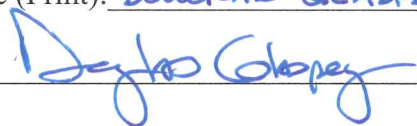
- Property of historic, archaeological, or architectural significance designated by Federal, state, or local governments or property eligible for listing on the National Register of Historic Places;
- Federal-listed threatened or endangered species or their habitat (including critical habitat), Federally-proposed or candidate species or their habitat, or state-listed endangered species or their habitat;
- Wetlands regulated under the Clean Water Act (33 U.S.C. 1344) and floodplains; or
- Special sources of water (such as sole source aquifers, wellhead protection areas, and other water sources that are vital in a region.

The Corporate Validation below is an indication of USGN's concurrence with the findings and determinations presented above. The Comment section below is provided for any necessary clarifications.

Comment:

Corporate Validation

Name and Title (Print): DOUGLAS GLASPEY MANAGER Date: 2-28-11

Signature: 

Determination:

Based on my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as prescribed by DOE Order 451.1B), I have determined that the proposed loan guarantee and associated actions involve no extraordinary circumstances (10 CFR 1021.410(b)) and fit within the specified category of actions in Appendix B of 10 CFR 1021 described above, and are hereby categorically excluded from further review under the National Environmental Policy Act (42 USC 4321, as amended).



Signature
Matthew McMillen
NEPA Compliance Officer
Loan Programs Office

3-2-2011
Date