

# Memorandum

Date: January 5, 2011

To: Melissa Jones  
Executive Director

From: California Energy Commission - Terry O'Brien, Deputy Director  
1516 Ninth Street Siting, Transmission & Environmental Protection Division  
Sacramento, CA 95814-5512

Subject: **ITEM FOR THE JANUARY 26 BUSINESS MEETING – BLACK  
ROCK 1, 2, & 3 GEOTHERMAL (02-AFC-2C) PETITION TO  
AMEND THE ENERGY COMMISSION DECISION**

## **PROJECT BACKGROUND**

Black Rock 1, 2, and 3 Geothermal Power Project (BR123), formally called Salton Sea Unit #6 (SSU6), was certified by the California Energy Commission (Energy Commission) on December 17, 2003 as a 185 MW multiple-flash (also called “multi-flash”) geothermal power plant. In May 2005, the Energy Commission approved a petition to amend to increase generating capacity to 215 MW as a multi-flash, single-generator facility through the use of an Organic Rankine Cycle, which would utilize energy dissipated from the dilution water heater. CE Obsidian, LLC (CE Obsidian) is now seeking to modify the project. The facility is located near the southern end of the Salton Sea, near the town of Calipatria in Imperial County. If approved by the Commission, construction of the modified facility is expected to commence in early 2011 and continue for 46 months.

- The SSU6 project was certified by the Energy Commission on December 17, 2003, as a 185 MW multi-flash geothermal power plant.
- On May 11, 2005, an amendment was approved by the Energy Commission for several changes in the project design including adding a binary-cycle turbine (Organic Rankine Cycle) to the existing steam turbine to capture dissipated energy.
- On December 19, 2007, the Energy Commission Approved an Extension of the Deadline for Commencement of Construction from December 18, 2008 to December 18, 2011 (Order No. 07-1219-4).
- On August 3, 2009, the Energy Commission approved the name change of the project from SSU6 to BR123.
- On December 3, 2010, a Staff Assessment was submitted to the public for comment.
- On January 3, 2011, the 30-day public comment period for the Staff Assessment ended.

## **ISSUE**

On March 13, 2009, the California Energy Commission received a petition from CE Obsidian, a wholly owned subsidiary of California Energy Company, to amend the Energy Commission Decision for the SSU6 Geothermal Power Project to build the BR123 Geothermal Power Project (02-AFC-2C).

The project owner requested the proposed modifications in order to construct three facilities sequentially over a four-year period, rather than construct a single 215 MW facility in two years. Building three smaller units will also allow use of standardized and proven technology, rather than the relatively unproven 215 MW single generator multi-flash system originally proposed. Use of single-flash technology with a Regenerative Thermal Oxidizer (RTO) also significantly reduces operating costs because it does not produce any waste requiring off-site disposal. Though initial capital costs for the BR123 project are higher than that estimated for the licensed SSU6, CE Obsidian's parent company (CalEnergy Operating Company), stated that data gathered from its operating single-flash and multi-flash plants over recent years shows that the BR123 project design will significantly reduce overall costs compared to the SSU6 project design, including compliance and operating costs.

## **SUMMARY OF ANALYSIS BY STAFF**

The amendment petition was review by Energy Commission technical staff. Staff found the requested changes in permit conditions would conform to applicable federal, state, local and air quality laws, ordinances, regulations and standards (LORS). Staff finds that the amended project would not cause significant impacts, provided that the proposed changes to conditions of certification contained in the attached staff analysis are adopted.

## **PUBLIC REVIEW**

A Notice of Receipt was docketed, posted on the Energy Commission website, and mailed to the post-certification mailing list on April 1, 2009. The staff analysis was docketed, posted on the Energy Commission website on December 3, 2010, and mailed to interested parties and affected public agencies on December 6, 2010. No comments were received.

### **STAFF FINDINGS**

Pursuant to Title 20, section 1769(a) of the California Code of Regulations, staff finds:

- The petition meets all the filing criteria of Title 20, section 1769(a) concerning post-certification project modifications;
- The modification would not change the findings in the Energy Commission's Final Decision pursuant to Title 20, section 1755;
- The project would remain in compliance with all applicable LORS, subject to the provisions of Public Resources Code section 25525;
- The change will improve the efficiency of the project, reduce the visual impact, and reduce negative impacts on Obsidian Butte; and
- There has been a substantial change in circumstances since the Energy Commission certification that justifies the change. The change is based on a project redesign from a single generator 215 MW multi-flash unit to three 53 MW single-flash units.

### **RECOMMENDATIONS**

Based on the above findings and staff's review of the proposed modification, staff recommends approval of the petition and revisions to the Conditions of Certification as presented in the attached staff analysis and proposed order.

### **COMPLIANCE PROJECT MANAGER**

The Compliance Project Manager is Dale Rundquist, (916) 651-2072.

The Amendment Compliance Project Manager is Christine Stora, (916) 654-4745.

### **BUSINESS MEETING PARTICIPANTS**

Dale Rundquist, Compliance Project Manager

Chris Marxen, Compliance Office Manger

Eric Knight, Environmental Office Manager

Rick York, Biological Resources

Paul Marshall, CHG, and Abdel-Karim Abulaban, PE, Soil and Water Resources

Will Walters and Matthew Layton, Air Quality

Jeanine Hinde, Land Use

Erin Bright and Shahab Khoshmashrab, Facility Design

Kevin W. Bell, Compliance Staff Counsel

Attachment(s): Staff Analysis

Draft Order