

**Proposed Amendment between California Energy Commission  
and  
Sacramento Municipal Utility District**

**Title:** SMUD Micro-Grid Demonstration  
**Amount:** \$0.00  
**Term:** No term change  
**Contact:** Steve Ghadiri  
**Committee Meeting:** 5/10/2011

**Funding**

FY	Program	Area	Initiative	Budget	This Project	Remaining Balance
<>						

**Recommendation**

Recommend approval of CEQA documents as required by the contract to continue the project.

**Issue**

This contract requires the preparation, submission, and approval by the Energy Commission of CEQA documents.

These are needed for SMUD to install three 100 kW generators, as required in the contract #500-08-009. SMUD has provided the CEQA report required in the original contract to the Energy Commission for final approval. Staff has reviewed the CEQA documents and has evaluated that the impact from the installation of these three generators in SMUD's plant operations yard is not significant. Legal staff has reviewed the document and recommends approval.

**Background**

The SMUD Microgrid field demonstration project is innovative in that it will link natural gas fueled internal combustion engines with a PV system. The direct current (DC) output from the PV system will be interconnected directly into the DC bus in the TecoGen units. This work has not been done before and affords the opportunity to understand how intermittent renewable DG can be integrated with nonrenewable DG, and how inverter based DG can be integrated with rotating DG. CEQA documents are required for the installation of the TecoGen units

**Proposed Work**

When this contract was approved by the Commission, it was stipulated that SMUD should come back to the Commission for the CEQA document approval. CEQA document have now been completed and the Commission needs to approve the CEQA.. Construction work is about to commence subject to the Commission's approval of CEQA requirement.

This agreement with Sacramento Municipal Utility District required the contractor to submit to the Commission for approval of CEQA requirements. Staff finds no negative declaration for the environmental impact of this project. Staff recommends placing this item on the [discussion agenda] of the Commission Business Meeting.

## **Justification and Goals**

This project "[will develop, and help bring to market] advanced electricity technologies that reduce or eliminate consumption of water or other finite resources, increase use of renewable energy resources, or improve transmission or distribution of electricity generated from renewable energy resources" (Public Resources Code 25620.1.(b)(4)), (Chapter 512, Statutes of 2006)).

This will be accomplished by:

- The goal is to field demonstrate a 310 kW Microgrid at the SMUD corporate headquarters in a customer-type application
- Demonstrate ability of Micro-Grid to operate successfully on operating utility system
- Validate the laboratory data collected in CERTS contract
- Demonstrate ability of microgrid to successfully operate with renewable technologies