

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

Title: SMUD's Smart Grid Proposal for FOA 58
Amount: \$1,000,000.00
Term: 55 months
Contact: Avtar Bining
Committee Meeting: 2/25/2010

Funding

FY	Program	Area	Initiative	Budget	This Project	Remaining Balance
09	Electric	ETSI	ARRA	\$7,170,389	\$1,000,000	\$0 0%

Recommendation

Approve this agreement with Sacramento Municipal Utility District for \$1,000,000 and 55 months, representing a cost-share fund to the U.S. Department of Energy (DOE) under ARRA award of \$127.5 million, to deploy advanced smart grid technologies throughout the Sacramento region. Staff recommends placing this item on the discussion agenda of the Commission Business Meeting.

Issue

The Sacramento region's hot summer climate requires SMUD to provide electricity for a peak load of 3,300 MW, of which 400 MW (over 12%) occurs in just 40 hours of the year (or less than 0.5% of the hours in a year). If this peak use can be "shaved" by providing tools and incentives to encourage customers to reduce or shift their energy use during these peak hours, SMUD will avoid the need to build new fossil-fueled fired peak generating plants. Current infrastructure does not allow for this because of an incomplete deployment of an advanced metering infrastructure, manual distribution controls, and lack of dynamic pricing programs.

Background

In response to the current economic crisis, the Federal government created the Federal American Reinvestment and Recovery Act (ARRA), including more than \$62 billion in energy related grants. The Energy Commission supported a number of applicants through a Program Opportunity Notice (PON) to bring these funds to California by offering cost-share.

On June 18, 2009 the California Energy Commission (Energy Commission) PIER Program released a PON and Application Package for the American Recovery and Reinvestment Act of 2009 Cost Share (PON-08-011). The PON announced that up to \$21 million is available from the PIER Program to offer eligible applicants funds to be used as cost share for those obtaining an award from the U.S. Department of Energy (DOE) for the identified Funding Opportunity Announcements (FOAs).

Outreach to expand awareness of the PON included a pre-proposal workshop on June 26, 2009. This workshop was held live in the Energy Commission's Hearing Room B, in Sacramento, California and accessible via WebEx for online participants. The workshop covered in detail the application process,

and provided a forum for questions and answers. The workshop, PON, and questions and answers were advertised and published on the Energy Commission website.

In accordance with the PON-08-011 grant solicitation and application package, proposals received under each FOA were screened for completeness, and reviewed by Energy Commission staff. The letters of intent for cost share were issued to the successful pre-applicants, who were directed to submit final applications to the Energy Commission. The Energy Commission's Technical Advisory Committee (TAC) reviewed, evaluated, and scored final applications, using the criteria prescribed in the application package, including requirement of receiving ARRA award from the federal government. Based on the TAC's scores and directions from the RD&D Committee, the proposed matching funding is recommended for the FOAs.

President Obama signed ARRA into law on February 17, 2009. Since then, DOE has released several solicitations on a variety of energy RD&D topics. These solicitations span the entire range of topics funded by PIER. It is the Energy Commission's policy to encourage and support California entities applying for ARRA funding.

The purpose of the Smart Grid Investment Grant Program (DE-FOA0000058) is to stimulate the rapid deployment and integration of advanced digital technology that is needed to modernize the nation's electric delivery network for enhanced operational intelligence and connectivity. Projects funded by this FOA apply "smart" technology to: appliances and electrical equipment, electricity distribution and transmission systems, and homes, offices and industrial facilities. The DOE awarded \$3,429 million under this FOA with California receiving \$203 million of those funds.

Proposed Work

This project will deploy a comprehensive regional smart grid solution built upon the installation and operation of an end-to-end smart grid that extends from the transmission system to the smart meters of all 600,000 SMUD customers. This project will link smart meters and home area networks with upstream, automated distribution operations; will optimize distribution system operations to improve system reliability and efficiency; and will fully enable customers to participate in the electricity market place by accelerating the introduction of dynamic pricing and demand response programs. SMUD is partnering with the State of California Department of General Services, California State University Sacramento, and the Los Rios Community College District to significantly accelerate and expand the deployment of advanced smart grid technologies throughout the Sacramento region, creating new jobs, preserving existing jobs, reducing customer energy costs, and cutting greenhouse gas emissions years sooner than could otherwise be accomplished.

Justification and Goals

This project "[has] the potential to enhance transmission and distribution capabilities" (Public Resources Code 25620.1.(c)(3)).

This will be accomplished by:

- deploying advanced smart grid technologies throughout the Sacramento region.