

# Memorandum

To: Robert P. Oglesby  
Executive Director

Date : June 16, 2011

Telephone: CALNET (916)-654-4026

From : **California Energy Commission**  
1516 Ninth Street  
Sacramento CA 95814-5512

Subject: STAFF RECOMMENDATION TO APPROVE AMENDMENT 1 FOR SHIFTING PROJECT FUNDS OF THE \$606,540 ARRA EECBG GRANT CBG-09-006 TO THE COUNTY OF PLACER TO BE CONSIDERED AT THE JULY 27, 2011, BUSINESS MEETING.

## Summary of Item

The County of Placer (County) has requested Amendment 1 to shift project fund of \$125,203 from lighting material to HVAC equipment at the Auburn Historic Courthouse. The central boiler/chiller project in the original grant scope was based on a previous analysis that identified rebuilding the two existing reciprocating compressors with one 80 ton Turbocor compressor. In developing the project specifications, it was determined that the Turbocor is only available in 480 volts and not the existing 208 volts. This would require a step-up transformer and may not perform as well as anticipated, due to the age of the remaining equipment. The project would take longer to install than a full replacement and require placement of temporary cooling to service the building. In addition, contractors have advised the County that a rebuild may not be successful, depending on what they find when they take apart the equipment.

In studying alternatives, County staff and consultants determined that full replacement would be more energy efficient and cost effective than replacing the chiller compressor because new chiller equipment is available in a higher efficiency rating. A full replacement can be a weekend project, not requiring temporary cooling equipment and rental costs.

An additional recommendation includes replacing chilled water and heating hot water systems with more efficient variable speed pumps and upgraded controls. This can be completed by County staff while the central plant is shut down for replacement. Finally, the scope of the project must meet current regulations, which include refrigerant gas monitoring, which was not anticipated in the original Grant proposal.

The proposed change in mechanical equipment scope provides a simpler installation with less risk of equipment failure and a shorter duration of downtime. In either scenario, installation labor charged through the Grant will be provided by County Staff.

Energy Performance Impact:

The energy savings for the new chiller project will result in more energy savings than the original proposal. By including the proposed change to Boiler, chiller and controls revisions at the Auburn Historic Courthouse, the Cost Effectiveness Ratio for all mechanical projects would be 8.46 mmBtu/\$1000, increased from the original submitted amount of 8.29 mmBtu/\$1000. The proposed Cost Effectiveness Ratio of all Placer County Projects would be 13.87mmBtu/\$1000, increased from the original submitted ratio of 12.63 mmBtu/\$1000.

Justification for Action Requested:

The County is committed to reducing its energy consumption and to the reduction of greenhouse gas emissions. This central system HVAC retrofit, when completed, will provide more energy savings to the county and more energy efficient operation at the county courthouse.

Energy Commission staff has determined that the amendment request for the County of Placer is technically justified and meets all requirements for the ARRA Funds. The program requires no repayment. The requirement to meet 10 mmBtu/\$1000 of grant funding has been met. Staff recommends approval of the grant amendment to the County of Placer.

Project Manager

Joseph Wang, Senior Mechanical Engineer  
Special Projects Office, Fuels and Transportation Division

Oral Presentation

Staff will be prepared to discuss this recommendation and to respond to questions regarding the grant amendment.

Business Meeting Participants

Pat Perez, Deputy Director, Fuels and Transportation Division  
Joseph Wang, Senior Mechanical Engineer, Special Projects Office

Commission Action Requested

Approve the grant amendment and authorize the Executive Director to execute the grant amendment documents.

A handwritten signature in cursive script, appearing to read "Pat Perez", is written over a horizontal line. The signature is fluid and includes a long, sweeping flourish that extends to the right.

PAT PEREZ, Deputy Director  
Fuels and Transportation Division

**County of Placer  
HVAC Project  
Grant Amount: \$606,540**

**Pros and Cons**

The following are the Pros and Cons to the Energy Commission of providing a grant to the County of Placer:

**Pros:**

- To reduce energy use, electrical demand, and greenhouse gas emissions through energy efficiency is consistent with the Energy Commission's *2010 Integrated Energy Policy Report*.
- Provides a grant to help the County install energy efficiency projects that it may otherwise not be able to fund.

**Cons:**

- None