Proposed Amendment between California Energy Commission and Southern California Gas Company

Title: Energy Efficiency Calculator Tools
Amount: $0.00
Term: 12 months
Contact: Kiel Pratt
Committee Meeting: 3/16/2011

Recommendation

Approve this amendment for a 12-month no-cost time extension with Southern California Gas Company for $0.00. Staff recommends placing this item on the consent calendar of the Commission Business Meeting.

Issue

The time extension is needed to allow time for tool development, testing, trials and verification. The original contract did not allocate sufficient time for completing certain tasks such as information dissemination and customer training.

Background

This contract was approved by the RD&D Comittee on April 16, 2008 and was approved at a Business Meeting on February 25, 2009. This $431,185 project is funded with $200,000 from the Energy Commission and $231,185 from the Southern California Gas Company (SoCalGas).

The proposed software tools are a compilation of web-based calculators that would be posted on the Energy Commission web site and will be available for all California industries. These tools will address the areas of process heating and steam generation. These two areas represent the primary uses of natural gas in California industry. Combined, these two uses account for about 85 percent of industrial natural gas use and represent the major opportunities to reduce natural gas use in California industries. The tools will list a large number of energy efficiency improvement measures or projects with proven history of applications that resulted in energy savings, cost reduction, and CO2 reduction.

In 2006, SoCalGas started a pilot program to develop standardized energy efficiency software tools that would allocate equipment energy use in a plant, identify energy efficiency opportunities and calculate possible energy savings for various measures. Another critical component of the pilot program was a solid, technical training program that taught equipment operation basics, how to spot potential energy efficiency opportunities, and how to use measurement tools to collect data that would be used in the software calculator tools. SoCalGas's experience has been that this pilot program has significantly improved their incentive program results in that they now have accurate, measured values to quantify energy savings.

However, additional tools, training materials and work papers still need to be developed. To date, SoCalGas has invested over $500,000 in the development of the calculator tools, training materials and work papers that are currently in use today. SoCalGas approached the CEC in summer 2007 for co-funding to complete the proposed compilation of web-based calculators.

The benefit to ratepayers and industrial customers are:

• energy efficiency opportunities can be identified more quickly
• proper measurements ensure that accurate data is used to model a measure
• an accurate energy savings quantity can be arrived at very quickly
• the energy savings calculations are all based on sound engineering mathematics
• the results are consistently repeatable

SoCalGas' experience with the pilot program demonstrates that actual energy savings were on par with savings calculated using the existing software tools. As a part of this pilot program, SoCalGas demonstrated use of the available tools to their customers and encouraged them to perform self-diagnosis of apparent energy saving opportunities as a first step towards detailed analysis. This met with encouraging results and demand for such simplified tools is increasing, as California industries are aware of benefits of these tools.

Another benefit these tools would offer is that they could be the standard method of quantifying energy savings. These tools could be used by the Energy Commission, statewide utilities, energy consultants and plant engineers for energy efficiency measures and the savings calculated for a specific measure will be consistent whether the result is modeled by a utility engineer, a Energy Commission engineer, a plant engineer or a consultant. SoCalGas stated that these tools will be made available for dissemination at the Energy Commission's discretion.

Proposed Work

Project:
To develop web-based software and desktop tools to aid California industries to identify, analyze and prioritize energy (i.e. natural gas and other alternate energy sources) savings opportunities. The tools are designed to help industrial end-users in analysis of energy saving opportunities and savings (energy in terms of MM Btu/year, energy cost in terms of US dollars and CO2 savings) by implementing selected energy saving projects.

Currently, Excel spreadsheets of most of the proposed tools exist in draft form and explanatory work papers are being produced concurrently. In the coming months, the tools and work papers will be finalized. Training materials will be prepared and customers will be trained to use these tools.

Justification and Goals

Supports California's goal to the 2008 Program Plan and Funding Request as approved by the CPUC.

This will be accomplished by:

- Developing energy efficiency calculator tools for industrial processes to help industrial natural gas customers save energy