

Proposed Amendment between California Energy Commission and DOE- Lawrence Berkeley National Laboratory

Title: Action-oriented Benchmarking - EnergyIQ Tool Enhancements and Service Extension Upgrades
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 Lawrence Berkeley National Laboratory (LBNL) for \$0.00. Staff recommends placing this item on the consent calendar of the Commission Business Meeting.

Issue

This time extension is needed because the documentation of the software requirements took longer than expected and was not completed to the level of detail that was required for the programmer. The coding process took longer and the website is more complex than the project team anticipated and this has simply required more development time.

Background

In isolation, energy benchmarking can inspire actions to save energy, but provides no practical guidance. With sponsorship from the California Energy Commission's Public Interest Energy Research (PIER) program, LBNL conceptualized and developed a prototype version of an "action-oriented" benchmarking tool for non-residential buildings - Energy IQ, in work authorization #201, under contract 500-99-013 and contract 500-03-022, which bridges this gap by providing a standardized opportunity assessment based on benchmarking results along with decision-support information to help refine actions.

The current contract was approved by the RD&D Committee on June 5, 2009 and was approved in a Business Meeting on July 15, 2009. This \$636,000 project is completely funded by the Energy Commission.

EnergyIQ represents a major advancement beyond LBNL's widely-used whole-building CalArch tool, and provides a deeper and complementary level of analysis compared to more generalized whole-buildings tools such as the ENERGY STAR Portfolio Manager. EnergyIQ benchmarks energy use, costs, and features for 62 building types and provides a carbon-emissions calculation for the energy consumed in the building, an important part of any businesses' overall "carbon footprint". Action-oriented benchmarking is particularly useful for opportunity-assessment purposes, improving on simplified benchmarking processes and helping lay the groundwork for investment-grade audits and professional engineering calculations.

This project's overall technical goals are to develop a production-quality version of EnergyIQ that is responsive to current gaps in the prototype tool and to California benchmarking initiatives, as outlined in AB 1103, and to provide outreach and training to engage tool users. EnergyIQ is interoperable with ENERGY STAR Portfolio Manager so that users can import their Portfolio Manager profiles into

EnergyIQ. This project is supported by diverse stakeholders, including Martha Brook of the Energy Research and Development Division, expert energy consultant Bill Bordass, and members of the Air Resources Board.

Proposed Work

Project:

The purpose of this contract is to develop a production quality version of EnergyIQ, a web-based benchmarking tool that can assist engineers, energy services companies and other identified areas of energy waste and energy saving opportunities in buildings. This is the second phase of the project. In the first phase, LBNL developed a prototype version of the benchmarking tool. This contract will result in further refinement of the tool to increase functionality, provide for outreach and training, and integrate the tool with California's benchmarking initiatives. The tool will be interfaced with data from the Commercial End Use Survey (CEUS). Currently, the first release of EnergyIQ on the LBNL website is imminent, and two subsequent releases and updates are planned during the course of this project.

Justification and Goals

This project "[will develop, and help bring to market] increased energy efficiency in buildings, appliances, lighting, and other applications beyond applicable standards, and that benefit electric utility customers" (Public Resources Code 25620.1.(b)(2)), (Chapter 512, Statues of 2006)).

This will be accomplished by:

- Completing work on Phase 2 of the development of EnergyIQ so that commercial building owners and operators will have access to this action-oriented benchmarking tool to facilitate energy savings