LEGISLATIVE REPORT

SUBJECT: Relating to Energy

REFERENCE: Act 96, SLH 2006 (HB2175, HD2, SD2, CD1, Section 2)

ACTION REQUESTED: Interim report on the progress to develop and implement a photovoltaic, net energy metered pilot project in public schools. Final report is due December 2008.

DOE REPORT: Attached is the report on the progress of the photovoltaic project. This report was also submitted to the Department of Business, Economic Development and Tourism (DBEDT).
Act 96, Session Law of Hawaii 2006, appropriated funds to develop and implement a photovoltaic, net energy metered pilot project in public schools. The specific objectives as set forth in Act 96 as they relate to this photovoltaic (PV) pilot project include:

1. To have, at minimum, a project site at one of the public schools within each of the four counties of Oahu, Hawaii, Maui and Kauai.
2. Installation of PV system to be timed in conjunction with substantial roof repairs or roof replacement.
3. To use the application of net energy metering to offset the cost of the system.
4. To recapture system cost within three quarters of the useful life of the PV system.
5. When advantageous, to use energy-savings contracts such as third party lease or purchase to maximize the objectives monitoring energy efficiency in Hawaii’s public schools.
6. Report results and recommendations from this project.

Energy Industries was hired to focus specifically on providing the Department of Education with the professional services which include: site selection, design-build analysis and project management. As of October 2007, they have completed the following deliverables:

1. Created weighted scorecard for the site selection with recommendations for sites in each county.
   a. Developed weighted scorecard.
   b. Collected school information.
      • Review of solar zone ratings for schools.
      • Review of historical electrical consumption.
      • Review of schedule of planned CIP roofing projects.
      • Review of schedule for new facilities.
   c. Created short list of schools.
      • Includes rating for all 258 schools.
      • Includes site survey report of top five schools in each county except Oahu.
   d. Performed analysis of site surveys.
   e. Presented scorecard and final report with site recommendations.

2. Developed basis of design and determined optimal implementation method.
   a. Prepared minimum contractor qualifications.
   b. Provided recommendations regarding design build vs. bid and specification.
   c. Prepared basis for design of PV installations.
      • Minimum capability of system for potential energy production.
      • Structural integrity evaluation of design bid submittal.
      • Net metering system requirements.
      • Data collection of system production.
d. Prepared system maintenance specifications.

- Warranty
- Minimum life expectancy

Energy Industries is just about completed with the solicitation plans. In order to meet the requirements of Act 96 and recapture the system cost within three quarters of the useful life of the system, the Department will initiate two Requests for Proposals (RFP) with the basic scope of work.

The first RFP will request proposals for the installation of four photovoltaic arrays of between 30kW and 50kW in size at schools throughout the Island of Oahu. The bidder shall own and operate the installed arrays, and the Department of Education shall purchase the generated electricity under the terms of a Solar Power and Services agreement. A total of four installations, one in each school district on Oahu, shall be considered. Each site installation shall also include a roofing repair or replacement project.

The second RFP will request proposals for the installation of four photovoltaic arrays of between 30kW and 50kW in size at schools throughout the state. The bidder shall own and operate the installed arrays, and the Department of Education shall purchase the generated electricity under the terms of a Solar Power and Services agreement.

The two RFP’s will be finalized by November 2007. DOE will post the solicitation during December 2007, review and evaluate the proposals in January 2008 and plan to award by February 2008. Construction should begin by June 2008. Energy Industries will be retained to manage the projects (PV installations) and provide quality assurance. They will prepare a final report after all installations have been operating for one month. This report will include the following:

1. Financial analysis of each project.
2. Collection of system performance data.
3. Analysis of system performances.
4. “Lessons learned” and recommendations.

Energy Industries will continue collecting data for the period of one year after the system installation and prepare an operational analysis report of all systems installed.