

## Saving Energy by the Book

Libraries have traditionally been considered fountains of information, refuges of silence and gathering places of the studious, but the Hawaii State Public Library System (HSPLS) is working to establish itself as a beacon of energy efficiency.

Uniquely situated as the only public system administered as a single integrated system by a State government, HSPLS is technically under the aegis of Hawaii's Department of Education. Comprised of 50 buildings—23 on Oahu; 13 on the Big Island of Hawaii; six on Maui; six on Kauai; one on Lanai and one on Molokai—HSPLS is responsible for its own electric bills and faces rising energy costs and aging equipment, but traditionally has lacked the funds for major renovations.

With its branch libraries geographically dispersed, it is often difficult to treat the system as one entity with regard to energy issues. One advantage to the system is that the libraries function as community meeting centers for the islands. In fact, when the Hawaii Electric Company, Inc. (HECO) wanted to distribute 50,000 low-flow showerheads to Oahu's citizens, it effectively utilized the libraries as distribution centers.

### *Doing Their Homework*

Recognizing that Rebuild America was a mechanism to secure the technical support and resources needed to make facilities more energy efficient, HSPLS formed a partnership in 1997. HSPLS was especially interested in performance contracting and its innovative financing approach, which would allow the State to

fund building improvements and reduce utility bills without requiring upfront capital. Before committing to performance contracting, HSPLS needed to identify and consider the distinctive characteristics that could potentially affect the analysis of energy service companies.

Each branch in the library system is only open to the public 50 hours per week. This factor, compounded by the relatively small size of the buildings (10,000 to 17,000 square feet), may make it difficult to realize economies of scale.



*The newly renovated and expanded Hawaii State Library was an Honor Award winner in the 1992 Project of the Year Awards, which is sponsored by the City and County of Honolulu.*

Another dynamic was the requirement for HSPLS to follow the Hawaii Department of Accounting and General Service's (DAGS) mandated procurement procedures. DAGS serves as the central procurement office for many State government agencies and must separate tasks as opposed to mainstreaming all building related tasks. This results in a slower pace of procurement as compared to that of performance contracting.

#### **PARTNERSHIP FACTS:**

- **Retrofitted Square Footage Targeted:**  
50 library buildings ranging from 10,000 to 17,000 square feet each
- **Completion Date:**  
Ongoing

To improve these existing problems, the DAGS has implemented a performance-based procurement system that ultimately will “buy the best performing contractor service/facility systems in a competitive bid environment.”

### *Financing A-Z*

In 1999, the State of Hawaii funded a replacement project that upgraded about half of the libraries’ air conditioning units. HSPLS asked the State agency doing the bidding and selection of air conditioning contractors to specify those mechanical systems that qualify for Hawaii’s electric utility efficiency rebates.

Next in line for retrofits are the libraries’ lighting systems. HSPLS is seriously considering using performance contracting for its lighting upgrade needs. In order to collect accurate energy data for evaluation, Volunteer Energy Coordinator Lynn Zane and library staff performed a preliminary lighting fixture survey on buildings throughout the system.

Relying on his Rebuild America contacts, Zane then turned to Dale Sartor, an engineer from the Lawrence Berkeley National Laboratory (LBNL), for his input on performance contract structure and the scope of work. To draft a proposal request for HSPLS’s project, the Hawaii Department of Business, Economic Development and Tourism (DBEDT) hired a technical consultant.

### *Non-Economic Benefits*

The Rebuild Hawaii Library System has not fixated on short-term returns from energy-efficiency measures, but instead has focused on long-term paybacks in savings, productivity and

comfort. With some measure of success behind them, the partnership is poised to learn about monitoring, verification and commissioning from Rebuild America resources.

“The [Rebuild America program] has allowed us to get good information and expertise from the



*Renovating the Carnegie Library took nearly two years to complete. The library’s expansion took place at the rear of the building, more than doubling its size from 47,000 to 102,000 square feet.*

U.S. DOE, the State, HECO, the national laboratories, the County and many members of the Rebuild Hawaii Consortium. Networking within the Consortium has been very valuable, allowing us to learn from others and to help us ‘sell’ energy efficiency as a solid investment,” attests Zane.

HSPLS is saving energy by the book—the Rebuild America book.

### **TO LEARN MORE ABOUT THE HAWAII STATE PUBLIC LIBRARY SYSTEM PARTNERSHIP, CONTACT:**

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