



## 1 Background

The State of Washington encourages all state and local agencies to use performance contracting for energy conservation projects. Since 1986, about \$145 million in energy conservation projects have been carried out in Washington using Energy Savings Performance Contracts (ESPCs). Like many other states, Washington has realized that there are a number of benefits to providing assistance to the agencies that use ESPCs. In this case, assistance is available from the Department of General Administration's "GA Energy Team" on a fee-for-service basis to state agencies, colleges and universities, cities and towns, counties, school districts, port facilities, libraries, hospitals, and health districts. The Energy Team provides an array of services similar to those offered by project facilitators in the U.S. Department of Energy's (DOE's) Super ESPC program — assistance in ESCO selection, proposal evaluation, technical and contracting assistance, evaluation of M&V plans and reports, etc.

In Washington, the project implementation process begins when a government agency issues a request for qualifications (RFQ) that invites ESCOs to submit a detailed statement describing the range of services offered, past experience, management approach, approach to M&V, financial stability, and other pertinent aspects of their business. The agency reviews and evaluates the qualifications of the ESCOs that respond and generally selects three for further interviews. In some cases, each of the three ESCOs may be asked to perform a preliminary survey of the site and prepare a list of conservation measures, which will serve as an initial proposal. Based on the interviews (and evaluation of the preliminary surveys, if required), the agency makes its selection. At this time, the agency also begins the process of securing financing for its project. In Washington, most projects are financed through lease-purchase agreements with the State Treasury.

The winning ESCO performs a detailed energy survey, which is an investment-grade audit that analyzes current building conditions, establishes base-year (pre-project) energy consumption, and identifies and defines the energy efficiency and cost reduction measures that will be implemented, with their associated energy and cost savings. After negotiations with the agency, the ESCO presents a final proposal containing the complete scope of work for the project, energy and cost savings guarantees, and a firm, fixed price proposal for construction of all ECMs. When all parties are in agreement, the ESCO proceeds with construction.

In general, ESCOs secure their own financing during the construction period. Only when construction is complete and the ECMs have been commissioned and accepted by the agency does the State Treasury release the funding secured through the lease-purchase agreement. The agency then pays the ESCO's expenses for the audit, construction, and construction-period interest.

## 2 A Representative Project

Eastern State Hospital is a psychiatric care facility operated by the State of Washington. Located in Medical Lake just outside of Spokane, the facility provides evaluation and inpatient treatment for individuals with serious or long-term mental illness. The entire complex contains about 20 buildings, some of which were constructed in the 1880s.



**Figure 1. Eastern State Hospital Building.**

In 1998, faced with increasing energy and maintenance costs at the hospital, an aging physical plant, and a shortfall in its capital improvement budget, the Washington Department of Social and Health Services (DSHS) decided to investigate performance contracting as a way to implement the many upgrades that were needed at Eastern State. With the assistance of the GA Energy Team, DSHS issued an RFQ, formed an evaluation committee, and selected Abacus Resource Management Company to make a proposal. Abacus performed a detailed energy audit of the hospital and developed an extensive list of ECMs. DSHS ultimately settled on a package of improvements worth \$2.5 million, which included installation of T-8 lamps and electronic ballasts, a campus-wide energy management and control system, variable-speed drives on fans, new steam boilers in the central plant, hot water boilers in individual buildings, steam trap replacement, and repairs to the steam and condensate piping systems. The project was financed over a 10-year period using the state's lease-purchase program. Guaranteed savings from reducing use of electricity and natural gas were about \$315,000 per year.

State law in Washington requires M&V of guaranteed energy savings. The ESCO is generally required to produce an annual M&V report for one to three years after construction, or until it is established that guarantees are being met and the equipment is operating according to specifications. M&V is based on IPMVP and is most often a mixture of Option A (stipulated values) and Option B (retrofit isolation) techniques. If the annual report indicates that savings are less than the guarantees, the ESCO must pay the agency the amount of the shortfall.

The Eastern State Hospital Project was the first use of ESPC by the DSHS. The successful results from the project led to a decision by DSHS to audit all of its facilities in the state. As a result, ESPCs were implemented at a number of other facilities.

### 3 Reference

Washington State General Administration. *Energy Savings Performance Contracting*. Web page, <http://www.ga.wa.gov/EAS/epc/espc.htm>.