# THE PURCHASE OF ENERGY SAVINGS PILOT PROGRAM'S ROLE WITHIN BPA's COMMERCIAL BUILDINGS PROGRAM STRATEGY

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The Bonneville Power Administration (BPA) is conducting a number of activities to encourage energy efficiency in commercial buildings. The activities combine to test design options relating to the elements needed for a successful conservation program. One of these activities is the Purchase of Energy Savings (PES) effort. The PES effort is designed to test private entrepreneurs as deliverers of commercial sector energy savings. These sponsors are responsible for marketing the program to attract participation, auditing commercial buildings to identify potential energy savings, and coordinating the financing, installation and maintenance of the energy conservation measures on behalf of the building owners. In return, sponsors receive incentive payments from BPA over a number of years based on either estimated or measured energy savings from the building retrofits.

To evaluate the ability of private entrepreneurs as deliverers of commercial sector energy savings their performance in all areas must be considered. Through the field test and pilot program, BPA is working with a wide variety of potential sponsors, including energy service companies (ESCos), architectural and engineering firms (A&Es), equipment manufacturers, utilities, and building owners. Interviews with sponsors and building owners are used to determine in which areas sponsors tend to excel and in which areas difficulties are encountered. Results to date indicate that local ESCos and A&Es are most capable of completing jobs. The success of these entities seems to stem from their previous experience with one or more of the areas of major responsibility under the program.

BPA is particularly interested in the PES sponsors ability to attract participation on the part of commercial building owners. This is because BPA needs to reach a significant portion of the commercial building stock through any programmatic effort offered. The fact that BPA's payments for energy savings will be made over a number of years can limit participation because the building owner or the lessee must have a long-term interest in the building and its energy use in order for this arrangement to look attractive. Evaluators will examine which building types PES sponsors targeted and why. It is assumed that buildings with large energy use would receive the most attention. Did this happen? Did sponsors concentrate on decision-makers that control a number of buildings with a high potential for energy savings or individual building owners? Answering these questions will provide some indication of the sponsor's flexibility and the possibility of encouraging them to go after specific market segments.

In field testing PES, BPA paid a set percentage of the cost of each job. The problem with setting incentives based on cost of the job is that the approach does not recognize the value of the energy savings to the sponsor/building owner. For example, if a job cost $20,000, BPA would pay

the same fraction of that amount regardless of whether there were 1,000 kWh saved annually or 100,000 kWh saved annually. So BPA's objective in designing the incentive structure and level for the PES pilot program was to take into account the value of the energy savings to the sponsor/building owner from a specific job in determining the incentive BPA should pay. To calculate an appropriate incentive on a job-by-job basis, BPA negotiated with each sponsor a rate of return on investment necessary to attract financing to retrofit buildings under the PES Pilot Program. Rate of return was used to portray BPA's incentive because sponsors felt the approach is an acceptable way of determining whether or not an investment is economicly attractive.

BPA does not provide the upfront capital to finance ECM's under this program. Instead, the sponsors have been asked to obtain the financing needed to retrofit the commercial buildings. In evaluating the effectiveness of the PES approach in stimulating private sector financing for commercial building retrofits, the types of financing employed by various sponsors must be examined. Options for financing includes loans, leases, shared savings, internal financing by building owners, or any other reliable mechanism. Under the field test building owners financed all the successful transactions. Most sponsors participating in the pilot program intend to use building owner funds to finance commercial retrofits. The interview format will again be used to determine why this option is used more than others. It appears that when building owner funds are used, sponsors pass through the bulk of the BPA incentive payments to the building owner, which is very attractive to the building owner.

In initiating the field test for the PES approach, BPA developed a contract which identifies the responsibilities of BPA and the sponsor, and outlines the sequence of events required for the sponsor to obtain payments. Although BPA completed negotiations with five sponsors and was willing to accomodate their individual needs within the contract, the result of the process was a standardized contract applicable to all sponsors. This was one of the major accomplishments of the field test. Because BPA was able to develop contract language applicable to all sponsors, a prototype contract was constructed for the PES pilot program. This prototype contract reflects the transition from field test to a programmatic framework for purchasing energy savings. The contract allows sponsors to add buildings as they are located instead of responding to an RFP with all the buildings in hand.

A decentralized administrative system was developed as PES evolved from a field test to a pilot program. An internal program operating guide identifies the responsibilities of BPA personnel and the procedures for program implementation. Primary responsibility for program implementation belongs to BPA's Office of Regional Operations. Personnel in the field serve as BPAs first point of contact for sponsors on contract and routine program matters. Through interviews, review of timeframes, and problem

identification, BPA's ability to meet its own standards for program administration will be evaluated. The procedures should be efficient and effective, allowing sponsors to obtain accurate and timely review of work products and answers to questions on implementation. An evaluation answering these questions will focus on availability and capabilities of BPA personnel in various Offices to carry out the procedures, as well as the actual procedures.

Primary emphasis has been placed on energy audits as a means of controling the quality and cost of each job. Technical requirements for conducting energy audits have been developed. These requirements specify auditor qualifications, auditing requirements, and energy savings estimating and cost estimating procedures. The evaluation will focus on the effectiveness of the technical requirements as a tool to promote the identification and accurate characterization of all cost-effective energy conservation measures (ECMs). The sponsor's energy audits are reviewed and data on building characteristics and installed ECMs are being incorporated into a data base. Several buildings under the PES field test are being metered by end-use to generate data which can be compared to audit predictions. Sponsors are required to keep a record of each building's utility bills which can be used for a less sophisticated type of comparison.

While important, the installation of ECMs and ongoing O&M are viewed as secondary to energy audits as a means for controling the quality and cost of a job. O&M procedures must be developed and followed for each job a sponsor completes. If this is not done, the payment from BPA is at risk. The evaluation will focus on the extent these procedures result in energy savings continuing over the life of the measures. The energy savings data collected through end-use metering and utility bills can be compared to data available from other BPA commercial conservation programs. One difficulty will be to distinguish between between inaccuracies in the energy audit and the effectiveness of these procedure.

Payments based on measured energy savings have the potential to significantly reduce BPA's need to control the quality and cost of a job by shifting the risk of non-performance to the sponsor. Three of the ten sponsors participating in the Pilot Program are being paid based on measured savings. BPA will evaluate to determine the accuracy of different measurement methodologies in tracking energy savings. Are energy savings more reliable over time when BPA pays on a measured rather than an estimated basis? How do payments made on a measured savings basis influence other aspects of the program, such as the sponsors ability to obtain capital, the level of BPA incentive payment, or a sponsors marketing strategy? The characteristics of the measured energy savings transactions can be compared to those transactions involving estimated savings to identify effects on other program objectives.