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Energy Efficiency

New energy efficiency initiatives can yield big savings for owners

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Energy efficiency initiatives are back, and building owners can pull in big savings on building improvements ranging from upgrading lighting and air-conditioning systems to providing window tinting. These initiatives are in the form of utility incentive programs, which provide money to customers for implementing measures that curtail energy usage.

What's more, the program is available for both new construction and building retrofits, and the terms are standardized for all participants regardless of utility provider.

The programs are provided throughout the state, in every utility service territory, based on a common template adopted by all investor-owned utilities in the state of Texas.

Why this user-friendly deal?

Essentially, electric utilities have no choice since the Public Utilities Commission of Texas mandated that utilities get involved in energy efficiency programs to reduce growth in energy demand by 10 percent minimum by January 2004. So, it becomes a win/win for building owners that already have planned capital expenditures or energy-related projects in the works and utilities, such as Houston's CenterPoint Energy.

How it works

The three parties include the building owner (or host customer), the project sponsor and the utility itself. Essentially, the project sponsor works as the owner's advocate to develop energy-efficiency measures and measure and verify the associated energy savings.

First, the project sponsor completes the initial application, the utility reserves the project funding, and the sponsor and utility execute a standard agreement, where a deposit or application fee is paid. The measures are then installed, the sponsor conducts the measurement and verification plan, and the incentive payments are made.

Most measurement and verification plans include a pre-installation inspection with the utility's agent, installation report, post-installation inspection, measurement and verification and a final savings report.

Almost painless

Although the participation process is not short on time, paperwork and energy calculations, a knowledgeable and creative project sponsor can make the process relatively painless.

Measurement and verification approaches depend on the equipment type, operation and complexity of each energy-efficiency measure, and solutions can range from short-term equipment metering to billing regression analysis or computer simulation.

In addition, most programs include a "deemed savings" procedure, where incentive payments are based on standard operating characteristics and efficiencies of equipment, and no field measurement is required.

Although this approach is limited to select measures, payments are administered "up front," since no measurement and verification is required.

When the energy-efficiency measure calculations become too complicated, calibrated computer simulations have become today's technological option, which requires intimate knowledge of how building systems operate. Simulations are especially applicable when:

Energy management or control systems are improved or replaced.

More than one energy-efficiency measure is involved, and measurement is too complex or expensive.

Building load impacts such as thermal insulation are involved.

One size fits all

Overall, this program is particularly appealing because it works for most building sizes as long as the minimum criteria are met. In addition, multiple sites can be packaged into one project to meet the minimum requirements, allowing building owners flexibility in creating incentive opportunities.

Yearly energy savings may range from 30 percent to 40 percent, and rebates can constitute from 15 percent to 40 percent of the total installed cost of the project, thereby reducing monthly utility bills and providing quicker payback.

In a high-demand environment, the PUCT is striving to give new life to energy reduction that benefits both the utilities and commercial customers. With these new programs, building owners can realize substantial savings on energy-related expenditures and receive a reasonably quick total payback while the utility is able to reduce its peak electrical demand.

Not surprisingly, the application line is growing.

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