What to Look for in an Energy Management System

A new opportunity has emerged with the advent of affordable, lightweight energy management systems designed for previously underserved small and medium-sized commercial facilities, such as restaurants, convenience stores, retail shops and bank branch offices.

"Smart" energy management systems enable users to easily view and reduce their resource consumption in real time, resulting in utility savings up to 20 percent per month.

Such advancements have generated enormous marketplace demand among contractors needing proven, cost-effective ways to help facility owners go green and boost their bottom lines. Here are five key considerations to help businesses make informed decisions when selecting an energy management system.

1. Ensure the solution specifically focuses on the HVAC system. Most energy management products on the market today are too complex to appropriately leverage or too simple to achieve the desired goal. To maximize energy savings, minimize related costs and realize a fast payback, seek a product that specifically focuses on the HVAC system—the largest controllable source of energy drain and the quickest and easiest way to produce savings. Consider additional sensors to monitor and control other sources of energy use—such as lighting, security and office equipment.

2. Seek a product that offers both onsite and remote measurement and control. An energy management system should be controllable onsite, as well as remotely by either company personnel or the manufacturer's operations center professionals. By connecting to the installed system via the Internet, manufacturers offering remote capabilities can monitor a company's real time energy consumption and ensure temperatures do not exceed the business' parameters. Continuous monitoring also enables the immediate flagging of consumption swings and other anomalies, which can indicate larger mechanical malfunctions. Ultimately, remote monitoring ensures the installed product is being used to the best of its capabilities and is facilitating the expected energy and cost savings.

3. Opt for a quick-install system with low initial fees and a fast ROI. Some commercial energy management systems can be delivered and installed for $2,000 or less, with a monthly service contract of less than $50. When considering a monthly business utility bill of $3,000, even a 15 percent monthly energy savings provides a return on investment in fewer than six months. Some companies also offer flexible payment terms, such as a higher monthly fee and lower upfront payments—particularly for multiple unit operators. It's also important to ensure the system can be installed rapidly to further mitigate upfront fees.

4. Obtain a product with robust, yet user-friendly, core features. In addition to graphical viewing of real-time and historical resource consumption, the best energy control products allow users to establish thermostat heating and cooling limits, set temperatures for different times of the day and select an automated "peak shaving" option designed to reduce consumption during peak demand periods. Such advanced systems also can block unauthorized access while allowing enabled users to view and alter the settings.

5. Ensure the solution has a track record of success. It is imperative that the manufacturer point to a critical mass of real-world (not trial) installations in the field and provide access to current customers for references. When evaluating competing products, be sure to check their quality and user-friendliness, as well as the ease of installation, the hard cost savings realized (and how quickly), and the level of post-deployment support offered by the manufacturer.

By using these five tips as a guide, contractors can help businesses secure a well-rounded and cost-effective energy management system that reduces their carbon footprint and energy consumption while delivering financial gains.

Gus Ezcurra is CEO of Advanced Telemetry, San Diego. For more information, visit www.advancedtelemetry.com.

IMAGEZOO /PUNCHSTOCK