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Government Goes Green

Energy Directives Prompt Agencies To Get In Gear

Adhering to green initiatives is a challenge for most organizations. But for government agencies, where red tape gathers like cobwebs in an old house, meeting environmental requirements within a predetermined time frame can seem next to impossible. Nonetheless, as part of the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007, agencies have a deadline of October 2012 to install smart power meters on buildings. Further, agencies have until fiscal 2015 to reduce their energy consumption by a whopping 30%.

“Energy efficiency is the most cost-effective way to reduce greenhouse gas emission, and it will produce long-term savings for taxpayers through reduced operating costs of government buildings,” says Jamie Van Nostrand, executive director of the Pace Energy and Climate Center at Pace Law School. “The government should set an example by striving to implement all cost-effective energy-efficiency [measures] in government buildings.”

■ Getting Smart With Meters

According to Paul O'Rourke, head of the energy sector of global consulting firm LECG, the primary challenge with the smart meter directive is ensuring that the benefits exceed the costs. He notes that, often, the benefits of installing smart meters don't convincingly outweigh their installation costs and all the required ancillary investments, unless a pricing program is put in place to encourage low-cost (or off-peak) consumption instead of high-cost (peak) consumption.

“In addition, comprehensive smart meter programs require corresponding investments

Key Points

- Government agencies have key energy-related directives they must meet by 2012 and 2015, which in turn prompt the need for evaluation and strategy to meet those deadlines.
- The installation of smart meters can potentially involve costs that reach far beyond the meters themselves because additional infrastructure could be required to support them.
- Agencies need to perform rigorous analysis to determine where opportunities exist for them to save energy and who needs to be tasked with enforcing subsequent policies.

on the utility side of the meter to be effective. And the utility investments involved with smart meters, such as an upstream smart distribution grid—enhancements to distribution systems to catch the benefits—also make the whole proposition costly to implement. Importantly, all of the costs associated with modifying customer billing systems and customer information systems to capture the real-time data produced by smart meters must also be factored into the cost-benefit analysis,” O’Rourke says.

There is also the question of technological obsolescence. Van Nostrand notes that there is fear around investments in smart meters that the technology will advance rapidly and that new technology today will be old technology in only a few years. However, he says that upgradeability is a crucial element in the selection of smart meters and other smart grid technologies and agencies should ensure that smart meters can be easily upgraded to accommodate technology improvements.

“The procurement officials at the various government agencies should be collaborating to educate themselves on the available technology and explore possible funding sources,” Van Nostrand advises. “This is a good role for organizations of government officials to play to avoid unnecessary replication of effort and expense at individual agencies. In New York, for example, the New York State Energy Research and Development Authority would provide the expertise to government officials throughout the state to assist in selecting the appropriate technology and in exploring possible funding sources.”

■ Putting It Together

Implementing smart meters is only part of the larger energy-focused equation, as the 2015 reduction deadline will still loom for agencies that manage (or don’t manage) to meet the smart meter requirement. For Jeffrey Smith, CTO of Numerex (www.numerex.com), both initiatives inevitably spawn plenty of questions: What is the stick? If the Marines don’t make the timeline, what happens? Is their contract broken? Are they fired? Who will be responsible—IT? How will they identify what the action plan is once they determine what their energy usage is?

“Much of the control will be cultural: Turn off the lights; turn off the computers. The infrastructure to automatically ‘control’ the power consumption in a facility will be 10 to 100 times the cost of installing the smart meters. . . . Defining the problem is the first step—setting specific objectives and a minimum set of requirements that will achieve those objectives,” Smith says.

For example, agencies need to determine how they’ll know they are successful in meeting the objective and how they will focus their people, system, and capital deployment, Smith says. Further, he recommends that agencies begin now to outsource, because getting there with internally focused capital expenditures might not be enough.

“If they [agencies] begin to think about outsourcing, they will at least put the service-level agreements and incentives in the private sector where they will have a higher probability of effective and on-time deployment,” Smith says. “Rather than installing a more efficient A/C system, think about outsourcing a ‘cool air’ contract at some cost per degree per cubic foot, with built-in incentives to drive energy consumption down. The ‘cool air’ service provider can take the capital risk and may be able to amortize it over an extended period while taking advantage of tax breaks and incentives from government and utilities.”

■ Different Faces

Because no two agencies are the same, different agencies will face different challenges along the road to more efficient energy usage. One example is agencies with multiple services territories, which will need to implement aggregate tracking of savings, says Anthony Erickson, global utilities industry leader for EDS (www.eds.com), an HP company. Moreover, he says, agencies will need to overachieve in service territories where smart grids are being deployed to accommodate territories that are further behind in smart grid deployments. ■

by Christian Perry

Turning Out The Pockets

Whether agencies are already working to meet the smart meter and other energy initiatives, help is always available. Jamie Van Nostrand, executive director of the Pace Energy and Climate Center at Pace Law School, recommends that after conducting a comprehensive energy audit to identify all opportunities for energy savings, agencies should explore the possible funding sources for the costs of the energy-saving measures.

“In many states, utilities offer programs that will pay a portion of the costs through rebates or may allow the costs to be paid over time through ‘on-bill’ financing, whereby the initial costs are repaid through the savings generated by the reduced energy consumption each month,” says Van Nostrand. “In New York, the New York Power Authority is an excellent resource for government agencies seeking to reduce energy consumption, as NYPA can provide the up-front capital costs of the energy-efficiency measures and be repaid from the savings generated by the reduced energy usage.”

Van Nostrand also identifies the stimulus package, or ARRA (American Recovery and Reinvestment Act), as a resource for government agencies seeking revenue sources to implement energy-saving measures. For example, he says the EECBG (Energy Efficiency and Conservation Block Grant) program expressly authorizes spending by local governments for improving the energy efficiency of their buildings.