

Manage Energy Uncertainty: Use Quick Financing for Energy Efficiency Projects

Katy Hatcher and Tom Dietsche

Uncertainty, both in electric system reliability and in energy expense, poses special challenges for local governments and the communities they serve. In California, as we have seen, government and business operations have been compromised by blackouts and price spikes. Nationally, rising energy prices have had a notable impact on public and private sector budgets, and states that are deregulating electricity may well face situations like California's. In January 2001, the U.S. Conference of Mayors officially recognized these energy-related concerns by calling for a 10 percent reduction in energy use by American cities and communities.

Fortunately, growing numbers of local governments are finding that large energy savings can be tapped through common-sense equipment upgrades in their facilities. Federal data have shown that government can typically reduce energy use by 33 percent through improvements in lighting, in their building envelopes, and in heating and cooling equipment. For instance, the city of San Diego's Ridgehaven facility, renovated in 1996 using sustainable and healthy building materials and design techniques, now is the most efficient low-rise office building in the region, saving \$80,000 per year—a 67 percent reduction in energy use compared with the building's past record.

According to the U.S. Department of Energy, for every dollar spent in local economies, energy efficiency generates 57 to 84 cents more economic activity than does the payment of energy bills. Many cities and counties are combining planning and sustainability activities to balance local growth, energy use, and their goals for a healthy environment. In doing so, they will be fostering local economic development, as well as the health and well-being of their citizens and environment.

Advantages of a Lease/Purchase Approach

Most local-government facility directors know they could benefit from energy performance improvements but wonder how they can finance such measures when the measures have not been included in the capital budget. The answer may lie in a tax-exempt municipal lease/purchase agreement, a financing vehicle exclusively available for city or county energy efficiency projects. These agreements do not require a capital budget appropriation.

Tax-exempt municipal lease/purchase agreements are effective alternatives to traditional debt financing allowing a city or county to pay for energy upgrades by using money that is already in its utility budget. A tax-exempt lease/purchase agreement, also known as a municipal lease, is like an installment-purchase agreement. The government entity owns the equipment after the financing term expires and meanwhile pays interest at lower, tax-exempt rates. Municipal leases can be structured specifically to pay for energy efficiency equipment and to allow city and county agencies to draw savings from future energy bills to pay for new, energy-efficient equipment today.

One great benefit of a lease/purchase agreement is that the lessee's (borrower's) payment obligation usually ends if the lessee fails to appropriate the funds to make the lease payments, an event known as nonappropriation. Because of this provision, neither the lease nor the lease payments are considered debt, and payments can be made from energy savings in the operating budget. Unlike

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bond issues, tax-exempt lease/purchasing financing vehicles do not require voter approval because they are considered operating rather than capital expenditures, thanks to this non-

appropriation language. Lenders, however, will want to know that the assets being financed are of essential use, thus minimizing the risk of nonappropriation.

In fact, many agencies do already lease their equipment. So it may be surprisingly easy to add an energy project to the existing leasing agreement, especially if a master lease is in place with a lending institution.

Boulder's Example

Boulder, Colorado, has used municipal lease financing to reduce energy waste and save money, and savings from energy improvement projects are "rolled over" for future building upgrades.

Bill Boyes, the city's asset manager, oversees building improvements. Boyes tries to complete energy upgrades quickly to avoid the costs of delaying them. In times of escalating energy prices, these costs can be high. "We do not like to put off the opportunities to make energy upgrades because, for every year they are postponed, that is

Efficiency Ideas for Government Operations

- Improve the performance of energy-intense operations, such as water and wastewater treatment plants.
- Retrofit traffic lights to use light-emitting diode (LED) technology.
- Properly maintain building heating and cooling systems. (This also improves occupant comfort and productivity.)
- Specify energy-efficient design and equipment for new buildings and end-of-life-cycle replacements. (Look for the ENERGY STAR® label on computer equipment and certain building products.)
- Use a logical approach to upgrade existing building stock (lighting, system tune-ups, load reductions, fans, and heating- and cooling-system upgrades).
- Adopt an environmentally preferable purchasing policy.

Efficiency Ideas for Sustainable Communities

- Educate businesses and consumers about energy and water efficiency.
- Encourage distributed (on-site) energy generation to reduce peak load.
- Harness landfill methane gas to produce electricity.
- Encourage clean-energy technologies and renewable-energy use.
- Implement energy upgrades in schools.
- Adopt resource-efficient building codes.
- Take steps to reduce "urban heat island effect."
- Establish or expand municipal recycling programs.
- Incorporate smart growth techniques to achieve economic development, social equity, and environmental protection.

one less year of profits from energy efficiency," Boyes says.

Boulder receives about \$400,000 for energy upgrades each year from operating budgets and from a six-year capital improvements plan. The city also uses operating budgets to pay for equipment not included in the plan. This equipment is purchased with energy savings through tax-exempt master lease/purchase agreements. By using operating budgets, local government managers can generate immediate savings and avoid competing with other departments for capital-budget dollars.

An energy-saving performance contract can be used to finance energy upgrades when the energy services company (ESCO) that installs and maintains the equipment also includes funding for the project. A guaranteed-savings agreement (GSA) is the most common type of performance contract used in the public sector today. Such an agreement, which bundles equipment purchasing and performance guarantees together, may include financing, energy costs, and maintenance.

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Performance Contracting in Boulder

As Boulder quickly learned, performance contracting can be a beneficial way to fund energy efficiency improvements, if savings can be easily measured and documented. ESCOs frequently assume the performance risk of the technologies they install and also often guarantee any energy cost savings, which can be used to pay for new equipment and deferred maintenance.

Since 1991, lighting upgrades have made the greatest impact on Boulder's budget. "I know the lighting retrofits are really working because I see a reduction in the energy bills every month," Boyes says. The city usually manages the lighting upgrades itself and then works with ESCOs on more complex projects. For these projects, Boulder has entered into a guaranteed-savings performance contract, which has ensured that the city will see a reduction in its utility bills.

An ESCO may bundle-in the financing needed to replace, repair, and maintain heating, ventilating, and air conditioning (HVAC), control, and lighting systems as part of an energy performance contract. However, the ESCO does not have to provide the financing. In evaluating performance contracts, it may save money to separate the financing vehicle from the performance guarantees, as Boulder has

done. Instead of financing projects through ESCOs, cities and counties can take advantage of the lower, tax-exempt interest rates they can obtain as government bodies, or can combine this financing with the financing for other projects.

Instead of having the ESCO verify the savings, project managers in Boulder have chosen to do so themselves. This decision has left more funds to pay for energy improvements. According to Boyes, the guaranteed-savings performance contract was provided an effective means of surveying major city facilities quickly. It also was a way to leverage capital and operating budgets to complete projects within 10 years, the city's time frame for a payback.

Boyes has used funding from various sources to pay for developing the project. For example, he used a grant to hire a mechanical consultant and operational funds to hire an independent energy engineer. These consultants identified additional energy-saving projects that were not included in the scope of the ESCO contract.

Says Boyes, "We employ several financing methods and implementation strategies. We select the best combination individually for each project and work with all city departments to lower the overall cost to the taxpayer and to the environment." The city's creative financing strategy has helped make Boulder's energy upgrade program a model for other cities and counties nationwide.

Katy Hatcher is the ENERGY STAR® Government Partnership manager at the U.S. Environmental Protection Agency, Washington, D.C. Tom Dietsche, program associate at the U.S. Green Building Council, Washington, D.C., is a former assistant project manager of ICMA's Energy Efficiency Program. Energy financing expertise was provided by Neil Zabler, president of the Catalyst Financial Group, Inc., Danbury, Connecticut. For more information on financing energy efficiency

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