



NATIONAL ASSOCIATION OF
ELECTRICAL DISTRIBUTORS

Smart Tools for Smart Distribution®

Going Green Outside:

Selling Energy Management Solutions

Case Studies

Overview

Electrical distributors and manufacturers interested in expanding their energy management sales should take a closer look at green building and energy efficiency spending in the government building sector.

This case study will explore:

- Opportunities for electrical distributors in the government energy management market
- Trends in new construction and energy retrofits
- Department of Energy (DOE) Energy Savings Performance Contracts
- Energy management sales opportunities in the American Recovery & Reinvestment Act (ARRA) stimulus package
- ARRA funding categories and amounts
- Sales approaches and knowledge of government programs
- Green building initiatives in the government sector

The Energy Management Market for Government Buildings

Case Analysis

How can electrical distributors leverage the upcoming investment and growth in energy management for government buildings? This sector looks for energy management solutions to reduce building operations expenses, while also serving as a role model for sustainable design solutions and greenhouse gas emissions reductions.

Energy efficiency investments in government buildings will see significant growth in the next few years as a result of the stimulus package funding, as well as local and state government policy commitments to reducing carbon emissions and cutting energy operating costs. Additionally, pressure will increase to reduce building operating costs through energy efficiency due to longer-term budget shortages, which should mean continued investment in this market.

The sheer size of the government building sector makes it impossible to overlook. For instance, the federal General Services Administration's Public Buildings Service manages 8,600 government-owned or leased buildings with an inventory of over 354 million sq. ft. of workspace.¹ State government building ownership is significant as well, with just the State of California owning more than 210 million sq. ft.²

Did you know?

A stated goal of the Obama Administration's stimulus package is to modernize and improve the energy efficiency of federal, state, and municipal government buildings.

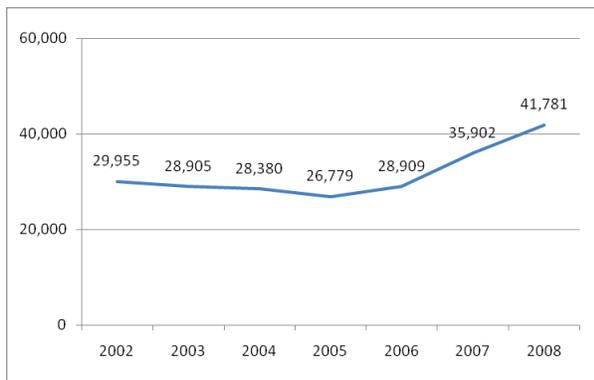
Market Trends

New Construction and Energy Conservation Retrofits

New construction spending on federal, state, and local government facilities (excluding public works spending) remained fairly flat between 2002 and 2006, but then saw a large increase in 2007 and 2008. In particular, detention facilities, courthouses, military buildings, and small post offices experienced significant growth in construction spending.³

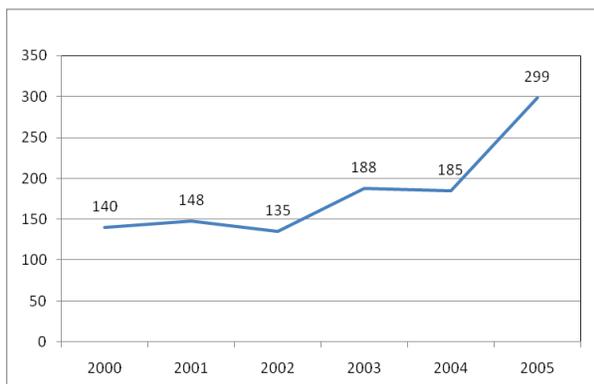
Figure 1 shows the amount of U.S. federal, state, and local government construction spending since 2002.

Figure 1: U.S. Federal, State, and Municipal Building Construction (in millions of dollars).⁴



The growth trend in new government construction is roughly mirrored by historic data on appropriations for energy conservation retrofits on federal buildings between 2000 and 2005, as shown in Figure 2.⁵

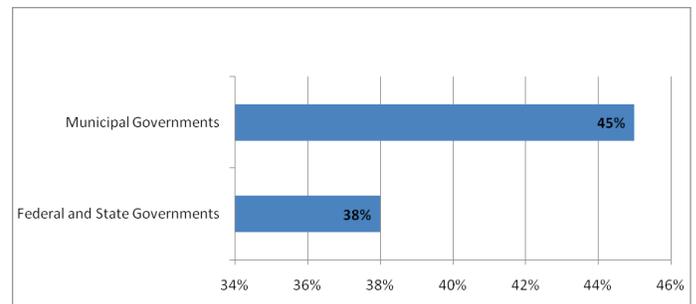
Figure 2: Direct Appropriations on Federal Buildings Energy Conservation Retrofits and Capital Equipment (in millions of dollars).



In a 2009 survey of National Association of Electrical Distributors (NAED) members, respondents were asked to describe all customer segments who are buying energy management solutions. While the majority of distributor respondents sold to commercial customers (commercial offices, retailers, and industrial buildings), federal, state, and municipal or local governments were the third most frequently cited category of end users.⁶

The response frequencies for government end users are listed in Figure 3.

Figure 3: 2009 NAED Survey, Distributors' Government Energy Management End Users:*



* Respondents were asked to check every end user category they sold to, so response frequencies exceed 100.

By contrast, federal, state, and local governments make up a much larger percentage of Energy Service Company (ESCO) revenues. According to a 2006 study, 22% of ESCO industry revenues, worth about \$760 million, come from the federal building market. Municipal and state government buildings are categorized with other institutional (public and nonprofit) buildings like schools and hospitals and constitute the majority (58% or \$2 billion) of ESCO revenues.⁷

“According to a 2006 study, 22% of ESCO industry revenues, worth about \$760 million, come from the federal building market.”

For More Information

➤ Find out more about distributors' most frequently cited end users—commercial and institutional building owners—from NAED's energy management survey. It can be accessed by referring to [NAED's Selling Energy Management Solutions case studies series](#).

Energy Management Investments in Existing Government Buildings

Trends and Funding Overview

Trends have been historically positive in new government construction and energy conservation retrofits. For example, the Federal Energy Management Program (FEMP) has been actively working since 1985 to improve the energy efficiency of federal facilities. According to the U.S. Department of Energy, with assistance from FEMP, the federal government's commitment to improving energy efficiency has accelerated and grown in recent years.⁸

Although the recession may negatively impact state and local government building investments, the American Recovery & Reinvestment Act (ARRA), also known as the 2009 economic stimulus package, should help counteract that reduction in spending. The stimulus package includes approximately \$11.8 billion in funding that can be used to improve the energy performance of federal, state, and municipal government buildings.

“*The stimulus package includes approximately \$11.8 billion in funding that can be used to improve the energy performance of federal, state, and municipal government buildings.*”

Another large source of funding, targeted at energy conservation retrofits in federal facilities, are 16 Indefinite Delivery / Indefinite Quantity (IDIQ) Energy Saving Performance Contracts (ESPCs) awarded by the U.S. Department of Energy (DOE) in December 2008. These contracts could result in up to \$80 billion in energy efficiency, renewable energy, and water conservation projects.⁹

INDEFINITE DELIVERY / INDEFINITE QUANTITY (IDIQ):

A type of contract that provides for an indefinite quantity of supplies or services during a fixed period of time

DOE Energy Savings Performance Contracts

These projects are a potential sales bonanza for electrical distributors, as they are the single most extensive source of funding for energy management in federal facilities. Electrical distributors and manufacturers could supply products to the ESCOs that have been awarded contracts. In this approach, the 16 ESCOs are pre-qualified to work with any federal agency; then they bid on task orders for specific projects, without the need for another formal Request for Proposal (RFP) process.

Even more federal ESPCs are available. At the end of 2008, the U. S. Department of Energy said that ESPCs under development now exceed \$1 billion dollars for the first time in the program's history. The current pipeline is three times larger than it was in February 2007 and continues to grow. To stay on top of this developing opportunity, distributors should closely monitor each ESCO active in their market area and consider participating in facility audits of current or prospective customers.

ESCOs Awarded Federal IDIQ Energy-saving Performance Contracts (ESPCs) in December 2008

- >> Ameresco, Inc., Framingham, MA
- >> Chevron Energy Solutions, Eagan, MN
- >> Clark Realty Builders, Arlington, VA
- >> Consolidated Edison Solutions, White Plains, NY
- >> Constellation Energy Projects & Services Group, Inc., Baltimore, MD
- >> FPL Energy Service, Inc., North Palm Beach, FL
- >> Honeywell International, Inc., Golden Valley, MN
- >> Johnson Controls Government Systems, LLC, Milwaukee, WI
- >> Lockheed Martin Services, Inc., Cherry Hill, NJ
- >> McKinstry Essention, Inc., Seattle, WA
- >> NORESKO, LLC, Westborough, MA
- >> Pepco Energy Services, Arlington, VA
- >> Siemens Government Services, Inc., Reston, VA
- >> TAC Energy Solutions, Seattle, WA
- >> The Benham Companies, LLC, Oklahoma City, OK
- >> Trane U.S., Inc., McEwen, TN

Energy Management Sales Opportunities in the Stimulus Package

The American Recovery & Reinvestment Act (ARRA) provides approximately \$11.8 billion that can be used for new construction and energy-efficiency related improvements in federal, state, and municipal government buildings.

Many of these funds will be distributed over the next two to three years, since the overall goal of the ARRA's \$787 billion in economic spending programs is to stimulate the economy in the short term.

Three programs will be the primary source of funding for government buildings:

- 1 State Energy Programs (\$3.1 billion)
- 2 Energy Efficiency and Conservation Block Grants (\$3.2 billion)
- 3 General Services Administration's (GSA) Public Building Service (PBS) (\$5.5 billion)

State Energy Programs (SEP)

The DOE-administered SEP focuses on helping states develop renewable energy supplies, energy efficiency, energy demand management, and reducing the overall environmental impacts of energy use.¹⁰

As a condition of the stimulus guidelines, the states receiving SEP funds must establish and enforce energy efficiency building codes and standards. The code for residential buildings must meet or exceed the most recently published International Energy Conservation Code. The code for commercial buildings must meet or exceed [ANSI/ASHRAE/IESNA standard 90.1-2007](#).

To ensure that efficiency guidelines are met, SEP funding will be distributed as follows:¹¹

- 10% of funding released at time of initial award
- 40% upon DOE approval of state plan
- 20% upon demonstration by the state that 50% of funds have been obligated
- 30% of remaining funds released once continued progress is demonstrated.

Energy Efficiency and Conservation Block Grants (EECBG)

The EECBG Program provides funds to units of local and state government, Indian Tribes, and territories to develop and implement energy efficiency projects. Of the \$3.2 billion allotted for EECBGs through the stimulus package, \$2.8 billion must be distributed within six months of U.S. Department of Energy's approval of submitted grant plans. This portion of funds allocation will be:

- 68% directly to more than 1,700 of larger U.S. cities
- 16% through states to counties of less than 200,000 people and towns of less than 35,000 population
- 12% directly to SEPs
- 2% for competitive program
- 2% available to tribes

The remaining \$400 million will be distributed through a competitive program among state, local, and tribal entities. These grants can be used for ESPCs, on-bill utility financing, revolving funds, loan guarantees, and other financial incentives and mechanisms.¹²

General Services Administration (GSA)

The GSA was allotted \$5.5 billion through the stimulus package for federal building projects. The three main ways this funding will be used are:

- \$4.5 billion to convert existing federal facilities into exemplary high-performance green buildings
- \$750 million to renovate and construct new federal offices and courthouses
- \$300 million to construct and renovate border stations

The GSA established an Office of High-Performance Green Buildings to ensure that federal buildings are meeting the sustainable design and energy-reduction targets mandated by the Energy Independence and Security Act (EISA) of 2007. This office, which has the same goals for commercial buildings, works in conjunction with the DOE's office.

Don Horn, Director of the Sustainability Program in the Office of Federal High-Performance Green Buildings of GSA's Public Buildings Service, said, "I like the idea that the stimulus funding is directed to existing buildings and not being entirely eaten up in new construction—that we're investing in the existing infrastructure that the federal government owns. I think the wording, 'To convert existing facilities into high-performance buildings,' is really great."

Horn continued, “The definition for high-performance green buildings is from the Energy Independence Security Act from 2007. All of the major categories of green buildings are included: site, energy, water, indoor air quality, operations, maintenance, etc., but it also touches on productivity, health, and other things. It could be interpreted broadly. A big focus is on energy efficiency so we’re looking at energy projects in the buildings and then, where applicable, we’ll implement other aspects of green buildings as well.”

“ We selected projects by focusing on where they will have the biggest effect and what can be done quickly and also be distributed across all the states in the country. ”

**—Don Horn
GSA’s Public Buildings
Service**

The GSA selected a series of buildings and projects that were most likely to create jobs quickly and improve energy efficiency and submitted them to Congress.

Horn described GSA’s process for selecting projects. “For us, it was mobilizing to get this done quickly—it’s about 10 times what we’ve ever done before, plus we have our regular budget for projects that were in the pipeline before the stimulus package,” Horn said.

“The \$5.5 billion will start to address the backlog of maintenance and repair. We selected projects by focusing on where they will have the biggest effect and

what can be done quickly and also be distributed across all the states in the country,” Horn explained.

The stimulus funding for federal, state, and local building projects, along with the DOE IDIQ ESPCs, will lead to a considerable increase in demand for energy management products and services.

Energy Efficient and Green Building Initiatives

Another way to track down energy management opportunities in the government building sector is through green building initiatives and legislation. Energy efficiency is a central component of green building frameworks, like the Leadership in Energy and Environmental Design (LEED) rating system.

A prime example of this is California’s Executive Order S-20-04, signed by Governor Schwarzenegger on December 14, 2004. It requires the design, construction, and operation of all new and renovated state-owned facilities to be certified LEED Silver.

Dan Burgoyne, Sustainability Manager with the Department of General Services in California, described the state’s progress.

“Retro-commissioning of large existing buildings over 50,000 sq. ft. is underway. About 20 have been done; and 20 more are underway via energy audits,” said Burgoyne. “Overall, about 60 buildings are registered under LEED for Existing Buildings Operations & Maintenance and are pursuing certification and the total is over 13 million sq. ft. I am also overseeing new construction projects for more than 200 buildings that must be certified at the LEED Silver level or higher.”¹³

For More Information

- >> [Recovery.gov](#) provides tracking on how ARRA funds are spent and opportunities that result from the spending.
- >> Detailed information about SEP funding opportunities can be found by contacting the state energy offices and programs that applied for the SEP funds. [The National Association of State Energy Officials](#) provides [a listing of State Energy Offices and affiliates](#).
- >> State and local grant allocations can be viewed through the [EECBG program’s website](#).
- >> Review the [list of proposed projects](#) for the General Services Administration (GSA).
- >> The GSA has a separate website for [small business opportunities](#).
- >> All federal contracting opportunities over \$25,000 are listed on [FedBizOpps.com](#).
- >> The National Association of Electrical and Medical Imaging Equipment Manufacturers (NEMA) also provides a [website with links to federal, state, and local stimulus package opportunities](#).
- >> A large list of federal, state, and local green building legislation, executive orders, resolutions, ordinances, policies, and initiatives can be found on the [U.S. Green Building Council’s website](#).

Endnotes

- ¹ http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_OVERVIEW&contentId=8513 accessed June 11, 2009.
- ² <http://www.documents.dgs.ca.gov/dgs/pio/facts/fast%20facts.pdf> accessed June 11, 2009.
- ³ McGraw-Hill Construction, “Construction Outlook 2009”, available at: http://construction.ecnext.com/coms2/summary_0249-295230_ITM_analytics
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- ⁵ http://buildingsdatabook.eren.doe.gov/docs/xls_pdf/4.3.3.pdf accessed June 11, 2009.
- ⁶ NAED Selling Energy Management Solutions Survey, administered between 12/29/2008 and 2/27/2009 by Yudelson Associates.
- ⁷ Hopper, Goldman, Gilligan, Singer, and Birr. “A Survey of the U.S. ESCO Industry: Market Growth and Development from 2000 to 2006.” Lawrence Berkeley National Laboratory and the National Association of Energy Service Companies, May 2007. Available at: <http://eetd.lbl.gov/ea/emp/reports/62679.pdf>
- ⁸ <http://www1.eere.energy.gov/femp/about/accomplishments.html>, accessed June 11, 2009.
- ⁹ <http://www.energy.gov/energyefficiency/6804.htm> accessed December 18, 2008.
- ¹⁰ http://www.naseo.org/about/seo_role.htm accessed March 23, 2009.
- ¹¹ “Energy Efficiency & the Stimulus Bill: Rebuilding the Economy Today for a “Green Energy” Tomorrow.” Op. Cit.
- ¹² “Energy Efficiency & the Stimulus Bill: Rebuilding the Economy Today for a “Green Energy” Tomorrow.” Op. Cit.
- ¹³ Personal interview with Dan Burgoyne, January 26, 2009.

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