

ENERGY CONSERVATION

TECHNICAL ASSISTANCE UPDATE

January 2008 through December 2008

Illinois Department of Commerce and Economic Opportunity
Bureau of Energy and Recycling
620 East Adams Street
Springfield, Illinois 62701

EXECUTIVE SUMMARY

During 2008, the Department of Commerce and Economic Opportunity provided technical assistance to local governments and other units of government through two programs – Energy Performance Contracting and Energy Code Training and Education. There are also two other technical assistance programs available to various sectors. The Smart Energy Design Assistance Center (SEDAC) provides assistance to businesses, state and local governments, public schools, community colleges, and universities and colleges. The Large-customer Energy Analysis Program provides assistance to any business, public sector or non-profit entity with annual energy expenditures over \$500,000. DCEO technical assistance programs have helped save these various sectors considerable amounts of energy and money. Some of the highlights include:

Energy Performance Contracting Program

- For over ten years, the Energy Performance Contracting Program has provided assistance to the public and non-profit sectors. During this time, program staff oversaw the implementation of over \$100 million in energy efficient capital improvements through performance contract arrangements resulting in over \$6.8 million in combined annual savings.
- DCEO worked with several school districts in 2008 to issue RFPs. The Department also began working with the Department of Central Management Services to use EPC to improve energy efficiency at the numerous Department of Corrections facilities around the state and to reduce their several million dollar energy bill.

Code Training and Education Program

- During 2008, DCEO partnered with the International Code Council, to train more than 100 local code officials, engineers, architects, and contractors on the most current International Energy Conservation Code. The training was designed to help them implement the statewide Illinois Energy Conservation Code for state and commercial buildings, which took effect April 8, 2006.
- In addition, the Department and its partners provided code-related technical assistance in response to more than 200 e-mail and phone inquiries during 2008 and distributed over 200 code training cd's.

Smart Energy Design Assistance Center

The Smart Energy Design Assistance Center (SEDAC) provides advice and analyses enabling private and public facilities in the State of Illinois to increase their economic viability through the efficient use of energy resources. SEDAC is sponsored by the Illinois Department of Commerce and Economic Opportunity in partnership with ComEd and Ameren Illinois Utilities and provides valuable services at no cost to for-profit businesses and public facilities. SEDAC is managed by the School of Architecture at the University of Illinois at Urbana-Champaign and the 360 Energy Group.

ENERGY CONSERVATION TECHNICAL ASSISTANCE UPDATE

For the Period January 2008 through December 2008

INTRODUCTION:

The Energy Conservation Act (20 ILCS 1115) was signed into law in September 1979. The law requires that the Department provide technical assistance in the development of thermal efficiency standards and lighting efficiency standards to units of local government, upon request by such unit. The law also states that the Department shall provide technical assistance in the development of a program for energy efficiency in procurement to units of local government, upon request by such unit. The Technical Assistance Programs provided under the law are supported by funds provided to the State pursuant to federal acts that provide funds for energy conservation efforts through the use of building codes.

REPORTING REQUIREMENT:

In August 1989 the law was amended to require that the Department issue an annual report to the Governor and General Assembly describing its authorities under this Act and describing the energy efficiency programs and projects undertaken by units of local government with the assistance of the Department.

PROGRAM OVERVIEW:

ENERGY PERFORMANCE CONTRACTING PROGRAM

Energy Performance Contracting is an innovative arrangement for designing, installing and financing energy improvements where the savings achieved by the project are guaranteed to amortize the cost of the project over the term of the agreement. Energy performance contracts provide a practical means to fund many types of building improvements including new lighting technologies, high-efficiency boilers and chillers, and energy management controls. Through the Department's Energy Performance Contracting Program assistance is provided to units of state and local government, schools, and not-for profit organizations to promote the use of energy performance contracting. Services provided by the Department include:

- Competitive Procurement Process

- Comparative Evaluation Methodology
- Technical Review of Project Audits and Scope
- Review and comment on Basic Contract Documents
- Advice on Contract Negotiations

Under an energy performance contract an agreement is made with a private energy service company (ESCO) that will identify and evaluate energy-saving opportunities and then recommend a package of improvements to be paid for through savings. To ensure savings, the ESCO offers staff training and long-term maintenance services. Additionally, the ESCO will guarantee that project savings meet or exceed annual payments and cover all project costs. Energy Performance Contracting agreements are typically ten years in length, are adaptable to site specific needs and are best suited for facilities that have the following characteristics:

- Annual utility cost in excess of \$100,000
- Stable use of the facility for the next five to ten years
- Minimal availability of funds for energy related capital improvements
- Have accomplished minimal energy efficiency upgrades over the past ten years

For over ten years the Energy Performance Contracting Program has provided assistance to the public and non-profit sectors. During this time program staff oversaw the implementation of over \$200 million in energy efficient capital improvements through performance contract arrangements resulting in over \$14 million in combined annual savings. Throughout the 2008 calendar year program staff worked to develop many new Energy Performance Contracting projects. A summary table of these projects and the corresponding annual savings is included below.

Facility	Annual Savings
DuPage County Phase I	\$74,188
Gibson Schools	\$174,820
Beck Area Career	\$14,628
Lebanon Schools	\$64,344
Valmeyer Schools	\$28,808

Alton Schools	\$113,176
Teutopolis Schools	\$41,728
TOTAL	\$511,692

During 2008, \$84,000 was expended for contractual services in support of the program.

COMMERCIAL ENERGY CODE TRAINING & EDUCATION PROGRAM

The objective of the Commercial Energy Code Training & Education Program is to prepare the building, construction and regulatory communities throughout Illinois for the adoption of the Illinois Energy Conservation Code for Commercial Buildings. Public Act 93-0936 was signed into law in August, 2004 by Illinois Governor Rod Blagojevich, requiring adoption of the code statewide. The code became effective April 8, 2006 and is in the process of being updated based on Public Act 94-815.

The law requires all new commercial construction for which a building permit application is received by a municipality or county to follow a comprehensive statewide energy conservation code. Additions, alterations, renovations and repairs to most buildings must also follow this code as components and systems of the building are altered or otherwise affected. Under the law, the Capital Development Board (CDB) was given the authority to adopt and modify the Illinois Energy Conservation Code based on the 2000 International Energy Conservation Code (IECC) as amended by the 2001 Supplement (hereinafter referred to as the 2001 IECC). Local governments are free, however, to adopt stricter energy conservation codes. Under Public Act 94-815, the CDB may update the code based on the International Code Council's latest edition of the IECC. The Board is in the process of updating the code to the 2006 IECC.

The project helped local governments move toward local adoption of the 2001 IECC and ASHRAE Standard 90.1-1999. Materials have been adapted from existing IECC and ASHRAE curricula to include revisions embodied in the 2004 updates. Recognizing the importance of involving both building code officials and the regulated community, Illinois has structured its outreach, training and educational efforts to inform local stakeholders about the content and value of the new codes through varied learning formats (i.e., workshops, web-based trainings, and on-going technical assistance) delivered by a diverse and well-respected collaboration of professional organizations. From January through April of 2008, six seminars were completed and more than 100 individuals participated in training. In addition, numerous code-related e-mail and phone inquiries were addressed.

Also during 2008, over 200 Illinois Energy Conservation Code for Commercial Buildings CD were distributed. The CD was produced to educate building, construction and regulatory communities throughout Illinois about the new IECC requirements. The CD was distributed at numerous workshop events and statewide meetings.

During 2008, the Illinois Department of Commerce and Economic Opportunity (DCEO) continued to work with various organizations to combine technical expertise with an understanding of the local stakeholders needed to successfully engage communities in moving forward with the Illinois Energy Conservation Code for Commercial Buildings.

The Illinois Energy Conservation Code for Commercial Buildings is the first statewide energy code in Illinois. The law is designed to help protect the environment and reduce energy consumption. Promoting energy efficiency throughout Illinois will spur the design and building communities to adopt more energy efficient, cost-reducing and environmentally sound building practices. By following an energy conservation code, property owners can reduce air pollution, moderate energy demand and stabilize energy costs for electric, oil and gas supplies.

Large-customer Energy Analysis Program

- LEAP has provided technical assistance to large energy users to implement energy saving programs in their organizations. The program targets clients with energy costs greater than \$500,000 per year and provides rebates to clients of 50%, up to \$10,000, towards the cost for developing an energy efficiency action plan and 50%, up to \$10,000, for the cost of a technical assessment. LEAP works with large Illinois clients including manufacturers, hospitals and universities to help manage their energy costs by making cost-effective efficiency improvements. The program involves key decision-makers and focuses on measures that can bring high returns with modest investments. LEAP identifies best practices in energy management and examines how energy is integrated with management systems.
- In 2008, LEAP provided assistance to approximately 75 large-energy users, resulting in approximately 50 follow-up for a total of \$250,000 in funding assistance.

New Initiatives

In August of 2008 Governor Blagojevich signed into law Public Act 95-0481, which mandates a portfolio of energy efficiency programs designed to meet specific energy efficiency goals. The Energy Efficiency Portfolio (EEP) programs are administered by DCEO, ComEd, and Ameren Illinois Utilities under a three year plan approved by the Illinois Commerce Commission. With the availability of additional funding through the EEP legislation, DCEO has the ability to expand the Energy Conservation Technical Assistance program to include additional assistance to public sector entities such public schools, units of local government and municipalities. In addition, the Commercial Energy Code Training and Education program will benefit from additional funds through EEP for increased levels of training and technical assistance. Other DCEO programs such as the Smart Energy Design Assistance Center (SEDAC) and the Large Customer Energy Assistance Programs (LEAP), which previously provided assistance only to Illinois businesses, will be expanded to local governments and other public entities.

It is important to note that the Energy Conservation Act Technical assistance programs and the EEP programs will complement each other and will help to ensure the continuation and

expansion of statewide energy savings through additional technical assistance programs and incentives.