

**ENERGY CONSERVATION
TECHNICAL ASSISTANCE UPDATE**

January 2011 through December 2011

**Illinois Department of Commerce and Economic Opportunity
Illinois Energy Office
500 East Monroe
Springfield, Illinois 62701**

EXECUTIVE SUMMARY

During 2011, the Department of Commerce and Economic Opportunity provided technical assistance to local governments and other units of government through the Energy Efficiency Portfolio. These programs included,–Energy Performance Contracting and Energy Code Training and Education, the Smart Energy Design Assistance Center (SEDAC) which provides assistance to businesses, state and local governments, public schools, community colleges, and universities and colleges and the Large-customer Energy Analysis Program which 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 12 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 \$295 million in energy efficient capital improvements through performance contract arrangements resulting in over \$17.5 million in combined annual savings.
- DCEO worked with several the City of Chicago and several universities and school districts in 2011 to issue RFPs.

Code Training and Education Program

- DCEO partnered with the International Code Council and the International Energy Conservation Consultants, LLC., to train 583 local code officials, engineers, architects, and contractors on the 2009 and the 2012 International Energy Conservation Code (IECC). The training was designed to help with implementation and enforcement of the current statewide 2009 Illinois Energy Conservation Code for residential and commercial buildings as well as the upcoming 2012 IECC which is scheduled to become law January 1, 2013.
- In addition, the Department and its partners provided code-related technical assistance in the form of 118 total interpretations (56 written letters/e-mails and 62 verbal/telephone responses) during the 2011 calendar year and distributed approximately 600 2009 IECC code manuals and workbooks.

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.

In September 2008, under the Illinois Energy Efficiency Portfolio Standard (EEPS), SEDAC services were expanded to include public entities in Ameren and ComEd electric service areas.

In June 2011, public entities in Ameren, Nicor, North Shore and Peoples natural gas service areas were added.

During 2011, SEDAC provided technical assistance consisting of Levels 1, 2, 3 and 4 to 198 local government clients. Potential energy savings from quantified energy reduction measures identified 38,000 MBtu per year and potential cost reduction of \$800K annually.

SEDAC provided new construction design review to 2 local government entities and retro-commissioning analysis to 7 local government entities.

SEDAC hosted 8 workshops targeting local government entities and maintains communication through a monthly electronic newsletter to 1600 local government and school addresses.

ENERGY CONSERVATION TECHNICAL ASSISTANCE UPDATE

For the Period January 2011 through December 2011

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

Energy Performance Contracting Program

- For over twelve years, the Energy Performance Contracting Program has provided assistance to the public and non-profit sectors. During this time, program staff and consultant oversaw the implementation of about \$295 million in energy efficient capital improvements through performance contract arrangements resulting in over \$17.5 million in combined annual savings.
- Over 884 hours of technical assistance was provided in 2011 to 20 local governments, schools, universities and non-profit entities seeking assistance with considering or implementing an energy performance contracting.
- Five energy performance contract projects with a total project cost of over \$33 million were completed in 2011, and are now in the "Measurement & Verification of Savings" stage of the process. These projects are expected to save over \$1.5 million annually.

BUILDING INDUSTRY TRAINING & EDUCATION PROGRAM (B.I.T.E)

The objective of the Building Industry Training & Education Program is to assist the Department in preparing 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, requiring adoption of the code statewide. The code became effective July 1, 2009 and is in the process of being updated based on Public Act 94-815.

The Illinois Energy Office has continued to provide consistent ‘Building Energy Code’ training on the 2009 International Energy Conservation Code (IECC) to residents, builders, architects, code enforcement officials and other energy professionals in and around the combined ComEd and Ameren Illinois Utilities service territories. Effective January 29th, 2010, an energy code for residential buildings became effective officially establishing the 2009 International Energy Conservation Code (IECC) as the energy code for residential buildings as well as commercial building in Illinois.

In 2011, the International Code Council (ICC) provided 25 days of training on the 2009 International Energy Conservation Code (IECC) to 583 class attendees. These training opportunities consisted of both one and two day sessions with a forecast of changes due to the impending adoption of the 2012 International Energy Conservation Code (IECC) at the end of each class.

During 2011, 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 such as manufacturers, hospitals and universities and helps manage their energy costs by making cost-effective efficiency improvements. The program provides energy management practices through Sustainable Energy Workshops and follow-up services provided by Utilivate Technologies. The Large-customer Energy Analysis Program is designed to reduce the cost of doing business in the state, and thereby demonstrating the cost-effectiveness of energy efficiency strategies, protecting jobs, and reducing pollution from wasted energy.

ComEd customers participating in 2011:

- Village of Richton Park, City of Bedford Park, City of Evanston, Village of Lake Forest, Village of Oak Forest, Village of Woodridge, Titan Tire of Freeport, Ridgewood High School, Village of Franklin Park, CSL Behring, Country Club Hills, Precise Construction,

Morgan Park Academy, City of Kankakee, Kates Detective Agency, Village of Robbins, Thayer Lighting, Tiehman Speyer, Dekalb County Government.

Ameren customers participating in 2011:

- City of Alton, City of Evanston, St. Louis Regional Airport, YWCA of Alton, Boys and Girls Club of Greater Peoria, City of Lasalle, Herff Jones, Huber Commercial, Lillibridge Healthcare, Beverly Farm Foundation, Lewis & Clark Community College, Saint Anthony's Health Care.

Energy Savings Achieved:

- 195,644.1 MMBtu's (14% reduction)

2011 expenditures

\$292,000 – ComEd service territory

\$108,000 - Ameren service territory

Summary

It is important to note the Energy Efficiency Portfolio and the Energy Conservation Act compliment one another in goals and energy savings. Requests for these services continues to increase as more public and private entities are focusing on energy efficiency. The Department will continue to provide the afore mentioned technical assistance in conjunction with the Energy Efficiency Portfolio and other Department programs.