

## SEDAC

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 University of Illinois at Urbana-Champaign and supported by the 360 Energy Group.

(Hyperlinks are shown in green)

## EDUCATION

### Missed a SEDAC presentation?

Look for it in the archives at [sedac.org](http://sedac.org)

**ENERGY CENTER OF WISCONSIN**  
Building Systems: Commissioning and Retro-commissioning  
Presenter: Rebecca Ellis, P.E., LEED AP

Chase Tower, Chicago, IL  
September 23, 2009

[www.ecw.org/comedtraining](http://www.ecw.org/comedtraining)

Online course available anytime:  
**Beyond Code: Designing Energy Efficient Commercial Buildings** by Donald Fournier

**CHICAGO CENTER FOR GREEN TECHNOLOGY**

**USGBC CHICAGO CHAPTER**

2009 Environmental Leadership Conference

**Bringing Green Down to Earth**  
The Hyatt Lodge at McDonald's Campus  
Oak Brook  
September 30, 2009

## NEWS

### ILLINOIS - \$40,528,400 awarded from Recovery Act *Check the [DCEO Web site](#) soon for applications and guidelines*

Illinois will improve energy efficiency and promote renewable energy projects by providing Recovery Act funding for energy efficiency retrofits and the biofuels industry. The state will provide grants to support new biomass manufacturing capacity or retrofits to existing facilities that will help reduce operating expenses and the environmental impact of biofuels manufacturing.

The state will also use Recovery Act SEP funding to provide grants to various entities including schools, public buildings, and industrial facilities to improve energy efficiency in new and existing buildings, facilities, equipment, and processes. Grants will fund multiple initiatives, including investments in energy efficient lighting, cooling, traffic signals, boilers, and furnaces. Programs will look to leverage funding with outside sources and will specifically target large-scale energy users, in order to identify and prioritize energy efficiency measures that will result in the greatest return on investment. After demonstrating successful implementation of its plan, the state will receive more than \$50 million in additional funding, for a total of over \$101 million.

See SEDAC's [Fact Sheet on the Recovery Act](#)

### The Future of Buildings - *new Illinois energy codes coming*



We have entered an interesting time period and are going to see a significant ramping up of energy performance requirements for new and existing buildings in the near future. The two model code and standard developing organizations, **International Code Council (ICC)** and **American Society of Refrigeration and Air-conditioning Engineers (ASHRAE)**, have initiatives underway to make their model codes require more energy efficiency. The next round of codes coming out in a year or two are targeting 30 percent lower energy usage than the current Illinois state energy code. See the 2006 **International Energy Conservation Code (IECC)** and **ASHRAE Std 90.1-2004 Energy Standard for Buildings Except Low-Rise Residential**. Also, the **Illinois Energy Conservation Code** will shortly be moving to the 2009 IECC and adopting not only the commercial buildings section, but also the residential building section. The 2009 IECC requires about a 12-15 percent more energy efficient design than the 2006 IECC for the residential sector and about 5 percent more energy efficiency for the commercial sector.

The American Clean Energy and Security Act (ACES), recently passed by the US House of Representatives, if enacted, would require an energy improvement in new commercial buildings of 30 percent immediately and 50 percent by 2016. What we see is a trend indicating new and renovated buildings have to be significantly more energy efficient than previous designs. ACES includes an incentive-based retrofit program for existing buildings tied to various levels of energy savings over the building's prior energy usage. Water savings would also be eligible for incentive funding.

...over

## DCEO CONTACTS

DCEO Public Sector Electric  
Efficiency Program  
[www.illinoisenergy.org](http://www.illinoisenergy.org)

### HOW TO APPLY

#### DCEO Program Contacts

Custom Incentive Program  
Retro-Commissioning Pilot  
New Construction Program  
contact:  
Tom Coe, 217-785-2433  
[tom.coe@illinois.gov](mailto:tom.coe@illinois.gov)

Standard Incentive Program  
contact:  
Andrea Reiff, 217-785-0164  
[andrea.reiff@illinois.gov](mailto:andrea.reiff@illinois.gov)

DCEO Outreach  
contact:  
Carol Kulek, 217-785-3412  
[carol.kulek@illinois.gov](mailto:carol.kulek@illinois.gov)

## ENERGY SMART TIPS

SEDAC has prepared energy **Fact Sheets**. New sheets are available for

- **Hotels**
- **Water Treatment Facilities**
- **2009 Recovery Act**



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## NEWS ...contd.

The program would be based on implementing recommendations from an energy audit. There are provisions in the bill to provide grants to state and local building code departments to assist in code enforcement.

The US Senate has not acted upon the ACES legislation, but has an energy bill of its own. It may not include carbon limits, but it has similar provisions for energy usage in the building sector and we can expect much of that will pass and become law.

Under ACES, an enhanced building labeling program is proposed to be established by the **US Environmental Protection Agency**. The program would be voluntary and apply only to new construction. Meanwhile, ASHRAE is developing a building rating system called **Building Energy Quotient (Building EQ™)**. The ASHRAE Advanced Building Energy Labeling (ABEL) program is based on the Building Energy Quotient (bEQ) label, together with a supporting certificate. The label is applicable to existing buildings, using the As Operated (Operational) Rating, and to new buildings using the As Designed (Asset) Rating. The ratings are designed to support regulatory energy use disclosure requirements which are being implemented in some states. The ABEL program uses a new rating system and methodology, in which the best score indicates net zero energy buildings (A+) and the worst score indicates unsatisfactory energy performance (F). These ratings do not correlate with the **ENERGY STAR®** ratings and scoring, which are based on the current statistical energy use of buildings as recorded in the **CBECS** database, so the user cannot currently make a connection between the two systems.

In addition to the ASHRAE system, the **American Society of Testing and Materials (ASTM)** International Committee E50 is developing a proposed standard for collection and disclosure of energy use information associated with buildings involved in real estate transactions. The standard would look at property and building characteristics (property type, building age, last major renovation, number of floors, square footage, occupancy, heating system, air conditioning system, etc.); electrical consumption and cost (minimum prior 12 months); water consumption and cost (minimum prior 12 months); energy audit history; green building certification/rating; and applicable energy efficiency ordinances/codes (local/federal).

On a final note, both the **ICC** and **ASHRAE** are developing model green building codes. The ICC effort is the **International Green Construction Code** to come out in March of 2012. This code will also require minimum of 30 percent beyond the IECC 2006 code and have Tiers beyond that up to IECC 2006 plus 50 percent and 50 percent on-site renewable energy. The ASHRAE effort is Std 189.1 **Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings**. Standard 189.1 should come out later this year and require 30 percent energy reduction beyond ASHRAE Std 90.1-2004. The goal of both the American Institute of Architects (AIA) and ASHRAE is to bring us net zero energy buildings by 2030 as per building code. We can expect higher and higher energy performance requirements over the next decade or two for both existing and new buildings. Existing building owners may be required to provide energy performance data for their buildings and to improve the performance of these buildings or they will lose their market viability. The public sector will also be expected to keep pace with the coming changes and to serve in a leadership role as early adopters.

To participate in the *Smart Energy Design Assistance program*, contact us at: (800) 214-7954 or [info@SEDAC.org](mailto:info@SEDAC.org)  
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