



**SMART  
ENERGY  
DESIGN**  
Assistance Center

# Smart Energy Design Assistance Center

Newsletter Vol. 5, No. 10, October 2009

[www.sedac.org](http://www.sedac.org)

## 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

### SEDAC Lunch & Learn

November 13, 2009

11:45 AM - 1:00 PM

#### MOISTURE IN BUILDINGS

Presented by William Rose  
BRC Research Architect

Location: Illinois Sustainable  
Technology Center

1 Hazelwood Drive, Champaign, IL  
61820

**REGISTER ONLINE**

#### DIRECTIONS

Sandwiches Provided

## PUBLIC SECTOR OPPORTUNITIES

### Free Workshop on Energy Efficiency in Public Sector Facilities, Peoria, November 17



SEDAC is hosting Electric Efficiency Workshops for public sector officials in K-12 schools, community colleges, public universities and colleges, local, state, and federal government.

Presenters are Don Fournier, Ben Sliwinski, and Kristine Chalifoux from SEDAC, and Andrea Reiff from the Department of Commerce and Economic Opportunity.

**Tuesday, November 17: REGISTER by November 12.** Limit 80  
**Illinois Central College North Campus, 5407 N. University, Peoria.**

#### Directions

- |                     |  |
|---------------------|--|
| 8:30 am – 9:00 am   | Registration   |
| 9:00 am – 10:00 am  | General Session – National Energy Situation, Future of the Built Environment, and Renewable Energy Transition  |
| 10:10 am – 11:10 am | Learn about new opportunities for energy efficiency: <ol style="list-style-type: none"> <li>1. Educational Facilities</li> <li>2. Municipal Buildings, Park Districts, Water and Waste Treatment Facilities</li> </ol> |
| 11:20 am - 12:15 pm | Learn about available Grants and Incentives  |

Register online at <http://go.illinois.edu/sedacworkshops>

### US Department of Energy Cost Projections for Winter

**Natural Gas.** In the Midwest, where more than 70% of all households and most businesses rely on natural gas, DOE projects a 15% decrease in average heating season expenditures. This results from an 11% decrease in prices and a decline in consumption of 4% based on the forecast of warmer weather than last winter.

**Propane.** DOE projects Midwestern users to see an average reduction in expenditures this heating season of 21%. One-fourth of the difference in the change in fuel bills is due to weather in the Midwest expected to be about 4% warmer, the rest is due to price reductions.

**Electricity.** Electrical costs for heating are expected to average of 2% less than last winter. The 2% decline in electricity expenditures reflects a 2% decrease in prices and very little change in consumption.

Source: DOE/EIA Short Term Energy and Winter Fuels Outlook, 10/6/2009  
<http://www.eia.doe.gov/emeu/steo/pub/contents.html>

## EDUCATION ...contd.

### ENERGY CENTER OF WISCONSIN

#### Online course available anytime:

**Beyond Code: Designing Energy Efficient Commercial Buildings**  
by **Donald Fournier**

ComEd and the Energy Center University

**November 3, 2009: Energy Efficient**

**Lighting: From Principles to Payback**  
by **Randy Johnson, LC**

Hilton Garden Inn, Schaumburg

**REGISTER**

### CHICAGO CENTER FOR GREEN TECHNOLOGY

**USGBC CHICAGO CHAPTER**

## 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)

**APPLY FOR SEDAC SERVICES ONLINE**

## NEWS

### 2009 Solar Decathlon

Congratulations to the University of Illinois team whose **Gable Home** won second place in the **2009 Solar Decathlon** competition sponsored by the U.S. Department of Energy.

### Common Energy Measures by Building Type

Last month we showed data that detailed the average energy savings and investment return we've seen for different building types that have undergone SEDAC analysis (**SEDAC Newsletter Vol 5.9.**) Here we list some of the most common energy cost reduction measures (ECRMs) that we recommend for those building types.

No-cost, low-cost measures should be considered first. Quick returns can be found from turning off, tuning up, and turning down equipment, and sealing cracks in building seams. Savings from these efforts can then be rolled into efficient lighting retrofits followed by mechanical system upgrades. Ideally, extensive insulation projects should be done before replacing mechanical systems to allow for downsizing. Once all loads are fully minimized, then SEDAC considers **renewables**.

**Restaurants:** Lighting retrofits, kitchen hood demand controls, low-flow pre-rinse spray valves on dish-washing faucet, reduced idle time of cooking equipment, and walk-in refrigeration ECM fans.

**Office Buildings:** High-performance or low-wattage lighting (T8 or T5), LED exit signs, HVAC replacement or recommissioning (tune-ups, minimizing reheat, checking minimum outdoor air settings), increased roof insulation (with planned roof replacement), updating control systems (DDC), demand control ventilation, variable frequency drives for motors, and computer power management (setting standby and sleep mode).

**Schools:** High-performance or low-wattage lighting (T8 or T5) in gyms and classrooms, boiler recommissioning (fuel/air adjustment, heat exchanger cleaning, steam trap maintenance), swimming pool covers, and educational renewable projects like small-scale demonstration green roofs and solar PV.

**Water Treatment Facilities:** High efficiency motors, fine bubble aeration, variable frequency drives on aeration motors controlled by O<sub>2</sub> sensors, and building conditioning using water source heat pumps.

**Hotels and High Rise Apartments:** Air sealing of building envelope, setback thermostats, attic insulation, condensing furnace upgrade, high efficiency heat pumps, hot water savings with low flow fixtures and ozone laundry, combined heat and power, and solar thermal.

**Manufacturing:** Highbay T8 or T5 lighting, skylights, infrared radiant tube heaters, displacement ventilation, and transpired solar walls. Simple process load measures include: waste heat recovery and compressed air commissioning (leak detection, standby controls).

To participate in the *Smart Energy Design Assistance program*, contact us at: (800) 214-7954 or [info@SEDAC.org](mailto:info@SEDAC.org)  
Smart Energy Design Assistance Center, 1 East St. Mary's Road, Champaign, IL 61820

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