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)

ISBE GRANTS and ILLINOIS ENERGY NOW

DCEO's Illinois Energy Now Energy Efficiency Portfolio rebate program could provide the matching funds schools need for receipt of ISBE Energy Efficiency Grant dollars. In order to be eligible for the the Illinois Energy Now ISBE grant match rebate program, schools must receive electric delivery service from ComEd or Ameren Illinois wires regardless of their retail electric supplier. Electric efficiency projects include but are not limited to, lighting retrofits, de-lamping and permanent lamp removal, as well as new lighting fixtures, HVAC and refrigeration equipment efficiencies, occupancy sensors and other computerized energy control systems, or other projects designed to reduce electric energy consumption.

To find out if your project is eligible for the Illinois Energy Now rebate dollars, click on the Guidelines for Local Government, Public Schools and Community Colleges link at illinoisenergy.org or contact Carol Kulek at (217) 785-3412.

OTHER TRAINING

ComEd
November 15, 2010
Data Loggers for Improving Building Operations - Mark Stetz

December 7, 2010
Direct Digital Control Systems for High Performance Buildings - Jay Santos

Details at http://www.ecw.org/comedtraining/

ENERGY CENTER OF WISCONSIN
Online course available anytime:
Beyond Code: Designing Energy Efficient Commercial Buildings by Donald Fournier

FREE PUBLIC SECTOR WORKSHOPS
Electric Energy Efficiency in Public Sector Facilities

November 19, 12:30-4:00 PM: DeKalb County Farm Bureau Sycamore, IL
December 8, 9:00 AM-12:30 PM: Illini Center, Chicago

WHO SHOULD ATTEND? Public sector officials in K-12 schools, community colleges, public universities, local, state, and federal government.

Register online NOW at http://go.illinois.edu/sedacworkshops

Missed a SEDAC presentation? Look for it in the archives at sedac.org
The Illinois Energy Conservation Code (IL ECC) governs the thermal performance of both residential and commercial buildings by setting mandatory standards for the design and construction of the building envelope.

Building envelope components addressed by the code include above-grade and below-grade walls, roofs, exposed floors, slabs-on-grade, windows, doors, and skylights. This article addresses IL ECC building envelope requirements for commercial buildings that reduce the amount of both air infiltration and heat transfer caused by thermal bridging.

**Air Infiltration**

- **Sealing of the Building Envelope:** The code requires all openings, penetrations, joints, junctions, seams, and all other openings in the building envelope to be sealed with caulking, joint tape, weather-stripping and/or gasketing systems. Materials must be compatible with the construction materials and location where they are applied, and they must allow for expansion and contraction of the construction materials.

- **Door and Window Assemblies:** The code governs maximum assembly air leakage for these components and requires air leakage be determined by a recognized accreditation organization, such as the National Fenestration Rating Council.

- **Vestibules:** The code requires an enclosed vestibule for entrance doors to separate conditioned space from the exterior of the building. There are somewhat different requirements and exceptions in the International Energy Conservation Code 2009 (Section 5.4.3.4) than in ASHRAE 90.1 2007 (Section 502.4.7). Where enclosed vestibules are required, all doors opening into and out of the vestibule must be equipped with self-closing devices. The vestibule must also be designed such that both interior and exterior doors need not open simultaneously in order to pass through the vestibule.

**Thermal Bridging**

- **Continuous Insulation:** The code requires installation of continuous insulation where the assembly construction type would result in significant thermal bridging without it. Examples of this requirement include roof insulation where the insulation is located entirely above the roof decking, most wall types, and exposed mass (e.g. concrete) floor assemblies.

- **Thermal spacer blocks:** The code requires installation of thermal spacer blocks between the steel framing and metal panels in specific roof and wall assemblies.

**New Construction.** SEDAC encourages designing and constructing to the ASHRAE Standard 189.1 Standard for the Design of High Performance Green Buildings in order to achieve beyond-code energy savings. ASHRAE Standard 189.1 targets between 20%-50% improvement over code-based requirements for envelope assembly performance. Recommendations include increasing overall insulation, with an emphasis on increasing use of continuous insulation, particularly for metal buildings, stringent air sealing specifications, and envelope commissioning.

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**EVENTS**

Nicor and Delta Institute  
**November 16 and November 23**  
*Overview of the Cook County Commercial & Industrial Efficiency Program*

Details at [http://www.nicorgasrebates.com/bus-contractor/b-events](http://www.nicorgasrebates.com/bus-contractor/b-events)

**SEDAC FACT SHEETS**

- Pools
- Ice Arenas
- Warehouses
- Convenience Stores
- Supermarkets
- Water & Wastewater Treatment Facilities
- Restaurants
- Hotels
- Condominiums

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**ILLINOIS ENERGY CONSERVATION CODE BASICS**

The law requires design and construction professionals to follow the Illinois Energy Conservation Code for any new building or structure in the State of Illinois for which a building permit application is received by a municipality or county. In order to comply with the code, building designers must follow either the International Energy Conservation Code 2009 (IECC 2009) or ASHRAE 90.1 2007 in their entirety.

For more information on the IL ECC see:  
[http://www.commerce.state.il.us/dceo/Bureaus/Energy_Recycling/IECC.htm](http://www.commerce.state.il.us/dceo/Bureaus/Energy_Recycling/IECC.htm)  