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# Financing Efficiency

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#### IASB JOINT ANNUAL CONFERENCE

Chicago, Illinois

# Financing Energy Efficiency

- State-based Funding:
  - Energy Efficiency Portfolio Programs
  - Training & Education Programs
  - Renewable Energy Grants
- ICECF Foundation Grants
  - Federal Tax Incentives
    - ISBE Energy Efficiency Grants

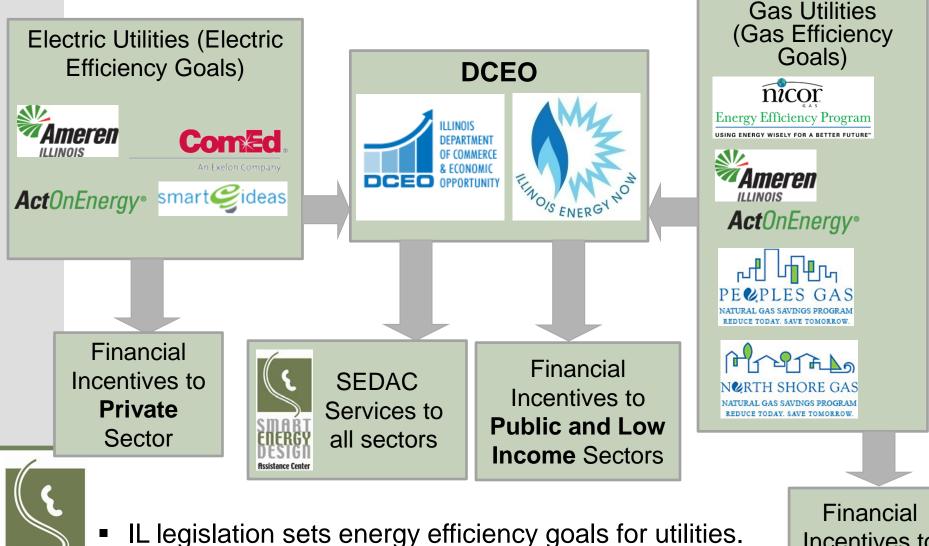


## Energy Efficiency Portfolio Standard (EEPS)

• EEPS - energy efficiency programs that provide for incentives for customers of investor owned electric and natural gas utilities to encourage them to purchase and install high efficiency equipment and systems to reduce electricity use. Goals ramp up to an annual reduction in electricity usage by 2.0% in 2015 and in natural gas usage by 1.5% in 2019.

 75% by utilities and 25% DCEO for public and lowincome sectors.

#### IL EEPS PROGRAM STRUCTURE



- IL registration sets energy enciency goals for utilities.
  SEDAC's funding is from IL Utilities through DCEO.
  - SEDAC Provides SERVICES to both Public and Private Sectors.

Assistance Center

Financial Incentives to **Private** Sector

### Estimated DCEO Budget for Illinois Energy Now Portfolio of Programs

Year	Electric	Natural Gas
2011-12	\$ 54 million	\$15 million
2012-13	\$ 55 million	\$19 million
2013-14	\$ 55 million	\$25 million



Public Benefit Funds from ComEd & Ameren Illinois Electric utility customer's rider on electric bill effective June 1, 2008.

#### 2011-2012 Program Year PSEE Standard and Custom Estimated Funding Available

Funding Level	Ameren Electric	ComEd	Ameren Natural Gas	Nicor	Peoples	Northshore
Year 4 Budget	\$7.7 M	\$20.2 M	\$2.0 M	\$4.4 M	\$1.2 M	\$271 K



Year 4 funds are available for projects completed 6/1/11 – 5/15/12.



# Program Eligibility Determined by Electric and/or Natural Gas Service Area

Where the public sector facility receives electric power delivery from Ameren Illinois or ComEd, the facility is eligible for electric efficiency incentives for those measures that produce electric savings. Measures include; lighting, HVAC equipment, motors, kitchen equipment.

Where the public sector facility receives natural gas delivery from Ameren Illinois, Nicor, Peoples or North Shore, the facility is eligible for natural gas efficiency incentives for those measures that produce natural gas savings. Measures include; HVAC equipment, water heaters, kitchen equipment.



Where the public sector facility is located in both a participating electric service area and natural gas service area, facility is eligible for both electric and natural gas efficiency incentives.



# Eligibility and Funding Availability

#### www.illinoisenergy.org

2011-2012 Program Year 4 Guidelines and Application available now for Illinois Energy Now Public Sector Electric and Natural Gas Efficiency Programs (for projects completed June 1, 2011 – May 31, 2012).

Please Check here for Funding Availability before proceeding with Application for Illinois Energy Now Public Sector Standard and Custom Incentive Programs.

Table 1. Funding Availability June 1, 2011

ELECTRIC			
1	Ameren	Yes	
<b>V</b>	ComEd	Yes	
ľ	ATURAL	GAS	
$\checkmark$	Ameren	Yes	
<b>S</b>	Nicor	Yes	
$\checkmark$	North Shore	Yes	
V	Peoples	Yes	



**Assistance Center** 

## ILLINOIS ENERGY NOW (IEN) Standard Incentive Program

Provides set or "Standard" incentives for common upgrades:

Electricity

- Lighting Equipment
- HVAC Equipment
- Kitchen Equipment
- Motors and Drives
- LED traffic signals

Natural Gas

- Gas Furnaces
- Water Heaters ≥50 gallon (Tanked & Tankless)
- Boilers
- Condensing Boiler
- Kitchen steam cookers
- Low Flow spray valves





#### IEN Standard Incentive Program Lighting Fixture Retrofit Existing Fixture New T-8 Lamps & Ballasts

High Performance or Reduced Wattage	Incentive paid per Lamp Retrofit
4-foot Lamp and Ballast	\$13.00 per Lamp
Reduced Wattage 8-Foot T-8	
8-foot Lamp and Ballast	\$22.00 per Lamp
Specialty T-8 Lamps and Ballasts	
4-foot U Tube and Ballast	\$7.00 per Lamp
2-foot Lamp and Ballast	\$7.00 per Lamp
3-foot Lamp and Ballast	\$12.00 per Lamp



Incentive for retrofitting existing T12 lamps and magnetic ballasts with high performance T8 lamps and electronic ballasts. This measure is based on the Consortium for Energy Efficiency (CEE) high performance T8 specification (<u>www.cee1.org</u>). A list of qualified lamps and ballasts can be found at: <u>http://www.cee1.org/com/com-lt/com-lt-main.php3</u>. Indicate from the list which lamps and ballasts will be installed. You may attach the list and circle the items that will be used. Both the lamp and ballast must meet the specification in order to qualify for an incentive. Incentives for this measure are calculated per lamp installed.



#### IEN Standard Incentive Program Lighting Delamp/Permanent Lamp Removal During Existing Fixture Retrofit

Delamp, Permanent Lamp Removal	Incentive Paid Per Lamp Removed
Delamp, 4-foot Lamp, Ballast, Holders	\$12.00 per Lamp
Delamp, 8-foot Lamp, Ballast, Holders	\$15.00 per Lamp
Delamp, 4-foot Lamp, add Reflector	\$22.00 per Lamp
Delamp, 8-foot Lamp, add Reflector	\$29.00 per Lamp



De-lamp is the net reduction in the number of lamps in a fixture. Applicants are responsible for determining whether or not to use reflectors in combination with lamp removal in order to maintain adequate lighting levels. Lighting levels are expected to meet the Illuminating Engineering Society of North America (IESNA) recommended light levels. Unused lamps, lamp holders, and ballasts must be permanently removed from the fixture and disposed of in accordance with local regulations. This measure is applicable when retrofitting from T12 lamps to T8 lamps or reconfiguring a T8 fixture to reduce the number of lamps. Removing lamps from a T12 fixture that is not being retrofitted with T8 lamps are not eligible for this incentive.

#### IEN Standard Incentive Program Lighting New Fluorescent Fixture with High Performance T8 or T5 Lamps

High Performance T8/T5 New Fluorescent Fixtures with Electronic Ballast	
Total Existing Fixture Watts less total New Fixture Watts	\$0.75 per Watts Reduced

Submit manufacturer specification sheet that shows new fixtures meet the new fixture specs:

- The T8 or T5 lamps must have a color rendering index (CRI)  $\ge$  80.
- The electronic ballast must be high frequency (≥20 kHz), UL listed, and warranted against defects for 5 years.
- Ballast power factor (PF)  $\geq$  0.90.
- Ballasts for 4-foot lamps total harmonic distortion (THD) ≤20%.
- Ballasts for 2- and 3-foot lamps total harmonic distortion THD ≤32%.
- High output T5/T8 lamps also qualify for this rebate.



Projects with new T8 or T5 fixtures that operate  $\geq$  6,000 hours per year (such as 24-hour facilities) may apply under the Custom Incentive Program.

#### Illinois Energy Now Case Study Standard Incentive Program

- Township High School District 214
- Existing T-8 fluorescent fixtures reconfigured to remove lamps and re-lamped 32W T-8 lamps to reduced wattage 25W T-8 lamps. Replaced existing incandescent lamps with CFLs. Installed occupancy sensors.

Total project cost	\$160,000
Illinois Energy Now Incentive	\$ 90,000
Total Cost to School	\$ 70,000
Estimated energy saved: 913,416 kV	Vh per year

Estimated cost savings:\$75,000 per year

Payback = 1 year



Calculated during year 2 of the Illinois Energy Now program



Illinois Energy Now Standard Incentive Program HVAC and Water Heaters

- Incentives for electric air conditioning equipment.
- Incentives added for:
  - Natural gas furnaces and boilers.
  - Ground Source Heat Pumps (GSHP):
    - Baseline all electric.
    - Baseline electric HVAC and natural gas heating.
    - Baseline existing GSHP  $\leq$  13 EER.
  - Natural gas water heaters:
    - Tanked
    - Tankless
    - Condensing





#### Illinois Energy Now Standard Incentive Program -- Motors

- Incentives available for 25 hp to 200 hp replacement motors where existing motor would have been rewound.
- 25 hp to 100 hp motors incentive = \$4.50 per hp.
- 125 hp to 200 hp motors incentive = \$4.00 per hp.
- VSD standard incentive no longer limited to HVAC equipment.
- VSD for existing motors  $\leq$  200 hp incentive = \$92 per hp.
- VSD and Motors > 200 hp may be eligible for a custom incentive.





#### Illinois Energy Now Standard Incentive Program Kitchen

- Refrigeration Incentives now Kitchen Incentives.
- New Incentives added include:
  - ENERGY STAR<sup>®</sup> freezer incentive = \$5 or \$6 per ft<sup>3</sup>
  - ENERGY STAR glass door refrigerator incentive = \$6 per ft<sup>3</sup>
  - Pre-Rinse Spray Valves incentive = \$32.00 each
  - Low Flow Faucet Aerator incentive = \$8.00 each
  - Electric and Natural Gas Steam Cookers incentives depend on fuel type and pan quantity





#### Illinois Energy Now Custom Incentive Program

- For those electric and/or natural gas efficiency measures not listed in Standard Incentive Program.
- Electric Custom Incentive = \$0.12 per annual kWh savings.
- Natural Gas Custom Incentive = \$1.25 per annual therms savings.
- Simple payback must be 1 to 7 years.
- Exterior LED or Induction Lighting Incentive = \$0.30 per annual kWh savings.



Not to exceed 75% of project cost to a maximum of \$300,000.



# Public Sector Retro-Commissioning Program



- Provides public sector funding to identify and implement low cost tune-ups and adjustments to existing building operating systems with a focus on HVAC and building control systems.
- Pilot projects included Peoria Civic Center, Normal Children's' Discovery Museum, WIU, Champaign Police Station, and Decatur Civic Center.



• Tune-up opportunities not end-of-life.

# Public Sector Retro-Commissioning Program

- Year 4 is now full at 27 projects.
- Must be either Ameren or ComEd customer.
- Link to application/RCx Program Manual on the web site:

http://smartenergy.arch.uiuc.edu/html/RCxProgram.html

- Client must commit to \$10K worth of building improvements based on RCx study.
- Limited to existing buildings over five years old, >150,000 sf that have potential to save electricity.



# Illinois Energy Now New Construction Program

- Encourages applicants to design new or rehabbed buildings to achieve the greatest level of energy efficiency.
- SEDAC can help with the design phase too!
- Offers \$0.08/kWh and \$0.80/therm incentives for facility design improvements beyond code.



- Design Bonus offered for LEED buildings.
- Estimated electricity savings must be documented by energy modeling and/or supporting calculations.



## New Illinois Energy Now Program Public Sector Aggregation

- Allows local governments and non-profit entities serving the public sector to combine projects.
- Allows unique approach to serve different sectors.
- Aggregator will manage project implementation.
- New delivery channel to hard-to-reach customers.
- Training and Technical Assistance will be provided.
- 2011 2012 Award recipients:
  - City of Chicago
  - IGEN Community College Sustainability Network
  - Metro Mayors Caucus
  - Illinois County Commissioners Association



## Illinois Energy Now Natural Gas Boiler Tune-Up Special

- Provides cash incentives to encourage owners of natural gas boilers (> 200,000 Btuh) to invest in a boiler tune-up by a qualified contractor.
- Encourages contractors to identify further energy saving opportunities with the boiler system (steam trap and pipe insulation repair).



### Heat Source MUST be Natural Gas

Applications accepted from 9/1/11 through 2/29/12

#### Illinois Energy Now Natural Gas Boiler Tune-Up Special

- Boiler Tune-Ups:
  - Boiler size >200,000 Btuh.
  - High/Low (\$300) or Fully Modulating (\$600).
  - No previous tune-up within last 24 months.
- Steam traps:
  - For traps that are leaking steam (failed "open").
  - Detection method (pyrometer, ultrasound or visual).
  - \$60 per individual steam trap.
  - No previous scheduled maintenance within 24 months.

Maximum Incentive/Rebate Allowed for any Single Project/Application is the lessor of \$35,000 or 75% of the Total Project Cost.

### Building Industry Training & Education New Programs

#### **Trade Ally Training**

 Coordinate statewide effort to educate DCEO trade allies to assist Public Sector entities in applying for Illinois Energy Now programs, provide incentives for trade allies.

#### **Community College Training Program**

 Coordinate energy efficiency training for students, community college staff and facility managers to achieve energy savings goals across community college system.

#### Low Income Implementation Assistance

 Provide technical assistance to affordable housing developers and building owners/landlords in improving energy efficiency of existing and new low income housing.





#### Illinois Energy Now Public Sector Program Contacts

- New Applications: Sally Agnew, 217.785.5081
- <u>sally.agnew@illinois.gov</u>
- Local Government: Andrea Reiff, 217.785.0164 <u>andrea.reiff@illinois.gov</u>
- Public Schools & Community Colleges: Byron Lloyd, 217.785.3412, <u>byron.lloyd@illinois.gov</u>
- Public Universities and Colleges: Tom Coe, 217.785.2433 tom.coe@illinois.gov
- Retro-commissioning & New Construction: Tom Coe, 217.785.2433 tom.coe@illinois.gov
- Low Income: Don Falls, 217.785.1997 <u>don.falls@illinois.gov</u>
- Natural Gas Boiler Tune-Up: Stefano Galiasso, 312.996.8646, <u>boiler@uic.edu</u>

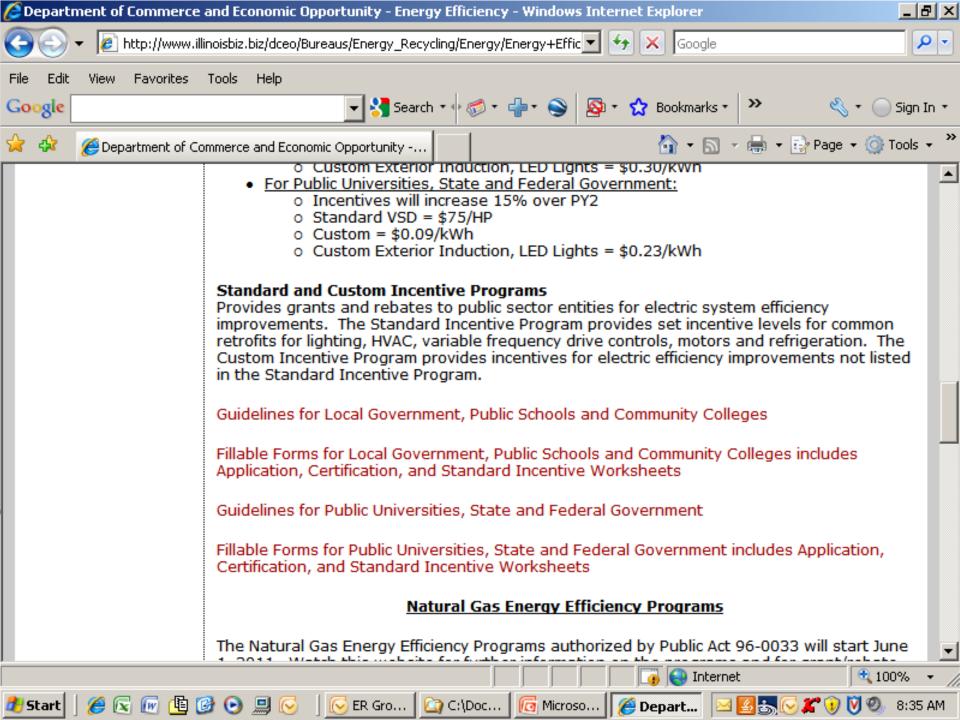


## Key Web Links

	Link	Information
	www.illinoisenergy.org	DCEO Energy Programs: guidelines, RFPs, contacts, applications, and other resources
	www.ActOnEnergy.com	Ameren Illinois ActOnEnergy Business Programs
	www.ComEd.com	ComEd Smart Ideas Business Solutions Programs
	www.nicor.com	Nicor Business Programs
	www. Peoplesgasdelivery.com	Peoples Energy Efficiency Business Programs
٢	www. northshoregasdelivery. com	Northshore Energy Efficiency Business Programs
A ŔT Rgy	www.illinoiscleanenergy.org	IL Clean Energy Community Foundation
ce Center	www.sedac.org	Smart Energy Design Assistance Center



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Energy & Recycling	Springfield 62701	
Resources	Phone: 21 TDD: 800/3	7/785-3416 785-6055
About Us	The Bureau ENERGY AND RECYCLING	
Energy		
Recycling	The Bureau of Energy and Recycling seeks to demonstrate	
Education	the economic development benefits, including job creation, of energy efficiency, renewable energy, and recycling through a	2
Contact	variety of programs and services. Further, Bureau programs 💦 🐉	JONED
Entrepreneurship and Small Business	will demonstrate that economic development, sustainable energy, recycling practices, and environmental protection go hand in hand.	E EDUCATION
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Homeland Security Market Development	In addition, the Bureau will continue to promote the leadership of the State of Illinois, through its own energy and	
Technology	recycling policies and practices, at state facilities.	
Tourism	aitiana annunitian ann anfit annuitian businana	ergy
Trade	industry, and other government agencies in an effort to	iency
Workforce Development	achieve the Bureau's mission.	
Facts & Figures	Click here for a summary of Bureau of Energy and Recycling	
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# **Application Process Steps**

#### **Step 1: Submit a Pre-approval Application**

Click the Pre-approval check box on the application Complete the appropriate worksheet

Pre-Approval Applications need customer signatures

#### **Step 2: Receive Notice to Proceed from DCEO**

#### **Step 3: Install Equipment or Perform Project Work**

Maintain documentation

#### **Step 4: Submit a Final Application**



Click the Final check box on the application Submit all required supporting documentation Final applications need customer signature

Step 5: DCEO Processes Rebate or Grant

Illinois Municipal Electric Agency (IMEA) Electric Efficiency Programs

- Standard Incentive Program
- Custom Incentive Program
- Rodd Whelpley
- 217.789.4632
- rwhelpley@imea.org





### Technical Assistance/Training & Education – Statewide Eligibility

#### Energy Audits, Design Assistance

- Smart Energy Design Assistance Center (SEDAC)
- Large-Customer
  Energy Analysis
  (LEAP)
  - Energy Performance Contracting (EPC)

#### **Training & Education**

- Business Industry Training & Education
- Code Training
- Building Operator Training
- Lights for Learning
- Green-Jobs Grants



# Smart Energy Design Assistance Center (SEDAC)

- Partnership with the University of Illinois, SEDAC Design Assistance Experts and Energy Service Providers.
- Assist public sector and private building owners identify opportunities to save energy and money.
- Provides energy assessments, analyses, and design assistance including:
  - Design review and/or site inspection.
  - Computer modeling of base case and alternatives with ECRMs.
  - Energy savings analyses.
  - Life cycle cost analyses.
  - Final report with recommendations.
- Energy service provider list.
- vider list. <u>www.sedac.org</u>
- Public Sector Retro-Commissioning Program

## Energy Performance Contracting (EPC) Technical Assistance

- Energy performance contracting redirects energy, water and operations & maintenance savings to amortize building improvements without up-front costs. Performance and savings are guaranteed over term of contract
- DCEO provides no cost technical assistance and advice that includes boilerplate documents:
  - Request for Proposal
  - Energy Audit Agreement
  - Energy Service Agreement



Measurement and Verification Assistance

For more information contact Wayne Hartel, 217.785.3420, <u>wayne.hartel@illinois.gov</u>

## **Training & Education**

Programs to train students and the building industry as well as to enhance the capacity of efficiency service providers, in order to meet long-term EEPS goals

# Training & Education includes:

- Commercial & residential green building practices.
- Building code and beyond code training.
- Building Operator Certification.
- Rater training.
- Community College degree and training Programs.
- Lights for Learning.



## DCEO Solar and Small Wind Energy Rebate Program

- Rebates and grants available to businesses, public sector, non-profit entities, and residential customers that pay into the Renewable Energy Resources and Coal Technology Development Assistance Charge:
  - 30% of total project cost available for residential & business.
  - 50% of total project cost available for public sector and non-profit.
  - \$50,000 maximum award.
  - FY12 already gone. FY13 next September.
  - Info on <u>www.illinoisenergy.org</u>





# Illinois Clean Energy Community Foundation (ICECF)

- Green Building Design and Commissioning Program:
  - Must be seeking LEED-NC v3 or LEED for Schools 2009 certification.
  - \$75k for LEED Silver and 20% beyond code.
  - \$150k for LEED Gold and above and 25% beyond code.
  - Must spend certain amount on commissioning.
  - State funded projects must be seeking LEED Gold or higher, since LEED Silver is required anyway.



www.illinoiscleanenergy.org

## **ICECF** Cyclical Grants

- New Green Buildings: Installation of *innovative high performance energy systems* not yet widely adopted in Illinois with energy performance characteristics above minimum Illinois energy code standards. Such systems should help earn points towards attainment of a LEED Silver or higher "green" building rating.
- Existing Buildings: Equipment, technologies and measures setting new energy performance levels above Illinois market standard and minimum Illinois energy codes standards to demonstrate their effectiveness in types of facilities common in Illinois.



- Community-based wind power generation meeting the on-site energy needs of community institutions such as nature centers, education buildings, and municipal facilities.
- Installation of building-integrated solar photovoltaic (PV) or thermal systems or other renewable energy systems that earn points toward attainment of a "LEED Silver" or higher "green" building rating.

# ISBE Energy Efficiency Grants

- Energy Efficiency Grants are a dollar for dollar state matching grant program providing up to \$250,000 for energy efficiency projects in K-12 schools.
- All school districts, charter schools, vocational center or public university laboratory schools are eligible.
- The FY 2010 Capital Bill provided \$50 million for Energy Efficiency Grants – the grants are planned to be distributed over the next two fiscal years, with \$9 million released this fall.
- The grants can be used for insulation, windows, doors, energy controls, lighting, energy recovery, energy conservation, alternative energy systems and other projects designed to reduce energy consumption.
- Last year's program is filled. Watch for next round.
- Details at http://www.isbe.state.il.us/sbss/ee\_grants.htm
- IEN program will now provide matching funds.



## Federal Tax Incentives (EPAct 2005)

- A tax deduction of up to \$1.80/sf for investment in energy-efficient commercial building property as part of new construction or is authorized.
- The amount of the deduction is the lesser of \$1.80/sf or the costs incurred or paid for the energy-efficient property.
- Qualifying systems include 1) interior lighting systems,
  2) heating, cooling, ventilation and hot water systems, and 3) building envelope.
- EPAct 2005 incentives for public sector are available to the designer responsible for the energy savings of a public project.



## Sources of Incentive Information

- www.dsireusa.org
- www.efficientbuildings.org
- www.energytaxincentives.org/
- www.lightingtaxdeduction.org/
- www.irs.gov
- www.treasury.gov/recovery
- www.mwalliance.org
- www.illinoisenergy.org
- www.illinoiscleanenergy.org
- www.isbe.state.il.us
- www.sedac.org





"America's future walks through the doors of our schools each day." Mary Jean Le Tendre

Web site: www.sedac.org Contact: info@sedac.org 1-800-214-7954