



**Illinois Clean Energy**  
*community foundation*

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**Summary of Foundation Grants**  
***Through April 2009***

The Illinois Clean Energy Community Foundation exists to improve energy efficiency, advance the development of renewable energy resources and protect natural areas for people in communities all across Illinois.

Over the past nine years, the Foundation has steadily grown its support of clean energy investments in Illinois through a widening array of programs. Since its first sets of grants in 2001, the Foundation has awarded over 3000 grants, totaling \$158 million, to Illinois nonprofit organizations, schools, municipalities and other local and state government agencies. The grants support activities in *every one of Illinois' 102 counties*.

**GRANTS AWARDED – BY PROGRAM AREA**

<b><i>Program Area</i></b>	<b><i>Number of Grants</i></b>	<b><i>Amount of Grants</i></b>
Energy Efficiency	2596	\$106,700,000
Renewable Energy	306	\$ 20,700,000
Natural Areas	121	\$ 30,660,000
<b><i>Totals</i></b>	<b>3023</b>	<b>\$158,060,000</b>

The Foundation's grantees are making high return investments in clean energy projects and moving Illinois to the forefront of "going green." Their projects ratchet up the momentum for clean energy as the best practice in Illinois.

Brief descriptions of key impacts of the funding awarded in each of the Foundation's program areas are provided on the following pages for your information.

## **Energy Efficiency: 2590 grants totaling \$99.4 million**

To advance the goal of making energy efficiency the norm in public facilities operated by government agencies and nonprofit organizations throughout the state, the Foundation has developed a set of “**green building**” programs. Milestones reached through Foundation grants are:

- ❖ 105MW of electric demand reduced through energy efficient lighting installation;
- ❖ Almost 4000 public facilities upgraded to high-quality, energy-saving lighting; and
- ❖ 100 new “green buildings” blazing a new standard for “*Leadership in Energy & Environmental Design*” [LEED] for Illinois public facilities.

**Energy Efficient Lighting Upgrades:** The Foundation’s largest initiative focuses on assisting local governments and nonprofits to make money-saving energy efficiency investments, emphasizing upgrade of interior lighting in public facilities. To date, more than **3,700 buildings** have been included in Foundation-funded lighting upgrade projects. In addition, 150 local governments have upgraded traffic signals at nearly 5400 intersections around the state to use energy efficient LED bulbs.

Foundation supported lighting upgrade projects will **save almost 98,000 kW of electricity demand every year**. An additional 17,125 kW will be saved via the Foundation’s LED traffic signal lighting upgrade program. That is enough electricity to meet the needs of almost 46,000 Illinois households and is the equivalent of taking close to 31,000 cars off the road or planting over 7.2 million trees to capture carbon. These impacts have been accomplished by leveraging \$29 million of additional investments by grant recipients in the Foundation funded lighting upgrade projects.

### **ENERGY EFFICIENT LIGHTING UPGRADE GRANTS**

<b>Building Type</b>	<b># of Grants Awarded</b>	<b># of Facilities Included</b>	<b>Est. kW Reduction</b>	<b>Total Grant \$ Awarded</b>	<b>Total Project Costs</b>
<b>K-12 Schools</b>	1188	1,969	63,451	\$38.2M	\$56.6M
<b>Libraries</b>	229	254	2,131	2.1M	2.1M
<b>Park Districts</b>	169	440	3,454	3.08M	3.9M
<b>Colleges</b>	139	508	18,805	12.8M	25.6M
<b>Child Care Centers</b>	176	244	2,163	1.6M	1.9M
<b>Historic Courthouses</b>	23	25	450	0.3	0.5
<b>Public Safety</b>	145	417	5,096	1.9M	4.4M
<b>Other Municipal &amp; Nonprofit Buildings</b>	39	141	1,957	1.2	2.3
<b>GRAND TOTAL</b>	<b>2108</b>	<b>3998</b>	<b>97,507</b>	<b>\$71.3M</b>	<b>\$97.3M</b>

Note: Includes 180 LED Traffic Signal Initiative grants totaling \$ 9.9 Million.

**Successful Building Lighting Upgrade Initiatives.** The Foundation’s lighting upgrade initiatives, as illuminated in the above chart, are accomplishing two milestones: One, they shift the market acceptance of high efficiency, high quality lighting in public facilities from being perceived as too difficult or costly into a commonplace, cost-

effective best practice adopted by users throughout the state. Two, the Foundation's efforts bring high-quality, energy saving lighting to public facilities and a brighter environmental future to communities throughout Illinois.

**First Three Building Type Initiatives Ended in 2007 with Major Accomplishments Recorded.** The Foundation support for its three earliest energy efficiency lighting upgrade initiatives came to an end in 2007. The above chart records those accomplishments in terms of facilities upgraded, energy saved, and investment made.

Capping its six-year run with 2007 as its final year, the Foundation's **K-12 schools** initiative has led to new, efficient lighting in almost 2000 schools. This results in improved classroom environment for pupils and teachers and yields millions of dollars in annual savings for cash-strapped schools, while at the same time reducing power-related pollution in Illinois communities.

Likewise, in 2007, the Foundation completed two five year initiatives that brought just under 700 **public libraries and park buildings** in all parts of our state more efficient lighting – saving them money and better meeting the needs of the families that use those facilities.

**Second Set of Building Type Initiatives Ended in 2009 with Major Accomplishments Recorded.** The Foundation support for its next set of two energy efficiency lighting upgrade initiatives came to an end in 2009. The above chart records those accomplishments in terms of facilities upgraded, energy saved, and investment made.

Capping its six-year run with 2009 as its final year, the Foundation's **Colleges & Universities** initiative has led to new, energy efficient lighting in over 500 higher education facilities on Illinois college campuses. Students are seeing the benefits of cost-saving, high efficiency lighting in their classrooms. Participation in the program was strong with 61 of the state's 100 eligible private and public colleges and universities awarded grants. 25 of these colleges & universities received grants in multiple years. Among the state's 38 eligible public community colleges, 19 – 50% - participated in the program. All 19 of the state's 4 year public universities participated in the program.

Also capping a five-year run with 2009 as its final year, the Foundation's **Child Care** initiative has led to new, energy efficient lighting in over 240 child care centers. The pool of potential applicants was less than originally anticipated because a significant percentage of child care centers do not own and operate their own buildings.

**Continuing Commitment to Building Lighting Upgrade Initiatives.** The Foundation has a continuing commitment to assist public facilities owned by government and non-profit organizations to make energy and money saving investments in energy efficient lighting.

The Foundation launched in 2008 two new lighting upgrade initiatives targeted to **historic courthouses** and **municipal public safety buildings**. Both initiatives continued to demonstrate the interest and demand among local governments to make energy efficiency investments that save energy and money and better their communities. Already over a third of Illinois' historic courthouses have taken advantage of the new Foundation initiative. At the same time, over 140 grantees stepped out to upgrade the lighting in over 400 public safety facilities around the state.

**LED Traffic Signal Upgrades:** The Foundation completed the final cycle of this initiative with its 2007 grants. Over four years, its \$ 9.9 million in grants has assisted **150 local units of government** to upgrade traffic signals at nearly 5400 intersections around the state to use energy efficient LED bulbs. These bulbs use up to 85% less electricity than the conventional incandescent bulbs they replace. Collectively, the upgraded intersections will require 17,125 kW less electricity than in the past. In addition to using less energy, LED bulbs last up to 10 times longer than conventional bulbs, which reduce signal down-time and associated maintenance.

This four year initiative has reached all but one of the cities with the most traffic signals in Illinois, as well as a majority of those with more than 50 signalized intersections. In addition, it has helped nearly two-thirds of all downstate communities that operate at least 10 signalized intersections.

**Energy Efficient Building Design & Commissioning:** Through \$9.7 million in "green" design grants, the Foundation is supporting the development of over 115 **state-of-the-art energy efficient buildings** in Illinois communities. These grants have gone to local governments and nonprofit organizations to enable them to design and commission new and substantially remodeled buildings to be highly energy efficient and in some cases to tap into on-site renewable energy generation. These green buildings lead to healthier work and living space, reduced life-cycle operating costs and power-related pollution.

These Foundation grants have contributed significantly to accelerating the market acceptance and use of green building standards for both public and private buildings in Illinois. Exemplary facilities supported through the Foundation's program include elementary schools, high schools, a college library, a community college classroom building, a university information technology library, museums, police and fire stations, a court house, public works facilities, affordable housing developments, offices, a park visitor center, community centers and a disaster operations center.

The Foundation uses as its building performance measure the nationally recognized *Leadership in Energy & Environmental Design* (LEED) criteria, developed by the US Green Building Council [USGBC]. So far, 26 Foundation supported projects have achieved LEED certification by USGBC:

**LEED Certified at the Platinum Level**

- Center for Neighborhood Technology – Headquarters Renovation, Chicago
- Evelyn Pease Tyner Interpretive Center, Glenview
- Jewish Reconstructionist Congregation, Evanston

**LEED Certified at the Gold Level**

- Access Living – New Headquarters, Chicago
- Bethel New Life – Commercial Center, Chicago
- Cross Point Human Services - New Holland Apartments, Danville
- Judson College - Harm A. Weber Academic Center, Elgin
- McKinley Foundation – New Student Housing at University of Illinois Urbana Champaign
- Orland Park Police Headquarters, Orland Park
- Prairie Crossing Charter School, Grayslake
- Saint Xavier University – Residential Hall, Chicago

**LEED Certified at the Silver Level**

- Center on Halsted – New Center, Chicago
- Children’s Discovery Museum, Normal
- Cook County Domestic Violence Courthouse, Chicago
- Faith United Methodist Church - Building Addition, Champaign
- Lakefront Supportive Housing – One Near North, Chicago
- Loyola University – New Information Commons, Chicago
- Illinois College – New Residential Tower, Jacksonville
- Kohl Children’s Museum of Greater Chicago, Glenview
- South Parks Facility – Naperville Park District, Naperville
- Villa Park Police Station, Villa Park

**Certified Level**

- Bolingbrook High School, Bolingbrook
- City of Chicago Marine Safety Station, Chicago
- City of Naperville - Public Works Center
- Infant Welfare Society, Medical & Administrative Headquarters, Chicago
- Mercy Housing - Wentworth Commons Apartments, Chicago

**Leading-Edge Energy Efficient Building Systems:** The Foundation has supported the introduction of energy efficient products and technologies in Illinois through **86 grants** across the state totaling more than \$ 12.6 million. These grants are intended to gain recognition for the feasibility and benefits of using these leading-edge products and technologies and to establish them as a cost-effective best practice in the market place. The systems supported through the Foundation initiative have brought major attention to the use of geothermal in the institutional market, the application of innovative heat recovery systems in housing and recreational buildings, the landmark introduction of Illinois soy-based building products for roofing, the greening of Chicago’s historic bungalows and the introduction of cutting edge integrated day & artificial lighting systems. These and other innovative energy efficiency building systems are helping building owners achieve LEED certification.

**Energy Efficiency Building Codes:** The Foundation has awarded **18 grants** totaling more than \$580,000 to support the adoption and implementation of local energy efficiency building codes in communities of differing sizes and types (urban, suburban, rural, mature, rapidly developing, etc.) around the state. The Foundation also has worked with State agencies on efforts to educate local building officials, school

administrators, architects and others about the new statewide energy efficiency building code for commercial and institutional buildings.

**Building Demand for Energy Efficiency:** Complementing these green building programs, the Foundation has awarded \$10.82 million for **80 projects** to advance adoption of energy efficiency within specific sectors and/or build consumer demand for energy efficiency. By showcasing the ways that energy efficiency and economic development can be mutually reinforcing, these grants are intended to build momentum for energy efficiency among businesses, community leaders and the general public.

### **Renewable Energy: 306 grants totaling \$20.7 million**

Foundation grants continue to support the development of clean, renewable energy generation in Illinois. By funding a variety of technologies operating in different settings, and increasingly requiring the reporting and public sharing of performance information, the Foundation is providing a valuable service to this emerging and rapidly expanding technology field.

Milestones reached through Foundation grants as of April 2009 are:

- ❖ 10 MW of new community wind generation,
- ❖ 1 MW of solar PV capacity and
- ❖ 140+ Illinois schools installing PV systems as part of their science curriculum.

Below are summaries of the Foundation's renewable energy grants grouped by type of renewable resource.

#### ***Wind Energy:***

The Foundation has awarded **56 grants** totaling over **\$10.1 million** to advance the development of wind power in Illinois. The Foundation has funded traditional turbines as well as newer vertical axis and roof mounted installations. As performance data begins to be available on these latter installations, it will be publicly shared to help inform the developing small-wind market. Some \$8 million of this funding has initially gone to support community wind projects in which one or a handful of **commercial-sized turbines** are installed to generate power for local use. To date, five such projects are in operation: a 660 kW turbine at the Bureau Valley High School in Manlius (Bureau County), a 1.65 MW turbine installed by the Illinois Rural Electric Cooperative outside Pittsfield (Pike County), a 1.2 MW turbine at Erie CUSD #1 (Whiteside County), a 600 kW turbine at Sherrard CUSD #200 (Mercer County) and a 900 kW turbine installed by the Rural Electric Convenience Cooperative near Farmersville (Montgomery County).

The City of Geneseo and Adams Electric Cooperative placed their turbine orders in 2008 and anticipate equipment delivery and installation this year. Taken together, the total installed capacity of the 8 large-scale community wind projects that plan to proceed with Foundation support will be just under **10 MW**.

The Foundation is responding to the growing interest in smaller turbine installations with support for **small/mid-sized turbine installations**. This new interest is likely driven by the economics for commercial scale turbine projects that are not what they were 3-5 years ago even though costs and wait-times for these sized turbines seem to have stabilized,. Foundation grants have supported turbines from 100 kW and 50kW to as small as 1 kW at a variety of types of facilities, from public safety buildings to housing and research centers, with 7 such installations totaling **208 kW**. In addition, schools and colleges are increasingly inquiring about turbines in the 50kW – 250kW range, that could provide electricity savings without requiring millions of dollars in debt.

At the same time, three schools have received grants to support small (around 1kW) installations primarily for educational purposes. Based on the number of inquiries from schools for similar education-purposed turbines, the Foundation is working on a “small-scale wind for schools” program – mirroring the small-scale PV for K-12 program.

The Foundation has awarded to date approximately \$1.8 million in grants to support a total of 36 **wind monitoring projects and feasibility studies** to identify whether locations support commercial size turbine installations. Included in this group of grants is the recent funding commitment to Western Illinois University to continue its state-wide wind resource monitoring efforts, zoning surveys, outreach and case studies publications. This information, along with wind resource data from any Foundation-funded wind feasibility study, will be made available on [www.illinoiswind.org](http://www.illinoiswind.org).

### **Solar Energy:**

The Foundation is finding opportunities to establish the potential of solar power for meeting future energy needs. To date, it has awarded a total of **215 grants** totaling almost **\$7.4 million** to support the installation of photovoltaic and solar thermal energy systems.

**Photovoltaics:** One hundred eighty-four (184) grants totaling over \$5.3 million are supporting the installation of photovoltaic **PV systems** that total **over 1MW** (1.1 MW) of solar electric generating capacity. One purpose of these PV systems is to generate electricity as part of LEED-qualified green buildings, including affordable housing developments, municipal park facilities, museums, college buildings, a court house and other public and nonprofit facilities. Public attention to the potential of building-integrated photovoltaic applications should come from grants to three high visibility venues, including the Chicago Botanic Garden and the new Children’s Memorial Hospital.

With Foundation support, the University of Illinois is competing in the national Solar Decathlon for the second time. This biannual international competition is hosted by the US Department of Energy and the US Green Building Council to design, build and present a 100% solar-powered house on the National Mall in Washington, DC. In its first round, the University entry placed 9<sup>th</sup> overall and first in market viability and comfort.

The Foundation continues to educate today's school-aged population about the potential of solar power. This year, the Foundation has surpassed the \$1.5 million mark supporting the installation of **PV systems at 144 K-12 schools in 46 Illinois counties**. This popular program is helping schools that have committed to integrate renewable energy into their curricula to install 1 kW PV systems.

An important component of the K-12 Small Scale Solar PV Program is the Foundation-sponsored website -- [www.IllinoisSolarSchools.org](http://www.IllinoisSolarSchools.org) – that provides on-line monitoring and real-time data display at each school. The Foundation continues to work to improve the site and make it more user friendly, especially regarding data download capabilities.. **Teachers can use this data in lessons on renewable energy, science and math**. An interactive map shows the location of all the solar schools in Illinois.

**Solar Thermal:** Thirty-one (31) other solar grants, which total just over \$2. million, support the installation of **solar thermal** systems. These systems, using a range of solar thermal technologies, provide hot water, heating or solar-assisted cooling at a variety of facility types, including, affordable housing, supportive housing for adults with disabilities, schools, universities and municipal buildings. New performance monitoring and reporting requirement on the hot water systems will offer a significant opportunity to study how different solar thermal technologies perform in Illinois.

**Biomass and Emerging Renewable Technologies:** The Foundation has awarded \$2.3 million for 13 grants to advance emerging renewable energy technologies with significant potential in Illinois, including E-85 (ethanol) vehicle fuel, manure digesters to generate methane, as well as the first miscanthus-fired power plant in the country that should come on line in 2010.

**Advancing Development of Renewable Energy Resources:** These grants support two efforts. One is to build consumer demand for renewable energy – primarily by educating Illinoisans about the benefits of renewable technologies. The other is to assist in bringing renewables into the classroom, supplemental to the K-12 Solar initiative. To date the Foundation has made 22 grants in this area, totaling approximately \$930,000.

**Natural Areas: 122 grants totaling \$30.1 million**

Grants to preserve and enhance natural habitats and wildlife areas in Illinois support four types of initiatives: land acquisition, planning efforts leading to land acquisition, nonprofit capacity building and (pre-2003) habitat restoration. Milestones reached through Foundation grants are:

- ❖ 14,500 acres of Illinois natural areas preserved and accessible today and permanently protected for future generations to enjoy;
- ❖ 12 planning grants leading to collaboration among the public and non-profit sectors on acquisition priorities; and
- ❖ 14 capacity building grants generating strong local land preservation organizations that have spearheaded the protection of almost 2,000 acres to date

**Land Acquisition:** The vast majority of the Foundation’s natural areas funding – \$28 million – has supported the protection of important habitat throughout Illinois. This funding has been distributed through **95 grants** that are protecting over 14,500 acres of land through outright purchase and establishment of conservation easements:

<b>Type of Acquisition</b>	<b>Chicago Metro Area</b>	<b>Downstate</b>	<b>Totals</b>
Acres purchased	2,666	8,973	<b>11,639</b>
Acres under easement	200	2,707	<b>2,907</b>
<b>Totals</b>	<b>2,866</b>	<b>11,680</b>	<b>14,546</b>

Important acquisitions funded by the Foundation include over 780 acres of forest and bluffs overlooking the confluence of the Mississippi and Illinois Rivers, 155 acres of forest and grassland habitat along the Apple River, 146 acres along 1-mile stretch of the Fox River in northern Kane County, Plum Island at Starved Rock State Park, a 1,260-acre addition to Nachusa Grasslands, nearly 1,500 acres of additions to the Middle Mississippi National Wildlife Refuge, more than 450 acres of old-growth forest at Funks Grove, in holdings within the Shawnee National Forest, the 450-acre Salt Lick Point Land and Water Reserve, additions to the Prairie Ridge State Natural Area, and wetlands along the Illinois, Kishwaukee, Kyte, Pecatonica, Kinnikinnick, Picasaw, Mackinaw, DuPage and Kankakee rivers. These acquisitions have been carried out by local and statewide nonprofit groups and by local units of government, such as forest preserve districts.

The Foundation continues to invest in key natural areas statewide, as evidenced by the projects highlighted above. It has also focused grant-making in regions of special ecological significance. These “focus areas” are the Fox River Watershed, the Illinois River Watershed, the Rock River Watershed, Kankakee Sands, the Middle Mississippi River Corridor, and the Shawnee National Forest. Foundation investments of over \$12 million in these areas have protected 7,279 acres and leveraged close to \$33 million in additional funding. The Foundation continues to value opportunities where it can partner with other funders and nonprofit organizations to multiply both the financial and ecological impacts of its grants.

**Planning for Acquisition:** The Foundation has awarded **12 grants** totaling \$1,500,000 to assist conservation organizations, local units of government, and regional associations of municipalities to prioritize the most important natural areas in their communities in advance of assembling public and private funds to protect those areas. Most recently, the Foundation awarded the Illinois Natural History Survey at the University of Illinois a grant to help support the first comprehensive update of the Illinois Natural Areas Inventory in 30 years; the INAI is used by conservation groups and local governments throughout Illinois to identify high quality natural areas as priorities for acquisition.

**Capacity Building:** The Foundation has awarded \$388,000 for **13 projects** to build the capacities of local nonprofit groups to acquire and manage natural areas in their communities. To date, organizations receiving these grants have been able to protect 1,944 additional acres of natural area, to secure more than \$1.2 million in land acquisition funding, and \$229,000 in land restoration funding. The impressive accomplishments of these organizations have encouraged the Foundation to continue to look for new opportunities to help expand the capacity of nonprofit conservation groups in Illinois.

Recognizing the critical importance of a vibrant, professional cadre of field managers for Illinois natural areas in the future, the Foundation is exploring ways to support the development of the capacity in the professional natural land management sector. Recent years have seen a loss of field staff professionals in Illinois. The Foundation has provided two seed grants to enhance the educational training opportunities for college students interested in these careers.

**Restoration:** The Foundation awarded **5 grants** totaling nearly \$600,000 to support local habitat restoration efforts. Since 2002, the Foundation has prioritized natural areas projects focused on acquiring, rather than restoring, habitat.