

HELIGRAPHS



25 years

www.IllinoisSolar.org

Newsletter of the Illinois Solar Energy Association March 2006, Vol. 25, No. 1

Illinois Has Restored Power To Its Solar Rebate Program

Until last summer, Illinois gave homeowners and businesses as much as \$5,000 on a \$10,000 solar system. Solar panels can supplement natural gas, which got more expensive last year.

But the program temporarily was halted as the state waited to learn more about how a new federal tax credit for solar energy would be structured for 2006. The state wanted the two programs to complement each other.

Now, the state is starting its rebate program again, even though it doesn't have all the details about the federal credit, according to Hans Detweiler, deputy director of energy and recycling for the Illinois Department of Commerce and Economic Opportunity.

"We might have to hold our breath for a long time" to wait for publication of the new tax credit rules, Detweiler said. "We've decided to go ahead with the best available information."

The new Illinois rebate program will combine with a 30 percent federal tax credit under the energy bill passed last year.

The new state rebate program provides a flat rebate of 30 percent for any system, up to a maximum rebate of \$10,000.

The old rebate program applied a 50 percent rebate on the first \$10,000 of costs and 25 percent on the next \$20,000, for a maximum of \$10,000.

With an \$8,500 system, the new Illinois rebate would be \$2,550, and then the federal tax credit would be \$1,785, for a total savings of 51 percent.

The state has \$500,000 available for this year's rebates, Detweiler said. It is also funding applications it received last year, under last year's program.

"Obviously, this is tremendous for the Illinois solar industry and Illinois citizens who want to use solar energy to reduce energy costs and pollution," Brandon Leavitt, president of Solar Service in Niles, said in a letter to leaders of the Illinois Solar Energy Association.

All his customers have used the state rebates, and he said the absence of the rebate program hurt business.

"I'm going to get real busy," said Scott Crider, project manager for Solara Systems in Bristol.

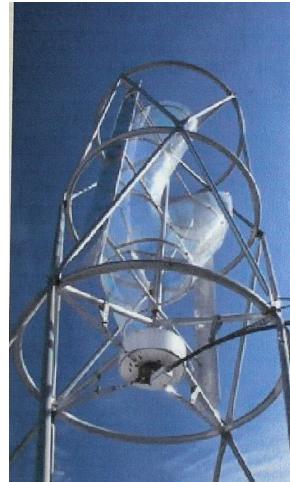


A solar system that provides only hot water installs for \$8,000 to \$10,000. A system that provides hot water and home heating is \$16,000 to \$20,000.

Information about the state program is available at (217) 785-3420.

SOURCE:
Mary Wisniewski - Chicago Sun-Times
www.suntimes.com

City Planners To Give Wind Machines A Whirl



Wind power is coming soon to the Windy City. But don't look for propellers mounted on poles. Chicago's wind machines will be thrust up into the breeze on the shoulders of its buildings.

This spring, planners said Monday, two wind turbines will be mounted on the Daley Center, and eight more on a Helmut Jahn-designed building on the Near North Side. Plans to place turbines on the Museum of Contemporary Art for its "Massive Change" exhibit, opening in September, are in the discussion stage.

Bird Watchers Comfortable

The projects will provide answers about how practical and affordable wind power can be here, said Sadhu Johnston, the city's environment commissioner. Some day, turbines could be on top of commercial and residential buildings all over Chicago, he said.

His department is putting together an "urban wind map" to see what areas of the city have the most potential.

The two turbines on the Daley Center will supply only a small portion of the building's energy needs. Together they will produce enough power for four households.

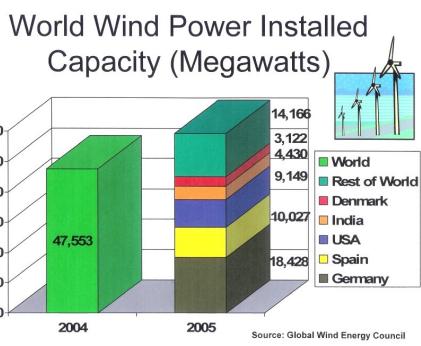
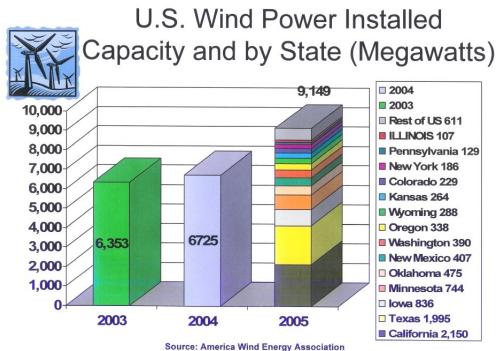
"City Wind" (page 4)

Interesting Times

Letter from the President

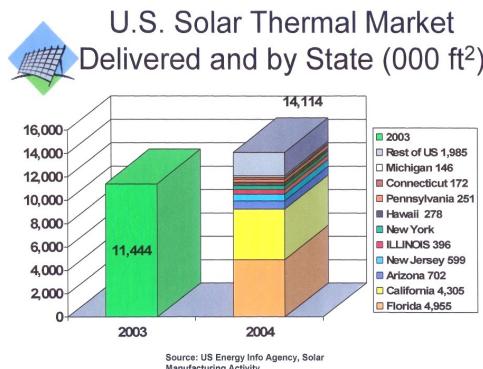
The title above is considered to be a not-so-pleasant wish on someone. Be that as it may, the solar, wind and other renewable energy industries and constituencies are in interesting times. It has been an interesting mixed bag, as follows:

- The U.S. wind power industry recovered from a dreadful 2004 to rack up the highest total of installations of any other nation in 2005, staying close behind No.2 Spain, with Germany continuing to lead. Illinois, with a second wind farm putting state capacity over 100 MW, hangs around the edge of respectability in 14th place.



- The photovoltaic market has literally outrun its supply, with the U.S. suffering more than the larger European and Asian markets. Growth over the next year or two may come down drastically until new cell manufacturing facilities, including the first ones specifically made for PV start coming on line this and subsequent years. There may also be some constraint on solar thermal and wind power supply due to growing shortages and expenses in materials.

- The solar thermal industry has picked up considerably from 2003 to 2004, the latest year available. Illinois moved into prominence with a fifth place showing of installation square footage behind the Sunbelt powerhouses.



- As the popularity of solar and wind power grows, so does NIMBY opposition. These applications are being blamed for wiping out entire species, slowing the earth's rotation and worst of all, threatening property values of those who don't install the stuff.
- Our presidential administration has taken the first step in admitting addiction and, in spite of bizarre situations like National Renewable Energy Laboratory folks being unceremoniously fired and rehired within days, has started taking halting steps to being less hostile about renewables. But, please, don't raid the funds that insulate low-income housing to do so.
- With fossil fuel prices retreating somewhat from historic or near-historic highs, there appears to be a collective holding of breath by business and policy leaders on what the spring, summer and fall will bring - more hurricanes, civil war in oil producing countries, continued torrid growth in the developing world keeping prices up, global climatic disaster or the Cubs in a World Series.
- Illinois has begun to restore some incentives for renewable energy systems. The question is whether a once good, but now ten year old, set of policies and incentives will be renewed and updated so that

renewable energy businesses will consider opening or expanding operating in Illinois instead of going to Connecticut, New Jersey, Pennsylvania, Oregon, Michigan or just about anywhere else.
(see: *Chicago Solar Partnership report*)

As I look for snowdrops and crocuses to come up, I want to welcome new Board Director Tom DeBates of Habi-Tek and thank departing Board Director Jeff Teppema for his service. I also want to welcome Gabriela Martin and Joe O'Gallagher, local leaders of the American Solar Energy Society, who will work with us to align ASES and ISEA on mutual goals.

I also want to thank Carol Gulyas, ISEA Event Planner, who actually has a year's worth of membership meetings planned out! Frightening! Also, Jim Camasto for his continued editorial excellence and Ted Lowe and everyone else who continue to help ISEA carry out its mission.

Mark Burger, ISEA President

ISEA Membership Meeting

Saturday, 4/1, 10am-12pm

Join the ISEA at the newly rebuilt **World's Largest Laundromat**, a beloved neighborhood gathering place and monument to energy conservation. Come see the largest solar thermal system in Illinois.

World's Largest Laundromat
6240 W Cermak Rd., Berwyn, IL



Brandon Leavitt will demonstrate how the system utilizes solar energy to heat thousands of gallons of hot water daily. The system was designed & built Solar Service Inc.

For more information, contact:
Ted Lowe
info@illinoissolar.org
(630) 260-0424

Midwest Alternative Fuel Vehicle (AFV) Expo

You are cordially invited to participate in the biggest and best Alternative Fuel Vehicle (AFV) event the Midwest has ever seen!

Saturday, May 13th, 9am-5pm

Route 66 Raceway - Joliet, IL



There will be AFV's of many types, including: gas-electric hybrids, biodiesel, veggie-diesel, electric, hydrogen fuel-cell, soybean oil, propane, ethanol, solar, natural gas, human-powered and steam.

- See & learn about amazing AFVs.
- Meet and talk with enthusiasts with real, hands-on AFV experience.
- Shop for your next or future car.
- Enjoy Exciting Electric Drag Racing!



This is really three events in one - the Midwest's 1st AFV Hat Trick Weekend:

The 2006 Midwest AFV Expo

Presented by Joliet Township High Schools, Route 66 Raceway, and the FVEAA.

The High Voltage Nationals

An official National Electric Drag Racing Association (NEDRA) event.

The 5th EV'er

A gathering of electric vehicle enthusiasts from across the United States and Canada.

For more information & directions:

Ted Lowe, FVEAA President
(630) 260-0424

www.fveaa.org

www.midwestalternativefuelvehicleexpo.com

(Please help spread the word;
Download the Midwest AFV Expo Flyer
print, post & circulate.)

Chicago Solar Partnership February '06 Update

The State of Illinois is facing a critically competitive time in solar industry development without a viable solar energy policy in place. As a result, the State of Illinois is losing jobs and strategic long-term market opportunities to other states and countries.

The solar industry is growing at a fast clip of 40% a year. While US solar energy production had accounted for 23% of world solar energy production since 1996, by last year, US production declined nearly 40%, accounting for 14% of the approximately 1500MW global market.

To reverse the trend, it is expected that new technologies coupled with market incentives will assist the US in establishing a global solar industry leadership position. Even in this time of tight budget constraints, the proposed 2007 federal budget includes \$148.3MM for research on solar energy - a 78.5% increase over 2006. Under the "President's Solar America Initiative" the goal is to decrease the cost of solar energy generation to be competitive with existing sources of electricity in 10 years. Five - ten GW of photovoltaics are expected to be deployed by 2015 - enough solar electricity to power roughly 2 million homes.

In addition, the new federal solar energy tax credit legislation is expected to save US consumers \$12B in electricity and natural gas bills in the next decade and create 20,000 new jobs. Others expect that within 10 years, 30,000 new jobs will be created with a reduction of 10 million metric tons of CO2 emissions.

Much of US solar manufacturing production is being exported overseas while, at the same time, individual states and regional state coalitions are creating highly competitive sub-markets. In the US, there is currently a 6 month to 1 year order backlog for solar photovoltaic panels. With escalating natural gas prices, demand for solar thermal panels is similarly increasing. Due to these market conditions, it is important that Illinois act now to implement policies conducive to securing its share of the solar energy market for the years ahead.

Firm, multi-year contracts for solar manufacturers and labor will enable the State of Illinois to claim the Midwest leadership position in solar industry market development. At this time, Illinois is losing solar manufacturing opportunities due to the absence of a viable solar energy strategy. Spire Solar Chicago recently closed its manufacturing facilities. Other major solar manufacturers do not perceive a secure solar market in Illinois. Instead, manufacturers are directing marketing and manufacturing resources to other countries, including Germany, Spain, South Korea, Japan and China, and to other states that have implemented effective solar energy development strategies. For example:

- The State of California has committed \$3.2B over the next 11 years to harvest 3,000MWs of solar generation by 2020. The investment is expected to save consumers an estimated \$9B. In the last year, funds of \$300MM were made available to fund solar projects on schools, farms, businesses and public facilities. An additional \$58MM in rebates are available for homeowners and small businesses. Already 5,000 jobs have been created and over 450 companies have located to the state.
- The State of New Jersey is amending rules to require 1500MWs of solar energy generation by 2020 - 2% of its RPS. Over 1,000 high quality, in-state jobs have been created in three years.
- The State of Pennsylvania is expected to have more than 600 MWs of installed solar capacity by 2025. An initial investment of \$6.5MM in June 2005 to fund clean energy projects is expected to net as many as 327 full-time research jobs in addition to 450 permanent and construction jobs.
- The State of New York is offering \$8.5MM in funding for renewable energy manufacturing and business enterprises located within the State, as well as ongoing annual rebates of more than \$5MM.
- The Western Governors Association has committed to achieving 1,000MWs of solar thermal - electric power generation.

"Chicago Solar Partnership"(page 6)

Fueling Illinois With E-85



The automotive fuel retailer Gas City is now the biggest retailer of E-85 fuel in the State of Illinois. Gas City currently sells E-85 fuel at 20 of its stations in our state. E85 is the term for motor fuel blends of 85% ethanol and

15% gasoline (an alternative fuel as defined by the U.S. Department of Energy). Any ratio blend of gasoline and ethanol may be used in ethanol compatible vehicles, known as "Flexible Fuel Vehicles" or FFVs.

Currently, three auto manufacturers produce flexible fuel vehicles: Daimler-Chrysler, Ford Motor Company and General Motors Corporation. General Motors alone claims that it has already made over 1.5 million such vehicles since the year 2000. More than 6 million FFVs are on American roads today.

Recently, GM started a new advertising campaign of "Live Green, Go Yellow" to promote the sale of its flexible fuel vehicles. E-85 is being promoted as the American fuel because it is made from corn grown here in Illinois and throughout the US.

Many claim that it is a fuel that is good for the environment because ethanol burns much cleaner than gasoline, is renewable, and carbon neutral. Others have promoted E-85 as being good for the economy and helps to promote energy security here. The agriculture industry has been the biggest supporter of ethanol because it helps to boost the price of corn grown by American farmers.

Today there are now over one hundred E-85 fuel retailers in the State of Illinois. In March of 2005, Governor Blagojevich announced \$500,000 of funding for the Illinois E-85 Clean Energy Infrastructure Development Program.

This program has provided funding support for the conversion of existing tanks and pumps at retail gasoline stations for E-85 compatibility.

The biggest users of E-85 fuel have been our federal government, state governments, U.S. Postal Service and many owners of large fleets of vehicles. Consumer use of this fuel has been light so far, but it has been growing with more fuel stations available and better knowledge among the general public.

For a listing of Flexible Fuel vehicles, past and present, check:
www.e85fuel.com

Christopher Sharp, ISEA

"City Wind" (page 1)

"We're monitoring the equipment," Johnston said. "As soon as that's done and the weather breaks, we'll be up there."

Renewable power sources such as wind and solar are pollution-free alternatives to fossil fuels and nuclear energy, he noted

Ground has been broken for Jahn's Near North SRO, a single room occupancy building near Cabrini-Green. Bill Becker, the turbine's designer and manufacturer, said he's been told "the roof will be ready in April or May."

Becker, a professor at the University of Illinois at Chicago and CEO of Aerotecture Ltd., calls his device an "aeroturbine." It's a 20-foot-long, 5-foot-wide horizontal cylinder containing a helical plastic sheet that catches the wind. "It's almost like a DNA structure, or like a twisted sail," he said.

Although wind turbines with propellers kill birds, Chicago birder groups are comfortable with the aeroturbine.

Recent studies show that a conventional turbine kills up to 7.5 birds a year. But Donnie Dann, president of the Chicago-area Bird Conservation Network, said, "This design is as close to zero as they can get."

SOURCE:
Gary Wisby - Chicago Sun Times
www.suntimes.com

ISEA Offers Solar 101 Workshops

The Illinois Solar Energy Association, a 501-C-3 organization dedicated to educating the public about solar, wind and other forms of renewable energy, will be conducting workshops around the Chicago metropolitan area this spring and summer.

The workshops, called **Solar 101**, will provide comprehensive and generic information on how solar energy can be used. The workshops will be held primarily on Saturday mornings and are designed for the following audiences:

- Home and business owners, and decision makers for public and non-profit facilities who are considering solar energy systems for their buildings.
- Architects, engineers, realtors, developers, contractors, government officials and other professionals who are seeking basic information about solar energy systems.

The workshop will cover a basic overview of how solar energy systems work in Illinois, the types of systems that provide heating, hot water, cooling and electricity, how to choose between different types of systems, economics and regulatory issues.

Information on dates, locations, costs & registration, contact:

info@illinoissolar.org
(708) 524-0799 or (630) 260-0424
www.illinoissolar.org

Model Statewide Net Metering and Interconnection Policy Being Developed

The Environmental Law and Policy Center (ELPC) has developed a model for statewide net metering and interconnection of small and large-scale solar and wind powered systems. This model can be used for the State of Illinois and elsewhere.

For more information, contact:
Gabriela Martin at ELPC
(312) 673-6500
gmartin@elpc.org

New Solar Cell Technology Sliver Cells by Origin Energy



On everyone's mind these days is decreasing the price of solar cells and the current shortage of silicon. Origin Energy intends to help address this with a new silicon solar cell called Sliver. This Sliver solar cell uses much less silicon, and has offers several other advantages:

- Flexible
- Up to 19% efficiency
- Reduced power loss at high temps
- Up to 10-15 times less silicon
- Bi-facial (accepts light front & back)
- High open voltage (685 mV)

Both Sliver and conventional solar cells start from a silicon ingot. In a conventional cell, the silicon ingot is sawed into disks about 200 to 300 microns thick (0.2 to 0.3 mm). This disk is then finished into a solar cell. A sliver cell starts out in a similar fashion, but the silicon ingot is cut 1 to 2 mm thick (vs 200-300 microns).

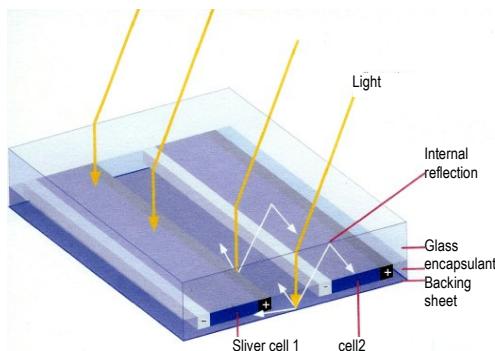
Here, the fabrication of the Sliver cell takes a different course. The thick disk that was cut from the ingot is then micro machined vertically with 40 micron (0.04 mm) gaps to form 50 micron (0.05 mm) thick Sliver cells. These are metallized and finished into Sliver cells on the original disk. Lastly, they are cut off from the surrounds of the disk to form the completed sliver cells.



Thus Sliver cells are made using less than 5 times less silicon of conventional cells. Sliver modules are then made from these Sliver cells, with the following advantages:

- Half coverage area (~14% efficient)
- Full coverage area (~19% efficient)
- Do not need bypass diodes
- Less affected by shade

The half coverage module takes advantage of the bifacial nature of the Sliver cell, spacing each Sliver cell 1 mm apart. A diffuse reflector on the backside of the module allows the sun to hit the top directly, and reflect onto the backside of the sliver cells. This results in a slightly lower efficiency, but uses half the silicon compared to a full coverage sliver module.



Better shade performance is due to the small size of a Sliver cell. For instance, in a "bank" of solar cells (Sliver or conventional), cells are wired together in series to increase voltage. If one cell is severely shaded, this will shutdown the entire bank. A 12V Sliver "bank" is about 8 in² square inches vs. 600 in² for a conventional 12V bank of cells. Thus, much less power from a Sliver bank is lost if shutdown by shade.

Regarding the Silver's elimination of bypass diodes, it is more accurate to say that sliver cells have a much higher resistance to reverse voltages than conventional cells. This can be explained by current density. The more electrical current that flows in a given area , the more heat is generated - degrading or destroying the cell. In a Sliver cell, current flows from one metallized side (or contact) to the other. There are no bottlenecks to increase the current density, and therefore, no detrimental heat.

Currently, Sliver technology is only available in small, prototype modules (10W, 20W) in very limited quantity. They are manufactured by Origin Energy in Australia. Larger modules (75W, 150W) are expected to be launched over the summer.

For more information, contact:
<http://www.sliver.com.au>

John Dorfman, ISEA

2006 Green Earth Fair Sunday, 5/7, 1-5pm

Green Earth Institute
10 S 404 Knoch Knolls Rd.
Naperville, IL
www.greenearthinstitute.org

The Green Earth Fair is an afternoon to visit our organic farm, learn about nature and ways to use earth-friendly practices in our gardens, yards, and homes.

There will be exhibits, demonstrations, farm tours and activities for the kids. Organic vegetable seedlings and native prairie plants will be available for purchase. The event is open to the public, free of charge.

Scheduled presentations include:

*Solar Energy -Home Applications
Green Home Improvements
Home Energy Saving Strategies
Natural Landscaping
Home Composting*

For more information, contact:
Ted Lowe
info@illinoissolar.org
(630) 260-0424

2006 Board of Directors

The ISEA welcomes newly elected Tom DeBates, and returning directors Mark Burger, Brandon Leavitt, Ted Lowe, and Bill Lyons to new two years terms on the board. They join Howard Alan, Jim Camasto, Jamie Cleveland and Mary Eileen O'Keefe serving in the second year of their two year terms.

We wish many thanks to departing director Jeff Teppema for his service and commitment to ISEA.

Thanks also to Dick Claus, who verified vote tallies.

Ted Lowe, ISEA Elections

"Chicago Solar Partnership" (page 3)

- The largest solar thermal power plant built in 15 years broke ground on Saturday February 11th in Boulder NV to produce 64MWs of electricity using Concentrating Solar Power (CSP). And, a third party lease agreement provides for installation of a total of 36MWs of PV projects in Nevada.
- Renewable Portfolios Standards now exist in 18 states plus the District of Columbia. Other states offer specific solar carve-outs to speed industry development including Arizona, Colorado, District of Columbia, New Jersey, New York, Nevada and Pennsylvania.

States are implementing a variety of financial strategies including upfront rebate payments to offset capital costs, tax credits, low-cost loans, production/performance based incentives, green tags and carbon credits and modest tariffs. There is increasing interest in third party financing and leasing agreements for large-scale solar distributed generation to garner the benefits of long-term, fixed energy pricing, peak power generation and emergency power resources.

In 2004, preliminary interviews with representatives from BP Solar, Astropower (now GE), Shell Solar and SEIA, the Solar Energy Industries Association, found that solar manufacturers are looking for 50% rebates/incentives, a minimum of a \$10MM annual fund per state to support purchases of \$20MM, sales opportunities of 100kW+ and a 5-10 year commitment in order to commit to solar energy market development in the Midwest. With a 5 year, \$80 million or \$400 million total regional commitment, solar energy manufacturers will seriously consider developing the Midwest solar energy market.

A State of Illinois solar energy policy that is nationally competitive will generate renewed interest in growing the solar energy market in the State of Illinois which will benefit the people of Illinois, our nation and the US solar industry for years to come. However, the State of Illinois needs to act quickly to ensure a viable solar energy industry future for its constituents.

Now is the time for the State of Illinois to implement solar energy policies that represent the State's commitment to:

- Diversifying energy generation resources in pursuit of energy independence goals
- Implementing an energy policy strategy that is a hedge against escalating energy prices due to the fixed price nature of solar energy generation.
- Diversifying its economic base through new service and manufacturing enterprises.
- Reducing natural gas demand and expense in the case of solar thermal deployments.
- Providing for emergency power sources for critical building operations.
- Improving grid surety through solar installations that will off-set peak demand and increase transmission capacity during peak energy periods.
- Achieving clean air goals.

For the solar industry, effective solar energy policies will demonstrate the State's commitment to:

- Providing a multi-year fund resource that is essential to providing market certainty for manufacturers.
- Contracting for solar energy installations that will provide jobs and training programs for electricians and pipe fitters in the era of clean energy.
- Continuing discussion regarding the elements that are essential for successful long term solar market and clean energy infrastructure development.

*Kathy Quasey, Program Developer
Chicago Solar Partnership
www.chicagosolarpartnership.com*

ComEd Factoid Through December 31, 2005

ComEd reports a total of 1,814 kW photovoltaic systems connected in its service territory, as well as 129.6 kW of small-scale wind. In addition, there are two independent wind power producers (Mendota Hills and Crescent Ridge) rated at 105 MW.

*Maryl Freestone
ComEd Energy Delivery
www.commonwealthedison.com*

Quotable:

"Delayed gratification and self-sufficiency are traditional conservative values. That is why the next conservatism should champion policy changes to use less, not more oil through conservation and energy efficiency."

Rep. Roscoe G. Bartlett (R-MD)

World's Largest Laundromat

All weekend long, the story of the newly re-opened solar World's Largest Laundromat has played on CBS, Fox News, CLTV, ABC and NBC. This morning (Monday, January 23) Fox Morning news broadcast live from the laundry to close out their newscast.

Lt. Governor Pat Quinn was one of the special guests at the grand opening celebration. He spoke about the need to use more solar energy on more buildings throughout the State.

The new solar hot water system, the largest to date in Illinois, produces over 2500 gallons of hot water daily.



On Saturday, January 21 (one month after the shortest day of the year) at 10:30am, on a 30 degree morning after a four-inch snowstorm, 113 degree solar hot water was feeding the back-up boiler, which only needed to boost it 7 degrees to 120 degrees before it entered the washing machines.

SOURCE:
Brandon Leavitt - President
Solar Service, Inc
www.solarserviceinc.com

ISEA Event Review

Illinois Institute of Technology (2/11/06)

Dr. Said Al-Hallaj shared some of his insight on the role of renewable energy in a sustainable energy future.



More than 60 people from the renewable energy community attended, and toured the IIT Fuel Cell and Battery Lab and Building.

(Dr. Al-Hallaj, IIT Research Associate Professor and Renewable Energy Programs Coordinator)

Also speaking was John Dorfman, who presented an example of the new "Sliver" Solar Module from Origin Energy, which uses significantly less silicon than existing technology. (See page 5)

Mark Burger welcomed all newly elected ISEA Board Directors.



Congratulations go out to our raffle winners David Schieleit, Justin Turner & David DeVries who won issues of **Solar Today** and to grand prize winner Terry Martin who won an **ISEA Polo Shirt** donated by ISEA.

Chicago Center for Green Technology (12/10/05)

Attendees heard from Kathy Quasey, Program Developer for the Chicago Solar Partnership (CSP), who shared the following information:

The CSP hosted a successful "Solar Means Security" conference on November 9, in Chicago. Focusing on how solar energy can provide essential emergency power in times of crisis, this was the first meeting of its kind in the nation. Over 90 attendees from five

states, surrounding municipalities, the British Columbia and Chile came to learn how solar energy systems can be effectively integrated into emergency response planning.

- The CSP represents a powerful business/labor/government alliance, with participation from the International Brotherhood of Electrical Workers, the City of Chicago, ComEd, and Manufacturers.
- The CSP website features practical installation information and partner information and has received over 1 million hits. Kathy noted that the knowledge that the Midwest is a viable solar market is dying, and there is increasing demand for information on solar energy.
www.chicagosolarpartnership.com

Finally, Kathy emphasized that Illinois needs to increase its solar energy goals, following the example of Pennsylvania and New Jersey - or it is unlikely that a viable solar energy market will materialize in Illinois.

Katie McClain, Sr. Policy Advisor on the Environment (Lt. Governor Pat Quinn's office) spoke to the group and shared information on the Illinois Green Government Coordinating Council, created by the Governor to "increase green purchasing, reduce pollution and waste, facilitate green building practices, and promote green-friendly policies." (*IGGCC Annual Report, August 2005*).

This is a first step in beginning to quantify how much is spent in Illinois on green energy.

During the Business Meeting, nominations were solicited for the ISEA Board of Directors.

Raffle winners: Greg Truex & Brandon Leavitt each won bumper stickers *Renewable Energy is Homeland Security* donated by Northern Sun. Jim Camasto won the book *From Space To Earth: The Story of Solar Electricity* donated by Spire Solar Chicago. Isabelle Kiedrowski won an autographed copy of *Energy Power Shift* donated by the author Barry Hanson.

Members lingered after the meeting to enjoy refreshments and network.

Carol Gulyus, ISEA Events

Turbine Demand Blows Past Supply

ST. PAUL - Worldwide interest in wind power is at a peak, but a shortage of the giant turbines is slowing wind development projects. Demand for turbines used to turn wind into electricity is blowing by supply, which is hampering efforts to cultivate the alternative energy source in the state.

The shortage of the giant turbines is making them more expensive. Turbine manufacturer General Electric said it is booked for the next two years as are European manufacturers.

Ken Valley, president of Midwest Energy Finance, said the shortage is making the task tougher for developers of smaller community-based wind projects.

"One Midwestern wind developer is planning a project with seven turbines, but he can't get them," Valley said. "Midwest would have had more than \$100 million worth of projects this year, but the shortage of turbines is getting in the way."

GE Energy spokesman Dennis Murphy said the shortage is real.

"The renewal of production tax credits has spurred a significant re-energizing of wind as a power option," Murphy said. "Around the world, and certainly in the U.S., a number of our customers have had a great deal of interest in wind."

Last year, a record-breaking 2,431 megawatts of wind power were installed nationwide, according to the American Wind Energy Association. GE-produced turbines accounted for about two-thirds of the total, with 1,005 turbines delivered around the United States.

Valley estimated that in the past 18 months wind turbine prices have gone up 50 percent per megawatt, partly because of demand outstripping supply.

David Morris, vice president of the Institute for Local Self-Reliance, said the wind industry isn't alone in its growing pains.

"There's been an enormous increase in demand for turbines in the world, and there's a comparable situation with solar cells," Morris said. "The growth of the solar electricity industry has outpaced the production capacity of solar-grade silicon, so the price of solar cells has gone up in the last year and a half."

SOURCE:
Susan E. Peterson - Star Tribune
www.startribune.com

ISEA PREMIER BUSINESS MEMBERS

This listing is provided as a Premier Business Member benefit and does not imply endorsement by ISEA. However, ISEA thanks these businesses for supporting our common goals of promoting renewable energy technologies & energy education.



A Solar Thermal System delivers more energy for every dollar spent AND pays for itself many times over.

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- businesses • pools • schools • multifamily

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Web: www.americanrenewable.com



www.spiresolar.com
800-510-4815



Advanced Geothermal Plumbing and Heating, LLC

Dirk Dypold, Manager
Elgin, Illinois
Phone: 847-695-1657
Email: geodd@sbcglobal.net
Web: www.advancedgeothermal.com

ISEA BUSINESS MEMBERS

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Able Distributors Piotr Zelasko 0N246 Cumnor Ave. Glen Ellyn, IL 60137 Phone: 773-889-5555 Email: pz@abledistributors.com Web: www.abledistributors.com	Advanced Geothermal Plumbing and Heating, LLC Dirk Dypold, Manager Elgin, Illinois Phone: 847-695-1657 Email: geodd@sbcglobal.net Web: http://www.advancedgeothermal.com	Howard Alan Architects 849 Armitage Ave. Chicago, IL 60614 Phone: 773-929-2121 Fax: 773-929-2122 Email: halan@xsite.net Web: www.howardalanarchitects.com
American Renewable Energy David Dwyer, President 805 Greenwood St Evanston, IL 60201 Phone: 847-424-0288, 800-454-1461 Fax: 847-424-0289 Email: david@americanrenewable.com Web: www.americanrenewable.com	AMV General Contractors Tom Mulcrone 13430 Glen Entrance Homer Glen, IL 60491 Phone: 815-462-7372 Email: tom@amvcontractors.com Web: www.amvcontractors.com	Baldwin Properties John Porter 6134 W Roosevelt Rd. Oak Park, IL, 60304 Phone: 708-383-1888 Email: j.porter@comcast.net
Becker Renewable Energy Bil Becker Renewable Energy Engineer 2155 Wolpers Road Park Forest, IL 60466 Phone: 262-642-4707 Fax: 708-481-6178 Email: bilbecker@bigplanet.com	Chicago Green Power Foundation Rick Prohov 30 N. LaSalle St. Suite 4300 Chicago, IL 60602 Phone: 312-807-3965 Email: rprohov@chigreen.org	Chicago Dept. of Environment Sadhu Johnston, Commissioner 30 North LaSalle Street, Suite 2500 Chicago, IL 60602 Phone: 312-744-7606 Fax: 312-744-6451 Email: environment@cityofchicago.org Web: www.cityofchicago.org/environment
EcoLogical Products, Inc. Glenn Hunter, President and Sales Mngr 739 N Elmwood Oak Park, IL 60302 Phone: 708-445-0341 Fax: 708-445-1112 Email: info@ecopro.biz Web: www.ecopro.biz	Evo Engineering John Dorfman 1576 Ridge Ave. Apt. 703 Evanston, IL 60201 Phone: 847-523-4997 Email: johnd@evo-engineering.com	Exposition Management International Kathy Quasey 1126 W. Morse Ave. Chicago, IL 60626 Phone: 773-274-8748 Fax: 773-274-8744 Email: kquasey@comcast.net Web: www.expositionmanagementintl.com
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IBEW/NECA Technical Institute Kevin Lynch Electrical Program Coordinator 6201 W. 115 TH Street Alsip, IL 60803 Phone: 708-389-1340 Fax: 708-389-2840 Email: klynch@in-techonline.org Web: www.in-techonline.org	Illinois Clean Energy Community Foundation Ed Miller, Program Director 2 North LaSalle Street, Suite 950 Chicago, IL 60602 Phone: 312-372-5191 Fax: 312-372-5190 Web: www.illicleanenergy.org	Illinois Dept. of Commerce and Economic Opportunity Bryan Clow, Program Manager 620 E. Adams St., Springfield, IL 62701 Phone: 217-785-3420 Email: bclow@ildceo.net Web: www.illinoisbiz.biz/dceo/Bureaus/Energy_Recycling/Energy/Clean+Energy/rep_program.htm

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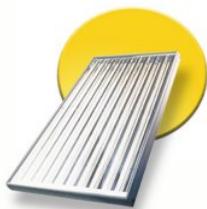
This listing is provided as a Business Member benefit and does not imply endorsement by ISEA. However, ISEA thanks these businesses for supporting our common goals of promoting renewable energy technologies and energy education.

Illinois Solar Products, Inc. Ernie Nathan 1920 Northland Ave Highland Park, IL 60035 Phone: 847-612-2789 Email: ernie@illinoissolarproducts.com Web: www.illinoissolarproducts.com	Image Plus Ron Burzynski 412 Ogden Ave Downers Grove, IL 60515 Phone: 630-852-4920 Fax: 630-852-6088	City of Naperville Municipal Electric Utility Allan L. Poole, Director 400 South Eagle St. Naperville, IL 60566 Phone: 630-420-6131 Fax: 630-420-6744 Email: poolea@naperville.il.us Web: www.naperville.il.us
NekoluxSolar John Berton 4807 N Hoyne Chicago, IL 60625 Phone: 773-334-7529 Email: nekoluxsolar@gmail.com Web: www.nekoluxsolar.com	OCULUS Architecture P.C. Paul E. Sterner, AIA 9525 South 79th Avenue Hickory Hills, IL 60457 Phone: 708-598-4255 Fax: 708-599-6440 Email: oculusdesign@att.net Web: www.oculusarchitecture.com	ReUseIt Center Monica Jenkins 213 W. Walnut St. St Charles, IL 60174 Phone: 630-584-1996 Email: monica@mvnia.org Web: www.reuseitcenter.com
S.N. Peck, Builder, Inc. Neil Peck, President 1647 W. Fulton St. Chicago, IL 60612 Phone: 312-738-2600 Email: npeck@snppeck.com	Solar Service, Inc. Brandon Leavitt 7312 N Milwaukee Ave Niles, IL 60714 Phone: 847-677-0950 Fax: 847-647-9360 Email: bl@solarserviceinc.com Web: www.solarserviceinc.com	Solar Gold Mary Eileen O'Keefe 1362 N State Pkwy Chicago, IL, 60610-6104 Phone: 312-482-9701 Fax: 312-482-9703 Email: maryeileenokeefe@aol.com Web: www.solar-gold.com
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Sun Ovens International, Inc. Paul Munsen, President 39W835 Midan Drive Elburn, IL 60119 Phone: 800-408-7919 Fax: 630-208-7386 Email: sunovens@execpc.com Web: www.sunoven.com	SunWize Technologies, LLC Mark W. Wilkerson VP Business Development #1 Sun Street, Stelle, IL 60919 Phone: 815-256-2274 or 1-800-683-4837 x-22 Fax: 815-256-2221 Email: mwwpv@stelle.net Web: www.sunwize.com	Wynne D. City Power, Inc. Robin Schulemann Director of Product Development 2035 S Racine Ave, Chicago, IL 60608 Phone: 312-243-6414 Fax: 312-243-6781 Email: robins@windycitypower.com Web: www.windycitypower.com

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ISEA CHARTER BUSINESS MEMBER SOLARGENIX

WINSTON SERIES COLLECTOR SELECTED TOP-10 PRODUCT



The Winston Series Compound Parabolic Collector (CPC) solar thermal collector, manufactured by

Solargenix Energy, LLC has been selected as one of the BuildingGreen Top-10 products (2004). This annual award recognizes the most innovative and exciting green building products added to the GreenSpec® Directory during the past year.

This year's BuildingGreen Top-10 covers a wide spectrum of products and applications. Some are used primarily in commercial buildings, others in houses. Some are considered green because they utilize renewable energy, others because they avoid toxic chemicals or are made from recycled or independently certified green materials, and others because they save energy or water.

A big driver in the development of green products is the U.S. Green Building Council's LEED® Rating System (Leadership in Energy and Environmental Design), which awards points for certain product characteristics or the energy or water savings they can achieve. Designers of LEED buildings are looking for green products, and manufacturers are responding., said Wilson.

The Winston Series CPC solar thermal collector is the most advanced solar thermal product on the market. Manufactured at the Solargenix facility in Chicago, the collector is used for solar water heating, space heating, industrial process heat and solar cooling projects. The advanced science that allows the parabolic collector to be designed as a building integrated flat plate collector is the patented non-imaging optics developed at the University of Chicago by Dr. Roland Winston who

now is on staff at the University of California at Merced.

The Winston Series CPC collector is the only solar collector used in the Solargenix water heating product line of active and passive solar heating systems. The aesthetical design, integrated mounting systems and quality materials gives builders and designers flexibility in use and installation of the solar collector array.

GreenSpec is the leading national directory of green building products. The 1,800-plus products included in the directory are selected by editors of Environmental Building News (EBN) based on criteria developed over the past 13 years. Environmental Building News, founded in 1992, is the oldest and most widely respected publication in the green building field.

SOURCE:
BuildingGreen
www.BuildingGreen.com
800-861-0954

Illinois Launches First State Sponsored Program To Offer Greenhouse Gas Emissions Credits

Illinois is the first state in the U.S. to offer farmers and other landowners the opportunity to earn and sell greenhouse gas emissions credits by adopting conservation practices that limit levels of carbon dioxide and methane.

The Illinois Conservation and Climate Initiative a joint venture between the Chicago Climate Exchange, the Delta Institute, and an advisory committee composed of Illinois agriculture and conservation groups.

CCX is the only legally binding greenhouse gas emission reduction and trading system in the US. CCX allows the carbon benefits from conservation practices to be quantified, credited and sold to its members, including large companies, municipalities, and institutions, that have made a commitment to reduce their emissions.

The Delta Institute is a nonprofit that promotes environmental quality and community economic development. They are responsible for "aggregating" the credits from many different farmers and landowners in order to sell them in large blocks to CCX members. State agencies, including the Illinois EPA and Illinois DNR, are conducting outreach and education to identify farmers who want to voluntarily participate.

The program positions Illinois farmers to take advantage of the emerging market in emission offsets. Although the value of these credits usually represents a modest income, that could change. Carbon credits are much more valuable in Europe and Asia where mandatory greenhouse gas limits have been adopted.

SOURCE:
Illinois Government News Network
Press Release
www.illinois.gov

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Membership information, updated information, and assistance in locating other resources can be obtained on the ISEA website:

www.illinoissolar.org

Comments & questions directed to:

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(630) 260-0424

UPCOMING EVENTS

April 4 <i>Saturday, 10am-12pm</i>	World's Largest (Solar) Laundromat <i>ISEA meeting/tour - Berwyn, IL</i>	<i>See Pages 2 & 6</i>
May 7 <i>Sunday, 1-5pm</i>	Green Earth Fair 2006 <i>Green Earth Institute - Naperville, IL</i>	<i>See Page 5</i>
May 13 <i>Saturday, 9am-5pm</i>	Midwest Alternative Fuel Vehicle (AFV) Expo <i>Route 66 Raceway - Joliet, IL</i>	<i>See Page 3</i>
June 10 <i>Saturday, 10am-12pm</i>	Crescent Ridge Wind Farm <i>ISEA meeting/tour - Bureau County, IL</i>	www.illinoissolar.org
August 5 <i>Saturday, 10am-12pm</i>	Aerotecture Test Site <i>ISEA meeting/tour- Round Lake, IL</i>	www.illinoissolar.org
August 12-13 <i>Saturday, 9am-6pm Sunday, 9am-5pm</i>	Fifth Annual Illinois Renewable Energy and Sustainable Living Fair <i>IREA - Oregon, IL</i>	www.irea.org
August 26 <i>Saturday, 9:30am</i>	ISEA Solar 101 Workshop <i>CCGT training room - Chicago, IL</i>	<i>See Page 4</i>



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