

Heliographs

www.iseanetwork.org

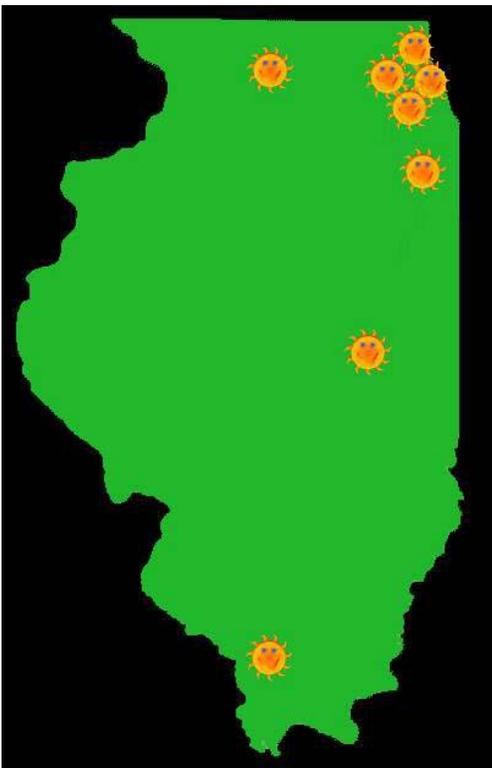
Newsletter of the Illinois Solar Energy Association September, 2003, Vol. 22, No. 3

Special Section Inside

Illinois Solar Tour 2003

Saturday, October 4, 2003

Real Places for Real People



As part of the National Tour of Solar Buildings, many Illinois buildings and homes energized by the sun are open for public tour on Saturday, October 4, generally from 10 am – 5 pm (*but double checking the ISEA website—www.iseanetwork.org/tour-- would be a good idea!*). Organized by various organizations, companies and individuals, the self-directed tours feature everything from homeowner – installed photovoltaic systems to complete offices and houses designed to maximize the sun.

One exciting addition this year is that anyone attending the tour will have the opportunity to enter a drawing for a free solar electric system with inverter and battery backup. Solar Electric Inc. in California has coordinated with United Solar Ovonic (Uni-Solar) and Xantrex to donate a 2 kW system with an inverter. In addition, C & D Technologies has donated an 8 kW battery backup system bringing the value of the prize to over \$11,000! Some lucky person will be happy they attended the tour!

Illinois Solar Tour graciously sponsored by the American Solar Energy Society, Illinois Clean Energy Community Foundation and Commonwealth Edison. Thank you!

Note:

Additional information about the solar tour is available online. Check www.iseanetwork.org for details regarding additional sites and directions.

NOTICE!! NOTICE!!! NOTICE!!!
ISEA FALL MEMBERSHIP MEETING
Saturday, November 8th, 2003
10am-1pm

“ Sun Ovens, The Technology and the Outreach”

Sun Ovens International,
39W835 Midan Dr,
Elburn, IL
(See page 7 for details!)

President's Letter

"Smoking Around The Edges"

Having grown up in New York, I grew accustomed to two things: pennant races and blackouts, in the latter experiencing the 1965 and 1977 episodes. On August 14, I found myself in the strange position of seeing both Chicago teams in the hunt and watching the 2003 blackout from afar.

The blackout reminded me of being stuck behind one of those smoking cars that are held together with duct tape. You know they're going to go sometime, probably in the middle of a highway during rush hour. Your anger at their spewing more than their share of toxins into the atmosphere may be tempered by the possibility that the owner is probably barely making ends meet. He or she may have to choose between repairs and rent, fuel or food. If they lose the car, they lose their job.

The operators of our nation's power grid have no such excuse. Federal Energy Regulatory Commission rules state that investment in the major transmission grid (a "natural" monopoly) can result in a 11 or 12% return on investment. I would think that would be pretty good in these times, but I guess I'm naive. The captains of the energy industry must think it's not sufficient enough or "glamorous" enough.

Like the California energy events of 2000 and 2001 and the recent blackout, what may be a contributing factor is deregulation. But not deregulation in the classic sense but the half-baked and bungled attempts that generally have resulted so far. There is enough blame to go around, whether the industry, policymakers or the public.

Deregulation does not mean lower prices and making a fast buck. Deregulation is the introduction of market forces in a controlled environment. You may get lower prices and more profits, or you may not. When the deregulation is half-baked, such as deregulating generators but not transmitters, or large energy users, not small ones, or freezing the purchase or sale of energy but not both, trouble will inevitably result. It may result in infrastructure being ignored, innovation being stifled or externalities like pollution being "blown" off.

Where does that leave renewable energy users? The answer may be to continue the long march in convincing the public of RE's value as an important ingredient in infrastructure reliability without overselling it as a panacea. Some specific ways include circulating some excellent testimonials from RE users who rode out the blackout that are on the American Solar Energy Society, (www.ases.org), Solar Energy Industries Association

(www.seia.org) and American Wind Energy Association (www.awea.org) web sites. Another is to take part in Lt Governor Pat Quinn's www.Blackoutsolutions.org initiative to get the value of clean, distributed energy up front. Last, but not least, keep putting up those panels and turbines, with or without government support.

So I wonder whether this year's National Tour of Solar Buildings on October 4 will have to compete with any Chicago playoff games?

Mark Burger,

President, ISEA

Here's how you can contribute!

PERFECT TIME TO WRITE A LETTER TO THE EDITOR

While electricity is on the public's mind and in the press, please use this opportunity to write a letter to the editor of your local paper about the benefits of renewable energy and energy efficiency. This is also an opportune moment to remind people that the instability of the power grid is only one of many reasons why we need to change our energy system. There is a good chance that your local newspaper will run a letter from you if it is tied into the recent blackouts.

Send your letter to the editorial page editor, with a cover note making it clear that you are requesting that the letter be included in the letters-to-the-editor section of the newspaper. Make sure to include your address and phone number, so that the editor will know how to contact you for verification or further information. Here are some sample key statements you could use:

☀ Now is the time for America to commit to using less electricity and to speeding the installation of distributed energy systems, such as rooftop solar panels, fuel cells, and small wind turbines. Not only would this decrease the likelihood of future blackouts, but it would slow global warming and reduce air pollution.

☀ If everyone in our community were to replace one of their old appliances with a new energy-efficient one, we could significantly reduce our reliance on the electrical grid and help avoid blackouts such as the one that recently affected 50 million people.

☀ The solar panels on my home provide independent, clean electricity that doesn't contribute to blackouts.

Source: American Solar Energy Soc –www.ases.org

Illinois Solar Tour Information October 4, 2003

Tour	Tour Communities (# Buildings)	For More/Updated Information
Chicago	Chicago (6)	Ted Lowe, Illinois Solar Energy Association, 630-260-0424, info@iseanetwork.org , www.iseanetwork.org
Chicago Area - North, South & West	Downers Grove (1), Glen Ellyn (1), La Grange Park (2), Libertyville (1), Naperville (3)	Ted Lowe, Illinois Solar Energy Association, 630-260-0424, info@iseanetwork.org , www.iseanetwork.org
Chicago Area - North Shore	Check www.iseanetwork.org for details!	Sharon Stuertze, Solar Service, Inc., 847-677-0950, ss@solarserviceinc.com , www.solarserviceinc.com
Chicago Solar Partnership-PV Chicago	Burbank (1), Chicago (7), Glen Ellyn (1) Check www.iseanetwork.org for details!	Angela Leontis, Spire Solar Chicago, 773-638-8700, aleontis@spirecorp.com , www.spireolarchicago.com
North Central - Ogle & Winnebago Counties	Ashton (1), Byron (1), Mt. Morris (1), Oregon (1), Check www.iseanetwork.org for details!	Bob and Sonia Vogl, Illinois Renewable Energy Association, 815-732-7332, sonia@essex1.com , www.illinoisrenew.org
Stelle	Stelle (Numerous)	Mark Wilkerson, Stelle Area Chamber of Commerce, 815-256-2222, mwwwpv@stelle.net , www.stellecommunity.com
Central East	Champaign (1), Urbana (2) Check www.iseanetwork.org for details!	Bill Fabian, Illinois Renewable Energy Association, 217-398-6385, bmfabi@advanienet.net
South - Carbondale Area	Check www.iseanetwork.org for details!	Aur Beck, Advanced Energy Solutions Inc., 618-893-1717, info@advancedenergyonline.com , www.advancedenergyonline.com

Chicago Sites:

849 W Armitage Ave

The Howard Alan Studio demonstrates passive solar design in an urban workplace building. A Direct Gain Solar Building and Water filled Cylinders Store Solar Heat Energy. The concrete block walls with their cores filled solid with cement grout for maximum mass, a 4.5" thick 2nd floor concrete slab along with five (5) 7 foot tall water filled tubes provide heat storage as well as an efficient barrier against urban street noise. The total energy bill for 1995, gas back-up heat and electricity, was \$531 (based on residential billing).



4807 N Hoyne Ave

A 2.2 kW photovoltaic array with 1500 amp hours of nickel/iron battery capacity provides all of the electricity for Berton's second floor apartment in this two flat building. John powers an 18 cu. ft. refrigerator, doorbell, answering machine and radio directly with DC. An inverter provides AC for the remaining electrical loads. John did most of the work himself and uses ComEd to charge his batteries only when there are many continuous sunless days. All of his electrical needs have been provided by solar electricity since his "Pull the Plug Party" a few years ago.

2533 W Thomas St

The Cummings residence demonstrates photovoltaic solar electricity generation in an urban environment. A 3.4 kW array provides all

electricity for daytime use in her second floor apartment including all public lights and all basement equipment in this two flat building. ComEd is used to charge batteries at night only. Kathy is participating in ComEd's Pricing Experiment and selling excess electricity back through the grid. She is paid at the end of the year for the total excess power.

1039 N Honore St

The Isaacson residence demonstrates photovoltaic solar electricity generation in an urban environment. Twelve 300watt ASE solar panels were installed on the roof for a total of 3.6kW of power. The power generated feeds a battery bank of AGM lead acid batteries. These are maintenance-free batteries, which are convenient for her. A 120 V AC 4000watt inverter was enough to cover all her electrical consumption needs. The system was designed to replace the utility grid.



1413 W Lexington St - 10AM - 2PM Only

The Jacobson residence demonstrates **BOTH** photovoltaic solar electricity generation and solar thermal heat and hot water in an urban environment. The Jacobson residence uses all their available roof area to hold BOTH photovoltaic and solar thermal panels. They are the first building in Chicago to have both types of systems! Dan comments, "It seemed like a no-brainer to install both types of systems and use all the available roof area."



1433 W Chicago Ave

The Nekola and Hamayan residence demonstrates photovoltaic solar electricity generation in an urban environment. Solar panels form a canopy over the porches and give shade to sit under. The garden features a solar water fountain that doubles as a bird bath on cloudy days.

Chicago Area - North Shore - 10AM - 2PM

This tour includes single family homes, 1 apartment building and one commercial coin laundry. Some of the buildings are open houses and others are "drive by viewing" only. Start the tour at 9507 Central Park, Skokie (E of Crawford, S of Golf). Maps with addresses for the rest of the buildings will be available at this first building. (See www.iseanetwork.org for maps and updated information!)

Chicago Solar Partnership

(See www.iseanetwork.org for maps and updated information!)

- Burbank - IHS Brentwood - 5400 W 87th St
- Chicago - Chicago Center for Green Technology - 445 N Sacramento Bl
- Chicago - Children's Place Vision House - 515 E 50th Pl
- Chicago - Claretian House, New Homes for South Chicago - 9022 S Buffalo Bl
- Chicago - Museum of Science and Industry - E 57th St & Lake Shore Dr
- Chicago - Museum of Science and Industry Bus Shelter - to the North of the museum on the Western side - U-shaped drive off of E 57th St
- Chicago - DuSable Museum of African American History - 740 E 56th Pl
- Glen Ellyn - Hadley Junior High - 240 Hawthorne St

Chicago Suburban Sites: (see www.iseanetwork.org for maps and updated information!)

Downers Grove - 907 Summit St

The Nowicki residence demonstrates passive solar design and energy efficiency in a suburban environment. The house is surrounded by lush gardens of native flowers, herbs and vegetables.

Glen Ellyn - 1s775 Conifer Ct

The Whitney residence demonstrates passive solar design and energy efficiency in a suburban environment. This hillside home takes advantage of a south sloping lot and the benefits of temperature moderation from the Earth which envelopes the north side of the lower level. Insulation of the exterior walls is rated R-26 and the roof is rated R-38. All exterior walls and ceilings employ a vapor barrier and have resulted in very tight construction. The house is surrounded by Earth-friendly native plants as well.

La Grange Park - 417 N Waiola Ave

The Kading residence demonstrates photovoltaic solar electricity generation in a suburban environment. Small stand-alone system includes a 30 watt photovoltaic panel mounted on garage roof, inverter, and two 6-volt batteries used for lighting. Installed several years ago.

La Grange Park - 423 N Waiola Ave

The Teppema residence demonstrates photovoltaic solar electricity generation in a suburban environment. Two 120 watt and four 110 watt photovoltaic panels mounted on adjustable rack on garage. 36 volt configuration utilizing an inverter for direct connection to ComEd power grid under the ComEd Pricing Experiment. Generates approximately 2-1/2 kW per day used to reduce the amount of energy consumed from the power grid at a savings of 9 cents per kW.

Libertyville - 15312 W Fair Ln

The Warner residence demonstrates passive solar technology and energy efficiency in a suburban environment. Passive solar features include Trombe walls to heat the downstairs bedrooms, a solar attic to collect heat for underground rock storage, and quarry tile floors for direct gain. Conservation features include earthberming and landscaping to stop winter winds, insulated window shutters on all windows, R-38 wall insulation and R-76 ceiling insulation and valanced fluorescent lighting throughout.



Naperville - 1264 Harvest Ct

The Woods residence demonstrates passive solar design and energy efficiency in a suburban environment with natural solar heat collection, continuous solar control and positive solar heat distribution. Outside makeup air is pre-filtered through 2 gaseous absorbing and 2 particulate filters. Inside air is recycled through filters continuously. Positive pressure maintained to prevent air infiltration.



Naperville - 639 Balmoral Circle

The Mankowski residence demonstrates passive solar design and energy efficiency in a suburban environment. Seasonal ice storage is built under the breezeway. Ice produced in winter is melted in summer for cooling. Coil on north roof of garage provides the cold source in winter to drive the refrigerant filled lines to the coil under the breezeway. The owners won a national award from the Energy Department in recognition of this feature. Other features include an air-to-air heat exchanger for supply and exhaust air and attractive interior insulating shutters.

Naperville - 612 Staunton Rd

The Armstrong residence demonstrates passive solar design and energy efficiency in a suburban environment. The house is surrounded by native prairie and has no mown lawn. The house is much wider to the south and there are 5 patio doors, 2 large triple glazed windows, 3 clerestory windows and 3 smaller windows in the earth-sheltered lower level. In the great room in front of the patio doors are 4" thick concrete and tile solar collectors. Sunshine warms and soaks into these areas which then radiate the heat back into the room at night. All windows are also equipped with insulated, hinged shutters that can be closed to keep the heat in at night, or on stormy days. Overhangs calculated for our latitude and deciduous sumac trees protect the windows from summer sun but allow winter sun full entry. The large roof has an insulation value of R40.



Stelle, Illinois 11 - 3 PM, October 4, 2003

Map and [directions](#) from the web site (www.stellecommunity.com)

SunWize Technologies and the Center for Sustainable Community are co-sponsoring the Stelle, Illinois stop on this year's National Tour of Solar Buildings. Visitors to this rural community (just two hours south of Chicago) can observe some of the latest solar technologies in existing home and commercial applications.

Highlights:



Stelle Telephone Company and Stelle.Net -- United States' first off-grid (solar powered) phone company and ISP operating totally without utility power.



A Stand-Alone Residential Wind and PV Hybrid System incorporating state-of-the-art technologies.



Straw Bale Home (Off-Site) - First in Illinois, and built using power tools completely run by the electricity generated from PV in the owner's solar-powered work trailer.



10KW Bergey Wind Generator that powers the community water plant.



12 Homes Using Solar Back-Up Power Systems of varying sizes.



University of IL Solar Demo Trailer showcasing solar farm-related applications (invited).



Hayride Tour of Community and Co-op Vegetable Gardens Learn about the mulch gardening method.



Investigate a Honda Insight – one of the new Hybrid Cars



Basic Solar Electricity, Overviews of Community and Sustainability are each a topic of discussion at seminars held during the tour.



Lunch, snacks, beverages will be available.

There's only one entrance to Stelle...someone will be greeting all guests, handing out Solar Tour Maps and available to answer any questions...remember to print the [map](#) and [directions](#) from the web site (www.stellecommunity.com) if you are unfamiliar with this rural area. Bring your friends and an appetite for information about solar and wind energy as well as for some good home cooking and maybe some fresh organic apple cider. Come join us for a sampling of country living at its best. Call 815-256-2222 week days from 9-5. Fax 815-256-2221 or email mwwwpv@stelle.net.

Illinois Solar Energy Association

Mark Burger, President

Howard Alan, Vice President

Ted Lowe, Treasurer

Bill Lyons, Secretary

Board Members: Bil Becker, John Berton, Roy Grundy, Sharon Stuertze, Steve Walter.

Heliographs is published quarterly by ISEA, the Illinois Solar Energy Association on recycled paper (of course!). Editor: Betty A. Warner. Membership information, updated information, and assistance in locating other resources can be obtained on the ISEA website at www.iseanetwork.org. Comments and questions can also be directed to the Illinois Solar Energy Association, P.O. Box 634, Wheaton, IL 60189-0634, to info@iseanetwork.org or via telephone at 630-260-0424.

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*From governments in developing countries looking for solutions to deforestation –
to North American families looking for a way to bake without heating up their kitchens.*

*From women in the rain forests of Africa who can't find wood to cook with –
to deer hunters in North America who love moist venison.*

*From Americans concerned with power disruptions and increasing fuel costs –
to Pakistani women who cannot afford the high cost of fuel to make their dinner.*

***The one thing they all have in common is that they have all discovered... solar energy is the
least polluting and most inexhaustible of all known energy sources and it is free.***

AGENDA

10-10:30 networking, snacking

10:30-11 Business Meeting -Elections and Volunteer Opportunities

11-1 Program by Paul Munsen, *Founder and President Sun Ovens International*

**Carpooling can be arranged for interested parties (show interest via email info@iseanetwork.org). The Metra Union Pacific/West Line goes to Geneva which is about 10 minutes from Sun Oven's location in Elburn; People leaving downtown Chicago on the 8:40 train could be shuttled to the meeting by 10am (request shuttling via email*

JOIN US in the common goal of promoting solar/renewable technologies, providing energy education and establishing a sustainable energy network. **Your support today can help provide a cleaner environment tomorrow.** *Dues and contributions are tax-deductible.* NEW RENEWAL

Name _____

Address _____

City, State, Zip _____

Home Phone _____

Work phone _____

Email _____

\$100 Annual Business Membership

\$30 Annual Family Membership

\$25 Annual Individual

\$20 Annual Student

\$20 Annual Senior

An Additional Contribution of \$ _____

Please make your check payable to “ISEA” and snail mail it with this membership application to

Illinois Solar Energy Association

P.O. Box 634

Wheaton, IL 60189-0634

MARK YOUR CALENDARS!!!!

October 4, 2003 -- **National Tour of Solar Buildings**

See Details inside or at www.iseanetwork.org

November 8, 2003 -- **Fall ISEA Membership Meeting**

See Details on page 7 or at www.iseanetwork.org

November 3-5, 2003 -- **Eighth National Green Power Marketing Conference**

Details at <http://www.eere.energy.gov/greenpower/conference/>

Don't forget: It's a perfect time to write to your local paper! See page 2 for tips on writing a letter to the editor!

Note to Current Members: To keep ISEA costs low and to save the environment, ISEA does NOT send annual dues invoices. Please check the address label on this edition of Heliographs! If the date on the label is highlighted in yellow, then your dues may be overdue! Use the application on the page 5 to mail your renewal! Thanks!



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