

Heliographs

www.illinoissolar.org

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Illinois Winds Propel Renewable Energy *Mendota Wind Farm Online; More to Follow*

The 50MW Mendota Hills farm just south of Chicago is the first of six potential Illinois wind farms. Electricity from the 63 wind turbines visible from Interstate 39 is expected to power approximately 20,000 northern Illinois homes. Ideally, if all six farms come online as planned, nearly 90,000 Illinois homes could have their electricity needs met with wind.

The Mendota project with its 63 Gamesa turbines cost over \$56 million to build, of which \$2.75 million was a renewable-energy grant from the Illinois Department of Commerce and Economic Opportunity. The developer, Minneapolis-based Navitas Energy, has developed similar farms in Minnesota, Iowa, Wisconsin, North Dakota and South Dakota over the past eleven years.

According to the American Wind Energy Association (AWEA), nearly 1700 MW of new wind power was installed in 2003, bringing the installed capacity in the U.S. to over 6,370 MW in 30 states. But wind farms generate more than electricity, according to AWEA:



Photo courtesy of DOE/NREL

- The nation's 2003 wind farms will generate approximately \$5 million in payments to landowners annually and create some 200 skilled, long-term jobs in areas where such employment is scarce, as well as short-term construction jobs and associated economic activity.

- The new wind capacity will displace emissions of three million tons of carbon dioxide (the leading greenhouse gas).

AWEA calculates that the US currently receives less than one percent of its power from wind, while some European countries produce anywhere from 4 percent to 20 percent of

(continued on page 3)

ISEA Spring Membership Meeting

Date: Saturday, 3/27/04, 10am - 1pm
Theme: Solar Lifestyles in Suburbia
Place: Home of Ted Lowe
2003 Paddock Ct. Wheaton, IL 60187

(more details on page 4)

President's Letter

As we go through 2004, I am struck by how the ISEA resembles so much of the renewable energy industry in terms of growing pains, both worldwide as well as in Illinois. We are proud of Navitas and the first Illinois commercial-scale wind farm in Mendota Hills in Lee County. Its 50-plus Megawatts joins over 30,000 Megawatts of capacity worldwide. While wind power is still less than one percent of worldwide or US electricity production, countries like Denmark (18 percent of production), and Germany (6 percent) show the possibilities.

The upward climb is bumpy. A bloated and not yet passed Federal Energy Bill, has stalled renewal of the vital Production Tax Credit. This inertia has stymied developing U.S. wind farms, including several in Illinois and, if not enacted soon, may delay the projects for the entire year, in some cases permanently. U.S. installed capacity has slipped to fourth place, behind Germany, Spain and Denmark. Opposition to wind farms is growing, a price of success. Reasons range from aesthetics to real or imagined health and safety concerns. Opposition by environmentalists to bird kills may have some justification, but it should be pointed out that a bird would have to strike a turbine or tower to be harmed, whereas a coal plant can harm the same creature from hundreds of miles away. This may be a classic case of destroying excellence in order to achieve impossible perfection.

Growing renewable energy industries also have their own turbulence. A troubled Astropower selling its assets to GE reflects some of the significant changes in the solar electric industry. US PV production threatens to slip to third place behind Germany. China, in a few years, is roaring past American installed capacity and may surpass production shortly afterward. Going back to wind, the possible merger of two Danish wind power companies, Vestas and NEG-Micon, may impact Illinois, as the latter's North American headquarters is located in suburban Rolling Meadows.

Continuing on the local scene, we welcome Solargenix (formerly Duke Solar) opening up shop in Chicago, joining Spire Solar Chicago and Aerotecture in renewable energy systems component manufacturing. Philips's new line of inverters is establishing a technical center in suburban Rosemont. As natural gas prices continue to rise, thermal companies like Solar Service continue to prosper. The green energy industry may not yet compensate for the job losses from a Maytag or a Motorola, but we hope to help begin an industrial (actually, a post-industrial) resurgence of job and business creation

Thanks to the many people who have contributed to ISEA's success, we are approaching 200 members, secured funding last year from the Chicago Department of Environment for a new, exciting looking display, and from the Illinois Clean Energy Community Foundation and ComEd for marketing last October's National Tour of Solar Buildings, attracting nearly 1,000 visitors across the state. This year, with new Board members and a growing number of committed volunteers, ISEA will go to the next level of serving Illinois in the promotion of renewable energy in 2004.

Mark Burger
President, ISEA

Paul Munsen, Sun Ovens Honored By US Commerce Department



On December 18, 2003, Speaker of the U.S. House of Representatives Dennis Hastert presented Paul Munsen, president of Sun Ovens International, with the US Commerce Department's Export Achievement Certificate. The award recognized SUN OVENS International for exports to Haiti that were made with the assistance of the Department of Commerce's Foreign Commercial Service.

"International Trade is a vital part of our local economic growth," said Hastert. "Exporting allows area companies to increase sales, expand their businesses and create jobs for the people of Illinois. SUN OVENS International is an outstanding example of how small business can work with government to take advantage of international opportunities. I'm proud to recognize this Illinois company today and am honored to have them located in my congressional district."

Members of ISEA visited Munsen's production facility at their November 2003 membership meeting.

NOTE: ISEA has changed its web site address and email to: www.Illinoissolar.org
Information about ISEA can be obtained at: Info@Illinoisolar.org
The phone number remains: (630) 260-0424

("Wind Power" continued from page 1)

their power from wind. The five leading states at year's end were California (2,043 MW cumulative capacity), Texas (1,293 MW), Minnesota (563 MW), Iowa (472 MW), and Wyoming (285 MW).

And, the future of wind energy is not without trouble. The Crescent Ridge project has been slowed by residents who object to the towering turbines and/or take issue with the legalities of how the project was approved by the local government. More critically, the federal wind power tax credit (PTC) expired at the end of 2003 and has yet not been renewed by Congress as of this printing.

According to AWEA Executive Director Randall Swisher, "Our members tell us that 2004 could have been an even better year than 2003 had the PTC extension in the energy bill gone into effect. There are thousands of megawatts of projects, representing billions of dollars in investments, that could move quickly if Congress takes action early in the year."

New Wind Projects in Illinois

Utility/Developer (Project)	Location	Status	MW Capacity	On Line By / Turbines
Illinois Wind Energy / ComEd (Crescent Ridge)	Crescent Ridge	Under Dev	48.0	NA / NEG Micon 1.5 MW
Illinois Power / NEG Micon (Demo Project)	Champaign	Proposed	0.9	NA / NEG Micon
Northern Alternative Energy / Navitas	West Brooklyn & Compton Areas	Proposed	50.0	NA / NEG Micon
Illinois Wind Energy	Near Princeton, IL	Proposed	50.0	NA / TBD
FPC Services (GSG Wind Farm I)	Lee County	Proposed	18.0	2004

Sources:

*Installed & Projected MW - AWEA

**Wind Energy Potential - *An Assessment of the Available Windy Land Area and Wind Energy Potential in the Contiguous United States*, Pacific Northwest Laboratory, 1991. ("Potential" is stated in terms of average Megawatts of Capacity (MWa), or megawatts of capacity at 100% capacity factor. 1 MWa is roughly equal to about 3 MW of nameplate wind turbine capacity. Source: AWEA (permission requested)

ISEA Selects New Board Members / Officers

Nine members constitute the ISEA Board of Directors. The terms of Bil Becker, John Berton, Steve Walter and Ray Grundy expired in 2003. A mail ballot of members in good standing re-elected Mark Burger, Ted Lowe and Bill Lyons to two-year terms. Brandon Leavitt and Jeff Teppema were elected for their first two-year terms. Jamie Cleveland and Jim Camasto were elected to one-year terms. Howard Alan and Sharon Stuertze continue on through the second year of their two-year terms.

The new Board members were welcomed at the first ISEA Board meeting on January 23. At that same meeting, officers for 2004 were elected, as follows: Mark Burger, President; Howard Alan, Vice President; Ted Lowe, Treasurer; Jamie Cleveland, Secretary.

Board members attend monthly meetings, maintain regular email communication, and often serve on additional committees between Board meetings.

Bil, John, Ray and Steve, whose terms have expired, were commended for their work and dedication.

New ISEA Presentational / Promotional Display



Thanks go to ISEA board member Sharon Stuertze and her team, who designed and oversaw production of the ISEA's new large, portable, presentation display and backdrop. Thanks also to the Chicago Department of the Environment who's generous grant made production of this display possible. Please come out to see it at an upcoming event!

Announcing the 3rd Annual Illinois Renewable Energy Fair

*Saturday, August 7, 9AM–6PM
Sunday, August 8, 9AM–5PM*

Illinois' premiere renewable energy event is held at: Ogle County Fairgrounds, 1440 Limekiln Rd.

*(Just north of Hwy. 64 west of Oregon
about 2 hours west of Chicago's Loop)*

More Information at: www.illinoisrenew.org

ISEA Spring Membership Meeting Saturday, 3/27/04, 10am - 1pm

ISEA leader Ted Lowe invites us to tour the solar features of his home, some of which include a solar thermal water & heating system, small off-grid PV system and a future 2KW grid-tie PV system. You may also be interested in Ted's Electric Vehicle, which he plans to charge with the PV system.

Come prepared to see and discuss many issues relating to a sustainable approach to living. Light refreshments will be served. RSVP's are appreciated. You don't have to be a member to attend, so feel free to invite neighbors, family, colleagues, etc.

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

Organic Architecture

By Howard Alan

"Our bodies are first cousins to our homes."

-Barbara Bannon Harwood

Organic Architecture is "living" architecture. We understand organic architecture similar to how we understand our bodies. Buildings, like our bodies and other living beings, are continually growing and evolving. Their design, structure, and contents can be transformed, adapted, and enhanced according to our changing needs and life patterns.

Organic architecture is architecture of the present, one that invites, accepts, and welcomes future changes. The living and ever evolving essence of human beings is mirrored in the ways that we perceive buildings to meet our needs. Buildings are not just isolated material structures; rather, they affect their surroundings and affect us within them.

Recognizing this interdependence is a fundamental underpinning of organic architecture. Embracing the intricate web of human beings, their buildings, and the environment is necessary in order to live a healthy and organic life. Organic architecture is one way of making buildings more sustainable.

Howard Alan practices organic architecture at Howard Alan Architects, 849 Armitage Avenue in Chicago. He is Vice President and a business member of ISEA.

Midwest Renewable Energy & Sustainable Living Fair

June 18-20 - Custer, WI

The MREA Fair offers:

- Over 100 workshops presented by experts from across the US
- Working demonstrations of renewable energy and energy efficiency technologies
- Products that help consumers save money, save energy, and protect the environment
- Special workshops and entertainment for children and families
- A friendly festival atmosphere

More Info: <http://www.the-mrea.org/energyfair.php>

Illinois Solar Energy Association

Board of Directors

Mark Burger, *President*
Howard Alan, *Vice President*
Jamie Cleveland, *Secretary*
Ted Lowe, *Treasurer*
Bill Lyons
Sharon Stuertze
Brandon Leavitt
Jeff Teppema
Jim Camasto

New Opportunities For Green Businesses

The ISEA Board approved new business membership categories that will allow for greater marketing opportunities while strengthening the Association and its mission.

There will also be multi-year membership rates for individuals and a subscription rate for libraries. Stay tuned!

Heliographs is published quarterly by the Illinois Solar Energy Association (ISEA) 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: www.illinoisolar.org

Comments and questions can also be directed to:

Illinois Solar Energy Association (ISEA)
P.O. Box 634, Wheaton, IL 60189-0634
info@illinoisolar.org
(630) 260-0424

ISEA BUSINESS MEMBERS

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.

Howard Alan Architects 849 Armitage Ave. Chicago, IL 60614 Phone: 773-929-2121 Fax: 773-929-2122 Email: halan@xsite.net www.howardalanarchitects.com	Becker Eco-Design Bil Becker Renewable Energy Engineer 2155 Wolpers Road Park Forest IL 60466 Phone: 262-642-4707 Fax: 708-481-6178 Email: bilbecker@bigplanet.com	Bergey Windpower Co., Inc. 2001 Priestley Ave. Norman, OK 73069 Phone: 405-364-4212 Email: mbergey@bergey.com Web: www.bergey.com
Chicago Dept. of Environment N. Marcia Jimenez 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	Davis Caves Construction Inc. Marty and Ruthanne Davis P.O. Box 69 Armington, IL 61721 Phone: 309-392-2574 Fax: 309-392-2578 Email: earthome@daviscaves.com Web: www.daviscaves.com	Divane Bros. Electric Co. 2424 N. 25 TH Ave. Franklin Park, IL 60131 Phone: 847-455-7143 Fax: 847-455-7899 Email: divanemail@divanebros.com Web: www.divanebros.com
Divane Bros. Electric Co. 2424 N. 25 TH Ave. Franklin Park, IL 60131 Phone: 847-455-7143 Fax: 847-455-7899 Email: divanemail@divanebros.com Web: www.divanebros.com	Environ Inc. Architecture, Design & Planning Susan F. King, AIA Associate 401 West Superior St. Chicago, IL 60610 Phone: 312-951-8863 Fax: 312-951-1719 Email: sking@environ-inc.com Web: www.environ-inc.com	Facilities Research Nancy Hamill Governale North Barrington 847-712-6251 hamill@iit.edu
Thomas A. Gentry Assoc. AIA 122 S. Michigan Ave. Suite 1455 Chicago, IL 60603 Phone: 312-360-0754 Fax: 312-360-0756 Email: mail@thomasagentry.com Web: www.thomasagentry.com	Green Energy Tech., LLC Randy Zaleski 215 N. Washington Unit F Wheaton, IL 60187 Phone: 630-668-0717 Fax: 630-668-1672 Email: rzaleski@greenenergytech.com Web: www.greenenergytech.com	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 Dept. of Commerce & Economic Affairs Rex Buhrmester Program Manager 620 E. Adams St. Springfield, IL 62701 Phone: 217-557-1925 Fax: 217-785-2618 www.illinoisbiz.biz/com/energy/renewable.html	Image Plus Ron Burzynski 412 Ogden Ave Downers Grove, IL 60515 Phone: 630-852-4920 Fax: 630-852-6088	Let the Sun Shine In Steve Graham, Designer/Installer of Alternative Energy Systems 19183 Plow Creek #9 Tiskilwa, IL 61368-9130 Phone: 815-646-4950 or 815-646-4505

Solar Service, Inc. Brandon Leavitt 7312 N Milwaukee Ave Niles, IL 60714 Phone: 847-677-0950 Fax: 847-647-9360 Email: solarserviceinc@aol.com	Spire Solar Chicago Mark Burger Sales Manager Chicago Center for Green Tech. 445 North Sacramento Blvd. Chicago, IL 60612 Phone: 773-638-8700 Fax: 773-638-8701 Email: mburger@spirecorp.com Web: www.spireolar.com	Michael Stavy Financial/Economic Consulting 432 North Clarke St., Suite 204 Chicago, IL 60610 Phone: 312-832-1631 Fax: 312-832-1632 Email: michael@michaelstavy.com Web: www.michaelstavy.com
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 Inc. Mark E. Wilkerson Business Manager #1 Sun Street, Stelle, IL 60919 Phone: 815-256-2274 or 1-800-683-4837 x-22 Fax: 815-256-2221 Email: mwwwpv@stelle.net Web: www.sunwize.com	Illinois Clean Energy Community Foundation Ed Miller, Program Director 2 North LaSalle Street Chicago, IL 60602 312-372-5191/5190 fax www.illinoiscleanenergy.org
Vladimir Nekola 1433 W. Chicago Ave. Chicago, IL 60622 Phone & Fax: 312-738-3776 Email: Vladimir@nekolux.com Web: www.nekolux.com	OCULUS Architecture P. C. Paul E. Sterner, AIA 172 East Burlington Riverside, IL 60546 Phone: 708-447-4300 Fax: 708-447-7336 Email: oculusdesign@att.net Web: www.oculusarchitecture.com	OWP & P Architects Inc. Richard T. Ray AIA, CCS – Principal 111 W. Washington St. Chicago, IL 60602 Phone: 312-332-9600 Fax: 312-332-9601 Email: rray@owpp.com Web: www.owpp.com
Philips Lighting Business Group Lighting Electronics Jamie Cleveland, Business Dev. Mgr. Renewable Energy Inverters 10275 W Higgins Rd Rosemont, IL 60018 Phone: 847-390-5102 Fax: 847-390-5058 Email: jamie.cleveland@philips.com Web: www.solar.philips.com	S.N. Peck, Builder, Inc. Neil Peck, President 1647 W. Fulton St. Chicago, IL 60612 Phone: 312-738-2600 Email: npeck@snpeck.com	Solar Gold J. H. Keller P.O. Box 1017 DuQuoin, IL 62832 Phone: 618-303-2100 or 1-866-771-9177 Email: info@solargold.com Web: www.solar-gold.com

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.*

Name _____
Address _____
City, State, Zip _____
Home Phone _____
Work phone _____
Email _____

- ☐ NEW
☐ RENEWAL
☐ \$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!!!!

March 27	Sat	ISEA Membership Meeting, Wheaton, IL Contact Ted Lowe at ISEA (See page 4)
April 22-24	Thurs-Sat	Earth Day: Field Museum Presents Green Chicago (ISEA presentation/exhibit on Sat. 4/24) Info at: www.fieldmuseum.org
May 2	Sun 1-4 pm	Green Earth Institute Fair, Naperville, IL Contact Ted Lowe at ISEA
June 18-20	Fri-Sun	Midwest Renewable Energy Fair, Custer, WI Info at: www.mrea.org (See page 5)
July 10-14	Sun-Wed	American Solar Energy Association Meeting "A Solar Harvest: Growing Opportunities" Portland, Oregon. Info at www.ases.org
Aug 7-8	Sat-Sun	Illinois Renewable Energy Fair, Oregon, IL Info at: www.irea.org (See page 4)

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 7 to mail your renewal! Thanks!



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