



2nd U.S. Solar Testing Lab Opens in State



Governor Jim Doyle presents a check to Debra Derr, MATC Vice President - Learner Success, as a down payment on the Northern Solar Testing and Certification Facility.

Until August Solar Mining Company, DePere, had installed more than one-half of the solar water heating panels for Wisconsin homes and businesses.

Solar Mining's future depended on receiving certification of its panels from the Solar Rating and Certification Corporation, an independent testing laboratory, which has a year-long backlog in certification work.

To ease this bottleneck in the testing and certification of solar thermal collector panels, including those of the De Pere company, the Madison Area Technical College (MATC) and the University of Wisconsin-Madison's Solar Laboratory formed the Northern Solar Testing and Certification Facility with an initial start-up grant of \$20,000 from Focus on Energy, the state's renewable energy program. Governor Jim Doyle was

on hand at MATC's Madison campus to pledge another \$100,000 from the State for the facility.

MATC and UW-Madison will jointly construct and run the testing facility to measure collector performance against national standards, while also giving students hands-on experience in solar thermal technology.

The project also fulfills three of the U.S. Department of Energy's 2005 solar water heating roadmap priorities: sustain critical research and development; create trained installers and plumbers; test solar water heaters in real world applications.

Ken Walz, MATC chemistry instructor and coordinator of the college's renewables program, pointed to the "maturing solar water heating infrastructure in Wisconsin, nurtured by Focus on Energy as a key factor in

In this issue . . .

Overcoming Payback Analysis	3
Producer Profiles: Andy Bangert	4
WPPI, MGE Tap Iowa Wind	5
Utility Wind Projects Advance	6
Neenah Paper Buys Renewable Power	7
Calendar	8

development of the facility.

Additionally, Walz cited much higher rates for natural gas, new tax credits and financial incentives, declining fossil fuel resources in the U.S., and "a greater awareness of energy and the environment by citizens, businesses, and educators."✪

New RENEW Members

RENEW welcomes the following new businesses and individuals who joined since the last newsletter:

Lenny and Carol Bass • Biogas Direct • Helen Brewster and Mike Bernard • Century Farms • Clover Hill Dairy • Decton Iron Works Design Coalition • Elexco, Inc. • Jeff Fochs • General Electric • H&H Solar Energy Services • Ryan Haney John Heinen • Hot Water Products William Johnson • Michael Laabs Lake Breeze Dairy • Midwest Renewable Projects • Walt Novash • Robert Owen • Mary Ann Phalen • Photovoltaic Systems, LLC • Pieper Electric Symbiont Science, Engineering, and Construction • Jonathan Shawl • Brad Sinjen • Richard Stephens • Rodney Stevenson • Zeus Stark • Wendy Stein Richard Steinfeldt • SUN & Daughters Timmerman's Talents • Arley Uhrig Veolia ES Solid Waste, Inc. • Ken Walz Jon Wilcox

To join RENEW, complete and return the membership form on page 2.

Payback Analysis: Impediment to Sustainability

by Michael Vickerman
RENEW Wisconsin

In my 15 years of promoting renewable energy use in Wisconsin, I have come to believe that the most persuasive advocates are those who back up their words with their wallets. So when the federal government in August 2005 established tax credits for residential solar water heaters, it was time for me to act.

Last January our family became one of a growing number of households that heats a portion of their domestic water with a solar system. Between April and September the solar system provided most of the hot water we use. During the cooler months, the natural gas water heater becomes the primary—though not the sole—source of hot water. If we chance upon a sunny stretch of weather during the winter solstice, our solar collector is there to gobble up the low-altitude sunshine and convert it into warm water.

Scaling back consumption of natural gas, a high-density and highly versatile fossil fuel, serves two beneficial purposes. First, the less we burn, the less carbon dioxide is released into the atmosphere. Even though natural gas has a reputation as a clean fossil fuel, the amount of CO₂ that is released from a combustion pro-

cess weighs more than the gas that went into it.

Though our furnaces and water heaters are every bit as responsible for climate change as automobiles and power plants, they are generally overlooked as greenhouse gas sources, in large part because burning natural gas produces less schmutz—Yiddish for impurities—than coal, diesel or gasoline.

The second purpose served by substituting sunlight for natural gas is that it slows down the unnecessary depletion of a high-quality energy resource that should be used for other, more valuable purposes. This is not an academic matter in North America, where, according to recent government estimates, natural gas reserves amount to about 10 years' supply at present rates of consumption.

Consisting primarily of a collector panel (66 square feet) and a second hot water tank that stores the preheated water, our relatively small system was purchased and installed for \$6,700. Between an installer's rebate, a Focus on Energy cash-back reward, and the federal tax credit, our share of the system came to about \$3,000, which we paid out of a savings account.

The site assessor who characterized

our "solar window" predicted, on average, savings of 120 therms per year. Presently, Madison Gas and Electric charges natural gas customers about \$1.00 per therm. Thus, if the price of natural gas keeps pace with the prevailing rate of inflation, it would take 25 years before our annual savings of \$120 would equal the \$3,000 we shelled out for this system.

To a traditional economist, one who boils life's complexities down to income, outflows and the time value of money, our decision to install a solar domestic hot water system doesn't make a whole lot of sense, principally because the return is tiny relative to the large up-front outlay.

No Place for Sustainability

But in reducing this transaction to simple, measurable flows of dollars in and dollars out, economists filter out a great deal of relevant information that might confound their notions of rational economic decision-making. Though economists will concede that there are other valid factors besides pure price considerations on which to base one's purchasing or investment decisions, they aren't likely to register meaningfully in the economic models they use. Instead, these factors are categorized -- and marginalized -- as "ex-

Continued on page 3

Yes! I want to help RENEW promote the use of clean, renewable energy resources to diversify Wisconsin's energy resource mix.

Name _____

Organization _____

Address _____

City/State/Zip _____

E-mail _____

Make your check payable to RENEW and mail to
RENEW, 222 S. Hamilton St., Madison, WI 53703
608.255.4044 · www.renewwisconsin.org

Please accept my membership in the following category:

- Terawatt Sponsor - \$2,500+
- Gigawatt Sponsor - \$1,000 - \$2,500
- Megawatt Partner - \$50 - \$1,000
- Kilowatt member - \$25 - \$50
- Conservationist member - \$10 - \$25
- Additional contribution of \$ _____

Your contribution is tax deductible.

WISCONSIN RENEWABLE QUARTERLY

Fall 2006, Volume 11, Number 3

RENEW Wisconsin is a nonprofit organization advocating the adoption of clean energy strategies to power Wisconsin businesses and households in an environmentally responsible manner. Through a combination of public policy and private sector initiatives, RENEW aims to increase the use of clean, self-renewing energy resources to generate electricity or displace fossil-generated electricity.

STAFF

Michael Vickerman, Director
mvickerman@renewwisconsin.org
608.255.4044

Ed Blume, Communications
eblume@renewwisconsin.org
608.819.0748

OFFICERS AND BOARD

Dennis Briley

President, Waukesha

Richard Hasselman

Vice President, Madison

Alex DePillis

Secretary, Madison

Shelly Laffin

Treasurer, Spring Green

Charles Alsberg, Neshkoro

John Bahr, Fox Point

Mark Daugherty, Fitchburg

Chris Deisinger, Madison

Gerry Flakas, Delafield

John Frantz, Monroe

Larry Krom, Spring Green

Katie Nekola, Madison

Mick Sagrillo, Forestville

Michael Vickerman, Madison

Articles in the *Wisconsin Renewable Quarterly* may be reprinted with credit to the author and the *Wisconsin Renewable Quarterly*.

The *Wisconsin Renewable Quarterly* is published four times a year by RENEW Wisconsin, 222 S. Hamilton St., Madison, WI 53703, www.renewwisconsin.org.

RENEW also moderates a blog at www.renew-energy-blog.org.

Payback Analysis

Continued from page 2

ternalities” -- a semantic purgatory designed to prevent these considerations from crimping corporate America’s style.

Moreover, such crude calculations rest on two assumptions that are highly questionable and cannot help but lead to distorted conclusions. One is that the solar water heating system is a typical appliance which depreciates over time, just like a toaster. The other is that natural gas is a limitless source of energy that will not become scarce and/or expensive over time.

Regarding the first point, a solar water heater is a simple, low-maintenance system that, once installed, can be kept in good working order for many decades at little cost. It is different from other household appliances like microwaves ovens and furnaces in that the outside source of energy (sunlight falling on the roof) it runs on is cost-free, a savings which is reflected in every monthly energy bill. For that reason, it is more proper to consider a solar domestic hot water system as a built-in feature of the house it serves, rather like south-facing windows.

If kept in good repair, houses tend to appreciate over time, unlike microwave ovens and furnaces. All else being equal, a house with a solar water heater should command a higher selling price than a house without one.

As for natural gas supplies, the outlook is not good. Thanks to decades of depletion, the North American resource base is in terminal decline. It simply cannot support consumption at present levels, no matter what price point you pick. To be sure, imports from overseas suppliers like Qatar will increase, but will they be able to offset declining output from mature fields? Not very likely.

But those individuals who believe that my solar water heater will take 25 years to pay itself back also assume, with

complete confidence, that enough new sources of natural gas will be discovered and brought to market to keep overall supplies from diminishing. Unless they happen to be petroleum geologists, they can’t possibly know what will happen to natural gas supplies in five years, but that doesn’t stop them from making calculations that discount the importance of future supply considerations.

Solar water heaters aren’t as flashy as other renewable energy systems, like photovoltaics or windpower, perhaps because they involve plumbing and don’t produce electricity. But they can be counted on to produce savings month after month, rather like interest from Treasury bills or a money market account. Unlike the interest from these instruments, the savings from a solar water heating system are not taxed. And if the price of natural gas goes up, the savings grow larger.

Is Conservation Passé?

Alas, Americans would rather spend discretionary dollars in casinos or on cruise ships than take preventive action against the possibility of higher heating prices. This should not be surprising in a society where the very idea of personal savings has become passé. Last year, the personal savings rate went negative for the first time since the Great Depression. It is the borrowing against future income that is propping up the American economy right now, not the savings from past and present wealth. Squandering our present-day wealth may be fun, but it ain’t sustainable.

When people first started asking me: “How long is the payback on your solar water heater,” it took all my self-control to keep from responding with “It’s paid back the day I have hot water in my house and you don’t.” In actuality, I believe my out-of-pocket portion of the system will be fully captured in the sale price of my house, though I have no intention of testing that proposition any time soon. Until then, we plan on taking the \$10 or more in monthly savings and applying them to our son’s college education.✱

Producer Profiles

Andy Bangert: Solar Installer and Master Electrician

With barely a nudge during Andy Bangert's recollections of growing up, he admits his hippie roots.

Yet, nothing seems hippie about Bangert these days. He manages H&H Solar Energy Services of H&H Energy, one of five divisions of multi-faceted H&H Group, which also offers mechanical and electrical contracting, pipe and sheet metal fabrication, and design/turnkey energy services.

Born in Jacksonville, Florida, his parents roamed west and finally settled in Montana after his father ended his military service. "You couldn't imagine the beauty of the remote area" where he lived until the fifth grade. After living a few years in upstate New York where he attended a Waldorf school, his mother, "for whatever reason," headed back to Montana, but ran out of money in Madison.

After graduation from Madison East High School, Bangert bicycled through Canada and Montana, attended the National Outdoor Leadership School, picked apples in Washington state, grilled steaks at a "cowboy cookout" for tourists in Yellowstone park, and ripped up a knee in an early spring skiing accident in Big Sky country. After living in a tent recovering through the summer, he awoke and banged his head on the roof of his snow-covered shelter. It was time to move on.

His unlicensed jack-of-all-trades uncle in Elgin, Illinois, gave him a job where he worked until his father convinced him to return to Madison to get a plumber's license so that they could work together. Plumbing turned out not to be Bangert's calling.



Andy Bangert works with Chad Silverthorn (on the roof) and Pete Bunch (behind Andy) on an installation at the home of Karl and Nina Loeffler just outside of Madison.

Q. How did you get from plumbing to renewable energy?

I've always tinkered with things. I liked to take them apart to see how they worked. I can remember that my sister got a music box for her birthday one year. It was out of the box, onto the table, and then off to where I kept my screwdrivers. I never did get that thing put back together.

The more immediate move came when my dad and I stumbled by chance onto the Midwest Renewable Energy and Sustainable Living Fair a while back. It triggered a lot of memories, because I went to the New Western Energy Show in Montana when I was a kid.

And my family had no electricity when I grew up. Everyone in the family had a chore, and one was to fill the Coleman lantern and kerosene lamps.

At some point when we lived out there, we purchased an old Jacobs wind turbine. The local electrical coop wanted everyone to join to help hold down rates, so we went to a farmer's place, took down the Jacobs, and put it on the side of the canyon where we lived.

We had to furl the Jacobs with a hand crank at the bottom of the tower. (*Furling angles the tail of the turbine to keep the turbine from over-spinning in high winds.*)

Anyway, I became a "material handler" for

H&H Electric, keeping the electricians supplied with whatever they needed on a job. Then I entered the electrical apprenticeship program. On a Friday I was a material handler on an expansion project for St. Mary's Hospital in Madison. On Monday, I came to work as an apprentice. After five years, I became a journeyman electrician. I later became a master electrician, and I have all sorts of other certifications in electrical installations and renewable energy.

Q. RENEW fields a lot of questions from young people who want to work in renewable energy. What would you tell them?

You must be an electrician with experience in all phases to be a solar electrician.

installer. I worked for a lot of years on a lot of different large electrical projects before I started solar installations. I put in all the wiring from the basement to the roof of the Waisman Center on the UW-Madison campus.

Installations are hot, heavy work. We're installing year around, so it's also cold. You can't be afraid of heights. It's surprisingly complicated too. You have to be thinking all the time during an installation. You have to understand Ohm's law, so that you know when you did something right (or wrong).

The conduit piping is a challenge. I remember the complaints in the '70s about ugly solar installations, so I think about how an installation is going to look, not just the panels but the piping too. I want it symmetrical and like it flows.

I'd also tell a young person about the variety of people of we get to meet. We installed a large system for an elderly gentleman near Albany who looked at his retirement funds and wondered whether he could do something more with them. He was very smart; we put in a large solar electric system, and he figures he's getting an 8 percent return by selling the electricity compared to 6 percent he was previously making on the money.

Q. *Will you take on young people to train?*

I'd be rich if I had a dime for every time I heard someone say, "All I want to do is come help and learn."

We have plenty of business. We're only a three-person crew, and we have a project list that's twenty deep. If we were going to add a person, it would have to be a person with some competency and a good level of training.

Q. *How do you get business?*

I don't know. Word of mouth, I guess. When we first started, I'd hear about someone who might be interested,

and I'd call them up to see an installation that we were doing. Now people are calling us.

Q. *WE Energies offers a 22.5 cent kWh buy-back rate for solar installations in the utility's service territory. Has that made a difference in Milwaukee?*

Ooooh, definitely. We're five deep on installations in Milwaukee. People know about the program.

It's unreal. Nothing is slowing down. I'd like to take a week off, but I can't.

Q. *How do you answer people who ask about the payback on a solar installation?*

I tell them that it's not about payback. It's the right thing to do. What's the payback on digging up coal? Or nuclear storage? Why even ask about payback on a solar installation?

Q. *Do you have any installations that stand out in your mind?*

I've been involved in all or part of probably 140 installations. The Urban Ecology Center in Milwaukee stands out. We're going to expand that system to the 20kW to 30 kW range.

The Madison Area Technical College (MATC) has plans for a solar bus shelter. The panels were originally going to be installed elsewhere but at one point I had to tell them honestly the spot was not the best. It was too shaded by the building, and the trees were going to grow and shade it. So I said, listen to this idea: panels on a bus shelter. Then the idea grew to include heat, handicapped access, and more.

You know, solar should be in the cities where we have so many flat spots. Solar gets to be a disease. I drive down the street saying, "There's a good roof. Solar would look good on that house."

At my own house I have a 1.1 kW tracker, another 1.1 kW on the roof, a solar-powered lawn mower, and a solar-powered riding mower. I designed the solar-powered golf cart that the MREA uses at the Fair. I'd hang a solar panel on the wall if my wife would let me. It's already got a frame. It only needs a hook on the back.

Solar is just unreal. It's not slowing down. I'm happy to see the fruits of our efforts to promote solar.☀

MGE, WPPI Tap into Top of Iowa Wind Projects

Madison Gas & Electric (MGE) and Wisconsin Public Power Inc. (WPPI) have committed to 80 MW of new wind generating capacity near the Top of Iowa installation in north-central Iowa. Midwest Renewable Energy (MRE), the owner of Top of Iowa, will construct Top of Iowa 2 and Top of Iowa 3, both of which should go on-line in the fourth quarter of 2007.

Of the planned additions, the 30 MW Top of Iowa 3 project will be built as a turnkey operation for MGE to own and operate, and is anticipated to produce 86 million kWh/year. Already an owner of 17 Vestas V47 wind turbines in Kewaunee County, MGE will add 18 Vestas V82 turbines to its generating portfolio, at a cost of \$56 million.

Instead of owning wind turbines, WPPI is entering into a 20-year power purchase agreement with MRE subsidiary Northern Iowa for a 50 MW portion of Top of Iowa Phase 2, which should generate 144 million kWh/year on average. WPPI serves 41 municipal utilities in Wisconsin and one in Iowa.

In all likelihood, MGE and WPPI will apply most, if not all, of the output to their Act 141 requirements. With a combined annual output of 230 million kWh/year, the two utility commitments will generate about 6% of the total amount of new renewable energy required in 2015 under the state's new Renewable Portfolio Standard (Act 141).

Wind Energy Projects Slowly Advance

by Michael Vickerman
RENEW Wisconsin

In January 2004 I wrote a long article for this newsletter heralding the coming breakout year for windpower development in this state. At that time, We Energies had committed to two projects—Blue Sky Green Field and Butler Ridge—totaling 253 megawatts, while other utilities were busy trying to line up contracts and commitments with the half dozen or so independent wind developers that had good prospects here. Indeed, with utilities hungry for new generation and so many wind developers streaming in and out of their offices with blueprints and computer runs in hand, our prediction of a burst of construction activity beginning in 2004 seemed like a safe one to make.

Now it appears that the long-awaited breakout year won't happen until 2008, four years after the initial prediction. A succession of bad breaks beyond the wind industry's control, (e.g., delays in extending the Production Tax Credit (PTC), delays caused by radar interference concerns, etc.), overaggressive pricing by developers (resulting in unfinanceable projects), and a worldwide shortage of turbines (due in part to pent-up U.S. demand) has kept the genie firmly in the bottle here in Wisconsin.

In the meantime, windpower manufacturers have gained the upper hand in negotiating turbine prices and commitments with buyers, and this evolution has created a very unlevel playing field for smaller entities that don't have the financial horsepower to buy 500 turbines at a crack. Almost all of the companies working to build projects in Wisconsin would be considered second-tier developers, including We Energies.

In the sellers' market that now prevails, turbine prices have steadily risen, and will likely increase again in 2007 and 2008. The result is that wind energy has lost some of its economic advantage over

natural gas, which has become substantially cheaper in the last six months.

While the slow pace of development continues to be a source of frustration for RENEW, we believe that at least one new wind installation will be operational before December 31, 2007, when the current PTC cycle ends. RENEW is confident as well that the PTC will be renewed before its expiration, enabling construction to proceed on several large projects that should be completed in 2008. These include Blue Sky Green Field, Cedar Ridge, and some of the smaller independently owned projects that round out more than 900 MW of windpower capacity in the development pipeline.

Blue Sky Green Field

The Public Service Commission of Wisconsin (PSCW) has begun formal review of We Energies' proposal to erect 88 wind turbines in northeast Fond du Lac County, in the townships of Marshfield and Calumet. In 2005 We Energies acquired the rights to construct a windpower station at this location from Navitas Energy, the original developer of the proposed Blue Sky Green Field prospect.

Reflecting the tightness of the wind turbine market and the leverage that suppliers have over buyers right now, We Energies has not committed to a particular turbine for its project. The odds of any developer finding turbines available for delivery in 2007 are close to nil, and We Energies has little choice but to push back the projected completion date to 2008. However, if it is to have a chance of locking up a turbine source for 2008 delivery, We Energies will need to have PSCW approval in hand by early 2007. By law the PSCW must issue its decision on the application by early February. The PSCW docket number is 6630-CE-294.

We Energies has narrowed its turbine options to four models: the GE Energy 1.5sle, rated at 1.5 MW; the Vestas V82, rated at 1.65 MW; the Gamesa G87, rated at 2.0 MW; and the Siemens S2.3, rated at 2.3 MW. Depending on the turbine selected, Blue Sky Green Field's total capacity would range from 132 MW to 203 MW.

In the three years following We Energies' original decision in 2003 to purchase the output from Blue Sky Green Field, turbine prices have increased by 50%. We Energies expects the turbines' capital costs to be in the neighborhood of \$1,750 per kilowatt of capacity. However, as turbines become larger and blades become longer, the productivity of utility-scale turbines increases as well. Long-bladed turbines on 80-meter towers should average about 30% at the best Niagara Escarpment sites like Blue Sky Green Field.

Cedar Ridge

In yet another sign that a wind generation portfolio is beneficial to a utility's bottom line, Alliant Energy – Wisconsin Power and Light (WPL) has submitted an application to own and operate the Cedar Ridge project in eastern Fond du Lac County. WPL acquired the Cedar Ridge prospect from Chicago-based Midwest Wind Energy, which had already negotiated option terms with property owners and had obtained the necessary siting approvals from the towns of Eden and Empire.

Like We Energies, WPL has not selected a turbine manufacturer for Cedar Ridge. WPL intends to build at least 80 MW of capacity but less than 99 MW. It has more than 40 sites available for turbines. The PSCW is expected to issue a decision on WPL's application in early 2007.

In addition to distributing annual payments to host landowners, the utility will also offer a Good Neighbor payment to

Continued on next page

Continued from previous page

neighboring residents within a certain distance of a WPL-owned turbine.

Radar Issues

After languishing in agency purgatory for six months, two southeast Wisconsin windpower projects received clearance in September to proceed with construction. The two projects had been held up over concerns that they could interfere with nearby radar installations.

The FAA gave the green light to the 53 MW Butler Ridge project in southeast Dodge County and the 200 MW Forward Wind project east of Horicon Marsh straddling Fond du Lac and Dodge counties. Though both projects have all the agency approvals necessary to proceed, there are so few turbines available in 2007 that developers may not be able to start construction until 2008.

Notwithstanding the green light given to Forward and Butler Ridge, several Wisconsin projects remain stalled as the FAA plows its way through a huge backlog of applications. The projects that still await FAA permits are located in the counties of Calumet, Columbia and Dane.

The air navigation review process became snarled earlier this year when federal legislation ordered the Department of Defense (DOD) to study the impact of wind generation on military readiness, including radar. During the preparation of the report, two agencies issued an interim policy contesting "any establishment of windmill farms within radar line of sight." This *de facto* moratorium snagged every Wisconsin project within 60 miles of a radar station.

DOD's report, released in late September, disappointed those who had hoped it would put the potential problems in perspective. According to the American Wind Energy Association, of the 4,225 turbine sites that have been evaluated by FAA, only four were found to be a hazard to air navigation. The report also failed to address mitigation measures and other strategies to allow wind turbines to coexist with radar stations.✧

Neenah Paper Buys Reams of Renewable Electricity

Neenah Paper, a premium paper manufacturer with several mills in Wisconsin, is now the state's largest purchaser of renewable energy, buying 10.9 million kilowatt-hours (kWh) a year from We Energies' Energy for Tomorrow program. This renewable energy purchase constitutes 12% of the energy Neenah Paper buys for its Wisconsin facilities.

With this purchase, Neenah Paper is the latest company to join the Green Power Leadership Club, a U.S. Environmental Protection Agency (EPA) initiative recognizing organizations for exemplary renewable energy purchases.

According to EPA, the environmental benefit of Neenah Paper's green power purchase is equivalent to reducing the CO₂ emissions associated with the combustion of 1,037,754 gallons of gasoline. This is the equivalent of reducing the emissions associated with the conventional electricity needed to power 1,170 average American homes for one year. The amount of renewable electricity Neenah Paper now buys from We Energies could supply more than more than 1,300 Wisconsin households.

"We're excited to have Neenah Paper as the lead participant in the Energy for Tomorrow program," said Wally Kunicki, We Energies vice president of customer relations. Through Energy for Tomorrow, Milwaukee-based We Energies provides renewable electricity to more than 14,000 residential and business subscribers, among them Miller Brewing, GE Health Care, Quad/Graphics, Milwaukee Area Technical College, and the City of Milwaukee.

"Neenah Paper's purchase is a creative demonstration of how renewable energy can improve the corporate bottom line," said RENEW Executive Director Michael Vickerman, who attended a ceremony in Neenah this September honoring the company's action. The purchase allows Neenah Paper to

offer several environmentally preferred brands of paper that are manufactured entirely with renewable electricity.

"This is a persuasive demonstration of Neenah Paper's environmental performance that customers can buy into," said Vickerman.

Bulk Purchases Drive Growth

Business subscribers to Energy for Tomorrow can purchase renewable energy in blocks of 1,000 kWh per month for \$13.70, or 1.37¢/kWh, for purchases of less than 70,000 kWh per month, or \$10 per block (1.0¢/kWh) if purchasing more than 70,000 kWh per month.

Neenah Paper's participation in Energy for Tomorrow is expected to push this year's sales of renewable electricity above the 60 million kWh mark this year, a 20% increase over 2005's results.

"Neenah Paper's purchase validates the effort that We Energies has put into Energy for Tomorrow, which is now one of the premier renewable energy subscription programs in the country," Vickerman said. "Because Energy for Tomorrow is a Green-e certified program, Neenah Paper can be confident that all of the environmental benefits it seeks through this renewable energy purchase will in fact happen."

In the coming months a number of governmental entities, including the State of Wisconsin and the City of Madison, will enter the voluntary renewable electricity market. The recently adopted Energy Efficiency and Renewables Law (2005 Act 141) commits the State of Wisconsin to source 10% of the electricity it uses from renewable energy sources by 2007. That percentage rises to 20% by 2011. The City of Madison expects to source 10% from renewable sources by the end of 2007 and 20% by 2011.

"Neenah Paper's commitment heralds a period of steadily increasing growth in Wisconsin's renewable energy marketplace," Vickerman said.✧

Renewable and Energy Efficiency Events

Nov. 4, 2006	RE 101 for Universities. UW-River Falls. The program partners with student environmental groups to provide a substantive understanding of renewable energy technologies, including wind electric, photovoltaic, solar hot water systems, and energy efficiency. The courses are not exclusive to college students and can be attended by anyone. More information at www.the-mrea.org .
Nov. 11, 2006	RE 101 for Universities. UW-Green Bay. See above.
Nov. 17, 2006	Commercial Wind Turbine Planning Considerations. Custer, WI. The course is designed for wind turbine installers and site assessors who want to learn how to evaluate commercial sites (farms, schools, businesses) for mid-size or larger single turbines. Sponsored by the Midwest Renewable Energy Association. More information at www.the-mrea.org .
Nov. 30, 2006	Wisconsin's Solar Decade. Waukesha, WI. Concurrent tracks on: residential solar electric; commercial solar electric; solar electric system information for providers, builders, architects, and others; solar hot water systems. Sponsored by We Energies and Focus on Energy. More information at www.solardecade.com .
Feb. 5-7, 2007	Better Buildings: Better Business. Wisconsin Dells, WI. Learning, networking and business development opportunity tailored to Wisconsin's residential building and remodeling industry. Sponsored by Energy Center of Wisconsin. More information at www.ecw.org .
June 15-17, 2007	Renewable Energy and Sustainable Living Fair. Custer, WI. The world's oldest and largest fair of its kind. Sponsored by the Midwest Renewable Energy Association. More information at www.the-mrea.org .

Recycled paper

Address Service Requested

RENEW Wisconsin
222 South Hamilton St.
Madison, WI 53703