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Renewable Quarterly
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Clean Energy Wins Big in State Budget

by Michael Vickerman

When Governor Thompson signed the budget bill last October, Wisconsin became the first U.S. state to establish a new system for delivering energy efficiency and renewable power to the public before restructuring retail electric markets. This long-term commitment to clean energy was a key component of Reliability 2000 package, which was unveiled last summer and strongly supported by a broad array of utilities, consumer and environmental organizations, business groups, and political leaders, including the Governor.

Reliability 2000's clean energy provisions, often called Public Benefits, will result in increased funding for energy efficiency and environmental programs, customer-installed renewable energy systems, and low income weatherization and bill assistance. In addition to directing greater amounts of ratepayer dollars into conservation and clean energy resources, the law requires electricity providers in Wisconsin to increase their supplies of renewable electricity over a 10-year period, beginning December 31, 2001.

The new law contains a number of landmark provisions affecting the state's electric industry, not all involving conservation and renewable power. Heading the list is a requirement on utilities to transfer their high-voltage transmission lines to an independent transmission company (often called a "transco"), which will have responsibility over the operation, maintenance and expansion of the statewide grid. In return for ceding ownership and control of their transmission systems, utilities will be able to plow a greater share of their retained earnings into nonutility investments without violating the asset cap provisions in the state Utility Holding Company Act.

Priming Efficiency Markets

Currently, utility conservation funding is embedded in rates, and most of the state's investor-owned utilities retain administrative control over program design and expenditures. An exception to the rule is Wisconsin Public Service Corp. (WPS), which in 1998 agreed to transfer its energy efficiency budget, amounting to $17 million over a two-year period, to the Department of Administration (DOA). Envisioning its arrangement with WPS as a trial run for a statewide public benefits program, DOA has been testing its ability to prime markets for energy efficiency services and clean energy systems. Called Wisconsin Focus on Energy, this two-year pilot program emphasizes establishing partnerships with private sector companies, providing them with marketing and promotional support as they venture into a more competitive energy marketplace.

Taking the Focus on Energy approach to the next level, the new law establishes a three-year transition period in which all the investor-owned utilities will turn over their ratepayer-funded public benefits activities to DOA. A well-known shortcoming of the current institutional arrangement is that it puts utilities in the economically uncomfortable position of spending a portion of their revenues to reduce electricity sales, which is how they make money. By transferring administrative authority of energy efficiency programs to an actor that does not generate revenue from the sale of electricity, that conflict of interest disappears.

The new conservation funding, amounting to about $17.5 million a year above current levels (estimated at about $60 to 65 million/year), will reverse the 60% decline in utility spending on energy efficiency programs since 1993. Combined with increases in low-income support, about $41.5 million a year in new funding will be earmarked for public benefits. That money will be collected through a line charge appearing on electric utility bills, which for residential customers translates into about a one dollar increase per month. While municipal utilities and rural electric cooperatives must also kick in more money, they can elect either to administer the programs themselves or turn over the collected funds to DOA.

Shortly after Reliability 2000 was enacted, DOA reorganized itself, creating a new administrative division exclusively devoted to energy. The new Division of Energy and Public Benefits will administer both the energy efficiency and the low-income programs. The law also established an advisory council, representing a broad range of constituencies affected by Public Benefits, to help the Department shape policies in this area.

Under the new law, DOA must issue emergency rules and procedures for collecting funds and awarding grants by April 1. Once they are final, DOA will begin soliciting bids from outside parties to administer major program areas. Collection of the new funding should commence before the end of this year.

More Dollars for Renewables

Funding support for renewable energy programs, traditionally a low priority item for utilities, will increase dramatically as a result of Reliability 2000. When the transition period ends, annual expenditures will have risen to

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1999 – THE YEAR IN REVIEW
Renewable Energy Milestones in Wisconsin

February	• Customers First! Coalition issues a White Paper outlining a comprehensive package of policy options for remedying Wisconsin's shaky reliability picture. Meanwhile, RENEW Wisconsin presents a renewable policy White Paper to the Legislative Council's Committee on Utility Public Benefits. The paper proposes gradually increasing the amount of renewable electricity sold in Wisconsin and applying public benefits funding to increase installations of customer-owned renewable systems. • Foundations are poured for 33 utility-owned wind generators in two eastern Wisconsin counties, with MG&E and Wisconsin Public Service installing 31 in Kewaunee County and Wisconsin Electric building two in Fond du Lac County.
March	• Madison Gas & Electric officially kicks off its renewable power program, offering windpower generated by its planned 17-turbine Kewaunee County project to self-selecting customers at a modest premium. • In a major address, Governor Thompson calls for legislation to correct limitations on the state's transmission systems. A utility coalition and the Customers First! Coalition begin work on drafting reliability legislation acceptable to both camps.
April	• Alliant Energy contracts with Minergy Corporation, a subsidiary of Wisconsin Energy, to purchase power from a 6.5 MW turbine fueled with paper mill sludge. The turbine will be installed at Minergy's Neenah plant, which employs a combustion process to convert paper mill sludge into glass aggregate.
June	• Governor Thompson unveils a comprehensive initiative, dubbed Reliability 2000, to revamp the transmission system in Wisconsin and institute longer-term improvements to the grid. The proposal, which has a strong clean energy component, is supported by Customers First!, utilities, and business and citizen groups. Citing the broad array of groups supporting Reliability 2000, the Governor urges the Legislature to pass the bill as proposed. • All 33 wind generators in eastern Wisconsin are energized in time to qualify for a federal production tax credit. With their projects, MG&E and WPS fulfill their Act 204 renewable requirements.
July	• While Reliability 2000 runs into resistance in the Assembly, Senate lawmakers approve the Governor's energy package as proposed and attach it to the budget bill. • MG&E's windpower installation is dedicated. The ceremony, held in the Kewaunee County town of Red River, attracts over 200 people.
September	• Minergy Corporation's 6.5 MW steam turbine, the largest biomass generator to come on line during the 1990's, is energized. • MG&E's renewable option program sells out in six months, with over 5,000 residential and business customers signed up to receive electricity from a 11.2 MW wind farm. The added cost of windpower is 3.3 cents/kWh premium. • FPL Energy applies for approval to install 33 wind turbines in the town of Addison in Washington County. Output from the 29.7 MW project would be sold to Wisconsin Electric and Alliant. Reaction to the project is mixed; one citizens group is formed to oppose windpower development in Addison, while area farmers rally behind the FPL installation.
October	• RENEW hosts Clean Energy in Wisconsin - The Doors Are Opening," a conference/trade show at the Paper Valley Hotel in Appleton. About 150 people gather and take part in the two-day event featuring tours, workshops and presentations, exhibits, and a keynote address by Trigen ceo Thomas Casten. • After lengthy negotiations between the Assembly, the Senate and the Governor's Office, Governor Thompson signs Act 9, the biennial state budget. The budget's clean energy provisions include higher funding levels for energy efficiency and a 10-year commitment to increase renewable electricity supplies in Wisconsin beginning in 2001.
November	• Wisconsin Electric signs contracts with Waste Management to purchase electricity from 7.5 MW of new landfill gas generating capacity in southeast Wisconsin. These new renewable generators will be used primarily to supply WE's renewable electricity program, which serves approximately 11,000 residential and business customers.

RENEW Thanks . . .

Sycamore Group, LLC, for joining RENEW as a sustaining corporate sponsor. A Milwaukee-based management consulting firm specializing in information systems, Sycamore works with its clients' executive management to develop and execute technology strategies. We greatly appreciate having the Sycamore Group's generous support for the coming year.

RENEW also wishes to thank Kurt Hahlbeck, a principal at Sycamore and a long-time supporter, for being the driving force behind Sycamore's corporate membership.

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about $3 million annually, a nearly ten-fold increase over what utilities had been spending per year in the 1990's. The timing of this new funding source is most opportune; the first dollars collected from utility ratepayers should arrive about the same time DOA's Oil Overcharge account dries up completely.

Among the areas likely to receive support are research and development (e.g., wind monitoring), customer-owned applications (e.g., the WisconSUN program), and demonstrations and performance monitoring of emerging technologies (e.g., farm-based anaerobic digesters).

Just as dollar amounts spent on renewable energy will increase under the law, so too will the amount of renewable electricity flowing into Wisconsin households and businesses. By December 2011, ten years after Reliability 2000's minimum renewable percentages take effect, the Department of Administration estimates that annual renewable electricity sales should reach the 4.5 billion kilowatt-hour mark, 1 billion kWh higher than current levels. That increase translates into a 100 million kWh increase each year. To put that figure in perspective, the annual output from the 22 megawatts (MW) of wind generation installed last year should average about 50 million kWh/year.

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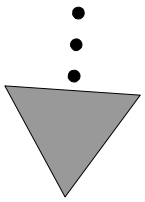
Though it is tempting to view Reliability 2000's renewable electricity requirements as a 10-year extension of the 1998 Reliability Act (Act 204), the two laws employ markedly different approaches in pursuing their objectives. Act 204 is quite simply a capacity set-aside, a mandate on four utilities to build 50 MW of new renewable generating capacity in the state of Wisconsin by year-end. It is very much a product of a regulated utility environment.

A Precedent-Setting RPS

In contrast, Reliability 2000's renewable requirements apply to all electricity providers in Wisconsin, and will remain in effect even if the utility industry is restructured to permit competition at the retail level. In fact, Reliability 2000 represents the first-ever application of the minimum renewable percentage approach (often called a renewable portfolio standard, or RPS) on regulated utilities. All the other states that have adopted renewable portfolio standards--Massachusetts, Connecticut, Maine, Texas, New Jersey and Nevada--have done so in the context of opening retail electric markets to competition.

The principal advantage of the RPS approach is that it ensures competitive neutrality. Electricity providers can increase the renewable content of their products in one of several ways. They can generate the necessary amount of renewable electricity themselves; they can purchase the renewable output from another entity; they can buy credits from other providers who have exceeded the standards; or they can pursue a combination of the above. In most instances they will select the lowest-cost option, whatever that may be. Analogous to the Clean Air Act's emissions trading provisions, the RPS's credit trading mechanism enables electricity providers to meet the minimum percentage requirements at the lowest possible cost.

The Public Service Commission is responsible for developing rules and procedures for trading renewable electricity credits. Though the PSC must produce a rough cut of these rules by April 1, it could take several more months before the final rules are published. With the enactment of Reliability 2000 under our belts, RENEW looks forward to the challenge of implementing the most important feature of Wisconsin's RPS, namely a vibrant credit trading market that establishes a fair price for the buying and selling of renewable electricity.



Reliability 2000
The RPS in a Nutshell:

- Requirement on Electric Retailer
- Excludes hydro operating before 1/1/98
- Based on energy, not capacity
- NSPW already meets requirement
- 0.5% by 1/1/02 (3,580 gWh/yr)
- 2.2% by 1/1/12 (4,580 gWh/yr)
- Existing (excluding hydro): 500 gWh/yr
- Fines of $500,000 for noncompliance

Source: Department of Administration

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WISCONSIN RENEWABLE QUARTERLY

Michael Vickerman — Executive Director
Shelly Laffin — Website and Newsletter Production

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. Creating a vigorous market for clean energy in Wisconsin will improve electric reliability, reduce pollution and redirect energy dollars into local economies.

The Wisconsin Renewable Quarterly is published four times a year by RENEW Wisconsin. POSTMASTER: Send address changes to **RENEW Wisconsin**, 222 S. Hamilton St., Madison, WI 53703. Phone: (608) 255-4044. E-mail: mvickerman@renewwisconsin.org.

RENEW Wisconsin Home Page
http://www.renewwisconsin.org

Standards for Green Power Set to Debut

By Michael Vickerman

Through a collaborative effort organized by RENEW, Wisconsin utilities may become among the first in the nation to seek national third-party certification for their renewable power products.

The purpose of third-party certification is to build consumer confidence in renewable power products, which are becoming increasingly available in both regulated and restructured markets. With nearly 17,000 residential and business customers already purchasing green power here, Wisconsin clearly has an attractive market. About 70% of the state's electricity customers have access to a utility-offered green power product or renewable donation program, and that figure is certain to rise. Yet while the Public Service Commission regulates the prices utilities charge for green power products, there are no regulatory standards in place for determining whether these products actually deliver the environmental benefits claimed in the marketing materials.

Enter the Center for Resource Solutions (CRS), a San Francisco-based nonprofit organization with an interest in promoting a vibrant marketplace for renewable electricity. Shortly before California and Pennsylvania opened their retail electric markets to competition, CRS launched Green-e, a voluntary certification service for renewable-based electricity products offered in restructured markets. Renewable power providers that meet stringent standards for customer and environmental protection, as verified by CRS in annual audits, receive the Green-e seal of certification.

In two years Green-e has become a nationally recognized symbol of superior performance in the renewable electricity marketplace. That success inspired CRS to begin developing a separate certification process for utility green power offerings, which was formally launched last November.

Underlying CRS's utility accreditation program is a commitment to engage local environmental groups, government agencies and interested utilities in the development of certification criteria. Under this program, the accreditation process begins with the formation of a stakeholder group to recommend standards for certifying utility programs in its state or region. These standards cover a range of program elements, such as resource content, product pricing, marketing and disclosure. Only when the recommended criteria has cleared both the stakeholder group and the national governing body can a utility program be nominated for certification.

Naturally, Wisconsin's favorable experiences with green power encouraged CRS to search for a local partner that could convene a stakeholder group and start the ball rolling. It didn't CRS very long to learn of RENEW's extensive involvement in shaping utility green power programs, including the negotiation of an agreement with Wisconsin Electric Power over its Energy for Tomorrow program, which is still in effect. Under the agreement reached two years ago, Wisconsin Electric agreed to supply its Energy for Tomorrow program with renewable electricity generated principally from new sources in Wisconsin. In exchange, RENEW and Wisconsin's Environmental Decade agreed to publicly support the program and provide marketing assistance to the utility.

Looking back, it is clear that our agreement with Wisconsin Electric gave environmental organizations a permanent seat at the green pricing table. Once there, we have managed to hash out issues with utilities in a cooperative and nonconfrontational manner. In many ways a dress rehearsal for the CRS initiative underway, the settlement experience provided RENEW with the credentials to assume a leadership role in crafting rules that all Wisconsin participants can accept as fair.

Under RENEW's aegis, the Wisconsin stakeholder group, which has been meeting since December, is very close to submitting its recommendations to CRS's national accreditation board. Our aim is to have the criteria in place by April 15 in time for Earth Day certification announcements.

In terms of resource content, all of the green power subscription programs offered in Wisconsin would meet the minimum requirements for certification, which attests to their high quality. It does not necessarily follow, however, that all green power providers will pursue certification, not does it mean that those who decline certification have substandard programs. While RENEW would encourage all Wisconsin providers to seek certification, utility participation is strictly voluntary. For utilities, that decision will ultimately come down to how well certification would complement their marketing requirements, which can vary significantly from one customer base to another.

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RENEWABLE ENERGY CALENDAR - 2000

April 12	**RENEW Board meeting** 222 S. Hamilton St. Meeting begins at 11:00. Call RENEW for details.
June 16 – 18	**Midwest Renewable Energy Fair**. Dane County Expo Center, Madison. Fair opens 9:00 AM each day. Keynote speakers: Winona LaDuke (Friday) and Mark Hertsgaard (Saturday). Call MREA at (715) 592-6595 for details.
June 19 –2 1	**Solar 2000 Conference**, Monona Terrace Convention Center, Madison. A national forum for the exchange of information on solar energy technologies. Conference sessions begin 8:30 AM each day. Tours of nearby solar installations TBA. Contact: American Solar Energy Society. Phone: (303) 443-3130. Web site: www.ases.org.

Browse Our Web Site!

http://www.renewwisconsin.org

We're on-line and some of the features on our web site are:

- Renewable Quarterly back issues
- ALERT's — you can lend support for windfarm construction in the town of Addison, near West Bend
- Link to Online DePere Wind Turbine Performance Data
- Updates on Green Pricing and Renewable Energy Projects in Wisconsin
- Commentary and reports from some of the most knowledgeable renewable proponents in Wisconsin
- **Renewable Energy Topics Forum** — you can voice your opinions and read messages about renewable energy topics online

Wanted: More Solar Energy Installations in Wisconsin

by Niels Wolter and Michael Vickerman

The Wisconsin Solar Use Network (WisconSUN™) is offering about $40,000 in cost-sharing grants this year for innovative solar energy systems and training activities. Proposals for the current grant cycle are due April 15, 2000.

This solicitation represents the second phase of a three-year $120,000 initiative designed to accelerate customer adoption of solar energy systems. The request for proposals for the third and final grant cycle will be released in December of this year.

In its first grant cycle WisconsinSUN™ awarded $40,000 in grants to four photovoltaic (PV) installations: the Waunakee Community High School, a new University of Wisconsin-Green Bay classroom building, the Ritger Law offices and MG&E's installations at the Dane County Expo Area Building and a Madison church.

More than just a solar-fueled generator, Waunakee's 2.3-kW rooftop mounted system, installed last November, functions as a multi-year science project. Each year the students will have an opportunity to present designs and technology specifications for expanding the solar system. Waunakee's system will undergo expansion each year until it reaches a capacity of 10 kW.

The University of Wisconsin-Green Bay PV system will be located on a classroom building now under construction. Not only will the 23 kW system be the largest in Wisconsin, it will also demonstrate the integration of PV material with the building's windows and roof. The PV windows will use a thin-film PV material that is laser-etched to make the window transparent. A portion of the building's roof will also be coated with a thin-film PV material.

Waunakee High School

Construction has begun on the Ritger Law Office's new building in Random Lake, which will also feature a PV installation integrated into the structure. In that building, the PV material will be laminated onto metal standing seam roofing. Other renewable energy features will include a Cool Daylighting™ design and a geothermal heat pump for heating and cooling.

This spring Madison Gas and Electric will purchase and install two PV systems, one on the Dane County Expo Center's Arena Building and the other on a Madison-area church. In exchange for the use of a customer's site, MG&E will provide 10% of the PV power to the site owner. MG&E customers may have the opportunity to support these projects through MG&E's green power program. In June, a Midwest Renewable Energy Association workshop will support the installation of the Expo's PV system.

WisconSUN™ aims to increase the number of effective solar energy systems by providing assistance to prospective system owners and by supporting Wisconsin's commercial solar energy service and technology providers. Created by the Energy Center of Wisconsin, WisconSUN™ receives funding support from the U.S. DOE's Million Solar Roofs program and the State of Wisconsin's Focus on Energy Program.

For more information about WisconSUN™ contact:

Niels Wolter, MSB Energy Associates,
7507 Hubbard Avenue, Suite 200,
Middleton, WI 53562;
Phone: 608.831.1127, ext. 308;
Email: Wolter@MSBnrg.com.

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Clean Energy in Wisconsin – The Doors are Opening

RENEW Wisconsin Conference Held in Appleton, WI Oct. 4-5, 1999

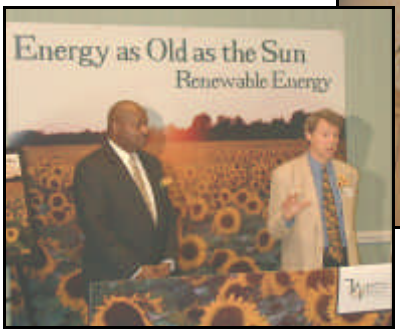
RENEW Wisconsin's Conference & Trade Show put a spotlight on public and private sector initiatives involving clean energy development in Wisconsin.

The preconference activities included three tours that showcased local examples of clean energy development:

- Tour 1 - "green" building, energy efficiency, and solar installations,
- Tour 2 - utility windpower projects in Kewaunee County, and
- Tour 3 - biomass and landfill gas cogeneration projects.

In recognition of companies and individuals who furthered clean energy in Wisconsin, the 1999 Clean Energy Awards were given for:

Clean Energy Honor Roll *(companies that installed new renewable generation or provided new renewable electricity to their customers)*:
Alliant Energy, Dairyland Power Cooperative, Madison Gas & Electric, Minergy Corp., Wisconsin Electric Power, and Wisconsin Public Service Corp.



Wisconsin Focus on Energy Press Conference
Nat Robinson & Don Wichert, Wisconsin Department of

Above: Don Wichert receiving Clean Energy Service Award from Michael Vickerman.

Clean Energy Provider *(for providing high-value renewable electricity options to customers)*:
Greg Bollom, (MGE) and **Chris Schoenherr**, (WEPCO)

Clean Energy Pioneer *(for advancing a clean energy future through effective negotiation and coalition-building):*
Lee Cullen, Cullen, Weston, Pines & Bach
Roy Thilly, Wisconsin Public Power, Inc.

Clean Energy Leadership *(for advancing a sustainable future through outstanding political leadership):*
Tommy Thompson, Governor, State of Wisconsin
Brian Burke, Wisconsin State Senate

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Clean Energy Service *(significant contributions of service toward a sustainable energy future by a state government employee):*
Paul Helgeson, WI Public Service Commission
David Iliff, WI Public Service Commission
Larry Krom, WI Department of Natural Resources
Dan Moran, *Posthumous*, Wisconsin Energy Bureau
Don Wichert, Wisconsin Energy Bureau

Clean Energy Volunteer *(effective grassroots education):*
Mick Sagrillo, Midwest Renewable Energy Association

The Keynote speaker was Thomas Casten, CEO, Trigen Energy Corporation – Author of "Turning Off the Heat: Why America Must Double Energy Efficiency to Save Money and Reduce Global Warming". Eight presentation topics were given, dealing with Wisconsin's resources and strategies for steering Wisconsin's energy economy on a more sustainable path.

The conference was also an opportunity for the Wisconsin Department of Administration – Wisconsin Energy Bureau to officially launch the **Wisconsin Focus on Energy Renewable Energy Program**, titled "Energy as Old as the Sun". A press conference explaining the program was held for regional news media.

Thank You….

RENEW Wisconsin would like to thank Michael Vickerman and Andy Olsen for putting in many long hours to make the conference a success. Our thanks also go to all the organizations that helped sponsor the conference, the property owners who graciously hosted tours, the presenters, exhibitors, and Alliant Energy for bringing the geothermal exhibit bus.

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Say Yes to a Renewable Energy Future for Wisconsin

I want the energy I use to come from clean, sustainable, locally available renewable resources. I will help RENEW make that happen.

5 I want to volunteer my time. Call me.

5 I would like to become a supporting member of RENEW. Enclosed is my check for:
5 $ 25 **5** $ 35 **5** $ other

5 I can't afford to become a supporting member, but I'd like to make a donation.

Name _____

Phone (day) _____ (evening) _____

Email (optional) _____

Address _____

City _____ State _____ Zip _____

Mail to: RENEW Wisconsin, 222 South Hamilton Street, Madison, WI 53703. Thanks.

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