

Wisconsin Renewable Quarterly

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Boom Times for Windpower Near Fond du Lac

by Michael Vickerman
RENEW Wisconsin

Invenergy, LLC, an Illinois developer, is seeking a permit from the Public Service Commission (PSC) to build a sprawling wind farm south of Fond du Lac that will generate nearly 10 times the power produced at the largest windpower installation operating in Wisconsin, Florida Power & Light's 20-turbine project in Iowa County.

Titled the Forward Wind Energy Center, Invenergy's development calls for constructing 133 General Electric 1.5 MW turbines, the same model as those paralleling U.S. Highway 18 between Cobb and Montfort. Power from the project will be sold to four of the five regulated utilities serving the eastern two-thirds of Wisconsin: Alliant Energy (50 MW), Madison Gas & Electric (40 MW), Wisconsin Public Power Inc. (40 MW), and Wisconsin Public Service (70 MW). We Energies, which has contracts with two other developers to begin providing 214 MW of windpower next year, is not participating in this venture.

If permitted, this project would produce about 500,000 megawatt-hours annually, amounting to about 0.7% of the electricity sold in Wisconsin. Current wind generating capacity in Wisconsin, totaling 53 MW, produces on average 110,000 MWH per year, with half of that coming from FPL's 30 MW Montfort installation.

A Wind Farm Grows in Wisconsin

The scale of the Forward Wind Energy Center is largely attributable to the collective utility appetite for more baseload generating capacity (read new coal plants), triggering a balancing need for low-emission power. The initial im-

petus for the Invenergy project came in December 2003, when MGE and WPPI issued a solicitation for up to 80 MW of windpower. This solicitation coincided with their decision to reserve a share of WE's coal-fired power stations in Oak Creek once they come on-line.

After MGE and WPPI started negotiating with Invenergy for 60 MW, WPS jumped into the mix looking for a share of the output. WPS's entry occurred during the PSC's review of its proposed 500 MW coal plant at Weston. The negotiations culminated in July with

The Governor's Task Force on Energy Efficiency and Renewable issued its final report. The insert in this issue highlights the key sections on renewables.

the signing of three power purchase agreements totaling 130 MW. That number rose to 150 MW when WPPI signed for another 20 MW installment on top of its original commitment. But the project wasn't done growing yet.

By the time Invenergy submitted an application on September 30 to build a 200 MW project, Alliant, the fourth and final utility participant, had signed up for the final 50 MW increment. Alliant's windpower commitment, it should be noted, is part of a larger capacity expansion plan that will include a new baseload unit on-line in Wisconsin by 2013, the details of which will be disclosed in early 2005.

Ball in PSC's Court

At 200 MW, the Forward wind project is the first of its type to require a PSC-issued siting permit before construction can begin. Once the PSC rules that Invenergy's application is complete,

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the agency has 180 days to review the proposal, hold a series of technical and public hearings on it, and issue an order based on its findings. As of this writing, a completeness determination has not been issued, meaning that the final decision could come as late as July 2005.

The PSC's review process will take the form of a contested case proceeding, complete with public hearings, technical hearings, and post-hearing briefs, culminating in an agency decision to approve the project, approve it with conditions, or deny the permit. The decision record will encompass a full-blown Environmental Impact Statement which should be released in early 2005. RENEW has registered as a full-party intervenor in the proceeding (Docket No. 9300-CE-100).

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New RENEW Members

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

Gerald Flakas • Marian Holton-Manuel • Al Matano • Jeff Van Voorhis

We also welcome and thank the following new business members:

Access Energy • Eden Wind Power Energy Maintenance Services (EMS) • Light Energy Systems • Techline Power Systems

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

Windpower Moves Forward

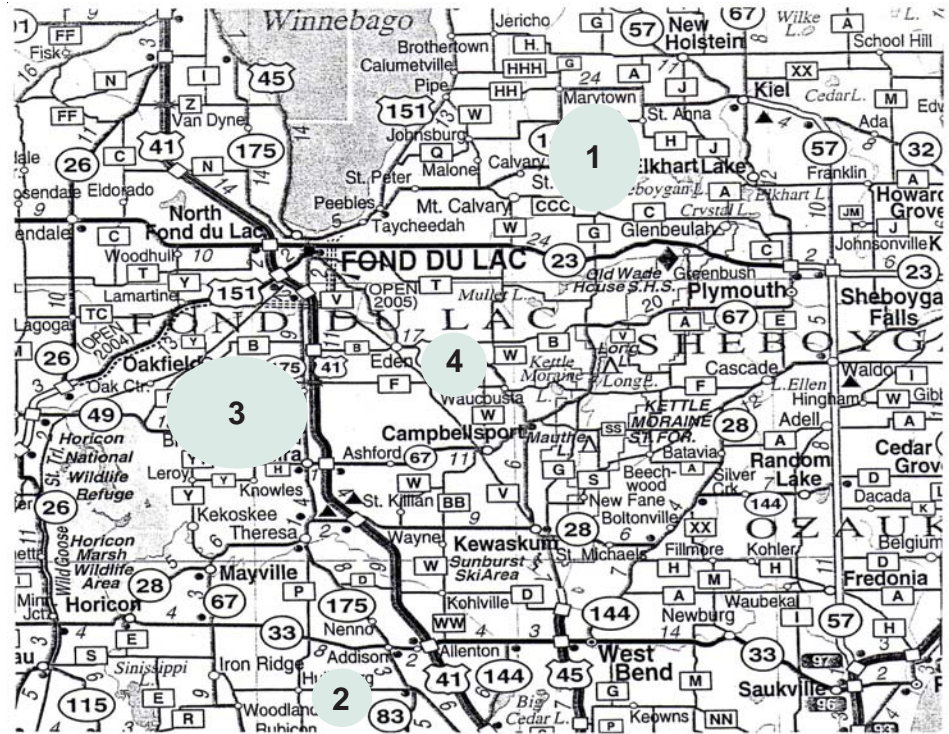
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Though the PSC has pre-emptive authority over local zoning regulations, Invenergy intends to negotiate agreements with local officials addressing such issues as setback distances, decommissioning, lighting, and bonding to cover road damage.

The Lay of the Land

Invenergy proposes to spread the installation across four townships, two in Dodge County (Leroy and Lomira) and two in Fond du Lac County (Oakfield and Byron). Highway 49, extending from Waupun to State Highway 175 north of Lomira, bisects the project development zone in an east to west direction, with roughly half of the turbines envisioned for Fond du Lac County and the other half in Dodge County. Highway 175 marks the proposed project's eastern boundary. The site plan arranges the turbines in a series of rows running north-south on the Niagara Escarpment, which butts up against the Horicon Marsh National Wildlife Refuge to the west.

About two-thirds of the turbines would be situated between Brownsville and Horicon Marsh. In its application Invenergy proposed a two-mile setback from the marsh's eastern boundary to the westernmost row of turbines. That setback, Invenergy contends, should be sufficient to keep the turbines out of view-



Fond du Lac area wind farm sites and their developers: 1. Navitas (160 MW; 88 turbines) 2. Midwest Wind (54 MW; 33 turbines) 3. Invenergy (200 MW; 133 turbines) 4. Midwest Wind (80 MW; 48 turbines).

ing range from nearby locations within the marsh.

In a November 2004 letter to the PSC the Department of Natural Resources stated that "the western boundary may be too close to Horicon Marsh," and requested more site-specific analysis from Invenergy. The project's proximity to the marsh concerns area residents, some of whom have formed a group called Horicon Marsh System Advocates in opposition to the project.

In all likelihood the group will intervene in the PSC proceeding.

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At a Glance Forward Wind Energy Center

- Turbines: 133 GE 1.5 MW SLE
- Size: 11,000 acres
- Tower height: 80 m or 264 ft
- Total height: 393 ft
- Rotor diameter: 77 m or 254 ft

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WISCONSIN RENEWABLE QUARTERLY

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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.

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Windpower Moves Forward

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Birds, Bats and Turbines

As a general proposition wind turbines are a trivial threat to bird and bat populations. A recently issued summary from the National Wind Coordinating Committee, relying on results from 12 wind projects throughout the United States (excluding California), indicates that the national fatality rate for birds averages 2.3 per turbine per year and 3.1 per MW per year. Here in the Upper Midwest, the average commercial wind turbine is responsible for an estimated 2.7 bird fatalities and 1.7 bat fatalities per year. The avian impact summary is a consensus document produced by NWCC's Wildlife Workgroup, and can be retrieved at www.nationalwind.org.

The summary also cites two important factors in evaluating a project's risk to birds: the level of use at the site and the behavior of birds at the site. The Forward project would rise alongside the largest freshwater cattail marsh in the United States, and one of the busiest stopover areas for migratory birds like Canada geese. Invenergy has hired Dr. Paul Kerlinger, former director of New Jersey Audubon's Cape May Bird Observatory, to prepare a risk assessment study for the PSC and DNR. It's a pretty safe bet that the PSC will require several years of post-construction site monitoring if it approves the Forward project.

Meanwhile, a two-year research initiative studying avian mortality associated with the Top of Iowa wind farm is on the verge of completion. This 89-turbine installation in north-central Iowa is sandwiched between three Wildlife Management Areas that attract large numbers of migrating waterfowl. According to the principal investigators, "it would be difficult to select another wind farm site in Iowa with higher potential bird use." Yet in a nine-month period in 2003, the investigators estimated that only two birds and 31 bats died as a result of collisions with Top of Iowa's

wind turbines. The final report will be released in spring 2005.

Economic Impacts

Under the state's recently revised revenue sharing formula, towns and counties hosting a windpower installation can count on a revenue stream of \$4,000 per MW per year over the project's life. If Invenergy's project is approved, each turbine would yield \$6,000 annually to the host jurisdictions, \$3,500 to the county and \$2,500 to the town. All told, the 133 turbines would result in annual payments of \$800,000 split among the two counties and four towns hosting the project.

In exchange for giving up less than one half acre per turbine on their properties, landowners can bank on a dependable source of income that far exceeds what would have been earned from keeping that land in cultivation. In the aggregate, direct payments to participating landowners should range between \$500,000 and \$600,000 a year.

Other direct economic benefits flowing from this project include:

- The creation of six to 10 full-time operations and maintenance positions;
- The hiring of 150 workers via local contractors during the construction peak; and
- The added value of using construction materials and windpower components from Wisconsin sources.✱

Information Sources on the Web

Invenergy: www.invenergyllc.com/wind.htm.
National Wind Coordinating Committee: www.nationalwind.org.

Top of Iowa Wind Farm Avian Study: www.public.iastate.edu/~rkoford/windfarm.htm.

Wisconsin PSC: <http://psc.wi.gov>.

An Acronym Decoder

FPL	Florida Power & Light
MGE	Madison Gas & Electric
MW	Megawatt
MWH	Megawatt-Hour
PSC	Public Service Commission
WE	We Energies
WPPI	Wisconsin Public Power Inc.
WPS	Wisconsin Public Service Corp.

Renewables Producer Profile

Urban Eco Center Taps Nature's Bounty in the City

by Ed Blume

RENEW Wisconsin

Though Milwaukee's Urban Ecology Center (UEC) sits on the edge of a forest in the middle of Wisconsin's largest metropolitan area, the interior has the unmistakable look of a North Woods lodge. But appearances can deceive. The UEC is neither a slapdash deer camp nor a typical modern box with outdoorsy accents. Instead, this is green building at its best, a simple structure that uses forms and forethought to work with — rather than against — the particulars of its location. Large eaves shade the sun in the summer but allow the low-angled rays of winter to warm the interior. The rainwater that falls on the building and lot flushes the toilets, and the sun striking its rooftop PV panels generates electricity. Indeed, no building in Wisconsin is as successful in fitting seamlessly into its immediate environment as the Urban Ecology Center at 1500 E. Park Place, Milwaukee.

The 15 acres of forest bisected by the Milwaukee River became Riverside Park around 1893 as a moonlighting project of popular landscape architect Fredrick Olmstead, designer of New York's Central Park. The city dammed the river to create a popular lake for canoeing, swimming, skating, curling, and family outings.

Decades of industrial pollution deposited twelve feet of toxic sludge on the river bottom, and the public slowly abandoned the park, which became a crime-ridden no man's land.

In the late 1980s, the city proposed converting this land into housing for married students at nearby UW-Milwaukee. Area residents vigorously objected and set about to reclaim the park for themselves. After hundreds of volunteer hours of clean up, Riverside Park was transformed from an urban dead zone to a vibrant public space worthy of a new ecology center.

UEC Executive Director Ken Leinbach oversees not only the building but programming for schools, adults, families, scouts, teenagers, and all of the city's diverse groups who use the center.

Ken starts every Wednesday with a walk through Riverside Park and sets aside the rest of the morning for informal conversations and tours with visitors and staff. In our case, we were able to tour the building and interview Ken at the same time.

Q. *This building is fantastic.*

It is amazing, isn't it? Everything in here has a story to tell. In the large second story room, the maple floor came from the old Bartlett Avenue School, torn down 14 years ago. It was originally laid in 1896. When kids come in here, their parents and grandparents can say they played on this floor.

[Ken keeps us moving on a tour of the center.]

In the animal room [just off the main area], we have aquariums filled with animals — snakes, turtles, salamanders, for instance — that can be found in the eco-zones in the park. [Ken lifts a large wooden trap door to expose a class covered box only a few inches deep.] Here in the floor we recreated a snake pit like ones we built in the park for herpetology studies.

Q. *But why a summer camp lodge?*

We're a neighborhood center, not unlike any other neighborhood center, but with an emphasis on ecology. We serve people from all over the city, but we primarily serve the two-mile radius around the center — where kids who go to 40 schools and 200,000 people live. We served more than 10,000 kids and 6,000 adults last year.

Additionally, our mission lays out four goals: 1) provide environmental science programs to neighborhood schools, 2) promote environmental awareness in the community, 3) preserve and enhance the natural resources of Riverside Park, and 4) protect the Milwaukee River. The UEC does them all.

Q. *That still doesn't explain the lodge.*

The lodge certainly shows our ecology emphasis. You can't miss it.

And I remember my summer camp experiences in Michigan. They made a huge impact. That's what we're trying to do in our North Woods lodge — recreate summer camp experiences. So we hike in the woods, study plants and animals,

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UEC's Ken Leinbach stands on the center's observation tower in front of 48 Kyocera PV modules. Each module is rated at 167 watts DC. With three SMA Sunny Boy inverters the panels can produce enough electricity over a year to power a typical 2,500 square foot house. We Energies contributed generously toward installation of the system and for other equipment. Focus on Energy contributed almost \$14,500.

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sing around campfires, listen to nature lectures, cross country ski, fish, and canoe.

This all started by asking why some people become aware of the environment and appreciate it when the next person doesn't. Research shows two factors rise to the surface – consistent contact with nature and a mentor who demonstrates positive behavior toward the environment.

That's why we want kids coming back as often as they can. That's why 250 active volunteers work directly with the kids. We also provide a lot of quality programming consistently, and we maintain a lot of contact with the schools.

Q. *Where did you get the money to build it?*

The center was housed for twelve years in a beat up double-wide mobile home on the grounds of Riverside High School just across the athletic field from where the center now sits. We couldn't serve school groups or much of anyone else from the little classroom in the trailer. The whole program was on its last gasp. The board of directors found \$20,000 to hire an executive director – me – saying I had two and a half months to make something happen or close the doors.

We said that we'd try to build a new center, but we figured there'd be no way we'd get \$1 million to do it.

We were all amazed at the support that we received. The Trinity Fund of Wisconsin gave \$2.2 million toward the construction cost of \$5 million. Our other large funders included the Brisco Fund, Jane B. Pettit Foundation, Halbert and Alice B. Kadish Foundation, Kresge Foundation, and the Greater Milwaukee Foundation. In addition, our membership nearly doubled and those contributions helped too.

Q. *You must have put a lot of thought into how to make it so green.*

We put every decision through six filters. Whatever we decided had to be en-

vironmentally sound, within our limited budget, politically sound, esthetically pleasing, fun for programming, and within our time constraints.

Q. *It must have been a lot of work.*

We worked really hard. We had to fight for everything we did. To give you one example, the construction crews weren't used to reusing and recycling. If they needed a small piece of 2 x 4, as an example, they were used to finding a long piece and cutting off what they needed. They were very reluctant to go to the scrap heap to find a small piece of wood. But they finally got comfortable with the idea. By the time we were done with the building, workers would look through the scraps at the end of the day to try to find something they might need for a project at home.

We created some hard work for ourselves because of inexperience. We didn't start with a concept, find recycled material, and then create the design. We had the concept and the design, but when the crews got to a certain part of the construction they'd say, "We need so many square feet of paneling for this room." We'd start scrambling to search all over the Milwaukee area for material that might be in storage or a building in the process of being demolished, hoping we'd find what we needed. [We're now standing on a second-story deck that wraps around the south-facing front and west end of the building.] For instance, this flooring came from the Atlantic City board walk.

We also used the whole community in the effort and they really chipped in to ease the load.

Q. *Does your building have certification as a Leadership in Energy and Environmental Design (LEED)?*

No it doesn't, but we go way beyond LEED standards. To me LEED is for businesses and organizations that aren't environmental in the sense we are,

so they can show their commitment to the environment. LEED certification could have added as much as \$75,000 to the cost just for the paperwork all the subcontractors would have had to keep.

[We climb the stairs to a tower overlooking Riverside Park., and turn toward the center view of the PV array.]

The solar electric panels produce enough electricity over the course of a year to power a typical 2,500 square foot house. Beneath the roof we installed the wiring needed to add more panels. When we expand the system, we won't have to tear up the roof.

Q. *Have the panels cut your electricity costs?*

The center is brand new. We just received our first electricity bill this month, so we don't have any standard of comparison. Let's just say, we were pleasantly surprised by the bill.

[Down from the tower and back onto the walkway, we go to the other end of the building.]

Right here next to our rooftop garden we have our system to filter leaves and debris from the runoff from the roof. The water collects in three 350-gallon stainless steel cisterns in the garage and we use it to flush the toilets, which by the way and the half flushed to save water or full flushed. Not a drop of water leaves the center site. When the cisterns get full, the water fills the pond in front of the building. The yard, driveway, and sidewalks slope just enough to direct rainwater into the pool, too.

[Ken quickly leads us down an interior stairway to the basement and out a door at the base of the tower.]

Q. *Has it been worth the effort?*

It's been an honor for me. I was just a high school teacher. And we work with such good-natured, wonderful people. Our board has staunch Republicans and liberal Democrats, but they all value kids, the environment, and the central city. That's what's cool.☀

Oak Creek Decision Steams We Energies, PSC

by Michael Vickerman
RENEW Wisconsin

As we begin the new year, We Energies and the Public Service Commission find themselves in a race against time to revive the fortunes of the two coal-fired power plants that were “unapproved” by a Dane County Circuit Court judge in late November.

Two weeks after Judge David Flanagan issued his ruling on the Oak Creek units, the PSC and We Energies asked the Wisconsin Supreme Court to step in and conduct an expedited review of that decision, bypassing the Court of Appeals. In its petition the PSC stated that accelerated review is necessary “to avoid the extraordinary increased costs related to delay.”

Among those applauding the decision were Racine-based S.E. Johnson and Sons, the environmental group Clean Wisconsin, and Calpine Corp., headquartered in San Jose, Calif. Their lawsuits against the PSC were consolidated into the case that resulted in Judge Flanagan’s ruling. If the lower court’s decision is upheld, the case will be remanded back to the PSC for further proceedings.

The two 615 MW coal-fired power stations that We Energies wishes to construct received PSC approval in October 2003. In overturning the permits, Judge Flanagan ruled that the PSC had issued its approval without assessing alternative locations for the project, as is required by statute. The judge also cited other irregularities in the review, including a failure to account for transmission system upgrades and associated costs, and faulted the PSC for not considering cleaner forms of fossil generation as is required under Wisconsin’s Energy Priorities Law.

But there is another facet to the ruling that worries utilities and independent power producers (including Calpine) alike. In his 54-page decision Judge Flanagan found fault with the PSC for certifying We Energies’ application as complete because the utility had not acquired sufficient environmental permits

to properly evaluate project costs and alternatives. If this ruling becomes a standard for future projects, it will lengthen and complicate the review process for all power projects requiring Commission approval, including large windpower installations like Invenergy’s Forward Wind project.

With an estimated cost of more than \$2 billion, the Oak Creek units anchor We Energies’ Power the Future program, an ambitious effort to build more baseload generating capacity, expand its asset base, and generate a larger return for its shareholders. The centerpiece of Power the Future, however, is a novel financing arrangement between We Energies’ unregulated affiliate, which will build the units, and the regulated utility that will operate them under a lease agreement. Other parties to the lease are Madison Gas & Electric and Wisconsin Public Power, Inc., both of which reserved 100 MW portions of this project for their own systems.

RENEW’s Analysis

To stay on schedule and on budget, We Energies must break ground this spring, otherwise the existing construction contracts will lapse, and new contracts will have to be negotiated. Under We Energies’ existing contract with the general contractor, cost increases incurred during construction cannot be passed through to the utility. Since that contract took effect, steel prices have shot up as well as components imported from Europe, due to the decline in the U.S. dollar. Should the current contract expire, We Energies would doubtless have to absorb those cost increases, estimates of which range from \$60 million to \$260 million.

For all the concern expressed over cost increases, there has been virtual silence about the rising price of Appalachian coal, the fuel that would be burned at Oak Creek. In the Final Environmental Impact Statement issued July 2003 We Energies forecasted a base

price of \$26/ton for this fuel, an estimate the PSC described as “conservative.” Well, it’s only January 2005 and the spot market price for bituminous coal from Pennsylvania has soared to \$55/ton. Why is this happening? While a combination of factors has changed the market environment, by far the most significant is the sustained high price of natural gas, which has encouraged many utilities to lean more heavily on their coal units, thereby increasing demand for fuel.

Guestimating Load Growth

We Energies has labored mightily to portray Power the Future as an appropriate response to the surging load growth that prevailed in the late 1990s. Yet customer demand for electricity essentially stagnated from 2001 to 2003, inching up a mere 0.2% a year during that time, a far cry from the 2.5% annual clip projected during the hearings on the Oak Creek plants. Indeed, when PSC Staff analyzed We Energies’ load projections and cost estimates, their conclusion was that the Oak Creek plants didn’t have to be built until 2011 and 2013 at the earliest. The PSC brushed aside Staff’s findings and settled on 2009 and 2010 as the preferred completion dates.

We Energies points out that load growth rebounded in 2004, approaching a 2% increase for the year. And, to be fair to the utility, if we had had a typical summer last year instead of the extraordinarily mild one that prevailed in the Upper Midwest, that increase would have been higher. Furthermore, in the week before Christmas, We Energies set a new record for wintertime electricity use, a function of below-normal temperatures and the proliferation of ostentatious holiday lighting displays.

We can’t say for certain whether We Energies’ load growth over the next five years will track closely to 2004’s trajectory, revert to the flatline trend of 2001-2003 or, more likely, meander somewhere between the two. Projecting load growth

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Oak Creek Decision

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is as fraught with uncertainties as is predicting fuel prices, yet the PSC's Strategic Energy Assessment predicts that the rest of the decade will pick up where the 1990s left off, with statewide demand and consumption rising between 2% and 3% each year. But in the previous decade, fossil fuel prices sagged to historic lows, which doubtlessly accelerated economic growth. Fast forward to 2005, and you won't find a single energy analyst predicting the return of cheap oil and natural gas.

The PSC would have us believe that the go-go days of the 1990s have re-

turned and will persist, unaffected by the inevitable ups and downs of the business cycle as well as fuel cost increases that are hard-wired into our future. The viability of the Oak Creek plants hinge upon this extremely optimistic scenario panning out. If the real world doesn't follow the PSC's script, the cost of building the biggest electricity generation project in Wisconsin history would be spread over a smaller rate base than projected, inflicting serious economic pain to customers.

What ratepayers need in Wisconsin is a serious planning venue for future utility investments, one that welcomes

tough questions and provides serious answers to them. One simple question that **always** seems to go unasked is: how will the next 10 years differ from the previous 10 years. One thing is certain: we are accelerating toward resource-constrained future that will have profound impacts on energy markets and economic conditions. To believe otherwise is to escape into a faith-based realm where rational policymaking has no place.

Editor's note: The Wisconsin Supreme Court agreed in early January to hear the appeal of Judge Flanagan's decision, bypassing the state appeals court. Oral arguments are scheduled for March 30.✪

Presentations Reach Out to Southeastern Wisconsin

by John Bahr

RENEW Volunteer

RENEW's Wind Power Community Education Program presents the renewable energy story to community groups, including schools, service clubs (Rotary, Kiwanis, Lions, etc), churches, government, and environmental groups. The goal is to help people understand the current problems of relying on electric power generated from fossil fuels and to introduce them to available alternatives.

The group of volunteers has given 16 presentations mostly in the Milwaukee area, with more scheduled. Response has been excellent. A comment from a group where 50 people attended was, "Thanks for your excellent presentation ... The large number of those in attendance is proof that this issue is gaining great interest."

Programs provided by our group describe the economic and environmental problems of burning fossil fuel to generate electric power. We present wind power as a positive alternative and tell the audience what they can do to promote the transition from fossil fuel to more windpower.

We urge audiences to learn more about windpower, share this information with their friends and government rep-

resentatives, and encourage them to sign up for utility-sponsored Green Power programs as another way to transfer their concern into action. We tell them about RENEW's work and how they can help our cause by joining.

Our program committee, which I chair, meets in Milwaukee at least once a month to discuss renewable energy topics to increase understanding of this field by our committee members. Some people joined our group to increase their personal knowledge of renewable energy before they consider making community presentations. Other more experienced members find they continue to gain more insight from others in the group. We also emphasize teamwork and presentation training, and plan new presentations for community groups as requests are received.

Our members have developed different PowerPoint programs so a presentation can be matched to the nature and interests of a specific group. Dennis Briley, a very active member as well as a member of RENEW's board, developed a tabletop display to support our presentations with educational posters and take-home literature.

Educational resources continue to grow as additional reference slides, PowerPoint presentations, and other

background material are found or developed. The material is available to all committee members for new programs.

Committee membership continues to grow as more people are reached through our presentations. We welcome anyone who wants to work with us. Since our study/action group is made up of people from a variety of backgrounds, the meetings also provide place for networking between members with different interests and needs.

Other RENEW members active in this program include Amy Taivalkoski, Rick O'Connor, Peter Lee, Gerry Flakas, Mark Daugherty, and Ed Allen. Anyone who has an interest in renewable energy is welcome to visit one of our group meetings. Contact John Bahr (414.228.0608) for more information.

As it grows in size and experience, our Milwaukee group can be a model for similar study/action groups in other parts of the state. Anyone in other cities who would like to participate in such a group to promote renewable energy in their community, should contact RENEW.

If you know of a community group in the Milwaukee area who would like a presentation, please contact Ed Blume at eblume@renewwisconsin.org.✪

Renewable and Energy Efficiency Events

Feb. 1- 2 2005	Better Buildings: Better Business Conference 2005. Kalahari Resort and Conference Center, Wisconsin Dells, WI. Unique learning, networking, and business development opportunity tailored to Wisconsin's residential building and remodeling industry. Sponsored by the Energy Center of Wisconsin, Focus on Energy, and others. More information on the events calendar at www.ecw.org .
Feb. 24 - 26 2005	Upper Midwest Organic Farming Conference and Organic University, La Crosse, WI. Watch for more details on the booth sponsored by Focus on Energy. More information at www.mosesorganic.org .
March 11 2005	Solar Technologies, Nicolet Technical College, Superior, WI. Appropriate workshop for everyone interested in solar technologies. Sponsored by the Consortium for Education in Renewable Energy Technologies (CERET). More information at http://ceret.us/solar05.htm .
April 4 2005	Wind Energy Workshop: Planning Small Commercial Wind Projects, Middleton, WI. Rural landowners, farmers, business owners, engineers, local officials, and investors will understand the capabilities of wind turbines; be better able to decide whether to develop a wind turbine project, and know the next steps and who to contact for assistance. Sponsored by Focus on Energy and Town & Country Resource Conservation and Development, Inc. Register online at http://www.peopleware.net/2723 . For more information contact Shelly Laffin at 608.588.7231 or lsassoc@hmtc.net .
April 15 2005	Biogas/Biomass, Madison, WI. A workshop for everyone interested in biogas/biomass technologies. Sponsored by the Consortium for Education in Renewable Energy Technologies (CERET). More information at http://ceret.us/biomass05.htm
June 17 - 19 2005	Renewable Energy & Sustainable Living Fair, Custer, WI. The world's largest and longest running event of its kind with workshops, exhibits, and displays on renewable energy and earth-friendly topics. Presented by the Midwest Renewable Energy Association. More information at www.the-mrea.org .

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