



# Ethical Energy

Wisconsin Interfaith Climate & Energy Campaign

## Community Wind

By Mike Mangan

There are essentially two strategies for developing wind power: commodity wind and community wind. The first is distinguished by very large, corporately owned wind-farms selling generated electricity to communities that are sometimes hundreds of miles away. Community wind, on the other hand, is locally generated wind power proportional to the energy demands of that community.

The rural economic, social, and environmental benefits of community wind power far exceed those of "commodity wind" from

corporate wind farms.

On the surface the benefits of community wind over commodity wind are not readily apparent. For example, community wind has a higher installed cost than commodity wind. But the long-term advantages are slowly emerging as the utility learning curve about wind is rising, wind-farm opposition organizes, and transmission "ceilings" restrict wind farm sites.

Only ten years ago, utilities experts said wind power would never be cost effective in Wisconsin. Now wind power is seen as the most viable renewable

energy alternative and citizen demand for wind power far exceeds the generating capacity of Wisconsin's wind power sources even at higher cost to the consumer.



Wisconsin's utilities are still trying to understand wind power's strengths and weaknesses and are, unfortunately, still trying to fit its distributed generation "square peg" into the "round hole" of centralized (i.e. wind farms) generation. It isn't work-

*(Continued on page 2)*

## A Day at the Fair

By Terry Burki

Sunny weather and gusty breezes provided plenty of power for the Midwest Renewable Energy Association Fair held in Custer, Wisconsin, June 20 – 22. WICEC was there with several educational displays. Our exhibit featured committee member Wayne Stroessner's hydrogen economy and fuel cell information. Since this was the only hydrogen display at the fair, fairgoers were literally standing in line for a chance to question Wayne and discuss the pos-

sibilities of hydrogen. It also earned WICEC a personal invitation to exhibit at the Illinois Renewable Energy Fair in August and Wayne an opportunity to speak on hydrogen.

We also provided C.A. F.E. standards literature and labeled cups for demonstration purposes. The cups have lines that mark how many ounces of gas different car models use to travel a mile. It's a good visual to easily distinguish the fossil fuel guzzlers from the conservers — so good

that a workshop speaker took one to use in his presentation.

An energy checklist poster showed how congregations could save money while caring for Creation. Many stopped to share stories about the steps their faith communities were taking, to inquire about the collaborative with the Green Building Alliance, and to sign up for further information from WICEC.

By distributing Earth

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### A Story Can Save the Climate!

Did you know that *Tom Sawyer* was the first novel written on a typewriter? Think of how much money could go to the Wisconsin Interfaith Climate & Energy Campaign if supporters bought books at [www.iGive.com/WICEC](http://www.iGive.com/WICEC), where up to 26% of every purchase is donated to WICEC! At [iGive.com](http://iGive.com), membership is free! So hurry up and visit the Mall at [iGive.com](http://iGive.com), where you can shop at 400+ stores for all your favorite stuff. Do your book shopping at [BarnesandNoble.com](http://BarnesandNoble.com), [Powells.com](http://Powells.com), [AbeBooks.com](http://AbeBooks.com), and [Booksamillion.com](http://Booksamillion.com), and you'll be helping the Wisconsin Interfaith Climate & Energy Campaign with no extra costs or obligations to you or us. Also, for readers of everything you can get your hands on, be sure to check out [Magazine-Outlet.com](http://Magazine-Outlet.com) and [ValueMags.com](http://ValueMags.com) for all your favorite periodicals and current events publications!

## Clean Coal-What is it?

By Wayne Stroessner

In the past, the term "clean coal" has always been considered an oxymoron. The burning of coal releases substances that contaminate our environment. Pollutants include: mercury, SOx (sulfur oxides), NOx (nitrogen oxides), COx (carbon monoxide and carbon dioxide), carcinogens, toxins, particulate matter, VOCs, (Volatile Organic Compounds) other heavy metals and substances too numerous to list.

Because our government heavily subsidizes research to obtain energy from coal, many experimen-

tal projects have been designed to reduce the pollutants from burning of coal. The resulting technologies (and those still in progress) have received the name 'clean coal' technologies.

One example of clean coal technology being considered in Wisconsin by We Energies is a technique that will gasify coal and run it through a combined cycle plant similar to the Wabash River Coal Gasification Repowering Project (see web address on page 5). It's referred to as "combined cycle" because it uses steam produced by the burning of coal in an "Entrained-Flow

Gasifier" to run a typical steam turbine and, at the same time, the gasifier produces a "syngas" composed of hydrogen, chlorides, sulfides and carbon monoxide. The syngas is then scrubbed as the final product is fed to a gas turbine to produce more electricity.

The efficiency for this system is around 40 percent greater than the traditional coal fired plant and much cleaner. This system is able to use high sulfur coal and remove nearly all of the sulfur dioxide reaching as low as 0.03 lb/10,000,000 BTUs. The "sulfur-based pollutants

*(Continued on page 5)*

## Community Wind (cont)

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ing. As a result, some counties (e.g. Washington and Shawano) voted to oppose wind turbine construction.

position to corporate wind farms in Martha's Vineyard similarly resulted in the unfortunate decision to do away with wind power entirely. In other words, corporate wind power is failing to find sites to create its farms because of opposition both from citizens and local governments.

This is especially so east of the Mississippi where large wind farms are seen as an eyesore. WICEC proposes that utility customers will

prefer wind turbines that offer more local control, rural economic development advantages, less stress and visual eyesore problems. To find out more about the benefits of community wind, contact Mike Mangan at 262.646.4664

**Mr. Mike Mangan** is the staff **Consulting Director** of the Wisconsin Interfaith Power & Light Co. He is a specialist in alternative energy and energy conservation and operates his own alternative energy company, Ecology Services & Products. To access his free services, congregations may contact him at: PO Box 180076, Delafield, WI 53018 or at the above mentioned telephone number.

...utility customers will prefer wind turbines that offer more local control, rural economic development advantages, less stress and fewer visual eyesore problems

**MREA  
Fair (cont)**

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Charter brochures, we helped spread the message of this declaration of fundamental principles for building a just, sustainable, and peaceful global society. For more information visit [www.earthcharterusa.org](http://www.earthcharterusa.org).

The Energy Fair, a gathering of some 13,000 Earth-minded people, was inspiring—a brief taste of the future we’re all growing into. Thanks to those who stopped by to chat. We’re grateful to have had the opportunity to get to know you.

**WICEC Statewide Conference  
At The Tipping Point: From Global  
Warming to Global Sustainability**

**Gruenhagen Conference Center**

On the campus of

**The University of Wisconsin-Oshkosh  
Oshkosh, WI**

The conference begins Sunday, February 8th at 2:00 pm and ends at 4:30 pm on Monday, February 9th. Invited speakers and panelists include:

- **Rabbi Jonathan Helfand**, professor of modern Jewish history at Brooklyn College
- **Ms. Jane Elder**, Executive Director of the Biodiversity Project
- **State Senator Robert Cowles** (2<sup>nd</sup> Senate District-R)
- **Dr. John J. Magnuson** and **Dr. Richard Lindroth**, Union of Concerned Scientists, UW-Madison researchers
- **Ahmed Quereshi**, Milwaukee Muslim Alliance
- **Tonen O’Connor**, Milwaukee Zen Center
- **The Rev. Dr. Dave Steffenson**, Eco-Ethicist, former director of the Wisconsin Interfaith Climate & Energy Campaign
- **Dr. Peter Bakken**, Au Sable Institute

Registration information will be mailed and posted on our website as soon as it is available. If you would like to be assured registration information please send an email to [kimherb@wicec.org](mailto:kimherb@wicec.org) with your contact information including name/organization, address, phone and email.

*Join us*

as we explore climate change as a social justice issue and the critical role faith communities play in confronting what has been called, “The greatest moral challenge our species has faced” — the human contribution to accelerated climate change.



**Wisconsin’s Dirty Dozen (plus)**

With air quality ratings in Wisconsin ranging from C to F, it may be worth knowing who is contributing what. Following is a list of Wisconsin coal fired plants and their contribution in tons as of 2001, please contact the Department of Administration for more updated information.

1. Pleasant Prairie, Racine Co. We Energies	5,300 tons/year
2. Columbia at Portage, WI Power & Light	4,400
3. Oak Creek , near Milwaukee We Energies	3,400
4. Edgewater at Sheboygan, Alliant	2,500
5. Weston-Wausau, WPS	2,000
6. Alma Mississippi River Dairyland Co-Op	1,750
7. Pulliam , Green Bay, WPS	1,450
8. Genoa, Mississippi River Dairyland	930
9. Men Valley , Milwaukee We Energies	700
10. Port Washington, We Energies	650
11. Nelson Dewey WI Power & Light	600
12. Blount St, Madison, MG&E	215
13. Bay Front Ashland, Excel	115
14. Manitowoc Municipal	110
<b>TOTAL</b>	<b>24,000 tons/year</b>





**EnAct**  
Meet New People, Help  
the Environment, and  
Have Fun

Join an EnAct (Environmental Action) Team this spring, and explore ways to save money, make your home safe and healthy, and live more sustainably.

Teams meet eight times, and take actions to reduce waste, conserve energy and water, protect water quality, and reduce greenhouse gas emissions. Participants celebrate their accomplishments with a potluck when they finish the program.

If you want to sign up, or have a question, contact Amanda Fuller or Rebecca Grossberg at 204-2888, or [amanda@enactwi.org](mailto:amanda@enactwi.org).

Also visit the EnAct website:

[www.enactwi.org](http://www.enactwi.org)



**EnAct: Meet your Neighbors, Help the Environment, & Have Fun!**

Do you want to get to know your neighbors or fellow church members? Would you like to save money, make your home safe and healthy, help the environment and have fun along the way? There is a new program that will help you do all these things. EnAct (Environmental Action) teams are now forming in churches and neighborhoods around Madison and Dane County.

EnAct encourages sustainable living and strengthen communities by creating Environmental Action Teams in neighborhoods, community organizations and workplaces. Team members meet regularly in informal settings to learn

from each other and work together to make changes in their daily lives. Team actions involve reducing waste, conserving energy and water, protecting water quality, and reducing greenhouse gas emissions. Teams meet for about sixteen weeks and celebrate their accomplishments with a potluck when they finish the program.

EnAct is a new “locally grown” program that will build on the achievements of the Madison Area EcoTeams program, which has been operating in the Madison area since 1998. Madison Environmental Group, Inc. is developing and administering the new program.

Residents interested in

organizing or joining a team can contact Amanda Fuller or Rebecca Grossberg, EnAct Program Managers: phone 204-2888, email [amanda@enactwi.org](mailto:amanda@enactwi.org) or [rebecca@enactwi.org](mailto:rebecca@enactwi.org). Additional information can be found on the program website: [www.enactwi.org](http://www.enactwi.org).

EnAct is sponsored by the Madison Area Environmental Action Campaign, a cooperative project among: City of Madison Storm Sewer Utility, City of Madison Streets Division, City of Madison Water Utility, Dane County Department of Public Works, Madison Gas and Electric, Madison Metropolitan Sewerage District, and Metro Transit Systems.



**WICEC CONTRIBUTION FORM**

The WICEC (formerly the Wisconsin Interfaith Climate Change Campaign, WICCC) is one of more than 20 state campaigns of the National Religious Partnership for the Environment (NRPE). Our aim is to inform, train, and activate religious congregations of all faiths to take concrete steps to reduce global warming and work toward a sustainable future out of a faith-based value orientation. It is the belief of all involved that our religious faiths can ethically inform a sustainable future and that inter-religious projects foster healthy, sustainable and secure communities by fostering creative relationships between diverse people.

The Wisconsin Interfaith Climate and Energy Campaign is a division of Wisconsin Interfaith IMPACT a 501 (c)(3) non-profit. As such contributions made to WICEC are not only greatly appreciated but also tax-deductible.

Name/Title \_\_\_\_\_

Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Denomination/Faith Community \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

ENCLOSED, PLEASE FIND A CHECK IN THE AMOUNT OF:

\$1000

\$500

\$250

\$100

\$50

Other

Make checks payable to Wisconsin Interfaith IMPACT, Inc. indicating WICEC in the memo, and send to:

WICEC  
 16 N. Carroll St., Ste. 800  
 Madison, WI 53703

## Clean Coal

(cont)

(Continued from page 2)

were transformed into 99.99 percent pure sulfur, a highly valuable by-product...". At the same time, coal ash is converted to a low-carbon vitreous (glass-like) slag, "impervious to leaching and valued as an aggregate in construction or as grit for abrasives and roofing materials, and trace metals from petroleum coke were also encased in a vitreous slag." (see <http://www.lanl.gov/projects/cctc/factsheets/wabsh/>)

Britain's Economist magazine says "a process called 'steam reformation' can change coal into a 'synthesis gas' composed of carbon monoxide and hydrogen, which produces cleaner energy. Moreover, the hydrogen eventually may be used in fuel cells, which make no pollution at all."

The results of various clean coal demonstrations have shown that the 'cleanest' scenario using coal would actually use the coal for the creation of hydrogen gas. The scenario would run something like this:



1. Gasify coal at the mine site to produce a "syngas";
2. Leave the ash and any pollutants at the mine site - capture all sulfur products and market them - use the already demonstrated techniques to reduce pollutants of coal or neutralize them - capture or "sequester" the carbon dioxide and use it in all industries where it can be used, inject CO<sub>2</sub> into gas wells to help strip the wells and/or inject into oil wells for storage;
3. Clean up the "syngas" so that hydrogen is the only remaining gas from the conversion;
4. Place the produced hydrogen in pipes to distribute in a fashion similar to the distribution of natural gas;
5. Use the railroad's right-of-ways to lay hydrogen gas pipe lines - in the future there won't be a need for railroads to haul long train loads of coal;
6. Instead of supplying a large centralized utility plant, the hydrogen gas should be distributed to sites of use. This could be to commercial, industrial or residential use - there won't be a need for further centralized utility plants;
7. Also, there won't be a need for large transmission lines, nor will there be a need to expand most of the other high voltage transmission lines;
8. By using fuel cells, commercial, industrial and residential users can produce their own electricity, heat and pure drinkable water. They could even disconnect from the electric grid since they'd be independent from centralized electric utilities;
9. The produced hydrogen could be used in the burgeoning fuel cell automobile industry;
10. As renewable resources become more available, hydrogen production from coal can be reduced. After all, even "clean coal" is not really clean and its use should be limited to various manufacturing purposes. The most difficult product to eliminate when burning coal is carbon dioxide - and that is the major greenhouse gas that must be reduced.



Learn more about the various clean coal demonstrations by visiting

Gasification Repowering Project:

<http://www.lanl.gov/projects/cctc/factsheets/wabsh/wabashdemo.html>

Converting coal into methanol:

<http://www.lanl.gov/projects/cctc/factsheets/estmn/csliquiddemo.html>

Reducing the amount of nitrogen from coal-derived fuel gas:

- <http://www.lanl.gov/projects/cctc/factsheets/pcdq/pulsecomdemo.html>



In the last issue of Ethical Energy we announced that the annual conference would be held in August. We have since changed the date of the conference to Sunday, February 8th and Monday February 9th 2004. We apologize for any inconvenience this may have caused





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[WWW.WICEC.ORG!!](http://WWW.WICEC.ORG!!)

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People of many faiths  
seeking to move the care of Creation  
to the forefront of Wisconsin faith communities

