

NEWSLETTERS

A quarterly newsletter of WEI's network of members and partners

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WEI Energy Forum Strives to Balance Energy, Environment, and Economy

On October 5, 2001, over 100 leaders representing utilities, industry, environmental organizations, consumer groups, local and state government and academia convened for the **WEI Energy Forum**. The Energy Forum challenged participants to work together towards shared goals and explore ways to meet Wisconsin's need for a safe, reliable energy supply while positively impacting the state's environment and economy.

In a kickoff address, Governor McCallum highlighted aspects of his Energy Policy and spoke about the need to diversify energy resources, encourage energy efficiency, increase the use of renewable energy, foster emerging technologies, and develop high-tech alternative energy production while keeping reliability as our foremost concern. Governor McCallum also emphasized that collaborative initiatives such as the Energy Forum are a key part in securing a positive energy future for Wisconsin. "To ensure safe and reliable energy for Wisconsin's future," McCallum said, "we have to involve all the stakeholders."

In other opening remarks, Tom Still provided an overview of We the People/Wisconsin's "Powering Wisconsin" conference held on September 24th, in which Wisconsin citizens expressed their vision for Wisconsin's energy future. In the "Citizens' Energy Choice" exercise, conference participants shared ideas about how to approach difficult energy decisions facing the state. Still reported that the results of the exercise showed that Wisconsin citizens valued: reducing the energy growth demand rate; diversifying fuel sources in order to reduce reliance on conventional coal; maintaining nuclear power as a key source of energy, renewing it at current levels; reliability; and making it a priority to manage the pollution impacts of energy growth.

Luncheon keynote Peter Asmus, a noted author and consultant, presented "Bringing Our Electricity Grid Into the 21st Century." His talk focused on ways to transform our energy

system by taking advantage of new technologies that offer smarter, cleaner, renewable energy with stable prices and high reliability. Asmus noted that investing in diverse and decentralized power sources is key to bringing our energy grid up to date, which will in turn provide a strong base for new-economy industries Wisconsin wants to attract and lessen the environmental impact of energy production and use.

The task of Energy Forum participants was to come up with ways to meet the “challenge question” of the Forum: **How do we fulfill Wisconsin’s energy needs while positively impacting the environment and economy?**

A panel featuring representatives of non-profit organizations, industry, utilities, and the Division of Energy highlighted opportunities that met the “challenge question” of the Energy Forum. Some of the opportunities identified by panelists included:

- a dynamic planning process that is long-term, inclusive, and proactive;
- view environmental protection as an opportunity for economic development
- reconfigure the energy economy towards sustainable sources
- invest in building and renovating facilities with daylighting and other sustainable features
- launch a Wisconsin Energy Initiative for state government and other public buildings
- Wisconsin Focus on Energy Program and Governor’s Energy Policy

In morning and afternoon breakout sessions, Energy Forum participants added to this list of opportunities other ideas on how to balance energy, environment, and economy. Participants then refined the list by determining which issues had enough merit to work on further; identifying action steps, obstacles, and incentives; and identifying key people to involve and share ideas with.

Several themes emerged from the Energy Forum on how to work towards an energy system that balances environmental quality, energy reliability, and the economy:

- 1) Reduce the energy growth demand rate through energy efficiency and conservation investments
- 2) Develop a dynamic energy planning process that is long-term, inclusive, and proactive
- 3) Support business, community and public education & research on energy and environment
- 4) Increase investment in renewable energy technologies

- 5) Value a “balanced” approach and diverse energy investments
- 6) Support “market transformation” efforts and the adoption and use of accurate price signals like real-time pricing

The Energy Forum was designed to not only identify common goals and share ideas, but also to work towards their implementation and produce concrete results. To that end, about forty Energy Forum participants have signed on to the Energy Forum Working Group. The task of the working group is to further refine ideas discussed at the Forum and come up with specific strategies for meeting the goals articulated by participants. The working group will develop principles and action steps to help guide a wise energy and environmental strategy for Wisconsin. Their work will also form the basis of a second Energy Forum event, scheduled for May 8, 2002.

We appreciate the interest on the part of working group participants in applying their skills and expertise to this initiative. We are also grateful for the valuable contributions of Harry Webne-Behrman of Collaborative Initiative and Darin Harris of the Wisconsin Department of Natural Resources, in particular their effective facilitation of working group activities.

To view a complete summary of the Energy Forum, select “Energy Forum” from the menu bar. For more information on Peter Asmus, see “Bringing the Electricity Grid into the 21st Century” in this issue of Update.

More information on the upcoming WEI Energy Forum can be found in this issue’s calendar and on WEI’s website at www.wi-ei.org.

Once again, we would like to thank the sponsors of the 2001 WEI Energy Forum:

Alliant Energy

Boldt Technical Services

Energy Center of Wisconsin

Madison Gas & Electric

Miller Brewing Company

Wisconsin Department of Natural Resources

Wisconsin Energy Companies

Wisconsin Focus on Energy

Director's View

In the last issue of Update, I raised the need for greater stakeholder collaboration and the establishment of "Partnerships for Progress" - innovative alliances between business, utilities, government and citizens working together on common goals, achieving shared rewards, and catalyzing long term, effective solutions to Wisconsin's challenges.

Since then, WEI has been involved in two cooperative efforts which demonstrate the potential of collaborative partnerships.

The first is the WEI Energy Forum held on October 5th and the Energy Forum Working Group which has been meeting regularly since. The Forum featured over 100 leaders from utilities, industry, state and local government, environmental and citizen groups, and academia who worked together to identify over 150 key ideas and opportunities for meeting Wisconsin's energy needs while positively impacting the environment and economy. Following the Forum, an alliance of 40 interested participants have carried the work forward by helping identify the emerging themes and specific strategies for accomplishing our underlying values of energy reliability and economic and environmental viability. Look for results of the Working Group to be highlighted at the next WEI Energy Forum on May 8th at the Country Inn in Waukesha.

The second cooperative effort was the recently completed Environment-Energy Fact-Finding Trip to Germany. The week-long trip, organized by the WI Department of Natural Resources, included 23 participants representing utilities, state and local government, UW-Madison, environmental organizations and media representatives. The purpose of the trip was to learn about German technologies and policies which can positively impact the environment and energy reliability in Wisconsin.

I think all the participants will agree that this was a very worthwhile trip where we saw first hand the use of innovative technology, practice and mindset, and the value of business - government partnerships to set high environmental standards and provide the flexibility to meet them.

Highlights from the trip include:

- briefings on the Environmental Pacts of Bavaria, which are the voluntary agreements between industry and government to focus on strong environmental goals as applied to energy generation and use.
- tours of coal and gas-fired power plants located in four different regions of Germany. The plants feature innovative technology including catalytic reduction of nitrogen oxides; electrostatic precipitators to remove 99% of dust particulates; and desulfurization plants to remove more than 90% of sulfur dioxide emissions. The plants are also quieter than American plants because they incorporate acoustic shielding around the noisier processes which make them more suitable for Germany's densely populated areas. The German utilities also make good use of their flue-gas

residues by incorporating fly ash into concrete and gypsum for building materials. Moreover, the plants make extensive use of “cogeneration” or combined heat and power, and pipe hot water long distances to provide “district heating” for nearby industry and urban areas. Finally, the newest plants have state-of-the-art visitor facilities featuring high-tech displays and exhibits for community, government and business groups to learn from.

- a Fuel Cells Park which features a 250 kW natural-gas based fuel cell and interactive exhibits and presentations. Five utilities participated in the project in order to demonstrate the potential of fuel cells to play a key role within a sustainable energy supply infrastructure. For example, a series of interconnected fuel cells (or micro-grid) could be deployed close to the point of use for residential and commercial power supply and heating. Natural gas would be used in the initial phase and the fuel cells would be linked via modern communication systems and serve as a complimentary network to the existing energy supply network. Besides the energy-efficiency and environmental benefits, these micro-grids could evolve based upon demand, thereby increasing reliability while decreasing investment risk.
- briefings on the insurance and banking sectors and how issues like climate change, the Kyoto Protocol, and environmentally-efficient power affect decisions on investment.

While the learning and exchanges on innovative technology, policies and practice are important, perhaps even more important was the camaraderie among the diverse participants. The eagerness of environmental and business leaders, the regulator and the regulated, to share expertise, perspective and insight, as well as interacting socially, will no doubt build greater trust and productive relationships for the hard work ahead. I trust that each of the participants has, as I do, a renewed sense of purpose to work collaboratively to meet our values of abundant and affordable energy, economic prosperity and the highest environmental standards for Wisconsin.

In the aftermath of September 11th and given concerns about political corruption and cronyism in our state, it may be time for us to develop real partnerships which bring together business, government and hard working citizens. I believe we can develop new efforts which facilitate cooperation and collaboration among all the stakeholders in Wisconsin. The reward for this partnership approach can be a new era of growth and prosperity, accompanied by significant improvements in our environment and quality of life. “Partnerships for Progress”-- it is up to all of us to seize this moment and work together for Wisconsin’s benefit.

Bringing Our Electricity Grid Into the 21st Century

By Peter Asmus

High and volatile wholesale electricity prices in California, the Pacific Northwest, Texas, New York and Boston, are beginning to threaten the viability of companies large and

small. The consequences of poor long-term energy supply planning, as well as continuing obstacles to technological innovation, are finally taking their toll on our economy and environment.

As Wisconsin contemplates its own energy future, state policy makers may want to consider the huge risks involved with a status quo response to the energy challenges facing the Badger State.

Having moved from Wisconsin to California two decades ago, and having analyzed the nation's energy challenges over the last 14 years, I can tell you that the solutions being enacted in California in response to this "energy crisis" will create even larger problems down the road.

Anyone who has money in the stock market today knows that in any investment portfolio, diversity is necessary to hedge against risks. It follows then that the prudent solution to California's power supply – as well as Wisconsin -- is to add enough new renewable energy to power plant portfolios to provide some price stability. But the ultimate solution goes even further and recognizes the inherent inefficiency of our current energy supply infrastructure.

The silver lining in the mess that has gripped California and is spreading to many other parts of the country is that we now have the tools and technologies necessary to propel a revolution in energy that mimics, to a large extent, the evolution in scale evident in telecommunications and computer industries. These new technologies – solar photovoltaics, fuel cells and wind turbines – are the equivalent to wireless cell phones and portable laptops that replaced traditional grid-connected phones and huge mainframe computers, respectively.

Our current energy supply conundrum reveals the limits of the old transmission and distribution grid, which, in turn, is impacting the growth of the digital economy that Wisconsin is now looking to attract. Our electricity grid, with its emphasis on large polluting and centralized power plants sending power long distances over transmission lines, is an artifact that is over 100 years old. It is dramatically out of sync with information technologies. The architecture of the existing transmission grid is the anti-thesis of distributed networks being made possible by the Internet.

Shifting to a more diverse, decentralized model reduces risks linked to fuel price forecasts, guesses about how fast future electricity demand will grow, and, as a bonus, increases grid reliability.

Hewlett Packard estimates just a 20-minute outage at a circuit fabrication plant would leave a \$30 million debt due to a loss of an entire day's production. If Wisconsin is serious about creating its own Silicon Valley, then smaller, cleaner and smarter power sources will have to displace some of the traditional fossil fuel power plants that are on the drawing boards.

At present, this state derives less than 1 percent of its electricity from renewable resources such as solar and wind power. While Gov. Scott McCallum's energy plan calls for the state to obtain 4 percent of its power from renewables by 2010, so much more could be done to empower businesses, local governments and residences to generate their own clean electricity right at their own premises.

One of the few recent bright spots in California is a program of incentives for consumers to install solar photovoltaic panels, small wind turbines or fuel cells that are only available if they are connected to the grid. The California Energy Commission will not only pay roughly half of the installation costs of these new technologies, but under a "net metering" program, these mini-power producers can sell what they don't consume on-site back to the utilities at retail rates. Patrick Campbell has installed a 10-kW wind turbine under this program and loves it. "There have been a few months where I actually paid nothing to the utility for my electricity. I loved that feeling," Campbell told me.

A few companies are investigating the installation of new cleaner and smarter power sources as a way of generating premium grade clean electricity right on site – without harming the environment and upgrading our energy infrastructure to take advantage of 21st century information and communications technologies. These sources are frequently referred to as "distributed generation" since the sources are distributed throughout a region.

Among the innovators are firms working with owners of approximately one quarter of the nation's commercial real estate. RealEnergy, Inc., which has offices in Sacramento and Los Angeles, has helped mount an acre of solar panels on the roofs of City Center, which is owned by Arden Realty, a Los Angeles-based office landlord. The over 300 kilowatts of solar PV on the City Center is reportedly the largest private installation of solar PV in the Western Hemisphere.

Distributed generation sources, when integrated with sophisticated computerized management and energy storage systems, offer reliability insurance.

The answer to the current energy mess in California, Wisconsin and much of the nation is to transform our archaic electricity grid into a catalyst for integrating increasing amounts of fixed-price renewable resources into our fuel mix. It may be time for forward-looking businesses to invest in these power systems to accelerate their introduction into the distribution grid. These businesses, which one day soon will hopefully include Wisconsin businesses, can offer the rest of the world a model of a smart power generation and delivery system that serves both the New Economy and the environment.

Wisconsin should learn from California. The problem is not just a flawed deregulation scheme, but an over reliance upon a single fuel – natural gas – to generate new electricity supply. A new energy democracy that empowers all consumers, large and small, to become part of the solution, is the only way to go to deal with the root of this nation's energy supply dilemma.

Peter Asmus is author of Reaping The Wind and Reinventing Electric Utilities, both published by Island Press. He is also a Senior Associate with the AHC Group of Saratoga, New York, a consulting firm offering strategic advice on environmental matters to many of the nation's leading corporations. Asmus provided the luncheon keynote presentation at the WEI Energy Forum on October 5th.

In Brief

WEI Executive Director participates in Environment-Energy Fact Finding Trip to Germany

WEI Executive Director John Imes was invited to participate in Wisconsin's Environment-Energy Fact Finding Trip to Germany in January 2002. The 25 participants including representatives of state agencies, utilities, environmental organizations, academia, and state and local government, sought to learn from Germany's successes in using technology to achieve environmental and energy goals. WEI, in particular, will benefit from the trip by bringing new perspectives and ideas to Energy Forum activities, in which several trip participants have played an active part.

The stated goals of the trip, led by the Wisconsin Department of Natural Resources, were: 1) to learn about technology German utilities use and how that technology relates to environmental performance and generating efficiency; 2) to learn about environmental policies affecting energy generation and use and how those policies promote environmental performance; and 3) to learn about the insurance and banking sectors and how their decisions relate to environment and energy issues.

Look for details on the outcomes of the Environment-Energy Fact Finding Trip to Germany in this newsletter's "Director's View" and on our website at www.wi-ei.org.

Green Built Home and Wisconsin Energy Star Homes Announce Partnership

Green Built Home and Wisconsin Energy Star Homes have outlined a strategy for how the two programs can effectively work together, identifying areas for collaboration and joint promotion.

The principle behind the partnership is that consumers and builders gain the most in terms of comfort, safety, durability, energy efficiency, and overall benefit to health and the environment by participating in both programs.

The Green Built Home/ Wisconsin Energy Star Homes partnership will include cross promotion in brochures, websites and other informational pieces developed by each program for builders, consumers, and other stakeholders. Other strategies for collaboration include incorporating information about Green Built Home into WESH's Consumer Seminars and further highlighting WESH criteria within the Green Built Home Checklist.

Green Built Home Buyer's Guide Highlights Environmental Priorities in Home Building

Responding to recent surveys that suggest that home buyers are increasingly aware of environmental issues as they relate to home building, WEI has produced the "Green Built Home Buyer's Guide," which outlines ten priorities in reducing the environmental impact of home building. Areas covered in the guide include saving energy through energy-efficient design and construction, using resource-efficient building materials, selecting materials and equipment that will contribute to good indoor air quality, and fostering strong communities through effective land use planning.

The buyer's guide will be available to consumers, home buyers, and builders as a guide for incorporating environmental awareness into home building.

The Green Built Home Buyer's Guide is available on WEI's website at www.wi-ei.org.

Calendar

March

1-3: Home Products Show, Madison, WI: Madison Area Builders Association, www.maba.org.

20: Indoor Air Quality Conference, Country Inn, Waukesha, WI: Metropolitan Builders Association, (262) 436-1122.

20-23: Building Energy 2002, Medford, MA: Northeast Sustainable Energy Association (NESEA), (413) 774-6051, www.nesea.org.

24-26: The National Green Building Conference, Seattle, WA: www.nahbrc.org, (888) 602-4663.

25-26: The National Symposium on Market Transformation, "Market Transformation: Energy Efficiency and More"; www.aceee.org.

April

15-20: Affordable Comfort Conference, Cincinnati, OH: www.affordablecomfort.org, (800) 344-4866.

22: EARTH DAY: Look for Earth Day events in Wisconsin and around the globe at www.earthday.net.

May

8: WEI Energy Forum, Country Inn, Waukesha, WI: Wisconsin Environmental Initiative, (608) 280-0360, www.wi-ei.org.

Dear Friend of the Wisconsin Environmental Initiative,

As WEI completes another successful year, we are grateful for your continued participation and your organization's support. Today we ask you to consider making a fully tax-deductible contribution to WEI as an individual donor.

Your individual contributions are essential to achieving a diversified funding base for WEI and furthering exciting opportunities to share our core belief in "doing well by doing good."

Consider what your contribution can accomplish. WEI's Environmental Policy Forum provides an important opportunity for diverse groups of Wisconsin leaders to collaboratively address critical environmental challenges facing our state. A perfect example is the WEI Energy Forum, which has created an innovative alliance between business, utilities, government, and citizen groups to work together on effective solutions to Wisconsin's energy and environmental challenges.

To increase market use of and demand for resource-efficient building and energy practices in residential construction, WEI's Green Built Home program is there to provide builders, home building associations and other partners with guidance, market distinction, and technical support.

Whether a business, developer, farmer, or policy maker, WEI is there with peer-to-peer management forums, innovative tools and guides, and leadership to help you "do well by doing good" for the benefit of Wisconsin's environment and economy.

Only with your fully tax-deductible contribution to WEI's Donor Campaign can WEI thrive and continue this important work. Please see below how easy it is to make a contribution to WEI. We look forward to working with you on WEI's upcoming initiatives and advancing our unique approach across Wisconsin.

Thank you for your support.

Sincerely,

John Imes, Executive Director

Richard Lehmann, Chair WEI Board of Directors

WEI Welcomes Mark Williamson of Madison Gas & Electric to Board of Directors

WEI is pleased to announce that Mark Williamson, Executive Vice President and Chief Strategic Officer of Madison Gas & Electric, recently joined the WEI Board of Directors.

Madison Gas & Electric has been a WEI member since 1997 and has made significant contributions to Energy Forum and Green Built Home programs.

Madison Gas and Electric (MGE) is a public utility that generates and distributes electricity to over 126,000 customers in Dane County. The company also transports and distributes natural gas to approximately 120,000 customers in seven south-central and western Wisconsin counties. MGE has served the Madison area since 1896.

Through the years MGE has strived to be environmentally conscious while providing customers reliable energy service at reasonable rates. MGE's corporate environmental management system is designed to blend standard business practices with environmental decision-making to arrive at sound business decisions companywide.

WEI's mission to "foster improved competitiveness in Wisconsin business through the integration of resource efficiency and environmental management into core business strategy and performance" is in line with MGE's corporate philosophy. MGE believes that our success lies in efficiently serving customers cost-effectively. And it is through many factors, including sound environmental management, that MGE plans to achieve continued success.

MGE appreciates the importance that WEI places on including many stakeholders (businesses, government, community) in environmental decision making. As a local energy company, MGE has made great efforts to include community perspective in business decisions.

Involvement in the WEI can provide valuable input into MGE's environmental management system and a better understanding of how other Wisconsin businesses are balancing community, regulatory and business needs to achieve sound business and environmental management goals.