Michigan 21st Century Energy Plan

We Energies Update on Renewable Energy Development Activities

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We Energies

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We Energies Profile

- Largest Utility in Wisconsin
  - Over 2 million metered electric + gas customers
  - Headquartered in Milwaukee, WI, 5350 employees

- Electric System
  - 6100 MW of generation system-wide
  - Recently set new records for usage
  - Few fuel sources from within Wisconsin or Michigan
  - 140 MW renewable energy: 90 MW hydro-electric, 27 MW wind, balance is biomass and solar

- Strategy: **Power The Future**
  - [www.powerthefuture.net](http://www.powerthefuture.net)
We Energies Service Territory
We Energies Power Supply Mix

2006 Estimated Production

- Coal: 54.6%
- Nuclear: 23.8%
- Purchased: 14.6%
- Renewable: 2.5%
- Natural Gas: 4.4%
- Oil: 0.1%
Renewable Energy Requirements

- Today, overall energy production from renewable energy = 430,000 MWh per year, about 2.5% of total energy delivered
- We Energies voluntary commitment to 5% by 2011
- Wisconsin Act 141 requires Wisconsin to reach 10% by 2015
- Governor Doyle has advocated “25 x 25”
We Energies Renewable Facilities
Biomass Projects to Date

- Landfill gas (4 sites)
- Tinedale Farms (2002)
- Maple Leaf Farm (2003)
- Quantum Dairy (2005)
- Green Valley Dairy (2006)
- Lake Breeze Dairy (2006)
Solar PV Projects to Date

- Milwaukee County Zoo
- University of Wisconsin - Milwaukee
- Schlitz Audubon Nature Center
- Urban Ecology Center

Building integrated photovoltaic installation at Schlitz Audubon Nature Center
We Energies - Wind

- **Experimental**
  - Rosiere Wind Project – near DePere; all state utilities

- **Demonstration**
  - Byron Wind Turbines – near Fond du Lac, WI

- **Production**
  - Badger Wind Farm
    - near Montfort, WI
We Energies - Wind

Blue Sky & Green Field Wind Project

- 88 wind turbines; 160 megawatts total (45,000 homes); expected to be on-line in 2008 or 2009
- Will be owned and operated by We Energies; regulatory approval process ongoing right now

Photo Simulation, Blue Sky Green Field Wind Project
Blue Sky Green Field Wind Project

- Location: towns of Calumet and Marshfield, located in northeast Fond du Lac County
- Enough to power up to 57,000 homes
- Currently in PSCW regulatory approval process for CPCN; hearings in late November
Green Pricing Program

Energy For Tomorrow®
www.we-energies.com/eft

- Voluntary program for customers willing to pay more to support renewable energy development
- Introduced in 1996; ranked as a “Top Ten” by US DOE
- In 2005, customers participating:
  - Used over 50,000 megawatt-hours of renewable energy
  - Reduced 47,900 tons of CO2 emissions; equivalent to planting 12,950 acres of trees
Green Pricing Program

- Over 14,000 customers enrolled
- Over 390 business customers including:
  - Neenah Paper
  - GE Healthcare
  - Milwaukee Journal Sentinel
  - Miller Brewing Company
  - Alterra Coffee Roasters
  - MATC
  - MMSD
  - REI
  - FedEx Kinko’s
  - MSOE
  - Quad Graphics
  - Outpost Natural Foods

The U.S. EPA congratulates Milwaukee Area Technical College - Mequon Campus for the largest green power purchase (by percentage) by a higher educational institution in Wisconsin – 6 percent of its campus electricity needs.
Renewable Energy Options

Options for Customers:

- Education – currently offering “Renewable Energy Workshops” for Homeowners
- Purchasing Renewable Energy via “Energy for Tomorrow” renewable energy program
- Financing and incentives available from “Focus on Energy”: [www.focusonenergy.com](http://www.focusonenergy.com)
- New rates for Wind, Solar, Biogas systems that customer install: [www.we-energies.com/CG](http://www.we-energies.com/CG)
- We Energies incentives for non-profits, local units of government and schools / colleges
- More information: [www.we-energies.com/RE](http://www.we-energies.com/RE)
As part of its “Power The Future” plan, We Energies committed to:

- develop renewable energy markets
- supply at least 5% of its Wisconsin retail electric sales from RE resources by 2011

As part of 2006 Rate Case:

- sixteen distinct “Renewable Energy Development” programs have been designed
- address a range of RE technologies
- offer a diverse number of RE options to both residential and business customers
These sixteen programs are being introduced over the next several months and are grouped into five categories:

- Utility-Owned Resources
- Customer-Owned Generation
- Outreach And Education
- Market Development
- Technology Assessment and Development

Byron, Wisconsin
Renewable Energy Development

Large Wind Generation Support

Planning and development efforts including modeling, evaluation, permitting and other expenses associated with the development of additional large-scale wind projects.
New Large Solar Photovoltaic Projects

First Phase - analysis to:
- quantify value
- identify locations
- determine incentives

Second Phase - Implement program to get very large PV systems installed and operational by the end of 2007.
Biomass generation is dispatchable.

Wisconsin and the Upper Peninsula of Michigan have an industrial base that is biomass based.

Objective is to work with these industries to identify additional biomass power generation capacity.
Renewable Energy Development

- **Customer generation interconnection process improvements**
  - Enhance/improve interconnection process.

- **Buy-Back Rates**
  - **Wind Net Metering Tariff**
    - Expands net metering to wind turbines up to 100 kW
  - **Biogas Buy-Back Rate**
    - 8.0 cents/kWh on-peak; 4.9 cents/kWh off-peak
  - **Future Buy-Back Rates**
Solar Buy-Back Rate

- We Energies will purchase 100% of the solar PV output for ten years at 22.5 cents/kWh.
- Customer must be an Energy For Tomorrow® participant.
- All of the solar PV output will go into the Energy For Tomorrow® power supply mix.
- We are now up to 30 customers and a total of 170.17 kW.
Renewable Energy Development

Direct Financial Incentives

- Up to $100,000 to selected customer-owned renewable energy projects.
  - Ownership by a not-for-profit organization, not-for-profit educational/academic institution, or unit of government.
  - Projects need to include a strong and clearly-identified outreach and educational component.
  - Incentives shall not exceed 50% of total installed project cost less any federal or state government incentive or credit and less any Focus on Energy funding.

- RFP and Application Form: www.we-energies.com/RE
Renewable Energy Education
• Workshops and classroom
• Designed to enhance customer awareness of renewable energy and We Energies’ initiatives.

Renewable Energy Awareness
• Advertising campaign
• Designed to increase customer awareness of renewable energy in general, and of particular programs and offerings from We Energies.
Renewable Energy Development

Market Development

- Perform a technology assessment for renewable energy technologies and market penetration.
- Refine We Energies' renewable energy strategy and program focus based on market assessment findings.
Renewable Energy Development

- M-RETS Tracking System
- New Business Models for RE Customer Options
- New RE rate for LEED-certified buildings
- Renewable Energy R&D
www.we-energies.com

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