

POWER REPORT

Summer 2009

what's inside

- 2..... From the CEO
- 2..... WPPI Energy News in Brief
- 3-4..... Member Spotlight: Kaukauna, WI
- 5..... Member News
- 5..... State Updates
- 6..... Commercial & Industrial News
- 7..... Datebook: Fall
- 8..... Ask the Experts

members

Wisconsin	Mount Horeb	Wausaukee
Algoma	Muscoda	Waupun
Black River Falls	New Glarus	Westby
Boscobel	New Holstein	Whitehall
Brodhead	New London	
Cedarburg	New Richmond	Michigan
Columbus	Oconomowoc	Alger Delta CEA
Cuba City	Oconto Falls	Baraga
Eagle River	Plymouth	Crystal Falls
Evansville	Prairie du Sac	Gladstone
Florence	Reedsburg	L'Anse
Hartford	Richland Center	Negaunee
Hustisford	River Falls	Norway
Jefferson	Slinger	
Juneau	Stoughton	Iowa
Kaukauna	Sturgeon Bay	Independence
Lake Mills	Sun Prairie	Maquoketa
Lodi	Two Rivers	Preston
Menasha	Waterloo	

WPPI Energy is a regional power company serving 51 customer-owned electric utilities. Through WPPI Energy, these public power utilities share resources and own generation facilities to provide reliable, affordable electricity to more than 192,000 homes and businesses in Wisconsin, Upper Michigan and Iowa.

Congress Takes First Step to Implement Carbon Regulation



On June 26, 2009, the U.S. House of Representatives passed landmark legislation that would, for the first time in our country's history, regulate carbon emissions and restrict carbon dioxide (CO₂) emissions from power plants and other sources. If enacted into law, this bill would represent the most significant change in utility regulation in decades and would dramatically alter the way WPPI Energy and our members meet customers' energy needs going into the future.

The centerpiece of the bill is a plan to regulate carbon emissions through a cap and trade program that would place a limit, or "cap," on the total amount of CO₂ emitted in the country and would distribute allowances via a complex allocation methodology to CO₂ emitters such as

utilities. The cap would be lowered over time, and entities would be required to buy or sell allowances based upon their needs in this new carbon market—the "trade."

Whether or not the U.S. Congress ultimately passes federal cap and trade legislation this year, we believe carbon regulation will inevitably be enacted. WPPI Energy is working hard to shape these anticipated changes, including the design of a cap and trade program.

Details Matter Greatly

As originally proposed and as included in President Obama's budget earlier this year, the cap and trade regime would have required utilities and other carbon emitters to purchase these allowances via an auction rather than receiving an allocation of allowances at no cost. As of a group of Midwest utilities, including WPPI Energy, recently showed, consumers could face alarming economic impacts under program designs using auctions to distribute allowances. The Midwest Consumer Utilities study showed that estimated average rate increases for consumers in seven Midwestern states from 2012 to 2030 could be as high as 79 percent under a cap and trade program that employs a 100 percent auction method to distribute allowances. WPPI Energy joined many other stakeholders in pushing for a free system for allowances to protect our customers and help mitigate the costs associated with moving to a cap and trade system. Major changes were made in the bill as a result. The bill as passed does not employ auctions for utilities.

continued on page 7

To view the Midwest Consumer Utilities study, visit <http://www.wppienergy.org/newsarchive?ID=184>

From the CEO: Demand Response Brings System-Wide Benefits and Costs

Roy Thilly, rthilly@wppienergy.org



Demand response refers to the ability of energy users to reduce consumption to maintain electric system reliability or avoid high market energy prices. For years, demand response programs have been designed primarily to maintain system reliability. In a typical demand response program, a utility provides a monthly discount to a large power user in exchange for the right to interrupt the customer's power supply in defined circumstances. These programs have operated successfully for many years, saved WPPI Energy and retail customers money, and helped to maintain service reliability when the electric system is under stress.

WPPI Energy and our members now anticipate an opportunity to expand

demand response services to large customers who are able to reduce their energy usage at peak periods upon request and help us minimize purchases at market energy prices when prices are high. We expect the Midwest ISO, the operator of the wholesale regional power market, to adopt new rules late this year that will facilitate the new retail programs. The new rules are likely to be quite intricate. Once these rules are in place, we will design our new programs, which will have to be approved by the Public Service Commission of Wisconsin. This process will take time.

It is very important that WPPI Energy members and customers coordinate their demand response efforts. Without coordination and properly designed programs, the actions of individual customers could increase rather than lower WPPI Energy's power costs. Our

objectives will be to design programs that allow us to reflect cost savings on the individual bills of participating retail customers and lower our total system costs over the long run. We believe by working together closely with members and large retail customers, we can provide more reliable and affordable electric service in the future.

During these challenging times, it is important to mitigate increasing power costs in any way we can. As your community's electric supplier, it is our job to capture savings opportunities for the benefit of our members and their retail customers. If you have questions about the future role of demand response in our long-term power supply strategy, please do not hesitate to contact me.

QUICK TAKES

WPPI Energy News in Brief

Stimulus Funds Could Benefit Members

Of the \$787 billion in federal economic stimulus funding provided by the American Recovery and Reinvestment Act of 2009, more than \$15 billion has been set aside to fund energy efficiency, conservation, renewable and weatherization programs in counties and municipalities nationwide. If secured, stimulus funding could provide significant opportunities for WPPI Energy member communities to advance long-term strategic goals in these critical areas while also securing significant financial resources to help mitigate local effects of the current economic recession. We are preparing to help interested members apply for these funds by identifying and developing a number of joint grant project concepts, as well as providing assistance with the grant-writing process.

While program guidelines, applications and rules have not yet been finalized for most stimulus programs, by planning ahead,

we will be positioned well to respond to stimulus opportunities that offer significant benefits to member communities.

Energy Savings Would Power 17,400 Homes

Since the inception of our cost-effective energy efficiency programs seven years ago, customers of WPPI Energy member utilities have realized cumulative energy savings of 154,500 megawatt-hours per year, equivalent to the electricity used annually to serve 17,400 typical homes. The cumulative reduction in diversified demand avoids the need to generate 23 megawatts (MW) of baseload power and helps defer the need to build expensive new power plants.

Standardizing Wind Energy Siting

While wind energy represents the most cost-effective renewable option for Wisconsin today, a series of local government actions across the state

threatens to undermine the ability to site new wind farms. Senate Bill 185 and Assembly Bill 256, authored by Senator Jeff Plale (D-South Milwaukee) and Rep. Jim Soletski (D-Green Bay), would result in common, statewide standards for regulation of construction and operation of wind energy systems smaller than 100 MW. WPPI Energy and the Municipal Electric Utilities of Wisconsin have urged the legislature to act quickly in adopting the measure.

Subscribe Online

If you would prefer to receive *Power Report* by e-mail, simply send your request to PowerReport@wppienergy.org. Include your name, organization and mail address, and you'll be added to the electronic distribution list.





MEMBER SPOTLIGHT

Kaukauna, Wisconsin

kaukauna, wisconsin fast facts

County: Outagamie

Population: 15,000

Nickname: *The Electric City*

Did you know:

- Kaukauna Utilities received American Public Power Association's Reliable Public Power Provider designation in 2006 and 2008 for providing the highest degree of reliable and safe electric service.
- Kaukauna Utilities was one of 23 original members to join WPPI Energy.
- Kaukauna Utilities was established in 1912 when the city of Kaukauna purchased the assets of the Kaukauna Gas and Electric Company for \$50,000.
- Kaukauna Utilities electric rates are among the lowest in the state of Wisconsin.

WPPI Energy member since 1980.



Kaukauna Utilities office facility.

Located on the Fox River in the northeast region of Wisconsin, Kaukauna is one of the oldest communities in Wisconsin. In September 1980, Kaukauna joined WPPI Energy, Wisconsin's first municipal electric power supply company. Today, Kaukauna Utilities is the largest community-owned and operated electric utility in Wisconsin.

Kaukauna Utilities provides electric service over a 50-square-mile area including the city of Kaukauna, villages of Little Chute and Combined Locks and parts of the towns of Buchanan, Freedom, Holland, Kaukauna, Oneida, Vandenbroek and Wrightstown. Kaukauna Utilities serves approximately 15,000 electric customers in the Fox Valley area and provides water service to more than 6,000 customers in the city of Kaukauna.

Valuable Hydroelectric Resources

Kaukauna Utilities owns and operates seven hydroelectric plants along the Fox

River including John Street, Little Chute, Combined Locks, Old and New Badger, Kaukauna City Plant and Rapid Croche. These facilities provide approximately 22.9 megawatts (MW) of nameplate capacity and in 2008 produced more than 147 million kilowatt-hours (kWh) of clean, renewable energy. Recently, WPPI Energy entered into a purchase power agreement with Kaukauna to purchase the entire output of the refurbished John Street Hydroelectric project, a purchase that will help meet WPPI Energy members' renewable requirements.

As part of a 15-year preventive maintenance program instituted by the utility, Kaukauna Utilities regularly monitors the efficiency and functionality of system components that make up each of its seven hydro plants. To do so, generators are taken apart and systematically rewound and the associated turbines are rebuilt. Dry ice cleaning and testing are performed annually and vibration testing analysis

continued on next page

Kaukauna, Wisconsin

is performed quarterly. With some original parts dating back to 1907, preventive maintenance indicates early warnings of breakdowns and malfunction prior to total system catastrophic failure.

Kaukauna's John Streethydro facility is a specific example of a recently refurbished hydro facility. Taken out of service in 2002 for structural and mechanical maintenance repairs, the generators were rewound and all of the 1911 vintage turbines completely rebuilt to closely model their original specifications.

Upgrades and improvements will increase the overall efficiency of the plant, which was put back into service on July 1, 2009.

Green Building Expansion

Through its green building expansion program, Kaukauna Utilities has undertaken a number of energy efficiency and conservation efforts. The recently completed building project follows high standards for energy efficiency and conservation, conforming to Leadership in Energy and Environmental Design (LEED) "Gold" standards for energy efficiency. LEED is the nationally accepted benchmark for the design, construction and operation of high-performance, sustainable buildings.

The utility's newly expanded and remodeled office and garage facilities incorporate recycled building materials, energy and water-efficient appliances, landscaping and natural lighting systems. Such features make Kaukauna's facility more efficient than traditional buildings simply built "to code." Kaukauna Utilities is providing a leadership example by meeting LEED standards and demonstrating that conservation through sustainable building is a long-term investment for future generations.

Groundwater Management

Long-term groundwater management and water conservation is also a priority for Kaukauna Utilities. Through a measure recently approved by the Public Service Commission of Wisconsin, residential water utility customers of Kaukauna Utilities are now able to participate in a toilet rebate program, providing a \$50 rebate toward the purchase of new WaterSense-labeled high efficiency toilets.



An array of solar photovoltaic panels at Kaukauna's 1000 Islands Environmental Center provides approximately 7,000 kWh of electricity each year.

Kaukauna "Keeps it Going"

In a recent effort to expand awareness of energy-saving methods, Kaukauna Utilities enacted the "Keep it Going" campaign, a residential education campaign presented by WPPI Energy. The campaign focuses on promoting broad energy awareness and conservation, increasing individual and community energy efficiency, as well as increasing environmental stewardship activities. Kaukauna's Keep it Going campaign seeks to enhance community-wide sustainability

efforts and participation in utility programs.

Customer Commitment

Customer participation continues to increase in programs, like the Keep it Going campaign and the new toilet rebate program, as customers become more focused on opportunities for energy efficiency, the use of renewables and waste reduction. From May 2008 to April 2009, commercial and residential utility customers purchased more than 13 million kWh of renewable energy. The community's participation rates in utility-sponsored programs have also increased, in large part, thanks to responses by local citizens to a challenge from utility General Manager Jeff Feldt encouraging residential utility customers to reduce their electric consumption.

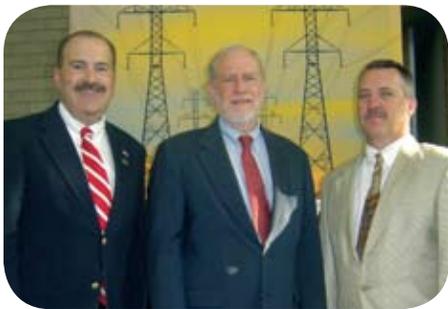
Large Power Leaders

Large power customers, like Thilmany, LLC, are also demonstrating that electric energy saving projects are a wise investment for large power customers. In February 2009, Kaukauna Utilities, Focus on Energy and WPPI Energy issued a pulp and paper staffing grant to Thilmany, LLC to support an energy manager position that focuses on improving efficiency efforts in the mill. Since the inception of the position and the end of the first quarter 2009, Thilmany's efficiency projects are projected to reduce electric usage by 13.5 million kWh annually. Thilmany has also received several grants through WPPI Energy's energy efficiency programs, replacing and upgrading equipment and systems to improve overall efficiency.

Leading By Example

Through the leadership efforts of Kaukauna's utility commission and city council, Kaukauna's community-owned municipal electric utility continues to lead by example in the areas of energy efficiency, conservation and renewables.

MEMBER NEWS



Benforado, Thilly and Bednarski.

Public Power Officials Earn National Recognition

Three local leaders and one municipal utility from Wisconsin recently garnered recognition at the national level, bringing home four prestigious awards from the American Public Power Association's (APPA) annual conference.

- **Dennis Bednarski**, general manager of Oconomowoc Utilities, received APPA's Robert E. Roundtree Rising Star Award for leaders of public power systems.

- **David Benforado**, executive director of the Municipal Electric Utilities of Wisconsin (MEUW), received the Harold Kramer-John Preston Personal Service Award for substantial contributions toward APPA goals.

- **Roy Thilly**, president and CEO of WPPI Energy, received APPA's Alan H. Richardson Statesmanship Award recognizing public power leaders who work successfully and tirelessly on APPA's behalf, forging consensus on national issues to achieve public power's goals.

- The **City Utilities of Richland Center** received the Community Service Award for "good neighbor" activities demonstrating the commitment of the utility and its employees to the community.

Renewable Energy Leaders

The U.S. Department of Energy's National Renewable Energy Laboratory (NREL) recently named River Falls, Wisconsin, and Lake Mills, Wisconsin, among the top

utilities in the United States for renewable energy program performance. The two communities ranked ninth and tenth, respectively, on NREL's national "Top 10" list for customer participation rates. River Falls also earned the No. 3 spot for green power sales as a percentage of total retail electricity sales.

EPA Green Power Partners

For the first time, River Falls and Stoughton are appearing on the U.S. Environmental Protection Agency's (EPA) national list of Green Power Communities. Green Power Communities are cities, towns and villages in which local government, businesses and residents collectively buy green power in amounts that meet or exceed the EPA's purchase requirements as part of the Green Power Partnership. River Falls and Stoughton are the first communities in Wisconsin and the Midwest to receive this distinction.



STATE UPDATES



WPPI Energy Welcomes New Member Crystal Falls

The City of Crystal Falls, Michigan, recently became WPPI Energy's 51st member utility. As of May 1, WPPI Energy assumed Crystal Falls' existing power supply contract and became the community's power supplier.



Barton Wind Project

WPPI Energy has a 20-year agreement with an affiliate of Iberdrola Renewables USA, Ltd. for the purchase of 30 megawatts (MW) of wind power from a wind farm in Worth County, Iowa. The new 80 MW Barton I wind project entered commercial operation in April.

Energy Optimization

Recent state legislation requires Michigan electric utilities to develop energy optimization plans to help customers save energy. WPPI Energy staff has assisted our Michigan members in creating these plans, gathering public feedback, and developing implementation strategies in cooperation with other Upper Peninsula municipal utilities and electric cooperatives. Pending approval by the Michigan Public Service Commission, implementation is expected to begin this fall.



Barth to Serve in Northeast Wisconsin

WPPI Energy welcomes Frank Barth, energy services representative supporting New Holstein Utilities, Plymouth Utilities and Two Rivers Water & Light.

Butler Ridge Wind Farm

WPPI Energy has a 20-year Power Purchase Agreement with an affiliate of Babcock & Brown to purchase 20 MW of wind generation from the Butler Ridge wind farm in Wisconsin. The 54 MW wind farm achieved commercial operation in mid-February.

Resources in Place to Meet Summer Demand

WPPI Energy's power supplies will be sufficient to meet the projected summer peak. We estimate a peak demand of 984 megawatts (MW) in 2009, reflecting the energy use of 51 member utilities. Earlier estimates of the forecasted peak were about 40 MW higher, but the forecast was adjusted downward to reflect the current economic recession.

The forecasted peak is about six percent higher than the 927 MW peak recorded in July 2008. The increase primarily is a result of additional members on the WPPI Energy system and assumed hotter weather. The forecasted peak is below the record peak of 998 MW set during the summer of 2006.

To meet summer demand, we have in place 1,094 MW of available capacity, including WPPI Energy-owned generation, power

purchase contracts, and member-owned and customer-sited generation.

While extreme weather conditions and major outages always have the potential to threaten reliability, there are no known significant operational issues or restrictions expected that could impact reliability

during the summer 2009 season. WPPI Energy works closely with other utilities, the American Transmission Company and the Midwest ISO to assess, plan for and respond to any potential contingencies and maintain reliable electric service.

customers play key role

Customer-owned generation resources make up an important part of WPPI Energy's demand reduction emergency response plan. Under capacity generation contracts, retail customers of our member communities are paid to run their back-up generators, relieving burden on the system during critical periods. Although the need to activate such programs is infrequent, the ability to reduce system-wide demand is crucial when a potentially serious power system outage threatens. A system-wide test of customer-sited distributed generation was conducted in March. The exercise went smoothly and demonstrated a demand reduction capacity of 19.7 MW.

Uniek Wins Grant by Bidding for Efficiency

In the most recent round of RFP for Energy Efficiency funding, Uniek, Inc., a customer of Waunakee Utilities, was awarded \$55,000 for an energy-saving equipment replacement project. WPPI Energy's RFP for Energy Efficiency program encourages investment by large commercial and industrial utility customers in energy efficient improvements.

The grant will help replace Uniek's existing central chilled process cooling water system, which is more than 20 years old and has become highly inefficient. Replacing the existing chiller will improve efficiency and the chilled water conditioning process, reducing energy demand by 70 kilowatts (kW) and save approximately 577,000 kilowatt-hours (kWh) per year. Additional benefits of the new cooling system will include improved compressor efficiency, reduced peak demand, reduced water and sewage use, and more.

The chiller project is one of a number of efforts illustrating Uniek's commitment to conservation and energy efficiency. Uniek continues to evaluate the efficiency of its existing equipment and look for ways to improve overall efficiency and reduce energy use. Uniek has formed an energy/sustainability team to focus on ongoing process improvements and recommend energy reduction initiatives for the future.

Qualified customers of WPPI Energy member utilities are invited to submit proposals for the RFP for Energy Efficiency bidding cycle. To date, WPPI Energy has funded 10 project proposals, issuing more than \$431,000 in RFP for Energy Efficiency grants, resulting in demand reductions of 857 kW and energy consumption decreases of 4.5 million kWh. For more information on the RFP for Energy Efficiency and other industrial energy efficiency project funding opportunities available through WPPI Energy, visit www.wppienergy.org.

Solar Installation a Bright Spot for Business

Steve Lewis, owner of the Jefferson Area Business Center (JABC) in Jefferson, WI, believes in the



power of clean, green renewable energy. Lewis partnered with Jefferson Utilities, WPPI Energy, and local contractors to install a 20-kW solar photovoltaic (PV) renewable energy system on the roof of the JABC, the largest commercial project of its kind in Jefferson County.

WPPI Energy provided funding for the project in the form of a \$72,000 upfront purchase of the system's renewable energy output. Lewis also anticipates \$35,000 in funding through Focus on Energy and will be eligible for tax incentives. Members of the media, local officials, project partners and special guests were on hand for a commissioning ceremony and reception on June 11, when Lewis "flipped the switch" and put the new project online.



Mark your calendar for these upcoming events, conferences and technical workshops for commercial and industrial utility customers:

Best Practices in Compressed Air Systems

Focus on Energy, www.focusonenergy.com/training

- October 5, 2009 | Eau Claire, WI
- October 6, 2009 | Green Bay, WI
- October 7, 2009 | Brookfield, WI

Building Systems Commissioning and Retro-Commissioning

The Energy Center University, www.ecw.org/university/

- September 23, 2009 | Chicago, IL

Building Systems Retro-Commissioning

The Energy Center University, www.ecw.org/university/

- September 22, 2009 | Madison, WI
- October 7, 2009 | Appleton, WI

Commercial Solar Thermal

The Energy Center University, www.ecw.org/university/

- September 22, 2009 | Delafield, WI

Energy and the Bottom Line Conference & Expo

Focus on Energy

<http://www.focusonenergy.com/Calendar/event08260901.aspx>

- August 25–26, 2009 | Wisconsin Dells, WI

Energy Efficient Lighting

Energy Center University, www.ecw.org/university

- November 4, 2009 | Eau Claire, WI
- November 5, 2009 | Brookfield, WI

eQUEST...the Quick Energy Simulation Tool

Energy Center University, www.ecw.org/university

- October 13–14, 2009 | Wauwatosa, WI

Financial Impacts of Energy Efficiency

The Energy Center of Wisconsin, www.ecw.org

- October 28, 2009 | webinar

Potential for Energy Efficiency in the Midwest

The Energy Center of Wisconsin, www.ecw.org

- September 23, 2009 | webinar

Practical Energy Management – Industrial

Focus on Energy, www.focusonenergy.com/training

- September 24, 2009 | Milwaukee, WI
- October 8, 2009 | Mosinee, WI
- November 5, 2009 | Green Bay, WI

Practical Energy Management – Commercial

Focus on Energy, www.focusonenergy.com/training

- October 29, 2009 | Green Bay, WI

Smart Strategies for Healthcare

Focus on Energy, www.focusonenergy.com/training

- September 15, 2009 | Eau Claire, WI



Energy efficiency, It's good for business!

Saving energy is a sound investment for businesses. That's because every dollar you save on energy costs goes straight to your bottom line.

Your local utility's membership in WPPI Energy gives you access to energy solutions that save money, boost productivity and reduce maintenance costs.

In Wisconsin, Focus on Energy offers grants and financial incentives to help you offset the costs of energy efficiency and renewable energy installations. To find out how smart energy choices can save your business energy and money—call Focus on Energy at **800.762.7077** or visit **focusonenergy.com**.

In Iowa and Michigan, WPPI Energy member utility customers have access to similar opportunities through their local utilities. Call **800.255.9774** or visit **www.wppienergy.org**.

Take action today. See results tomorrow.



©2009 Focus on Energy FOE-3003-0709

Congress Takes First Step to Implement Carbon Regulation: continued from page 1

While the House action is only the first step in what will be a long and winding road to a final passage and the bill being signed into law by President Obama, momentum

is clearly building in Washington for action this year. WPPI Energy will stay engaged in this debate and will fight to protect our member communities and ratepayers to

the maximum extent possible and support a bill that balances the need to preserve the environment, ensure a secure energy future, and mitigate costs for consumers.

Ask the Experts

Q: “How do geothermal systems work? Can I use this technology for my home or business in a cold climate?”

A: A ground-source heat pump (GSHP), also known as a geothermal heat pump, uses thermal energy from the ground to provide heating and hot water. The GSHP is able to access underground temperatures that are warmer than the air above during the winter and cooler than the air in the summer. These systems are highly efficient, even in cold climates, because underground temperatures are relatively stable throughout the year. And, while the cost for a GSHP is typically much higher than conventional systems, the difference usually can be returned in energy cost savings in less than 10 years.

A number of WPPI Energy customer projects offer a first-hand look at the use of a GSHP in cold climates. On the residential side, GreenMax Homeowners Tom and Verona Chambers used a GSHP to help them achieve net zero energy use. Through use of the GSHP in combination with a residential solar photovoltaic system and other energy-saving technologies and practices, the Chambers' Black River Falls, Wisconsin, home is now producing as much energy as it uses. The Chambers designed and constructed their all-electric home, which they completed earlier this year, with grant funding from WPPI Energy's GreenMax Home initiative.

Commercial utility customers are also reaping the benefits of a GSHP system. The Sun Prairie (Wisconsin) Area School District is currently constructing its third school using a geothermal heating and cooling system. In fact, because output efficiency levels can easily reach 300 percent or more compared to input energy, a GSHP system will be the biggest cost-saving measure at the new 400,000 square-foot Sun Prairie High School.

For more information on energy-saving ideas and technologies for your home or business, visit www.wppienergy.org.



your questions answered

Have a question you'd like answered by one of WPPI Energy's experts? E-mail your inquiry to PowerReport@wppienergy.org.

Kurt Pulvermacher, Energy Services Representative,
(608) 834-4565, kpulvermacher@wppienergy.org

 Printed on recycled paper

PRRST STD
US POSTAGE
PAID
MADISON WI
PERMIT #2783

1425 Corporate Center Drive
Sun Prairie, WI 53590

The way energy should be

