

Changes Play to Public Power's Strengths

On average, each of WPPI Energy's 51 member utilities has been in business 100 years.

Their longevity has been driven by a strong record of reliability; the ability to respond quickly in the event of a problem or outage; local governance and decision-making; involvement in economic development; financial contributions back to local government; and most importantly, a focus on what's best for the businesses and households they serve.

With no shareholders or profits to protect, these locally owned utilities exist solely for the benefit of their customers, making them well positioned to respond to industry developments and evolving customer expectations.

Such a shift is already taking place. Changes in the way that electricity is produced, delivered and used is requiring all electric utilities – municipal, cooperative and investor-owned – to change all aspects of the business.

Four out of 10 utility CEOs worldwide anticipate that changes will “transform” their business model by 2030, according to the 2013 PricewaterhouseCoopers (PwC) Annual Global Power & Utilities Survey.

DG Takes Center Stage

One change that is quickly gaining momentum is an increasing customer interest in producing renewable energy on-site, known as distributed generation (DG). Utilities are expecting significant growth in one form of DG – residential solar installations – in the years to come.

The PwC survey showed that 82% of North American utility executives see DG as an opportunity.

“The utility of the future, the orchestra leader of the future, is going to learn how to balance an entirely different sort of grid – one where you’ve got very many inputs,” said Ron Binz, former chairman of the Colorado Public Utilities Commission and head of the Brookings Institute’s Energy Security Initiative, in POWER magazine.

WPPI Energy member utilities have demonstrated their commitment to the future by investing in more than 55 community-based renewable energy demonstration projects since 2006; helping customers connect their DG systems into the local distribution grid; and launching a community solar garden

pilot program to give customers in member communities an additional option.

Achieving Harmony

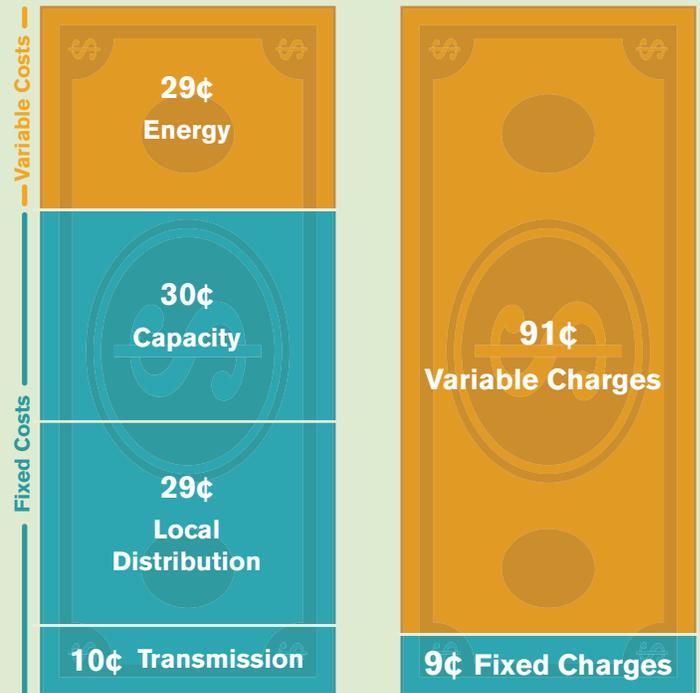
Putting the right rate structures in place to anticipate and enable DG is a challenge that all utilities will face. For most utilities, today's rates recover just a portion of the utility's

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Today's rates don't match costs

What it costs a utility to serve the average residential customer
(per dollar)

How residential utility customers are currently billed
(per dollar)



Many utilities are changing their rate design so they can recover more of their fixed costs. That means increasing the customer charge and reducing the energy charge on customers' bills.

Please note: The figures used in these charts are representative of monthly residential customer costs and charges for WPPI Energy's 51 member utilities. They are not actual costs and charges.

Long-Term Solution for the UP is a Priority

Over the past 18 months, the fate of an Upper Peninsula power plant has had the potential to significantly raise electric costs for customers throughout Michigan and Wisconsin.

Although a final decision is yet to come, we expect that our members' customers will pay far less than once expected. It's an outcome that several utilities, including WPPI Energy, regulators and policy makers have worked hard to achieve.

We Energies owns Presque Isle Power Plant in Marquette, Mich. After losing its largest customer, Cliffs Natural Resources, in 2013 under Michigan's utility choice law, the company no longer needed the resource. The Midcontinent Independent System Operator (MISO) denied the utility's request to quit operating the plant and required it to remain available as a system support resource (SSR) to ensure regional grid reliability. The SSR costs – up to \$97 million annually – were allocated to utilities across Michigan and Wisconsin.

This is an issue that impacted all of our members – not just the seven locally owned utilities we serve in the UP – as the SSR costs would raise WPPI Energy's wholesale rates. We have responded by intervening in a number of cases at the Federal Energy Regulatory Commission (FERC) related to how the SSR costs would be allocated. We've also had many discussions with the state Public Service Commissions in Wisconsin and Michigan and our fellow stakeholders in the UP.

What happens with Presque Isle also affects reliability for our membership. With the plant set to eventually close, we are actively involved in discussing the need for both near-term and long-term affordable solutions to meet the UP's energy needs.

There is still much work ahead, but we are making progress.

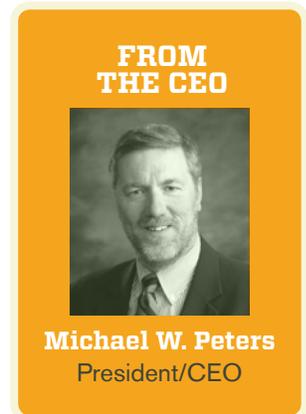
In a series of deals announced by Michigan Gov. Rick Snyder,

Cliffs' mining operation returned as a customer of We Energies in January. We Energies and MISO have taken steps to end the SSR payments effective Feb. 1, 2015, which would be a promising development for customers.

In related discussions, Upper Peninsula Power Co. (UPPCO) had agreed to buy Presque Isle, We Energies' utility business in the UP and the UP electric customer base of Wisconsin Public Service Corp., a subsidiary of Integrys. However, in March we learned that UPPCO and We Energies were unable to reach an agreement on the sale. Presque Isle and We Energies' other assets will stay with We Energies. Permanent removal of the SSR designation for Presque Isle is the issue we are most concerned with and will depend upon the mines agreeing to take retail electric service from We Energies and not from an alternative energy provider allowed under Michigan's flawed utility choice law.

As for the SSR costs, FERC has issued an order requiring MISO to conduct a study on how best to allocate the SSR costs incurred from February 2014 through January 2015. The outcome of that study will have an impact on costs for WPPI Energy members and their customers.

Ensuring reliability in the UP and managing costs across our system are ongoing priorities for us. We'll continue to advocate for an affordable long-term power supply solution that not only benefits our UP members, but all 51. For WPPI Energy, "stronger together" is not just a tagline – it's how we do business.



WPPI ENERGY NEWS IN BRIEF

WPPI Represented at EPA

WPPI Energy's Andy Kellen was among two dozen utility representatives, regulators and environmentalists who met with U.S. Environmental Protection Agency and White House officials to discuss the EPA's Clean Power Plan.

Members of the Midwestern Power Sector Collaborative explained the need for recognition for actions taken before

2012, the EPA's proposed baseline year. WPPI Energy, for example, decreased emissions by 23% from 2005 through 2012.

"This region has a unique stake in the proposed EPA rules, and we hope EPA will carefully consider the group's comments," said Kellen, vice president for power supply resources.



POWER REPORT

WPPI Energy is a regional, not-for-profit power company serving 51 locally owned electric utilities. Through WPPI Energy, these public power utilities share resources and own generation facilities to provide reliable, affordable electricity to 200,000 homes and businesses in Wisconsin, Upper Michigan and Iowa.

Member Spotlight: Boscobel, Wisconsin

The Lower Wisconsin River has been a conduit for lead miners, loggers, goods and passengers since Boscobel first became a city in the mid-1800s.

Today the river is still a major attraction. Thousands of acres of public land surround the waterway, including Boscobel's scenic bluffs.

Camping, canoeing, kayaking, hiking, bird watching and bicycling draw people during the summer, while cross-country skiing, snowshoeing, ice skating and other activities bring visitors in the colder months.

"Right now the Chamber of Commerce is going through a branding and marketing initiative to emphasize that Boscobel is a recreation destination," explained Director of Public Works Mike Reynolds.

The city is also known for its hunting and fishing. Boscobel has long been known as the Wild Turkey Hunting Capital of Wisconsin, and the three-county area has nearly 90 Class 1 trout streams.

Many historical landmarks still stand, such as the Boscobel Hotel, birthplace of the Gideon Bible, and the Boscobel Depot, a marshalling point for enlisted men during the Civil War and again during World Wars I and II. Another historic building, the G.A.R. Hall – believed to be the only one remaining in the state and possibly the Midwest – remains a testament to the era of the Grand Army of the Republic. The Rock School preserves turn-of-the-century architecture as a modern-day school for kindergarten and first-grade students.

Each August, history comes to life when hundreds of people arrive for the Muskets and Memories Civil War Reenactment and G.A.R. Heritage Encampment. Popular battles of the North and South are recreated, along with social events, band concerts and other activities.



U.S. Highway 61 crosses the Lower Wisconsin River via the Boscobel Bridge. The bridge is dedicated to one of the city's well-known residents, former Wisconsin Gov. John Blaine.

Downtown Boscobel also pays homage to its history. Recent updates to Main Street include LED replicas of antique streetlights. Soon all of the lights will have new energy-efficient LED fixtures with help from a Focus on Energy incentive and a WPPI Energy member loan for financing.

Working Together

Boscobel Utilities serves about 1,750 customers in an area of about three square miles.

Reynolds has been in his job since 1990. Born and raised in Boscobel, he attended college at the University of Wisconsin-Platteville and earned his professional engineering credentials before returning to his hometown. He took over the role from Dave Mikonowicz, who left to serve as general manager of the Reedsburg Utility Commission until his retirement in 2012.

Utility billing clerk Misty Molzof is also originally from Boscobel and previously worked for the Village of Prairie du Sac, another WPPI Energy member.



BOSCobel FAST FACTS

County: Grant
Number of customers:
1,750 electric and water
Member website:
www.boscobelutilities.com

Did you know?

- The area was first discovered by French explorers Louis Joliet and Jacques Marquette in 1673. They named the area "Bosque-Bell," which means "beautiful woods."
- Local citizens voted to form a city-owned utility in 1899 to provide lighting for downtown businesses and to encourage economic development.
- The Boscobel Fireman's Festival on July 4 features one of the area's biggest fireworks displays, plus a carnival, softball tournament, parade and Firecracker Run.
- WPPI Energy member since 1980.

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The seven-person team, plus energy services representative James Schwingle, provide hometown service on a daily basis – including all utility maintenance and reading meters door-to-door.

The relatively recent flash floods in June 2013 are still fresh in residents' minds in the community of 3,300.

When water breached a levy, Sanders Creek overflowed and water poured into the basements of local homes – including Molzof's, whose home sustained some of the worst damage. Lightning hit a substation, knocking out power to most of the city for four hours. During that time, a lift station failed, overwhelming the system and causing sewers to back up in homes where sump pumps were inoperable. Flooded and washed-out roadways made it more difficult for help to arrive. Many area fire departments sent crews, and many volunteers made clean-up efforts easier.

"It really brought everyone together," Reynolds said.



The historic Rock School, with its Romanesque revival architecture, is a school building for kindergarten and first grade.



The staff of Boscobel Utilities includes (from left) Cory Murphy, Jason Hurda, Misty Molzof, Mike Reynolds, Rick Ritter, Hershel Marks and Gary Farrell.

Reaching Out

The utility's revenue is nearly evenly divided among residential and business customers. The largest customers are two packaging companies, Nu Pak and Bemis North America, which have a combined load of more than 2 megawatts; as well as the Wisconsin Secure Program Facility; Gundersen Boscobel Area Hospital and Clinics; the local grocery store and schools.

Programs and incentives from Boscobel Utilities and the statewide program Focus on Energy help business customers save energy and trim operating costs. Utility staff recently helped Bemis complete a process energy use evaluation project to improve energy efficiency, and many other businesses have upgraded their lighting.

In 2013, the utility used surplus Commitment to Community funds to help the high school install a 12.5-kilowatt solar PV system, which fulfills some of the school's electricity needs. Previously, the utility helped the local pool install solar panels. Purchasing renewable energy is another option for customers.

During Public Power Week, Boscobel Utilities invites customers to stop by the office for treats, gifts and prize drawings. Throughout the year, residential customers have access to Focus on Energy incentives as well as ENERGY STAR, Tree Power and central air conditioning tune-up rebates.

Giving Back

Reynolds has served on the WPPI Energy Board of Directors since 1990 and first served on the Executive Committee in 2002.

"Another utility manager asked me to consider participating – he said there's a benefit to having small utilities represented," Reynolds said. "I've enjoyed being involved on the EC and I've learned the most about the industry from it." He's also a member of the Personnel Committee and the Energy Services Advisory Group.

In 2013, Reynolds put his knowledge to use in a more personal way by commuting more than an hour each way to Maquoketa, Iowa, two days a week to fill in as the interim utility manager for a fellow WPPI Energy community. Through an arrangement with Maquoketa Municipal Electric Utility, the City of Boscobel and WPPI Energy, Reynolds helped out until the MMEU Board hired Tom Gaffigan. The city was familiar to Reynolds, who had visited Maquoketa to look at its commercial spec buildings as a member of Boscobel's economic development group.

Boscobel Utilities is governed by a seven-member Board of Public Works, and it's one of the biggest contributors to the city budget, with a payment in lieu of taxes of \$147,423 for 2014.

"More than 115 years ago, our city leaders thought to create a locally owned utility to serve Boscobel. It's a decision that has worked out well to this day," said City Administrator Arlie Harris.

MEMBER NEWS

Badger Hydro Recognized

Kaukauna Utilities' Badger Hydro project was among the 16 renewable energy projects added to RENEW Wisconsin's Honor Roll for 2014. The renewable energy advocacy organization honored what it considers to be the largest and most innovative renewable energy projects built in Wisconsin at its fourth annual Energy Policy Summit, on Jan. 9 in Madison.

The Badger Hydro reconstruction and upgrade resulted in a generating capacity increase of nearly 3 MW. It was one of two hydropower projects and one of two owned by an electric utility that RENEW Wisconsin recognized.

The 16 projects inducted into RENEW's

Honor Roll added 5.92 megawatts (MW) of new generating capacity in Wisconsin. Combined, the projects will provide enough electricity to power the equivalent usage of about 2,600 Wisconsin homes.

Members Sponsor Education

WPPI Energy member utilities are sponsoring 140 live performances by The National Theatre for Children at nearly 100 schools in 45 communities.

More than 25,000 students will participate in the interactive performance of "The Energized Guyz: Daylight Savings Crime."

During the 25-minute show, students learn that the evil Dragonfly is encour-



A student holds a banner that reads "Open Your Eyes: Be Energy Wise!" during a National Theatre for Children performance on Feb. 16 at Clovis Grove Elementary School in Menasha, Wis.

aging people to waste energy. It's up to the kids to help superhero Nikki Neutron learn all he can about using energy wisely to save the day.

STATE UPDATES

IOWA

New Committee Chairs Named

Sen. Janet Petersen (D-Des Moines) has been appointed chair of Iowa's Senate Commerce Committee, and Rep. Peter Cownie (R-West Des Moines) will continue to serve as chair of the House Commerce Committee. The Commerce committees take on many utility-related bills in Iowa.

MICHIGAN

Committee Chairs Named

Sen. Mike Nofs (R-Battle Creek) serves as chair of the Senate Energy and Technology Committee, and Rep. Aric Nesbitt (R-Lawton) is chair of the House Energy Policy Committee in the Michigan Legislature.

WISCONSIN

Chair, Commissioner Appointed

Commissioner Ellen Nowak has been appointed chairperson of the Public Service Commission for a two-year term effective March 1. Nowak takes the mantle from Phil Montgomery, who continues to serve on the commission.

Joining them as the third commissioner is former state legislator and Department of Administration Secretary Mike Huebsch.

In addition, Commissioner Nowak recently was named to the National Association of Regulatory Utility Commissioners (NARUC) Executive Committee and Board of Directors.

Hearing Held on EPA Rule

"Each of our members, individually and through their joint action agencies like WPPI Energy and Great Lakes Utilities, has taken significant steps since 2005 to lower our emissions. EPA must recognize that early action in the final rule," said Zak Bloom, executive director of Municipal Electric Utilities of Wisconsin (MEUW), in testimony on the Environmental Protection Agency's proposed Clean Power Plan. Bloom also said that the rule's "interim goals" may lead to unnecessary coal plant retirements without long-term plans for viable, cost-effective alternatives.

Bloom, along with staff from other state agencies and utility groups, spoke at a joint informational hearing with the Senate Committee on Workforce Development, Public Works, and Military Affairs, and the Assembly Committee on Energy and Utilities, on Jan. 28.

Legislative Leaders Named

Rep. Jim Steineke, who represents Kaukauna and is a strong supporter of public power, will serve as Assembly majority leader in the Wisconsin Legislature.

Rep. Mike Kuglitsch (R-New Berlin) will continue to chair the Assembly's Energy and Utilities Committee and Sen. Roger Roth (R-Appleton), who represents the member community of Menasha, has been named chair of the Senate Committee on Workforce Development, Public Works and Military Affairs.



The River Falls EcoVillage, a St. Croix Valley Habitat for Humanity community, is designed to be net-zero energy use, with LEED Platinum and ENERGY STAR® certifications.

Setting a New Sustainable Standard

Habitat for Humanity homes earn national honors

St. Croix Valley Habitat for Humanity's latest project has earned national recognition for sustainability, including energy efficiency and use of renewable energy.

River Falls EcoVillage, a neighborhood of new homes for income-qualified families in the WPPI Energy community of River Falls, Wis., has been a collaborative effort between Habitat for Humanity, the City of River Falls, River Falls Municipal Utilities (RFMU), St. Croix Institute and corporate partners. The 18-home development was named Best Affordable Project by Green Builder magazine.

RFMU came in during the planning process to help Habitat reach its ambitious energy-efficiency goals and to find as many rebates and incentives as possible.

Each house is constructed with structural insulated panels with R-values of 60 to 100, an in-floor radiant heating system and a solar thermal hot water system. During 2014, the homes' rooftop solar arrays produced an average of 6,105 kilowatt-hours, equivalent to 67% of consumption. Two-level homes produced an average 6,847 kWh, or 45% of consumption. Direct savings from the photovoltaic panels ranged from \$578 to

“The homes have proven to be very efficient, and with homeowner education, the whole village will be at net zero energy use.”

**– Dave Engstrom,
St. Croix Valley
Habitat for Humanity**

\$715, with an average of \$596 for single-level homes and \$669 for the two-level homes.

“Our commitment to sustainability goes beyond energy efficiency,” Engstrom added. The homes were built with features such as 50-year metal roofs and low-maintenance exteriors.

“St. Croix Habitat for Humanity has been a leader in sustainable building practices. They're a valuable and visible partner in River Falls' movement toward developing a conservation ethic. Their continual eye towards improvement and innovation is a great model for the larger Habitat organization and their future building and community development practices. We're very fortunate to have such a working lab in River Falls,” Noreen said.

Utility Contributions

St. Croix Valley Habitat for Humanity worked with Mike Noreen, conservation and efficiency coordinator at River Falls Municipal Utilities, who coordinated:

- A contractors' lunch on site to educate local contractors about the building and HVAC practices at the site;
- A \$25,000 contribution from low-income weatherization assistance funds for local vendors to install energy heel trusses;
- An incentive from RFMU to match that of the Focus on Energy New Homes Program.
- A donation of two upgraded pulse water meters for the homes' energy management system;
- Bill pay assistance for income-qualified residents.

Changes Play to Public Power's Strengths (cont.)

fixed distribution costs – the expense of maintaining the poles, wires and equipment needed to deliver electricity to customers – through the flat monthly customer charge. The majority of costs are recovered from customers through the per-unit energy charge, and those costs do not decrease as more customers install DG systems.

DG customers remain connected to the distribution grid for backup electricity (needed when a DG system produces less energy than the customer is using) and, at other times, to sell their excess energy back to the local utility.

Because DG customers purchase fewer units of energy, they pay for less than their share of the costs for the distribution grid under the traditional rate structure.

As more customers install DG systems, utilities must ensure their rates will still recover the costs to maintain reliable, round-the-clock service for all customers. Utilities also will want to structure rates so that customers without DG do not end up paying for the DG customers' share of the distribution grid. Appropriately structured rates encourage development of renewable DG options in a financially sustainable way.

A more modern rate design would include more of the fixed costs in the customer charge, ensuring that those costs are more uniformly shared by all customers who use and benefit from the system. At the same time, the per-unit energy charge would decrease.

DG is just one of the issues WPPI Energy members face as they approach or pass the century mark – and being locally governed, not-for-profit and customer-focused will be an advantage. As the past has proven, public power providers are equipped to adapt, in a way that is fair to customers and financially sound for the long term.

Datebook: Spring and Summer

WPPI Energy and its 51 members in Wisconsin, Upper Michigan and Iowa sponsor and provide support for energy education conferences and technical workshops benefiting commercial and industrial utility customers.

Energy Center of Wisconsin Interactive Webinars

www.ecw.org/education/webinars

- Energy efficiency in grocery stores, 1-2:30 p.m. Central, March 31

Energy Center of Wisconsin On-Demand Webinars

www.ecw.org/education/webinars

These and other webinars are available to view for free; pay for CEU credit:

- Critical energy planning during healthcare facility renovations and additions
- Top 10 energy conservation measures for data centers
- Climate impact and building resilience strategies
- Cost effective energy improvements for small and medium industrial facilities
- Optimization of commercial building systems: technologies, practices and strategies
- Energy efficient motors and drives update
- Pursuit of net zero energy: the Walgreens experience
- Operating an energy efficient restaurant (video series)

Energy Center of Wisconsin Training Events

www.ecw.org/education/onlocation

Best lighting retrofit solutions, April 28, La Crosse

Industrial lighting technologies and applications, April 29, Appleton

Industrial lighting technologies and applications, April 30, Milwaukee

2015 Michigan Commercial & Industrial Energy Conference – UP

Efficiency UNITED

www.encyunitied.com/commercial-industrial/ciconference

April 1, Harris, Mich.

11th Annual Sustainable Forestry Conference

Marinette County Association for Business & Industry, Inc.

<http://mcabi.com/sustainable-forestry>

April 16, Florence, Wis.

Workshop: Lighting is Evolving Near Speed of Light

Iowa Energy Center | www.iowaenergycenter.org

April 27, Ankeny, Iowa

Midwest Solar Expo

May 13-15, Minneapolis, Minn. | <http://midwestsolarexpo.com>

MEUW JT&S Underground Facility Locating Workshop

Municipal Electric Utilities of Wisconsin | www.meuw.org

April 14-15, Two Rivers, Wis.

MEUW Annual Conference

Municipal Electric Utilities of Wisconsin | www.meuw.org

June 17-19, Wisconsin Rapids, Wis.

26th Annual Energy Fair

Midwest Renewable Energy Association | www.midwestrenew.org

June 19-20, Custer, Wis.

Stronger Together: Power Supply Planning and Analysis

Many months before WPPI Energy signed a purchased power agreement with Nelson Energy Center in 2014, the Power Supply staff began evaluating how the new resource would fit into the existing power supply mix.

That's the job of **Todd Komplin**, director of planning analyses and compliance officer, and **Jared Hayden**, planning analyst.

It means crunching numbers – a lot of them.

To evaluate a potential new resource, they evaluate how it aligns with WPPI Energy's load profile and whether the resource is truly the lowest-cost option to meet members' needs.

They also examine other benefits – like whether the resource reduces vola-



Jared Hayden



Todd Komplin

tility or adds diversity in the power supply portfolio. Their final economic analysis is presented to senior staff, the Executive Committee and then the Board of Directors for review and approval if necessary.

They also develop a 20-year load forecast for each member every year, using a

detailed model that analyzes factors that impact energy use such as daily average temperatures from the past 10 to 15 years.

The WPPI Energy Rates and Billing staff uses these forecasts – along with the annual resource plan that Komplin and Hayden prepare – to help utilities set their current rates and anticipate future power supply costs. Power Supply uses the information for long-term resource planning and to determine capacity requirements.

In addition, the planning staff reports information on WPPI Energy's capacity resources to the regional grid operator, MISO, and oversees compliance for WPPI Energy and those members that must comply with NERC requirements for grid reliability and security.