

WPPI Energy to Purchase Output from Wisconsin's Largest Solar Facility

In January, WPPI Energy entered into a 20-year power purchase agreement with NextEra Energy Resources (NextEra). Under the agreement, NextEra will construct a 100-megawatt solar energy center near Two Rivers, Wis., and WPPI Energy will purchase all of the center's output starting in 2021.

The Point Beach Solar Energy Center will be constructed adjacent to the Point Beach Nuclear Plant. It will be the largest generator of solar energy in Wisconsin, with capacity to serve more than 23,000 homes with affordable, clean energy.

It will also provide economic growth for the area. "This energy center will harness the state's own sunshine to create clean, renewable energy, as well as good-paying jobs and increased tax revenue for the state and local community," said Mike O'Sullivan, senior vice president of development for NextEra.

The solar energy center will create 150-200 jobs during its construction period, which will begin in 2021 and is estimated to last 6-9 months.

"Energy has been an important part of our economic mix here in the Two Rivers area for a long time, and this happily further affirms that role," said Two Rivers City Manager Greg Buckley.



The Point Beach Solar Energy Center will use solar photovoltaic panels similar to the ones pictured from the River Bend solar site in Florence, Alabama to convert sunlight into electricity.

"Energy has been an important part of our economic mix here in the Two Rivers area for a long time, and this happily further affirms that role."

The solar project is a good fit for several reasons.

"This solar energy center adds diversity to WPPI Energy's power supply portfolio in a way that's more cost-effective than other opportunities currently available to us," said Mike Peters, president and CEO of WPPI Energy. "In addition, WPPI Energy has achieved significant emissions reductions over the past 10 years, and the clean, renewable energy generated by this project will help us continue that effort."

The power purchase agreement will build on an existing relationship between the two organizations. WPPI Energy has two power purchase agreements with NextEra for output from the Point Beach Nuclear Plant and the Butler Ridge Wind Energy Center in Dodge County, Wis.



The Point Beach Solar Energy Center will be built adjacent to the Point Beach Nuclear Plant (pictured) in Two Rivers, Wis. Photos courtesy of NextEra

A Year in Review

In times of change, it's important to adapt and grow while still remaining true to our values as a not-for-profit joint action agency. Looking back at WPPI Energy's accomplishments in 2016, I think we were able to do that. Here are some highlights from the past year:

Member All-Requirements Contract Extensions

In March, we completed our member all-requirements contract extensions efforts. The enthusiastic response we received was a great example of member unity. The new power supply agreements are in place through 2055.

Bond Issuance

Also in March, the WPPI Energy Board of Directors authorized the issuance of WPPI Energy's Series 2016A bonds in order to refund an \$82 million portion of our 2008A bonds. As a result, our net present value savings on the refunding will total more than \$9.8 million.

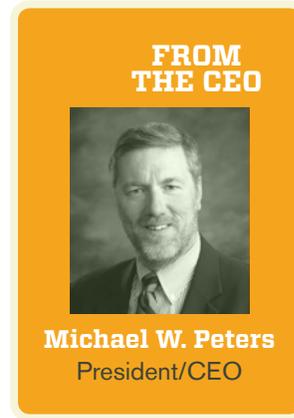
Member Feedback Survey

In July, we wrapped up our most recent member feedback survey to measure member satisfaction with WPPI Energy's performance as a power supplier and service provider. The responses affirmed that overall member satisfaction remains very high, and also helped identify areas of focus as we continue strengthening our joint action agency to best serve members and their communities now and into the future.

WPPI Energy Business Plan

Throughout 2016, the membership participated in planning meetings and provided feedback to shape the development of the 2017-2021 WPPI Energy Business Plan. The business plan, which was developed to respond to a rapidly-changing industry, identifies priorities in three major categories: power supply planning, technology and meeting customers' evolving expectations.

I urge you to continue to be active and involved in 2017. Times of change aren't easy, but as in the past, our unity will be the key to our success.



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: Menasha, Wisconsin

Menasha is part of the Fox Cities, 20 communities that together make up one of Wisconsin's largest urban areas. Menasha is sometimes referred to as "Your Place on The Water" since its location alongside Lake Winnebago, Little Lake Butte des Morts and the mouth of the Fox River makes it an ideal location for water-centric industries and recreation.

Menasha Utilities

Menasha Utilities (MU) was established in 1906 and provides electric services to 9,055 customers and water services to 5,022 customers. The utility was a founding member of the state-wide trade association Municipal Electric Utilities of Wisconsin, commonly known as MEUW.

MU has been a WPPI Energy member since 1981, and many MU employees have been active on advisory groups and committees throughout the years.

"I think there's great benefit to having a joint partnership with other members and with WPPI," says General Manager Melanie Krause. "It's important to be able to share ideas and take lessons learned, resources, etc. from other members and tailor them to our organization."

Stronger Together

The WPPI Energy community was especially important to Menasha in 2011, when the city faced financial issues stemming from the closing of their unprofitable steam plant.

WPPI Energy bought MU's electric distribution assets and leased them back to the utility so operations could continue. This transaction provided the revenue needed to resolve their financial issues. Although the transaction involved some risk, it was important to the other WPPI Energy members to ensure the health of their fellow utility and the WPPI Energy membership as a whole.

"One of the foundations of joint action is that we have each other's back. The lease back agreement is a good example of how joint action was able to provide opportu-



Menasha's waterfront location provides several recreational opportunities.

nities that wouldn't have been available otherwise," says Mike Peters, President and CEO of WPPI Energy.

At the beginning of March, MU was able to buy back its assets and close on the lease agreement 14 years sooner than the original 20-year term. The utility financed the repurchase through the BCPL State Trust Fund Loan Program, and in doing so will save their customers over \$2.5 million.

"It's a great partnership that we have with WPPI Energy to be able to accomplish what we did, says, Krause. "They helped us through that difficult time, and now we are able to refinance and buy back our assets in our sixth year of lease payments. The utility is stronger and we can move forward."

In 2014, the steam plant got a new purpose as a food processing facility when the utility sold it to Simply Incredible Foods. It was a win-win situation. Simply Incredible Foods got space to expand, and the utility was able to focus on their core electric and water distribution services.

"From my perspective, to take a steam utility plant and convert it over to a food

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MENASHA FAST FACTS

Counties: Winnebago, Calumet

Electric customers: 9,055

Member website:

www.menashautilities.com

Did you know?

- Menasha comes from "Menashay," a Ho-Chunk word for "Settlement on an island."
- The University of Wisconsin - Fox Valley is located in Menasha. The campus houses the Barlow Planetarium and Weis Earth Science Museum.
- Metropolitan Opera company member Jean Kraft (mezzo-soprano) and Connie Clausen, a television and Broadway actress, literary agent, and author, are both from Menasha.
- Menasha is the hometown of three-time World Series champion and 2002 American League rookie of the year, Eric Hinske.
- WPPI Energy member since 1981

processing facility is pretty visionary. It was a unique circumstance that provided benefit for both our organizations,” says Krause.

Strong Local Industry

MU is the second largest WPPI Energy member utility in terms of load, with 75 percent of that load coming from nine industrial customers. Among these are SCA Tissue, a manufacturer of consumer tissue products; U.S. Paper Mills Corp., a paper and packaging manufacturer; Coveris, a packaging and coating company; and RR Donnelly/LSC Communications, a printing, binding and marketing company.

As an MU customer, SCA Tissue is eligible for incentive funding from WPPI

Energy and state program Focus on Energy. The two organizations recently contributed \$66,500 and \$9,000 respectively to help SCA Tissue develop and install coordinated air compressor system controls to maximize the system and collect data to improve energy efficiency and plan maintenance. It’s estimated that the project will save 1,730,000 kilowatt-hours (kWh) of energy per year for an annual savings of \$115,000.

MU is also in the third and final year of an LED street lighting project with the City of Menasha. City officials plan to upgrade over 800 street lights to energy efficient LED lights. The city is receiving \$34,200 from WPPI Energy’s Utility and Municipal Building efficiency incentive

program and another \$34,200 from Focus on Energy for the project. It’s projected to help the city save 393,000 kWh of energy and \$64,460 every year in energy and monthly fixed charges.

Community Outreach

As a locally owned, not-for-profit utility, MU hosts several events to “try to get out in the public and put a face to the utility,” says Krause. These include an electronics recycling event in the spring and fall; a booth at the Menasha Farm Fresh Market with LED light bulbs and other giveaways; and an annual breakfast where landlords and utility employees discuss energy efficiency programs, regulatory concerns and the utility’s collection process.

In the first full week of October, the utility hosts its annual Public Power Week celebration. The community event includes free energy efficiency kits; refreshments; booths from partner organizations; and interactive displays put together by the line crew, including a transformer demonstration, a scaled down electric pole, and a display toilet to show how to detect leaks.

Menasha’s unique waterfront location continues to attract businesses, residents and visitors to the community. As the city grows, utility employees continue to look for ways to further improve programs, services and tools to meet the needs of customers.



Menasha has a full service marina with 87 seasonal boat slips, boater amenities and a gift shop.

WPPI ENERGY NEWS

New Members Elected to WPPI Energy Committees and Advisory Groups:

- **Distribution Services Advisory Group (DSAG):**
 - *Newly Elected:* Scott Adler, Jefferson; Pat Weber, Eagle River (one-year term); Neal Wozney, Whitehall
 - *Term Renewed:* David Herfel, Mount Horeb; Randy Posthuma, Waupun
- **Policy & Communications Leadership Council (PCLC):**
 - *Newly Elected:* None
 - *Term Renewed:* Jim Brooks, Evansville; Jeff Feldt, Kaukauna; Roger Steingraber, New London; Pat Weber, Eagle River
- **Rates Services Advisory Group (RSAG):**
 - *Newly Elected:* Jeff Feldt, Kaukauna (two-year term); Jared Oosterhouse, Waupun; John Schuh, Oconomowoc (two-year term)
 - *Term Renewed:* Melanie Krause, Menasha; Kevin Westhuis, River Falls

New Committees/Advisory Groups Formed

Two new WPPI Energy groups were formed in 2017

- **Outage Management Task Force (OMTF):** The OMTF met for the first time January 25. The group will evaluate options for best meeting a diverse range of outage management needs and working with disparate systems across the membership.
- **Member Services Advisory Group:** The Energy Services Advisory Group (ESAG) and Information Technology Advisory Group (ITAG) combined to form the new Member Services Advisory Group (MSAG). MSAG formed with the goal of working on priorities laid out in the business plan, especially those regarding customer expectations and technology.

MEMBER NEWS

Members Attend Customers First! Coalition's Power Breakfast

Eight WPPI Energy utility representatives from Columbus, Evansville, Sun Prairie, Kaukauna, Waunakee, Reedsburg and Eagle River joined WPPI Energy employees, state representatives and other attendees at the Customers First! Coalition's annual Power Breakfast February 16. The main topic of discussion was the value of a regulated energy market in Wisconsin. Presenters included Nate Zolik, an administrative and regulatory attorney focusing on energy regulatory matters, Vikram Godbole, Regional Director of External Affairs for the Central Region of Midcontinent Independent Service Operator, Inc. and Public Service Commission of Wisconsin (PSCW) Chair Ellen Nowak.

WPPI Energy Representatives Attend APPA Legislative Rally:

48 member advocates representing 21 WPPI Energy member communities



Pictured from left: Don Baumann (Hustisford), Randy Jaeckels (New Holstein), Todd Tessmann (Hustisford), Glen Falkenthal (Hustisford), Mayor Dianne Reese (New Holstein), Mike Peters (WPPI Energy), Lee Meyerhofer (Kaukauna) and Cliff White (Sturgeon Bay)

attended the 2017 American Public Power Association (APPA) Legislative Rally Feb. 27 - Mar. 1 in Washington, D.C. The legislative rally is an important opportunity for municipal utilities and

the communities they serve to have their voices heard by members of Congress. Topics of discussion included tax-exempt municipal bonds, cyber security, energy infrastructure and regulatory reforms.

STATE ENERGY POLICY UPDATES

Wisconsin

Key Energy Committee Chairpersons Named:

- Rep. Mike Kuglitsch (R-New Berlin) will chair the Assembly Energy and Utilities Committee again this session.
- Sen. Devin LeMahieu (R-Oostburg) will be the new Chair of the Senate Elections and Utilities Committee. Plymouth is in his district.
- Sen. Rob Cowles (R-Green Bay) will again chair the Senate Natural Resources and Energy Committee. Kaukauna is in his district.

PSCW Allocates Funding to Rural Wisconsin: The Public Service Commission of Wisconsin (PSCW) is allocating up to \$26 million toward rural energy efficiency programs. The PSCW recently found that the benefits

some rural customers received from the Focus on Energy program were disproportionate to those received by urban customers. The funding is intended to address this discrepancy and encourage broadband expansion in rural Wisconsin. The PSCW also announced a decision to provide up to \$20 million in funding to develop a hub and spoke anaerobic digester system.

Iowa

Iowa Senate Commerce Committee Chairperson Named: Sen. Bill Anderson (R-Pierson) was named Chair of the Iowa Senate Commerce Committee. Rep. Peter Cownie (R-West Des Moines) will maintain his role as House Commerce Committee Chair. All energy and utility legislation passes

through the House and Senate Commerce Committees.

Michigan

Michigan Energy Legislation Signed into Law: The Michigan Legislature passed two bills addressing a host of energy and utility policies. The long-debated bills received bipartisan, but not unanimous support. Key changes include:

- Mandatory integrated resource planning filings by rate-regulated utilities
- A 5% increase in the renewable portfolio standard
- Requirements for utilities and alternative electric suppliers to demonstrate they have the capacity to serve their customers
- Mechanisms intended to encourage utilities and alternative electric

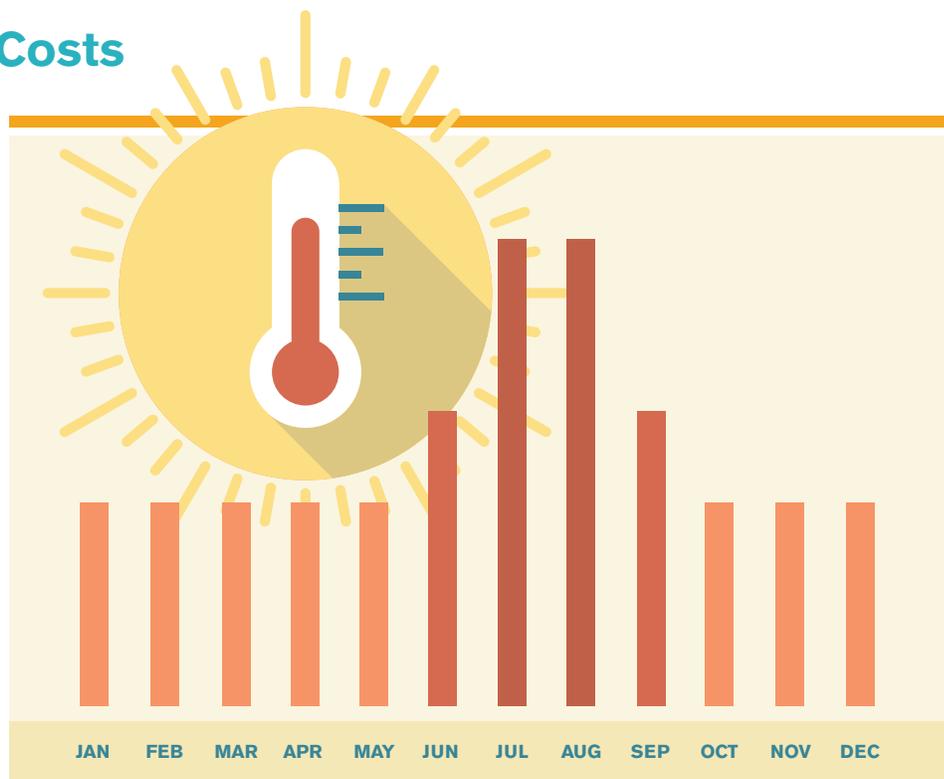
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Seasonal Electricity Costs

This year, in order to more accurately reflect seasonal differences in the cost of electricity, WPPI Energy's monthly wholesale price and member utility prices will follow a seasonal profile, in which the cost of power is more expensive in the summer months than the rest of the year.

Electricity is more expensive in the summer, because utilities need to have more generation and transmission capacity available to serve the peak demand for electricity. This usually occurs between June and September when customers increase their use of appliances and other equipment that require a lot of electricity, such as air conditioning and refrigeration.

When demand for electricity is high, there is a corresponding price increase in the energy markets. This makes it more expensive for energy wholesalers, such as WPPI Energy, to purchase electricity. This means it's also more expensive for our member utilities to purchase the electricity needed to serve their customers during times of high demand. As a result, customers will likely see higher bills between June and September, and lower bills during the other eight months. This shift will typi-



As temperatures rise, so does the cost of electricity.

cally be reflected through the Power Cost Adjustment Clause on a customer's bill (on a per kilowatt-hour basis).

Overall, the annual amount most customers pay for electricity will be comparable to previous years.

Making energy efficiency improvements, using less energy and shifting load to reduce peak demand are especially

important in the summer months and will help customers save money.

Resources are available to help customers identify energy efficiency opportunities and get connected with incentive or financing programs. Contact your Energy Services Representative for more information.

Energy Efficiency Measures to Help Your Business Save Money

There are many ways to cut down on your business' energy usage during peak hours in the summer when electricity costs are highest. Some of these include:

- Retrofitting fans and other cooling systems to be more energy efficient
- Improving industrial ventilation, refrigeration and cold storage systems
- Shifting production or processes to off-peak times

Your utility has several resources to help you, including:

- Energy efficiency incentive funding - There are several programs through which a business can receive funding to help offset the cost of installing energy efficient equipment and/or upgrading current inefficient equipment.

Taking measures to help the grid during times in which we need to shed load can save you money, too. Here are a couple programs your utility provides:

- Interruptible load credits - Interruptible load credits are available to eligible

customers that are able and willing to curtail energy use upon request. Customers most suited for this type of arrangement are those that can periodically "interrupt" their operation with minimal impact to their business.

- Backup Generator Program - Financial incentives are available for business customers willing to share their backup generator capacity with WPPI Energy during select peak electricity use periods.

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suppliers to invest in generation resources in Michigan

The bills won support after more controversial measures were removed.

Michigan House Energy Policy Committee Chair Named: Rep. Gary Glenn (R-Larkin Township) was named Chair of the Michigan House Energy Policy Committee. Sen. Mike Nofs (R-Battle Creek) will remain Chair of the Senate Energy and Technology Committee.

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understand complex concepts.” This ability is often challenged in a new hire’s first months of work, as he or she undergoes intense book training and mentoring from veteran staff.

Thinking back on his early days, System Operator Nate Eklof says, “There was a large volume of information to process, and it took some time to learn how to interpret all the graphs, tables and webpages.” However, with help from Senior System Operator Marty Brey, he was able to work his first shift alone on the real-time desk in a matter of weeks.

“His patience is heroic,” says Eklof. “It’s not an easy job spending 12 hours at a time alone with someone who’s not used to staying up all night and trying to teach them lots of very abstract things.”

All of that information can provide a unique perspective according to Joe Greene, who worked as a system operator for several years (he’s now a planning analyst for WPPI Energy).

“I enjoyed having a bird’s eye view of the electric grid. The monitors in the operations center depict everything from members’ electric loads, to market pricing, to generator output, to weather. It’s just kind of cool to be able to see the overall picture.”

For the people who depend on reliable electricity, operations employees are the unsung heroes who make it possible – no matter what the time of day (or night).

Upcoming Technical Training Courses

Seventhwave Training | seventhwave.org/education/events

Power Quality Management and Arc Flash Safety

May 18 • Green Bay, WI

Focus on Energy Training | focusonenergy.com/about/events

Multifamily Builder Operator Certification (BOC) 1003 - Efficient Lighting Fundamentals

April 5 • Milwaukee Area Technical College, Oak Creek, WI

Building Performance Institute Certification

April 24-28 • Stevens Point, WI

Energy Efficiency Considerations for Commercial Air Conditioning Systems

April 27 • Madison, WI

Multifamily BOC 1004 - HVAC Controls Fundamentals

May 3 • Milwaukee Area Technical College, Oak Creek, WI

Industrial Ventilation - Energy Cost Reduction Opportunities

May 9 • Kohler, WI

Multifamily BOC 1005 - Indoor Environmental Air Quality

May 10 • Milwaukee Area Technical College, Oak Creek, WI

Operations and Maintenance Practices for Energy Efficiency

May 16 • Pewaukee, WI

Operations and Maintenance Practices for Energy Efficiency

May 17 • Green Bay, WI

Multifamily BOC 1006 - Common Opportunities for Low-Cost Operations

May 24 • Milwaukee Area Technical College, Oak Creek, WI

Multifamily BOC 1009 - Building Scoping for Operational Improvement

June 7 • Milwaukee Area Technical College, Oak Creek, WI

Strategic Energy Management

June 14 • Black River Falls, WI

Stronger Together: WPPI Energy Operations Department

Electricity is such a ubiquitous part of modern life that it can be easy to take for granted. Yet, behind every illuminated light, air-conditioned building and charged cell phone is a complex process that ensures electricity is available the moment it's called upon.

That process centers around the global electricity markets, which match electricity supply and demand across a regional grid. All WPPI Energy utilities and their customers are located in the midcontinent region, which is managed by the Midcontinent Independent System Operator, Inc. (MISO) electricity market.

WPPI Energy's System Operations Center (SOC) functions to maximize the value of our power supply resources in the MISO market and minimize the cost of the electricity we purchase through the market. This results in the lowest possible

cost of electricity for customers in WPPI Energy member communities.

The SOC is led by Todd Biese, Assistant Vice President of Operations, and is further staffed by people in three main roles:

- **Operations Coordinators:** facilitate the cost-effective participation of WPPI Energy's power supply resources in the MISO market and forecast the electricity needs of our members' customers on a daily basis.
- **System Operators:** staff the SOC 24x7 and are responsible for real-time communications with WPPI Energy's power supply resource partners and the MISO operations center. They also monitor incoming electricity meter data and resolve any issues.
- **Operations Analysts:** perform analysis and develop reports in an effort to

improve market outcomes for WPPI Energy's power supply resources and electricity purchases.

"Our staff members come from a variety of backgrounds," says Biese. "Usually we look for people with a college degree in an analytic field or equivalent experience. They also must have good communications skills and the ability to learn and

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Pictured from left: Sam Dvorak, Jon Meyer, Kevin Kleinfelt, Tom Sikes, Jim Janz and Todd Biese. Note: Due to their rotation schedules, some members of the operations department are not pictured.