

Solar is coming — is your utility ready?

By Rich Andrysik

*Distributed Resources
& Generation Specialist*

The costs to install solar photovoltaic (PV) systems have been dropping. Electricity consumers across the country are installing more and more systems, typically rooftop solar, to generate at least part of their electricity needs from this green energy source.

Although these systems are not as prevalent in the Midwest as other parts of the country, customers are installing them and utilities need to be prepared when a customer asks to connect a solar or wind energy generation system to the local electric grid.

Some small utilities have been surprised and sometimes caught unprepared when customers ask to connect solar or wind generation systems to the electric grid.

MEAN can provide its wholesale electric participating communities an interconnection policy to prepare utilities for customer requests to connect these distributed generation, or DG, systems. MEAN's policy, which includes rules and safeguards for interconnecting with an electric distribution system, is similar to policies used by other utilities in the Midwest.

The policy includes:

- An application form that collects project information for the utility such as who wants to connect, where, how big a system and the project time frame;



Stock photo

MEAN assists its wholesale power participants by providing an interconnection policy to prepare utilities for customer requests to connect residential rooftop solar systems to the local electric distribution system.

- An agreement that informs and binds the retail customer to the utility's rules; and

- A form for notice of completion, which allows the customer to notify the utility when the DG system is complete. Once complete, the utility checks the site for the required equipment and installs a meter. When both parties sign-off on the completion form, the customer may energize the system.

I have visited more than a dozen MEAN participant communities to encourage adoption of this policy. My visits typically include a presentation to the utilities board or city council, where I provide information regarding this interconnection policy and other DG system related topics such as net metering.

Net metering is a billing mechanism that allows a customer with a so-

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New generator delivered to Falls City

Falls City, Neb., received a new electric generator from Helsinki, Finland in June for the City's power plant.

Falls City Utilities Director Alan Romine

told News Channel Nebraska that it was cheaper to purchase the new 155-ton electric generator rather than to retrofit the City's old



Member News

generator to satisfy increased U.S. Environmental Protection Agency guidelines.

Video footage was recorded of the giant generator being slowly transported through the city to the local power plant.

The generator was shipped from Finland to Houston before heading to Falls City by railcar.

CAMU honors the late George Michael

The late George Michael of **Haxtun, Colo.**, was announced as the 2017 Darrell T. Davis Sheepherder Award recipient presented by the Colorado Association of Municipal Utilities (CAMU) at its Annual Conference in July in **Glenwood Springs, Colo.** Michael served as the Haxtun Town Superintendent and on the Municipal Energy Agency of Nebraska Board and Management Committee for many years before passing away in November 2016. NMPP Energy representatives attended the event.



NMPP Energy's 2016-17 Annual Report is online

The 2016-2017 NMPP Energy Annual Report and audited financial information is now available online.

Go to **www.nmppenergy.org** and click on the Annual Report link on the home page.

Nebraska PSC names new executive director

The Nebraska Public Service Commission in July named Mike Hybl as its new executive director.

Hybl, 63, previously headed the agency from 2007 through 2012, before leaving to become chief of staff for U.S. Sen. Deb Fischer. Most recently, he has been working as legal counsel for the Legislature's Transportation and Telecommunications Committee.

"We are excited to have Mike working with us again," said Commission Chairman Tim Schram. "A familiar face to many, his vast knowledge of policy and his experience on both the state and federal level will serve the commission well."

He replaces Jeff Pursley, who resigned in June. Hybl began his duties July 19.

Share your community successes in the Member News section. E-mail us at info@nmppenergy.org.

During the worst of times, the best of public power steps up

Driving into the City of Bayard, Neb., on the morning of June 13 felt like entering a war zone.

The night before, an F2 tornado struck the city of about 1,200 residents, uprooting numerous giant trees and damaging businesses and houses. It also left the entire city without electricity.

One of the many things I've learned during my career as utility services representative for the Nebraska Municipal Power Pool is when a small municipality is facing a crisis, public power utilities will answer the call to assist one of their own.

NMPP's mutual aid program was developed for this very reason—to provide the coordination of assistance between nearby utilities to help a neighbor utility during a crisis.

After an emergency planning meeting with multiple agencies and city officials, power restoration plans were under way the next day.

It was time for public power to roll up its sleeves.

Coordinating through NMPP's mutual aid program, utility crews and equipment from Mitchell, Hemingford, Kimball, Sidney, Chappell, Gering and Bridgeport were called in. The

Utility Services



By Bob Meade

Nebraska Public Power District brought crews and equipment and several rural electric cooperative utilities were coming in to repair areas outside the city.

When multiple utility crews are working in tandem, it takes significant planning and coordination, always keeping safety as the top priority.

The teamwork, dedication and selflessness of public power utility crews during times of crisis is special to witness. Utility and other emergency crews put in long, hard days as well as the volunteer supporters that serve meals and help clear debris to get the community back to its feet.

Western Nebraska Community College Power Line Construction and Maintenance Technology Instructor Ed Salazar, who lives in Bayard, called in his 27 power line students to volunteer. With just three weeks of class time under their belts, the students were limited in working with electricity, so they assisted in many other ways and received valuable experience from veteran line workers.

The city's most severe damage was near a local church where a funeral was scheduled for Friday. Some local ladies asked if they might be able to have power restored in time to cook Thursday for the funeral reception. An NPPD crew promised them they'd have power on by Thursday, which I honestly had doubts due to the extensive damage.

I checked in on the crew



Courtesy photo

Crews from several public power utilities help restore electricity in Bayard.

from time to time working tirelessly Thursday and they had everything energized by 7 p.m. Thursday night just as promised.

With public power utilities working together, most of the city had power restored by Wednesday night, just two days after the tornado hit. The remaining isolated outages were restored on Thursday and the mutual aid effort ended Thursday afternoon.

At NMPP Energy we use the phrase "working together works" frequently. Nowhere was that more apparent than in Bayard through the response and dedicated work of public power utilities to assist one of their own.

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Bob Meade is a utility services representative. Contact him at bmeade@nmppenergy.org.

NMPP members earn reliability designation

Seven NMPP member utilities earned the Reliable Public Power, or RP3, designation from the American Public Power Association for providing reliable and safe electric service, APPA recently reported. The six utilities awarded include:

- **Waverly Utilities** (Iowa)
- **City of Fort Morgan** (Colo.)
- **Lincoln Electric System** (Neb.)
- **Indianola Municipal Utilities** (Iowa)
- **Nebraska Public Power District**
- **Hastings Utilities** (Neb.)
- **City of Grand Island** (Neb.)



Reliable Public Power Provider

David Lynch, assistant director of utility operations at Michigan's Marquette Board of Light and Power and chair of APPA's RP3 review panel, presented the designations in May during the association's annual Engineering and Operations Technical Conference held in San Antonio, Texas.

The RP3 designation, which lasts for three years, recognizes

public power utilities that demonstrate proficiency in four key disciplines: reliability, safety, workforce development and system improvement.

Overall, 235 of the more than 2,000 public power utilities nationwide hold the RP3 designation.

"Utilities that have earned an RP3 designation demonstrate public power's emphasis on achieving leading practices and providing a high level of service to communities," said Lynch. "We are proud to welcome all utilities earning this recognition for the first time and to those renewing their designations."

This is the 12th year that RP3 recognition has been offered.

NMPP provides net metering assistance

The Nebraska Municipal Power Pool provides NMPP member utilities with net metering assistance through a cost-based service with three options:

- **Policy, guideline and procedure development.** This service provides one copy of policy, guideline and procedure document which includes: Current net metering laws for state, sample of ordinance for the municipality's consideration of adoption, sample form of interconnection agreement, sample form of customer application for interconnection and billing for a qualifying customer-owned generator.
- **Review customer generation application for interconnection.**
- **Development of rate for payment for energy delivered to utility.** This service calculates an avoided-cost rate (or rate required by law) for a municipal utility to compensate customers for net excess generation during the billing period. NMPP also can prepare a rate ordinance for the municipality's adoption of such rate.

Solar

Continued from page 1

lar PV system to partially offset their monthly energy use and sometimes receive credit from their utility for excess energy generated. It's important to remember the utility is always standing ready to provide the customer's total energy needs above the solar PV system's capabilities or when the system isn't generating any electricity such as on cloudy days or at night.

Having an interconnection policy in place before the utility or city office receives a request can alleviate confusion, better educate the customer and help streamline the overall process. The interconnection policy also helps with safety concerns and reliability of the local distribution system.

The utility checks for proper connections and a disconnection switch. This switch protects the utility's crew from electricity generated by the customer's equipment. A state inspector needs to check compliance with safety codes.

If any MEAN participant communities need assistance with an interconnection policy, please contact me at (800) 234-2595.

Study seeks ways to increase electricity flow between grids

A two-year, \$1.5 million study is under way that includes researchers from national laboratories, universities and the utility industry to study ways to better tie together the Eastern and Western interconnections of the U.S. electric grid. The goal is to be able to transmit significantly more electricity across the U.S. electric grid.

The study, headed by the National Renewable Energy Laboratory based in Golden, Colo., is part of a \$220 million Electric Grid Modernization Initiative announced by the U.S. Department of Energy in January 2016.

Currently, the nation's grid is divided into three separate grids - the Eastern Interconnection, the Western Interconnection and the Electric Reliability Council of Texas. The Eastern and Western grids are separated by a seam that generally runs north and south of the Nebraska-Wyoming border. Moving electricity across the grids is limited as they operate out of sync with one another.



Photo by Werner Sloccum, NREL/DOE

Iowa State's James McCalley describes computer models showing the effects of tying the country's two major power grids together.

Currently, the seven connections that cross the Eastern and Western grids allow for nearly 1.5 gigawatts of electricity, compared to the country's installed generation capacity of more than 1,000 gigawatts, said Iowa State's James McCalley, one of the study's researchers and a distinguished professor in engineering and chair in power systems engineering in

the department of electrical and computer engineering.

With the growth of wind-generated electricity in the Midwest and solar-generated electricity in the Southwest, there is more incentive to figure out a way to move more electricity across the seam when there is excess electric load.

Crete, Fort Morgan earn APPA safety awards

The City of **Crete**, Neb., and the City of **Fort Morgan**, Colo., Light and Power earned the American Public Power Association's Safety Award of Excellence for safe operating practices in 2016.

Rick Aguilar, chair of the APPA Safety Committee and director of job training and safety at Kansas Municipal Utilities, presented the awards during the Association's Engineering & Operations Technical Conference earlier this year.

"When it comes to electric utility operations, safety is a top priority for everyone involved; from lineman to operator," said Aguilar. "These utilities have embraced a culture of safety while serving their local communities and deserve to be recognized."

The Association noted that 270 utilities entered the annual Safety Awards, which is among the highest number of entrants in the history of the program.

Entrants were placed in categories according to their num-

ber of worker hours and ranked based on the most incident-free records during 2016. The incidence rate, used to judge entries, is based on the number of work-related reportable injuries or illnesses and the number of worker-hours during 2016, as defined by the Occupational Safety and Health Administration.

The Safety Awards have been held annually for the last 58 years.



Hubbell Power Systems focuses on manufacturing quality products

Hubbell Power Systems, Inc. (HPS), manufactures products that provide mission critical infrastructure and the delivery of power to millions of people worldwide. In its business, failure is not an option. So they manufacture products of uncompromising integrity, starting with its quality policy.

HPS holds itself to the highest standard, carefully selecting quality supplier partners to ensure they exceed all the expectations of their customers. Progressive supply chain management and strategic sourcing maximize the value of HPS. Through global operating efficiencies and

careful analysis of market trends affecting commodities, they achieve greater capacity, leveraged purchasing power and cohesiveness along the path of our supply chain. Success in supply chain management affords HPS competitiveness and growth.

Their commitment to quality enhances the reputation of a family of valued brands that are well-known for reliability.

HPS's commitment to quality enhances the reputation of a family of valued brands that are well-known for reliability. All HPS's products are backed by warranty, and each of their facilities follow a rigorous quality

assurance process specifically designed around the products we manufacture.

Certified lean engineers monitor performance throughout the manufacturing cycle, and perform internal audits and third-party audits. HPS is confident in its quality assurance process. They invite their customers to perform their own audit any time they like or to just take a factory tour.

For more information on HPS's services, contact Tim Andrews, territory manager, Hubbell Power Systems, Inc. at taandrews@hubbell.com or (402) 321-3944.

For a complete listing of NMPP Energy Champion Businesses, see page 7

Employment

Utility Worker

The City of **Franklin, Neb.**, has an opening for a full-time utility worker. Experience with an electrical distribution system or in the electrical field is preferred. Duties include skilled labor for new construction, operation and maintenance of the electric, water and sewer systems. Perform skilled operation of equipment, maintenance of other municipal facilities and assisting in street and public property maintenance. Must be willing to obtain a grade 4 water operator's license and have a high school diploma or equivalent. Wage based on experience including an excellent benefit package with insurance, vacation, holidays and retirement. Applicant must live within Franklin city limit. Applications may be obtained at the City office at 619 15th Ave, Franklin, NE 68939. Or by e-mail at: rfelzien@cityoffranklin.net. Applications will be accepted until the position is filled. For more information call (308) 425-6295.

Journeyman Lineman

The City of **Broken Bow**/Broken Bow Municipal Utilities (Neb.) will be accepting applications for a journeyman lineman. Applicants should have

two years prior experience working as lineman on electric transmission and distribution systems. Journeyman lineman certification is preferred. Duties will include the operation and maintenance of the City of Broken Bow electrical distribution system. Starting pay will be based on prior experience and certifications. Applications and job descriptions are available at the Broken Bow Municipal Building at 345 South 10th Ave in the Utility office, and should be returned to the Utility office with applicable resume. Applications will be taken until the job is filled. The City of Broken Bow is an equal opportunity employer. For more information call (308) 872-6884.

General Manager

Due to the planned retirement of the current General Manager, the Board of Public Works/**Nebraska City Utilities** (NCU) seeks an energetic and experienced executive to provide strategic leadership to its customers, community and employees as the general manager. The general manager has direct responsibility for the safe, reliable and efficient delivery of electric, natural gas, water and wastewater services to the community of Nebraska City, Neb., and surrounding areas.

NCU is governed by a five-member Board of Public Works appointed by the mayor and confirmed by the commissioners for staggered five-year terms. NCU employs 67 staff members working in utility operations, consisting of electric generation and distribution, natural gas transmission and distribution, water treatment and distribution and waste water.

Reporting to the Board of Public Works, the NCU General Manager is responsible for strategic and people leadership, as well as all aspects of NCU operations. While a bachelor degree is preferred, all qualified candidates with senior-level leadership experience, especially in a municipal utility setting with progressively increasing experience, are encouraged to apply. While remaining approachable and easy to talk with, NCU's general manager must be an outstanding leader with top-notch communication skills to facilitate collaboration among employees, customers and the community. Also, NCU's general manager must have a proven history of delegating/coaching appropriately to maintain high expectations/accountability of employees for assigned responsibilities.

See 'EMPLOYMENT' on page 8

Support NMPP member communities through the Champions Business Program

Champions are businesses and organizations that support NMPP Energy's effort to provide products and services to members. Consider these businesses when your utility or municipality has a business need. If your business is interested in becoming an NMPP Energy Champion, call Andrew Ross at (800) 234-2595.



Champions Business Directory

Financial Services

Ameritas Investment Corp. (Ameritas.com).....	Omaha, Neb.
D.A. Davidson & Co. (dadavidson.com/ficm).....	Omaha, Neb.
First National Bank (Firstnational.com).....	Omaha, Neb.
UNICO Group, Inc. and Midlands Financial Benefits (unicogroup.com).....	Lincoln, Neb.
Nebraska Energy Federal Credit Union (ne-fcu.com).....	Columbus, Neb.
RBC Capital Markets (rbc.com).....	Denver, Colo.

Regulatory/Compliance Services

Air Regulations Consulting (airregconsulting.com).....	Lincoln, Neb.
Power Plant Compliance (Powplant.com).....	Oketo, Kan.
NAQS Environmental Experts (naqs.com).....	Lincoln, Neb.

Utility Services & Supplies

EnergySolutions, Inc. (Energysolutions-inc.com).....	Omaha, Neb.
Fairbanks Morse Engine (Fairbanksmorse.com).....	Beloit, Wis.
Hometown Connections, LLC (Hometownconnections.com).....	Lakewood, Colo.
Hubbell Power Systems (Hubbellpowersystems.com).....	Bellevue, Neb.
JK Energy Consulting, LLC (JKenergyconsulting.com).....	Lincoln, Neb.
Kriz-Davis Co. (Krizdavis.com).....	Grand Island, Neb.
NovaTech (Novatechweb.com).....	Lenexa, Kan.
PDS, Inc. (PDSinc.biz).....	Omaha, Neb.
Protective Equipment Testing Laboratory (petl.com).....	Great Bend, Kan.
REM Electric, Inc. (Davidsoncompanies.com).....	Nebraska City, Neb.
RESCO (Rural Electric Supply Cooperative) (resco1.com).....	Ankeny, Iowa
Solomon Corporation (Solomoncorp.com).....	Solomon, Kan.
Stanley Consultants, Inc. (Stanleyconsultants.com).....	Muscatine, Iowa

Computer/Technology Services

Proteus (Proteus.co).....	Lincoln, Neb.
Salt Creek Software, Inc. (Saltcreek.com).....	Lincoln, Neb.

Engineering Services

EPSIM Corporation (epsim.us).....	Boulder, Colo.
Exponential Engineering Company (exponentialengineering.com).....	Fort Collins, Colo.
HDR (hdrinc.com).....	Omaha, Neb.
JEO Consulting Group, Inc. (jeo.com).....	Wahoo, Neb.
Lutz, Daily & Brain, LLC (ldbeng.com).....	Overland Park, Kan.
Olsson Associates (Olssonassociates.com).....	Lincoln, Neb.
Sega Inc. (segainc.com).....	Stilwell, Kan.

Legal Services

Chapman and Cutler, LLP (chapman.com).....	Salt Lake City, Utah
Spiegel & McDiarmid (spiegelmcd.com).....	Washington, D.C.

Telecommunication Services

Consortia Consulting (consortiaconsulting.com).....	Lincoln, Neb.
River Oaks Communications Corp. (rivoaks.com).....	Centennial, Colo.



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Employment Opportunities (cont.)

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Compensation will be commensurate with experience. NCU offers a generous comprehensive benefit package including medical, dental, life, long term disability, and vision insurance, paid vacation, holidays, and a defined contribution pension plan.

The NCU general manager is expected to live within the city limits of Nebraska City, or at an address served by the NCU electric utility within a 15-minute response time to the NCU office.

Resumes and cover letters will be accepted by email only at bpw@nebraskacityutilities.com.

Resumes will be accepted until the position is filled. NCU is an Equal Opportunity

Employer. Offers are contingent on passing a background check and pre-employment physical and drug test.

Village Superintendent

The Village of **Arnold**, Neb., (Pop. 597 in Custer County), seeks a village superintendent. The individual is to coordinate, oversee, manage and assist in the operations of all the departments. Departments include the general (general government, pool, parks, community center), street, electric, water, sewer, and solid waste. Requirements include graduation from high school or equivalent, a valid Nebraska driver's license. Applicant must have or be able to obtain a CDL within six months of hire. Individual must have

knowledge of an electric distribution system. Certification in wastewater and water are desired but the Village is willing to train. Wage is based on experience. Please contact Village of Arnold, PO Box 70, Arnold, NE 69120; (308) 848-2228; arnoldvillage@gpcom.net for an application, job description and list of benefits. Resume and references must be attached to the application. Position will be open until filled. EOE.

Upcoming Meetings

August 16 - MEAN Committees

August 17 - MEAN Board/
Mgmt. Committees

For all descriptions of employment opportunities go to www.nmppenergy.org.

To submit an ad: NMPP members can advertise job openings for free in the Essent newsletter and on the nmppenergy.org website. E-mail your job opening to: info@nmppenergy.org.

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