

BULLETIN

The energy and planning resource for Western utilities

ASPEN REACHES 100-PERCENT RENEWABLES GOAL

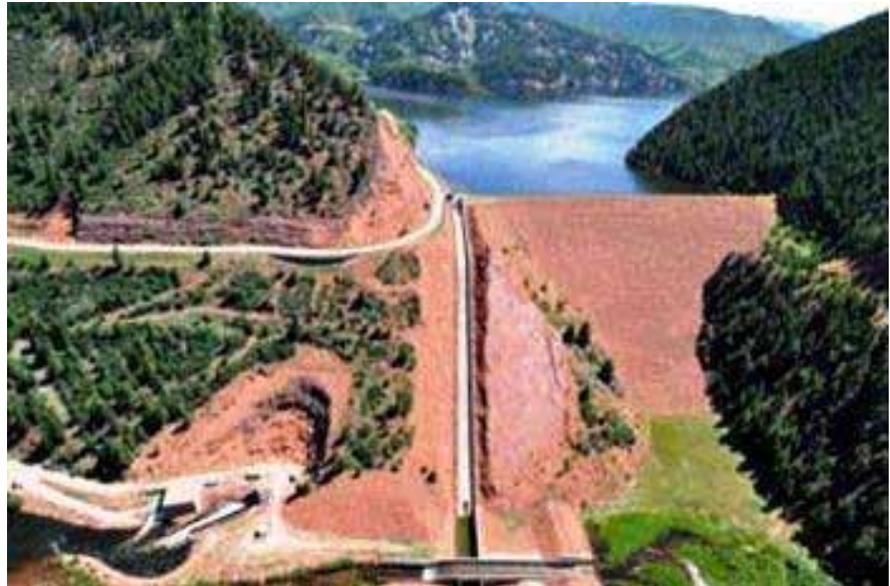
A decade of striving to build a clean energy portfolio culminated in success for Aspen, Colorado, when the city recently announced that its municipal electric utility now receives all of its power from renewable sources.

A contract the city signed in late August with its power wholesaler Municipal Energy Agency of Nebraska (MEAN) replaces coal power—about 20 percent of Aspen’s electricity supply—with wind energy. The MEAN purchase, which put Aspen over the finish line, will initially add less than \$2 per month to the average residential utility bill.

Aspen Utilities and Environmental Initiatives Director David Hornbacher praised MEAN, noting, “If it weren’t for MEAN we couldn’t be in this position. The members (of MEAN) are valued and proactive – this is a win-win for both organizations.”

Mixing it up

The City of Aspen Utilities energy portfolio consists of about 53 percent wind power and 46 percent hydroelec-



The Ruedi Dam and Reservoir, part of a multipurpose, trans-mountain water diversion project, provides about one-third of Aspen’s power requirements. (Photo courtesy of City of Aspen Utilities)

tricity, with small amounts of solar and landfill gas. The wind comes through MEAN from wind farms in the Nebraska cities of Kimball, Ainsworth, Bloomfield, Petersburg and Crofton Bluffs, and one in Wessington Springs, South Dakota. In addition to an allotment from Western, generators on Ruedi Reservoir, Maroon Creek and Ridgway Reservoir make up the hydropower portion.

“The challenge is to secure the most effective mix of renewables to meet the customer load reliably,” Hornbacher explained. “Each community’s energy use is unique, and each renewable energy source has its own personality.”

Getting the right mix means more than just resources, Hornbacher added. “The key is projects, conservation

and efficiency and partners,” he said. “We are lucky to have such willing and supportive partners in MEAN, NREL [National Renewable Energy Laboratory] and Western.”

NREL worked with Aspen, MEAN and other agencies to define renewable energy, determine what projects would best fit with Aspen’s load and evaluate the utility’s conservation and efficiency measures. Those tools include a renewable energy mitigation program, green building code, tiered rate structure and energy performance contracting. “If you aren’t working with customers and managing your load, you could wind up using more energy,” said Hornbacher.

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Community driven

Customer support for a local renewable energy supply dates back to the 1980s when the Aspen city council decided to build the plants at Ruedi Reservoir and Maroon Creek. The community formalized the plan to go 100-percent renewable 10 years ago. "Aspen residents have always had very strong environmental values," said Hornbacher. "It helps to live in a town where the civic leadership is representative of the community."

Smaller municipalities so far have a clear edge on large metropolitan areas in "going green." The mountain resort town of 7,000 joins Burlington, Vermont, (pop. 45,000) and Greensburg, Kansas, (pop. 800) in becoming the first cities in the nation to reach the all-renewable energy goal. Georgetown, Texas, (pop. 47,000) plans to follow these leaders next year with a 25-year contract to buy 150 megawatts (MW) of clean power from new SunEdison solar plants.

Hornbacher noted that being small is not necessarily an advantage, although a smaller load opens up the possibility of fitting smaller projects into the portfolio. "It is important to



Built in the 1980s, the Maroon Creek hydroelectric project was one of Aspen's first forays into local renewable energy development. (Photo by City of Aspen Utilities)

note that each of these communities took a different course to reach their goal. You have to look carefully at your own situation," he cautioned. "One important takeaway is that renewable energy does not automatically translate to higher rates. Aspen's residential rates are still among the lowest in the state."

Going above, beyond

Aspen's vision does not stop at the city limits, however. Hornbacher hopes the city's accomplishment will spark a dialogue on the state level and challenge other municipalities to engage with their energy supply.

The media beyond Colorado have taken notice as well. Television stations from California, Utah and China have interviewed the utility to find out how a small town in Colorado achieved the big goal of shifting its energy supply to renewable resources. "We've demonstrated that it is possible," Hornbacher said. "Realistically, we hope we can inspire others to achieve these higher goals."

That is the kind of attention Western likes to see its customers receive. We congratulate the city of Aspen on setting their sights high, sticking to their plan and creating a clean, reliable energy future. ⚡

ENERGY SERVICES BULLETIN

The Energy Services Bulletin is published by Western Area Power Administration for its power customers.

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ENERGY EXPERTS HOTLINE, WEBSITE DISCONTINUED

As part of an effort to serve our customers more effectively, Western has discontinued the Energy Experts hotline and website. Our Energy Services website still provides plenty of technical assistance resources and information on integrated resource planning, along with a direct connection to your Western regional representative.

Watch for new tools and calculators to help you plan your load management programs and consumer energy programs. We welcome suggestions from customers who have found online tools that proved useful in their planning efforts.

We are still here to answer your questions about energy-efficiency measures, new technologies and customer service programs. Contact Western's Energy Services program manager at 720-962-7419, and please don't hesitate to share other ideas and feedback about how Energy Services can best support your utility. ⚡

SIoux VALLEY ENERGY DIPS TOE IN SOLAR POWER FOR MEMBERS

The words “renewable energy” and “South Dakota” usually call up images of wind turbines rather than solar panels, and rightly so—the state has almost 900 megawatts (MW) of installed wind capacity, compared to less than 300 kilowatts (kW) of solar. Under those circumstances, you might expect South Dakota consumers and utilities both to have a lot of questions about solar power. Sioux Valley Energy is taking the do-it-yourself approach to finding answers by installing a small solar array on one of its facilities.

The 24-kW array on the Brandon, South Dakota, service center consists of 80 panels, aimed in three different directions to determine which configurations work best during peak energy use times. In addition to siting, Sioux Valley is also collecting data on selecting equipment, cost benefit and installation.

Carrie Law, the cooperative’s director of Communications and Government Relations, explained, “Our members want to know more about distributed generation and how solar panels perform in our climate. We wanted our employees to get experience with the systems, too,” she added. “In the long run, that experience is likely to be worth more than the small amount of power the system generates.”

Well-rounded solar education

The demonstration project became something of a crash course in solar for Sioux Valley employees. A committee drawn from customer electrical services, customer service, accounting and engineering was involved at every step, from surveying members about their interest in solar to designing and installing the array. “The board asked us basically to throw everything solar on the table,” said Reggie Gassman, manager of Customer Electrical Services.



Sioux Valley Energy employees work together to install a 24-kilowatt solar array on the cooperative’s Brandon, South Dakota, service center. The demonstration project is a learning experience for both the electric cooperative and its members. (Photo by Sioux Valley Energy)

Installation turned out to be one of the easier parts of the project, noted Law. “Panels are designed now so that it is not that difficult to put them up,” she said. “From a safety standpoint, though, it is always good to work with qualified technicians. We want our members to know that their utility can provide that expertise now.”

All fired up

The array began generating power in May, with the south and southwest panels being the high performers. “That was pretty much to be expected,” said Law. “It will change come fall and winter. We will need to collect a lot more data before we are ready to draw any conclusions about performance,” she added.

If members are interested in learning how solar performs in the local climate, the utility wants to know more about how it performs in relation to peak demand. Once a winter-peaking utility, Sioux Valley now faces the challenge of a diverse load that includes agriculture customers, data centers and a growing residential territory. East River Electric Power Cooperative, one of Sioux Valley’s wholesale power suppliers, connected the array to a SCADA system. “That should give us

some good information on peak offset,” observed Gassman.

Waiting, watching

Now that the solar array is up and generating, members are taking a wait-and-see approach. That is not surprising, given that the survey the employee committee conducted last fall showed that people wanted more data to help them make informed decisions. “We already knew that our members are very interested in solar power, and that came out in the survey,” Gassman noted, “but so did their concern about costs and payback. That is why we chose the demonstration route.”

In the meantime, members can see the solar system when they drive by the service center, which is located on a main road between Brandon and Sioux Falls. Managers from other co-ops have toured the facility, and Gassman recently gave a presentation on the project to the local chapter of the Izaak Walton League conservation group.

Members can also follow the array’s output from an online dashboard that displays the kilowatt-hours generated each day and a monthly comparison. “We have been urging members to use

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IN-HOME EVENTS JUMP-START OUTREACH, SAYS DOE BETTER BUILDINGS PROGRAM

Keeping customer outreach programs fresh is a challenge for even the most customer-oriented utility. The Marketing and Outreach Handbook from the Energy Department's Better Buildings Program recommends using in-home events to show customers the real-world benefits of energy-efficiency upgrades.

Unlike remodeling projects, the benefits of a home energy upgrade are generally not immediately visible to the casual observer. Strategies that demonstrate tangible benefits from upgrades can help customers understand the value of such projects and motivate them to invest in improvements.

Utility-sponsored house parties and demonstration homes help make energy efficiency real by showing potential customers what a home energy assessment or upgrade entails. In some cases, the hosts of these events were interested or satisfied customers—trusted marketing sources—who invited friends and neighbors to their homes. Utility program staff and contractors were typically on hand to walk the guests through an assessment of the house or to point out the efficiency measures in upgraded homes, and to answer any questions.

The handbook offers case studies of successful home tour programs across the United States. A few proven practices that make upgrade benefits visible include:

- **Show how assessments work**
Energy Impact Illinois used "house parties" to build momentum for energy assessments and upgrades. Trusted neighbors hosted contractors who showed guests where energy was being wasted and explained ways to improve comfort while saving energy.
- **Hold house tours**
New Orleans, Louisiana Worthwhile Investments Save Energy gave open

house tours in the upgraded homes of happy clients. Signs highlighting completed work were posted throughout the house, and the upgrade contractor was present to talk about the associated energy savings. These showcase events produced high-quality leads who were likely to undertake projects.

- **Invite the whole neighborhood**
ShopSmart with JEA, a Florida utility rebate program, threw a Home Energy Makeover: Block Party to raise community awareness about its rebate opportunities. Homeowners who had received home energy assessments from a local energy professional hosted block parties for their neighbors. The energy professional reviewed the assessment and upgrade process, discussed rebate options and answered questions from friends and neighbors who attended.

■ **Make efficiency personal**

The California Center for Sustainable Energy provided demonstration tours in homes that completed upgrades in Chula Vista, California. Potential customers could learn about their neighbors' experiences, ask questions of the home performance professionals who installed the upgrades and sign up for an energy assessment of their own home for less than \$50.

Start here for success

You will find more residential energy-efficiency outreach tips, step-by-step instructions and program examples in Marketing & Outreach – Develop Implementation Plans to jump-start your outreach program. If you haven't used the Better Building Residential Program Solution Center, take a tour through its resources for key lessons and best practices drawn from the experience of utilities, energy organizations and their partners. ⚡





AROUND THE WEB

CELEBRATE PUBLIC POWER WEEK WITH THESE RESOURCES

Public Power Week, Oct. 4-10, is a great excuse to remind your members that they are the “public” in public power, and to educate them about energy issues. America Public Power Association (APPA) has put together a list of online resources to help cooperatives and municipal utilities in their public outreach efforts, during Public Power Week and beyond. You can link to them from your website and include the resources in your publications and communications.

■ Department of Energy Science Education

This website supports science education through educational online content, resources for parents and teachers, internships and student partnership programs, and national events for students like Solar Decathlon and the National Science Bowl. Younger students can delve into energy science and conservation with resources like Energy Kids, Energy Star for Kids and an energy-themed coloring book.

■ DOE Energy Saver

What better way to celebrate Public Power Week than introducing your members to this treasure trove of tools and information on saving energy and money at home. If your utility already shares Energy Saver tips through your website and bill stuffers, consider tying topics from Prices and Trends to a big-picture story about how public power benefits the community.

■ Federal Energy Regulatory Commission Student’s Corner

Very few people outside the power industry now what FERC does or the part the commission plays in keeping our lights on. Even adults could learn a thing or two from the games, quizzes and other multimedia on this website.

■ APPA’s Energy Efficiency Resource Central

Don’t just start a new energy-efficiency program for your members—use these resources to explain to them why energy efficiency is good for them and for the community.

■ Alliance to Save Energy Top Ten Energy Efficiency Tips

Everyone loves a Top Ten list, especially when it makes saving energy easy at home, work, school and on the go.

■ Environmental Protection Agency What You Can Do

Answer your members’ questions about climate change and offer simple steps they can take at home, school and the office to protect the climate, reduce air pollution and save money.

■ Electrical Safety Foundation International Home Safety, Workplace Safety and Public Safety

Let your members know you care about their safety with tips for consumers and educators from ESFI.

■ APPA Pride in Public Power campaign

This campaign encourages public power utility managers, staff and governing bodies to promote the benefits of public power to the communities they serve. Find programs and tools to help you tell your story. ⚡

Sioux Valley Energy from page 3

the website, and one recently came up to me on a camping trip to tell me that he is monitoring the project,” said Law.

Next step for renewables

The data Sioux Valley is collecting will help the co-op determine how solar fits into its overall mix and what direction a member program might take. Gassman thinks it may

take several years for solar to really catch on in South Dakota. “We have such affordable rates right now that renewable energy doesn’t really pencil out for most people. But the survey indicated that members believe renewables should play a part in Sioux Valley’s future portfolio,” he acknowledged.

The co-op’s portfolio already includes about 15 member-owned solar systems, hydropower, waste heat recovery, a small amount of biogas from manure digesters and wind. Most of the wind comes from

generation-and-transmission co-ops East River and Basin Electric Power Cooperative.

Future regulation, new technology, changes in the economy and environmental concerns are likely to factor into shaping Sioux Valley’s energy mix, as well. The one thing utilities can count on today is that tomorrow will be different. Fortunately, with a board, staff and members who are willing to learn something new, Sioux Valley Energy will be prepared for whatever comes next. ⚡

ENERGY DEPARTMENT OFFERS \$6 MILLION FOR NATIVE AMERICAN CLEAN ENERGY

Western, DOE Office of Indian Energy, present free webinar for applicants

Sept. 16

1-2 p.m. MDT

The Energy Department (DOE) announced on September 2 a \$6 million grant opportunity to establish clean energy and energy efficiency projects on tribal lands. The Department's Office of Indian Energy is soliciting applications from Indian tribes (including Alaska Native regional corporations, village corporations, tribal consortia and tribal organizations) and tribal energy resource development organizations to install facility-scale clean energy and energy efficiency projects and community-scale clean energy projects on Indian lands.

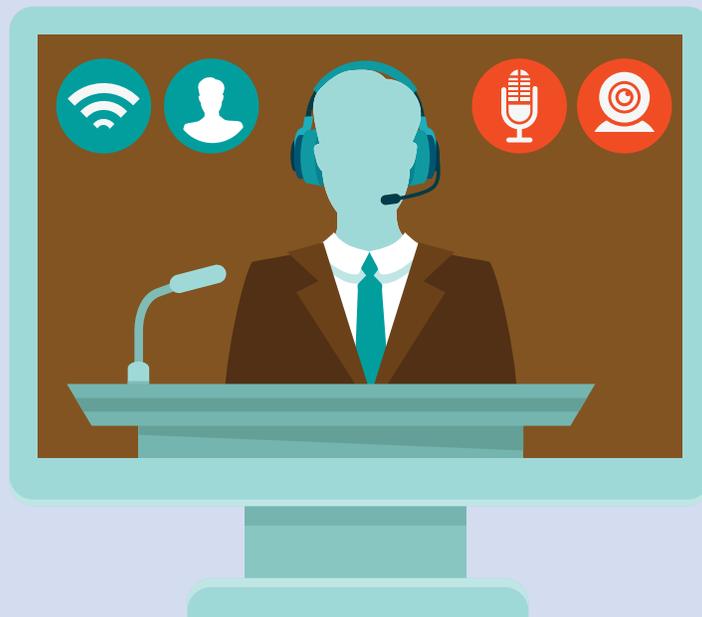
Accompanying the funding announcement, DOE issued a report showing that threats to tribal energy infrastructure are expected to increase as climate change exacerbates extreme weather conditions. *Tribal Energy Systems*

Vulnerabilities to Climate Change examines in detail, region by region, how climate change is likely to affect the energy supply system serving tribal lands—including many system components that are not directly owned or controlled by

tribes. The report concludes that tribes that own and operate their energy infrastructure have greater self-determination in building resilient energy infrastructures.

The Office of Indian Energy, in coordination with Western, is hosting an informational webinar on the funding opportunity on Sept. 16, 2015, from 1–2 p.m. Mountain Daylight Time. Attendees will hear who is eligible to apply, what the application needs to include, cost share and other requirements, how to ask questions and how applications will be selected for funding. There is no charge for the webinar, but advanced registration is required.

Applications must be submitted by Dec. 10, 2015, 5 p.m. ET. ⚡



A LOOK AHEAD:

APPA CUSTOMER CONNECTIONS OFFERS ECONOMIC DEVELOPMENT TRAINING

Utilities support the economic health of their communities by providing reliable power at affordable rates, but they will discover they have much more to offer at the Customer Connections Conference Oct. 18-21 in Austin, Texas.

The American Public Power Association (APPA) has put together a full track of economic development sessions for not only utility professionals, but local officials and city staff, board members and regional economic development and marketing specialists, too. All are encouraged to attend the event at the APPA member rate.

Improve key account service

A roundtable session will kick off the economic development track on Monday morning, Oct. 19. Key account and economic development professionals will come together to discuss the best practices for working together toward common goals. Participants will learn how to identify roles and actions, as well as how to collaborate on projects to attract and retain businesses.

Customers Speak is an afternoon panel that brings the large customer into the mix. Representatives from Whole Foods, Samsung Austin Semiconductor and other Austin-based key accounts will talk about what they expect from utilities and what drives customer satisfaction and decisions on location and expansion.

Bring business to town

Strategies for making your community stand out as a business-friendly environment are the

focus of two more sessions. Retail Recruitment: Tips and Strategies for Building Stronger Communities looks at proven techniques to recruit and retain retailers and foster local entrepreneurship.

Finding creative solutions and new opportunities in environmental regulations is the topic of Using Sustainability as an Economic Development Tool. Hear from utilities that turned energy efficiency and sustainable innovation into drivers for economic growth.

Set sites high

Location may still be king, but it does not have to be your community's destiny. On Tuesday morning, Oct. 20, participants will learn from experts how to identify and market to the right sectors, and discover what selectors really want in a site. The session Using Analytics and Visualization to Create Economic Development Opportunities will provide tools for evaluating the assets in your service territory and focusing your economic development efforts.

Later that afternoon, Site Selection Panel: Business Trends 2015 delves deeper into the trends and location priorities currently driving economic development activity in a number of industry sectors. A panel of site locators will talk about what they're looking for when they visit your

community, meet with local leaders and go through the incentives and negotiations process.

Do it right

The final two panels look at best practices in economic development. Successful Economic Development from a Statewide Perspective explores the programs and policies that make Texas one of the best states for business. Economic development representatives from Texas talk about business recruitment and expansion, incentives to expand and cultivate industry clusters and creation of a unified and proactive approach to economic development.

The track raps up Wednesday, Oct. 21 with Utility Economic Development Best Practices: Roundtable Discussion. After hearing about a national survey on the topic and reviewing utility case studies on successful economic development projects, strategies and practices, attendees will have the chance to share their experiences. There will also be a discussion on how utilities measure the value of economic development efforts and how to articulate success.

Public power professionals involved in economic development, key accounts, energy services, marketing, public communications and customer service can contact APPA at 202-467-2921 to learn more about this educational and networking event. The International Economic Development Council You are leaving Western's site. recognizes the Customer Connections Conference as a professional development event and offers continuing education credits to attendees. ⚡