WATT'S UP
AT LA PLATA ELECTRIC ASSOCIATION
DECEMBER 2015
LPEA
La Plata Electric Association, Inc.
A Touchstone Energy® Cooperative

A trip back in time...

Photos: Indiana Reed

Plant manager Jeff Wilbanks (second from left) explains the history and function of the Tacoma Hydroelectric Generation Station.

While LPEA's Board of Directors and staff essentially deal daily with the nuances and processes for distributing electricity to co-op members, very rarely do they have the opportunity to actually "see" how power can be produced, let alone walk among the ghosts that were among the first to deliver alternating current (AC) to the region.

On Oct. 30, four LPEA board members – Karen Barger, Tom Compton, Kohler McInnis and Joe Wheeling, as well as CEO Mike Dreyspring – took a "field trip" back in time to further their "electrical" education, and visited the Tacoma Hydroelectric Generation Station, located about three miles north of Rockwood.

"It was fascinating. Jeff Wilbanks is a Renaissance man," says Barger, referencing Tacoma's plant specialist tasked with repairing and maintaining the generation station. "He's a self-proclaimed mechanic, but he's also historian, inventor and educator."

Indeed, Wilbanks' enthusiasm for Tacoma and its history is palatable. Built in 1905 to supply power to the mines and milling operations in the Silverton area, Tacoma employed a "new" technology that remains viable today – utilizing what is considered a high water pressure, low volume system, as opposed to the high volume, low water pressure systems that require large dams on a river.

"We use very little water to make our megawatts," says Wilbanks. "These types of plants are coming back in favor all over the world where you have a little bit of water and a lot of gravity."

Though set on the banks of the Animas, the water used to power the turbines originates in Cascade and Elbert creeks. Through a combination of open flumes and steel pipes, the water makes its way to Electra Lake. It is then carried via a 2.5 mile pipeline to the Animas Canyon rim and cascades 1,000 feet down to the generating plant where gravity turns the turbines to produce electricity. The water is then released into the Animas, the flumes of which are visible to those aboard the train.

"One gets the impression after listening to Jeff Wilbank's history lecture on the plant that he knows every bolt and brick," says Dreyspring. "It's here you realize a few significant things. One, hydro power is clean and durable. No air emissions issues to debate here. And how many other forms of electric generation can boast a 100 year life?"

In the big scheme of things, Tacoma, which is owned by Xcel Energy but "wheels" electricity produced across LPEA's lines, is a minor producer. Currently two generators produce about 4 megawatts of electricity at peak production, which, in perspective is less than 2 percent of LPEA's demand.

A third generator, replacing one that literally blew up in 2005, is set to be installed this winter and add 5 to 7 megawatts of generation. Though with an anticipated price tag of $5 million, Wilbanks confirms that it will pay for itself in a couple of years.

"It's worth the cost," he says. "Hydro is cheap, green, old technology."

Tacoma is in many ways a working museum and one that few ever get to appreciate, as Tacoma is only accessible via the Durango & Silverton Narrow Gauge. Wilbanks does welcome tour groups, however. Contact him at jeffrey.wilbanks@xcelenergy.com.

Harms, Looman named new managers

Long-time LPEA staff members Dan Harms and Linda Looman have been promoted to new positions within the cooperative, taking on new challenges as LPEA departments are reorganized.

Formerly Systems Engineer, Dan Harms is now Manager of Rates, Technology and Energy Policy, overseeing energy policy development, financial analysis and rates, information technology and systems operations and planning. Linda Looman, who has served as Human Resources Director since 2003, is now Manager of Member Relations and Human Resources, adding oversight of all customer and member relations to her human resources responsibilities.

Harms, a 30-year Durango resident who was an LPEA scholarship recipient and interned with the cooperative while studying electrical engineering at Fort Lewis College and Colorado State University, has served full time at LPEA as an electrical engineer since 1995. Lewis County Rural Electric Cooperative was also the beneficiary of his expertise in rate design and cost of service, as he also consulted with the sister co-op for six years.

Harms is a graduate of the NRECA (National Rural Electric Cooperative Association) Management Internship Program, and since 2013 has served as an instructor. He is also a NRECA Certified Key Account Executive.

A volunteer with La Plata County Search and Rescue (since 1998) and mentor for Engineers Without Borders (2003-2005), Harms is a FIRST Lego League Coach and Mentor (2012 to present), helping to introduce young people to science, technology, engineering and math (STEM) principles.

Looman is a 37-year Durango resident and a graduate of Fort Lewis College with a BA in Business Administration. She earned the designation of Senior Professional in Human Resources (SPHR) in 2004.

Prior to joining LPEA, Looman served as Personnel Manager at Durango's Wal-Mart Super Center, helping in the setup of the new store, and the hiring of all personnel. For five years she handled HR duties for the Super Center that employs 500-plus. She also has 16 years of retail experience with Gordon's/Zale's Jewelers, where she was Store Manager for five.

Her community involvements include past president of the Durango Area Human Resource Managers, the Durango Senior Center as a Certified Medicare Enrollment Counselor, and St. Columba School, chairing the Innisbrook Fundraiser for eight years.

"We have sought to better utilize the talent we have right under our roof," said CEO Mike Dreyspring. "Linda and Dan are both very talented and devoted LPEA employees and we're confident this reorganization will be of benefit to all our members."

Rachel Schur Wagner new staff engineer

Rachel Schur Wagner has joined LPEA as a new Staff Engineer.

Raised in Pagosa Springs, Wagner returns to Southwest Colorado after four years in Portland, Ore. working in the electric utility industry with consulting firm HDR and Bonneville Electric Power Association. She completed her degree in Mechanical Engineering at Colorado State University in 2010, after attending Fort Lewis College for general course study.

Wagner's interest in engineering was sparked during her junior year at Pagosa Springs High School when she attended a "women in engineering" conference in Boulder and was struck by a presentation about the international Engineers Without Borders program.

"That's when it really hit me, what an impact engineering can have, and so I decided that afternoon that I was going to be an engineer," says Wagner. "When I got to Fort Lewis College I asked on my second day of class if they had an Engineers Without Borders program, and they had started one just the year prior."

For the past 10 years Wagner has been active with the program, volunteering her time to assist rural villages in Southeast Asia and South or Central America. Projects have generally focused on water and sanitation efforts.

"It's hard work," she says. "You're up at dawn, working past dark every night, lifting 50-lb. bags of concrete, digging trench, but you're working there with the people. They're so appreciative and you make such good friends. I love it. It drives me and keeps me going."

Wagner and her husband, Jason, are now advisors laying the groundwork for the FLC Village Aid Project/Engineers Without Borders efforts in countries such as Nicaragua and Myanmar, and heading up the teams of Fort Lewis students involved with the program. Information is available at www.fortlewis.edu/ewb.

While at Pagosa Springs High School, Wagner was awarded the LPEA scholarship and she interned during her college years at the LPEA Pagosa Springs and Durango offices.

Capital Credits refunded

LPEA members received a little bonus from the cooperative during the November billing cycle as the Board of Directors voted to refund $3.85 million in capital credits. Most received credits to electric bills, though refunds in excess of $100 were mailed as checks.

Capital credits are essentially the margins or revenues remaining after all expenses have been paid. This capital, along with borrowed funds, is used to finance needed improvements to LPEA's system infrastructure.

Annually, should the patronage capital account reach a level in excess of the amount LPEA needs to maintain the system, the LPEA Board of Directors "retires," or gives back, a percentage of the funds. Since incorporation in 1939, LPEA has refunded nearly $44 million.

IBEW "Fills the Bucket"

Photo: Renee Davis

The 8th Annual Fill the Bucket Food Drive, held Nov. 14 at both City Market and Hometown Market in Pagosa Springs, generated 1,780 lbs. of non-perishable food items (and $175 in cash) to stock Archuleta County's food banks in advance of the holidays. Furthering the commitment to community, and in recognition of LPEA's Pagosa employees, the co-op will double the proceeds from the event.

"Everyone involved felt rewarded in volunteering, giving back and supporting our community," says Jeremy Gurule, LPEA fleet mechanic who organized the event. "Over the years 'Fill the Bucket Food Drives' have been a joint project with International Brotherhood of Electric Workers (IBEW) Local 111 Unit 26A and LPEA using volunteer 'people power' and the cooperative's equipment to execute this event. It is our mission that working together we can do so much more than provide and maintain reliable power to the community."

And as a bonus this year, because so many LPEA employees came out for the event, they capitalized on the good weather and stepped the effort up a notch, supporting the IBEW's commitment to CDOT and Unit 26A's "Adopt a Highway Program." LPEA volunteers cleaned up all trash between mile markers 135 and 137 on Highway 160 in front of LPEA's Ponderosa Substation.

Tribal solar project moves ahead

The largest solar photovoltaic project within LPEA's service territory is one step closer to fruition as Southern Ute Indian Tribe Growth Fund and LPEA reached a major milestone with approval from the Southern Ute Tribal Council for interconnection and power purchase agreements with LPEA for the Southern Ute Indian Tribe's proposed solar photovoltaic project.

Southern Ute Alternative Energy, LLC (SUAE), a division of the Growth Fund, has worked with LPEA since early 2014 on details for connecting the approximately 1 megawatt solar facility to LPEA's electric distribution lines.

"We appreciate the support of LPEA's staff and Board to help make this project a reality," says Southern Ute Growth Fund Operating Director Bob Zahradnik. "We are pleased to be able to bring this project and its locally-produced energy to the tribal community."

The project has grant funding from the U.S. Department of Energy, which specifies the project must be built on tribally-owned lands and that the electricity generated is for the benefit of the Tribe.

The project will occupy approximately 10 acres of Tribal land in proximity to LPEA's Rock Creek Substation and will generate energy equivalent to a 15 percent offset of the total energy usage at about 10 tribally-owned buildings, or about the equivalent of the electricity consumption at 250 typical households.

The next milestones for the project are to finalize the specific site on the Reservation, complete detailed design and pass LPEA's engineering review.

LIVE WIRES

Board meeting Dec. 16, 9 a.m.

The next meeting of the LPEA Board of Directors is set for Wednesday, Dec. 16, 2015, 9 a.m. at LPEA headquarters in Durango. The agenda will be posted 10 days in advance of the meeting at www.lpea.coop.

New Rate Tariffs posted

Changes to LPEA's Rate Tariffs are currently posted at www.lpea.coop (or available via hard copy at LPEA's offices). Public comment is currently being taken in writing.

Project Merry Christmas at LPEA

LPEA once again in partnership with Four Corners Broadcasting, will host a live radio remote on Saturday, Dec. 12, encouraging donations for Project Merry Christmas. Help deserving families in our community. Bring your new toys, blankets, canned goods or cash to LPEA's offices in Durango between 11 a.m. and 3 p.m.

Salvation Army Lunch

LPEA will host a green chili lunch in support of the Salvation Army, Dec. 16, 11:30 a.m.-1:30 p.m. at the cooperative's headquarters. Suggested donation: $5. No reservations required.

Rate development 101

BY DAN HARMS | MANAGER OF RATES, TECHNOLOGY AND ENERGY POLICY
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As LPEA is working on new rates for 2016, we'd like to give our members a little bit of a primer on how we arrive at the various line items you see on your electric bill. This is not an arbitrary process, and remember, though LPEA is a cooperative, it is also a very highly-regulated business that provides a vital service: delivery of electricity. Much goes into the rate structure.

Bonbright's *Principles of Utility Rate Making* outlines the basic guiding principles often used when establishing rates: **simplicity, understandability, fairness** and **stability** are some of these principles. These may seem to be obvious attributes to consider when designing rates, but they don't necessarily go hand-in-hand.

A rate that is **simple** and **understandable** is sometimes hard to balance with one that is **fair** and creates revenue **stability** for LPEA as a business. Did you know that electricity was once unmetered and electric bills were based on the number of lamps in someone's house? That was certainly simple and understandable, but when folks changed the way they used electricity with motors and appliances, it was no longer fair and didn't provide revenue stability. Today we are accustomed to the electric meter that measures energy consumption in units of kilowatt-hours (kWh).

The basic energy meter does a great job in recording the quantity of energy used, but not the rate at which it was used. Two LPEA members might consume the same amount of electricity, but one might use it slowly and steadily throughout the month while the other runs a large load one day and then turns everything off for the rest of the month. The member who pulls all their power at once requires larger transformers and power lines to serve them.

This is where the term "demand" comes into play. Demand is simply a measure of a member's maximum requirement at a moment during the month. Historically, LPEA, as well as most electric utilities, include a demand billing mechanism only on commercial and industrial rates where demand requirements can vary greatly. For our residential members, demand expenses are typically blended into the energy kWh charge for increased simplicity and understanding.

With technology constantly reshaping the way LPEA members use and generate power, the simplicity of billing by kWh may have to give way to something slightly more complex and innovative to maintain fairness and stability; just as the transition from billing by the bulb occurred so many years ago. In the future, we may see demand as a separate item on the residential bill or requiring Time-of-Use rates that more accurately capture varying costs throughout the day.

LPEA continually evaluates the proper balance when establishing rates, which in the end are simple, understandable, fair and stable. View the 2016 rates proposed by the LPEA Board of Directors at www.lpea.coop.

Happy Holidays!

In observance of Christmas and New Year's, LPEA offices in Durango and Pagosa Springs will be closed Dec. 24 & 25, and Jan. 1, 2016.

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Mission Statement:
La Plata Electric Association provides its members safe, reliable electricity at the lowest reasonable cost while being environmentally responsible.

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Statement of Non-discrimination
LPEA is an equal opportunity provider and employer M/F/Disability/Veteran.
If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Discrimination Complaint Form, found online at http://www.ascr.usda.gov/complaint_filing_cust.html, or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.