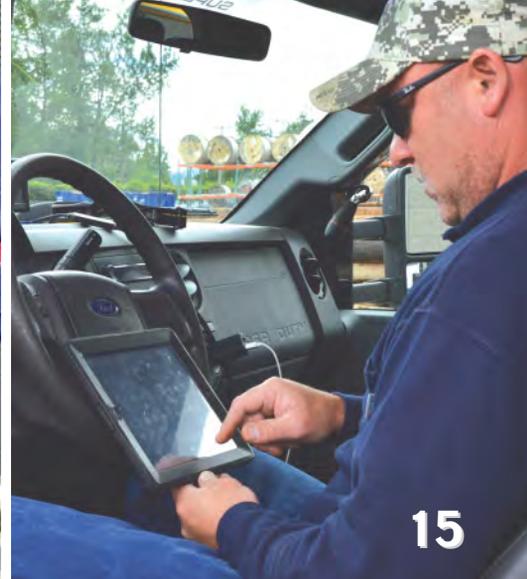


Northwest Public Power Association **BULLETIN**

July 2014
Volume 68, Number 7

**Tacoma Power and
partners serve
America's military**





On the cover: An American flag flies in front of a home at the Joint Base-Lewis McChord (JBLM), which is powered by Tacoma Power, a division of Tacoma Public Utilities. In 2012 and 2013, JBLM was Tacoma Power's second-largest customer; this year it captured the top spot. Annually, the utility supplies about 370 million kilowatt-hours of electricity. Photo provided by Tacoma Power.

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The *Bulletin* is a publication of Northwest Public Power Association, a regional organization of diverse utilities. The membership is made up of utility districts, electric cooperatives, municipalities, and crown corporations in Alaska, British Columbia, California, Idaho, Montana, Nevada, Oregon, and Washington. We are also a trade association for nearly 300 companies, individuals, and organizations affiliated with the electric power industry.

Opinions expressed in single articles are not necessarily policies of the Association. For permission to reprint articles, write or call the associate editor.

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Pathways to LEADERSHIP



Top row (L-R): Instructors Mark Christensen and Molly Davis, Dale Coulombe, Brian Kollman, Thomas Wolf, Bart Peterson, Greg Deedon, Aaron Sandberg, Ged West, and Adam Mikulski. Bottom row (L-R): Joshua McEllrath, April Owen, Meaghan Vibbert, Shannon Bessette, and Terry Kelly. Graduates not pictured: Brad Koehn and David Koski.

Pathways graduates its first class

Last spring, 14 employees from various NWPPA member utilities and organizations embarked on a new journey together by enrolling in NWPPA's inaugural five-part Pathways to Leadership series. Over the next 16 months, this group of employees would meet for five different two- or three-day sessions, forming their own cohort to navigate and complete the series together, thus building strong relationships and public power support networks in the West. At the end of the fifth session, they are eligible for a Pathways to Leadership Certificate.

The attendees who will be receiving Pathways to Leadership Certificates are Shannon Bessette from Wasco Electric (The Dalles, Ore.); Greg Deedon from Redding Electric Utility (Calif.); Terry Kelly from Salem Electric (Ore.); Brad Koehn from Turlock Irrigation District (Calif.); April Owen from Pend Oreille (Newport, Wash.); Bart Peterson from Missoula Electric Cooperative (Mont.); Meaghan Vibbert from Douglas County PUD (East Wenatchee, Wash.); Ged West from Grays Harbor PUD (Aberdeen, Wash.); Brian Kollman and Thomas Wolf from Columbia Basin Electric Cooperative (Heppner, Ore.); and Dale Coulombe, David Koski, Joshua McEllrath, Adam Mikulski, and Aaron Sandberg from Bonneville Power Administration.

Pathways is a leadership development series for senior managers, managers, Front Line Leadership graduates, and

newly appointed leaders. It is a powerful learning experience that blends classroom training, coaching, and everyday work into one integral leadership development process. It focuses not just on what leaders learn but also how they learn it. This series of classes, online tools, templates, and application assignments enable the leader to practice and apply essential skills within the context of an actual job.

The five sessions include 1) *Lead Yourself*; 2) *Lead Your Team*; 3) *InsideOut Coaching: More Leaders Coaching, More Often, For More Impact!*; 4) *Lead Your Organization: Maximize Performance with Organizational Tools*; and 5) *Lead Your Organization: Sustain Excellence and Manage Change*.

Because of the positive feedback that has been received about the program, Pathways for Leadership has been incorporated into the regular litany of NWPPA certificate courses. Attendees in the 2014-2015 series just finished up their second session in Bend, Ore., last month and are scheduled to graduate in June 2015. For anyone interested in enrolling in the 2015-2016 series that will start in February 2015 in Vancouver, Wash., registration will be open online at www.nwppa.org by the end of August. For any questions about the program, please contact Arnie Winkler at arnie@nwppa.org. NWPPA

The NIC finally heads to the Emerald City

After many requests from members over the years, NWPPA and the Northwest Communications & Energy Innovations Conference (NIC) Planning Committee are excited to finally take the 2014 NIC to Seattle for the first time. Headquartered downtown at the Renaissance Hotel and with a fun masquerade ball theme, the 2014 NIC — *Rendezvous at the Renaissance* — promises to be one of the best yet! If you are a communications, marketing, or energy efficiency professional, you need to mark your calendars now and plan on being in Seattle during September 14-17 for the NIC.

“We’re excited to bring the conference to Downtown Seattle!” said NIC Chairwoman and Kootenai Electric Cooperative Communications Coordinator Erika Neff. “The location is great and the planning committee has developed an engaging conference with every level of professional in mind. I hope to see you there!”

Some of the speakers already booked for the conference include:

- Best-selling Author and Certified Speaking Professional David Rabiner, who happens to also be a graduate of the Edward R. Murrow College of Communication at Washington State University
- Cadmus Executive Director Brian Hedman
- International Association of Public Participation USA Board President and Zenn & Associates Principal Doug Zenn
- International Association of Public Participation Cascade Chapter President and HRD Engineering Strategic Communications & Public Involvement Manager Alex Cousins
- DEFG Executive Vice President Darren Brady
- Snohomish County PUD General Manager Steve Klein

Breakout sessions always play an important part at the conference. Some of the scheduled breakout session topics for this year include:

- Contracting out energy efficiency services
- Do-it-yourself YouTube videos
- Public involvement — doing it right!
- Pre-pay survey results
- Strategic communications
- Social media for electric utilities 2.0
- Communicating energy efficiency

And of course, two roundtable sessions (one on Monday and another on Tuesday) have been scheduled.

Roundtable sessions are where attendees can bounce ideas off one another and come away with tips and tricks to take back and possibly even implement at their own utilities.

On Tuesday evening, September 16, we’ll celebrate the best and brightest communications efforts with the annual Excellence in Communications awards banquet. Recognizing the best communication work produced at NWPPA member utilities in the past year, these awards cover eight categories (a social media category was added this year) and are designed for utilities of all sizes. NWPPA and the committee are hoping to break the previous record of 189 entries this year — come to the conference to see if we do!

Some of the NWPPA staff and committee visited the Renaissance in June and all agreed that it will be a fantastic location for this year’s conference. The Renaissance is a stylish hotel conveniently located right off of Interstate 5 in downtown Seattle just minutes from the world-famous Pike Place Market, Safeco Field, Seattle Art Museum, Seattle Public Library, Pioneer Square, and Westlake Shopping Center. Spacious guest rooms provide stunning views of Puget Sound, the mountains, and city skyline. From colorful paintings by local artists displayed in the lobby; to hallways whimsically papered with magazines and book pages; to the fully equipped and newly remodeled fitness center; to the two restaurants and one lounge within the hotel, the Renaissance truly outshines other downtown Seattle hotels. Book your room at the Renaissance as soon as possible, but no later than August 15, 2014, to secure the NWPPA discounted rate. To book your room, call (206) 583-0300 or visit www.marriott.com and search for the Renaissance Seattle Hotel.

Be sure to join us September 14-17 in Downtown Seattle for the 2014 NIC! The conference starts Sunday night, September 14, with a hosted welcome reception from 6-9 p.m. at the R View restaurant at the top of the hotel, with breathtaking views of the city and the Sound.

To register for the conference or get updated information about the schedule, visit www.nwppa.org. If you have any questions about this year’s NIC, please direct your questions to Arnie Winkler at (360) 816-1445 or arnie@nwppa.org. NWPPA



NWPPA presents award to Rep. Doc Hastings

On Tuesday, July 1, NWPPA honored Chairman Doc Hastings (R-Wash.) with an Award of Appreciation for his 20 years of service in Washington, D.C., and his unfailing support of public power in his state and the region. Franklin Public Utilities District in Pasco, Wash., hosted the event in its auditorium. NWPPA Trustee and Franklin PUD Commission Vice President Stu Nelson presented the award to Rep. Hastings. Approximately 35 senior management, commissioners, and board members from area PUDs, cooperatives, and utility associations attended the event. Other member utilities represented included Columbia REA, Benton PUD, Benton REA, Richland Energy Services, Grant PUD, Douglas PUD, and Energy Northwest.

NWPPA Executive Director Anita Decker welcomed everyone to the event. In her opening remarks, she acknowledged that not everyone could make it on short notice, but several sent their best wishes to Rep. Hastings. "I've been blessed to have known and worked with Doc for at least three decades on a variety of community issues," wrote Richland Energy Services Director Bob Hammond. "He is a true champion of public power and grassroots community involvement."

Hastings was first elected to the U.S. House of Representatives in 1994 and became the ranking member on the Natural Resources Committee in 2009 and chair in 2011. Throughout his Congressional career, Hastings has been a strong supporter of public power, and has worked to promote a bipartisan, regional approach to critical energy issues.

One of his primary focuses since being elected to represent the 4th District in Congress has been to assure protection



(L-R) NWPPA's consultant Nicole Case and NWPPA Executive Director Anita Decker take a moment with Rep. Doc Hastings and NWPPA Trustee and Franklin PUD Commission Vice Chairman Stu Nelson. Photo provided by Franklin PUD.

and encourage continuation of the Northwest's supply of clean, renewable hydropower to millions of Northwest citizens. Another important priority of his legislative efforts has been to seek improvement and updating of the Endangered Species Act. For the Northwest, almost every entity and activity has been touched by ESA regulation and litigation. This year, he has led the first real legislative effort in the House of Representatives to improve the ESA in nearly a decade. **NWPPA**

NWWH members will collaborate in Bend

General managers, operations managers, labor relations professionals, and human resources professionals will gather in Bend, Ore., October 8-10, 2014, for the Northwest Wage and Hour Group's Annual Meeting, *Collaboration: A Gathering of Great Minds in Bend*. Non-members may also attend if they are part of a utility, are members of NWPPA, and it is the first time they have attended an NWWH Annual Meeting.

The Annual Meeting is where labor relations leaders share their experiences, recommendations, and lessons learned about key labor relations issues. This year will see a return of a past favorite — arbitration case studies — where attendees work through sample arbitration scenarios and receive invaluable feedback from professional arbitrators.

There will also be presentations and panel discussions on current issues around FLSA and healthcare reform. Presenters include J. Kent Pearson of Bullard Law and representatives from Gallagher Benefit Services. At lunch on Thursday, Ray Kindley, NWPPA's corporate counsel, will discuss anti-trust rules.

More time will be allotted to the always-favorite activity: roundtable discussions. Other returning activities include Unscheduled Topics; a review of the 2014 Milliman Compensation and Benefits Surveys with Larry Daniels, Milliman Consultants; and the state of the economy presented by John Mitchell, economist.

Those who arrive early on Tuesday, October 7, can join the golf scramble, where skill does not count and everyone is just out to have fun, socialize, and enjoy the great outdoors on the scenic Rivers' Edge course. Other activities include an optional outing on Thursday evening with a private tour/tasting at Deschutes Brewery and a no-host dinner at Bend Public House.

This two-and-a-half-day annual event is a great opportunity to collaborate with other great minds; build a network of resources; and have some fun at the golf scramble, evening reception, and optional outings.

For more information, contact Bonnie McCombs at bonnie@nwppa.org. **NWPPA**

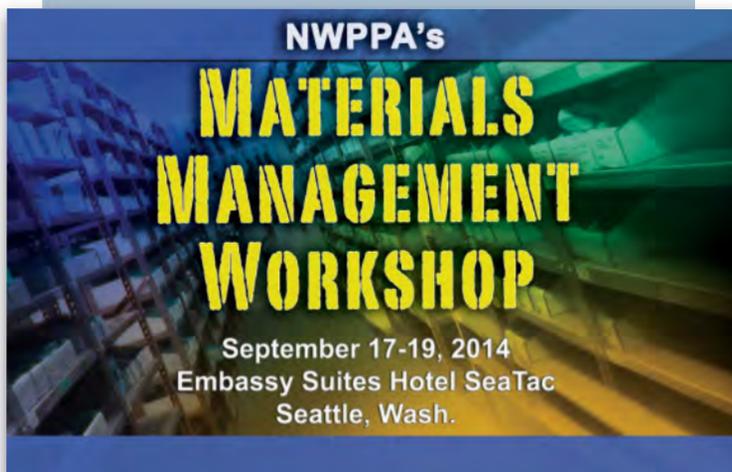
Getting to know the NWPPA Board

- **Name:** Dale Walker
- **Utility:** Grant County PUD (Ephrata, Wash.)
- **Position:** Commissioner
- **Education:** Big Bend Community College
- **Years in utility industry:** 3
- **Years on NWPPA Board:** First year
- **What are the current challenges at your utility?** Fixing the Wanapum Dam and replacing employees as people retire.
- **What do you see as the current challenges in the industry?** Finding good replacements for retiring people.
- **How does NWPPA help your utility and the industry with these challenges?** NWPPA is a good source for classes and training people.
- **Any hobbies outside of the public power world?** Golf, reading, and spending time with my grandkids. **NWPPA**



NWPPA
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Materials Management Workshop!



www.nwppa.org



A look back at public power

50 years ago — 1964

The City of Anchorage Municipal Light and Power Department began construction on its new \$337,000 service headquarters building (Alaska) ... Elmhurst Mutual upped its incentive allowance (not to exceed \$50 per home) to help defray drying out costs for new all-electric homes added to the system (Wash.) ... In honor of its silver anniversary, Lincoln Electric Cooperative offered a \$50 scholarship in each of the area's 11 high schools to the member of the Class of 1965 who wrote the best essay to the question: What 25 years of service by the Lincoln Electric Cooperative have meant to the area (Mont.).

25 years ago — 1989

Bob Titus assumed the position of city light director in Port Angeles; he replaced Rob Orton who left to become general manager of Peninsula Power & Light (Wash.) ... The Bonneville Power Administration began selling power to Sacramento Municipal Utility Board after 53.4 percent of the electorate voted to shut down the Rancho Seco nuclear power plant (Calif.) ... Tacoma Public Utilities and the Nisqually Indian Tribe reached a settlement regarding the Nisqually River; the agreement provided for a permanent flow regime and operation of a new fish hatchery on the river (Wash.).

5 years ago — 2009

Emerald PUD and the City of Veneta dedicated the recently completed solar electric system at Veneta City Hall (Ore.) ... Matanuska Electric Association reached a milestone in its local generation planning process when the Anchorage Assembly unanimously approved the ordinance rezoning the property for the power plant (Alaska) ... Fergus Electric received a \$15 million loan from the U.S. Department of Agriculture; it was the only Montana utility out of 37 rural utilities across the nation to receive part of the more than \$1 billion in loans designated to build and repair distribution and transmission lines in rural areas. **NWPPA**

August, September, and October 2014

Please register 30 days in advance to receive the Early Bird discount. See www.nwppa.org for more information.

NEW! ADMINISTRATIVE PROFESSIONAL CERTIFICATE LEVEL 3: ALL FOUR DAYS

Who Should Attend: Administrative assistants, executive secretaries, and employees in administrative or service-oriented professional roles.

Overview: This is a four-day series of classes that provides utility-specific information directed toward administrative assistants and executive secretaries who want to become more effective in managing their tasks and in communicating with others.

AUGUST 5-8, 2014 — SEATTLE, WASH.

NEW! ADMINISTRATIVE PROFESSIONAL CERTIFICATE LEVEL 3: DAY 1 — ORGANIZATIONAL DYNAMICS, TEAMS, AND DIVERSITY

Who Should Attend: Administrative assistants, executive secretaries, and employees in administrative or service-oriented professional roles.

Overview: This one-day course serves as an overview of basic business organization principles, including structure and operation. This seminar is designed to assist participants in learning the skills of being an effective team builder, member, and leader.

AUGUST 5, 2014 — SEATTLE, WASH.

NEW! ADMINISTRATIVE PROFESSIONAL CERTIFICATE LEVEL 3: DAY 2 — PROJECT MANAGEMENT

Who Should Attend: Administrative assistants, executive secretaries, and employees in administrative or service-oriented professional roles.

Overview: This training session will provide valuable information on how to be successful in the areas of project scheduling, budgeting, and planning. Participants will learn how to understand a project cycle and develop one that works. In addition, the seminar will provide participants with the confidence to take on projects from conception to completion.

AUGUST 6, 2014 — SEATTLE, WASH.

NEW! ADMINISTRATIVE PROFESSIONAL CERTIFICATE LEVEL 3: DAY 3 — GETTING SUPPORT FOR IDEAS/PRESENTATION SKILLS

Who Should Attend: Administrative assistants, executive secretaries, and employees in administrative or service-oriented professional roles.

Overview: Skills covered in this class will include how to state the purpose and main point of a message; how to present points to aid understanding while checking for understanding and reactions; how to summarize main points; and how to handle reactions to what is presented.

AUGUST 7, 2014 — SEATTLE, WASH.

NEW! ADMINISTRATIVE PROFESSIONAL CERTIFICATE LEVEL 3: DAY 4 — PERFORMANCE MANAGEMENT/SELF APPRAISALS/GOAL SETTING

Who Should Attend: Administrative assistants, executive secretaries, and employees in administrative or service-oriented professional roles.

Overview: This module provides a process for handling conversations about work expectations in a way that reduces ambiguity, increases trust, and strengthens the working relationship between employees — on peer-to-peer as well as peer-to-manager levels. The purpose of this course is to provide participants with skills to discuss performance expectations with others in a way that gains their commitment and sense of ownership.

AUGUST 8, 2014 — SEATTLE, WASH.

NEW! WHAT'S NEXT? A ROAD MAP FOR EXPLORING THE REST OF YOUR LIFE

Who Should Attend: General managers and their spouse or significant other.

Overview: The *What's Next* class is about career and life possibilities for people at or beyond mid-career. It certainly includes the phase of life called retirement, but it is more complex than that. The approach that will be taken in this class is providing a road map; not a roadmap for your life, but a road map for planning the rest of your life, one with milestones to help you in your own career and life planning.

AUGUST 13, 2014 — PORTLAND, ORE.

NEW! FINANCIAL AUDITS AND INTERNAL CONTROLS

Who Should Attend: Finance and accounting employees; senior management or policy makers; or any employee seeking to increase his or her knowledge of the auditing process that takes place at electric utilities.

Overview: This one-day class is offered as part of the NWPPA Utility Accounting Certificate Program. Attendees will gain an understanding of the financial auditing process and learn how it may impact their responsibilities to the utility and its consumers. They'll also learn how internal controls can be established to avoid devastating results from errors and fraud.

SEPTEMBER 9, 2014 — BOISE, IDAHO

OVERCURRENT PROTECTION (DISTRIBUTION ENGINEERING SERIES CLASS #2)

Who Should Attend: Engineers and senior technical personnel involved in selecting and coordinating overcurrent protection devices.

Overview: In this two-day class, you will cover the best practices for protecting transformers and equipment while maintaining the highest reliability possible. You will work through the application considerations of circuit breakers, relays, reclosers, sectionalizers, and fuses; and the methodologies to verify source impedances for system models, the effect of transformer connections on fault current calculations, and the concept of assumed fault impedance.

SEPTEMBER 9, 2014 — PORTLAND, ORE.

NEW! OUTLOOK AND ONENOTE: DYNAMIC DUO

Who Should Attend: Anyone who uses Outlook and would like to increase efficiency organizing electronic communication. Also, anyone who could benefit from OneNote's function as a simple, quick storage and reference system.

Overview: This class is loaded with simple tactics that will save you countless hours spent on daily tasks; it combines instructor demonstration and hands-on practice with Outlook and OneNote 2010 and 2013. Laptops pre-loaded with exercises will be provided by the instructor.

SEPTEMBER 9, 2014 — PORTLAND, ORE.

NEW! EXCEL WITH EXCEL

Who Should Attend: Excel users who already know the basics but want to take their Excel skills to a new level.

Overview: In this class, you will learn how to incorporate features such as sorting, filtering, pivot tables, conditional formatting, and spark lines as well as how to integrate Excel with Word and PowerPoint. The course combines instructor demonstration and hands-on practice with Excel 2010 and 2013. Laptops pre-loaded with exercises will be provided by the instructor.

SEPTEMBER 10, 2014 — PORTLAND, ORE.

TRAINING OPPORTUNITIES

NEW! MONITORING BUDGETS AND FINANCIAL ANALYSIS

Who Should Attend: Finance and accounting employees; senior management or policy makers; or any employee seeking to increase his or her knowledge of the budgeting process that takes place at electric utilities.

Overview: This one-day class is offered as part of the NWPPA Accounting and Finance Certificate Program. It covers the effective techniques of monitoring budgets and review and oversight of the budgeting process throughout the year. This class will also focus on understanding financial reporting and preparing financial analysis to ensure accurate reporting.

SEPTEMBER 10, 2014 — BOISE, IDAHO

NORTHWEST COMMUNICATIONS & ENERGY INNOVATIONS CONFERENCE (NIC)

Who Should Attend: Managers, communications staff, energy services staff, and renewable energy employees.

Overview: The theme of this year's Northwest Communications & Energy Innovations Conference (NIC) is *Rendezvous at the Renaissance*. We have keynote speakers who will inspire you and challenge your thinking about how we should communicate and innovate in this challenging world of the electric utility industry. See page 4 for more information.

SEPTEMBER 14-17, 2014 — SEATTLE, WASH.

HAZWOPER 8-HOUR FIRST RESPONDER AWARENESS/RE-CERTIFICATION TRAINING FOR UTILITY PERSONNEL

Who Should Attend: First responders who are likely to witness or discover a hazardous substance release and need to initiate an emergency response sequence by notifying the proper people.

Overview: This course will refresh your knowledge and understanding of the requirements for hazardous waste operations and emergency response (HAZWOPER), as required by 29 CFR 1910.120. This course also helps to satisfy the annual HAZWOPER training required for re-certification.

SEPTEMBER 16, 2014 — SACRAMENTO, CALIF.

NEW! ENTERPRISE RISK MANAGEMENT FOR UTILITIES — PART 1

Who Should Attend: Chief financial officers, senior-level accounting staff, auditors, general managers/CEOs, policymakers, and legal counsel.

Overview: Enterprise risk management (ERM) is the discipline of examining the impact of potential financial, operational, regulatory, environmental, legal, safety, and reputation risks on an organization. Implementing ERM helps utilities achieve their objectives by improving their operation and organizational effectiveness. A strong ERM program will integrate risk management with strategy, tactics, and operational processes.

SEPTEMBER 17-18, 2014 — PORTLAND, ORE.

MATERIALS MANAGEMENT WORKSHOP

Who Should Attend: Materials management, purchasing, supply chain, and operations personnel.

Overview: This workshop is designed to keep you abreast of new programs and skills in the purchasing and materials management area through speakers, facility tours, and networking with your peers. The agenda will include presentations on effective communications and warehouse safety; warehouse and facility tours; and roundtables for discussing hot topics.

SEPTEMBER 17-19, 2014 — SEATTLE, WASH.

NUTS AND BOLTS OF WORK ORDERS

Who Should Attend: Employees involved in any aspect of preparing and/or processing work orders for their electric utility, or employees outside the accounting area who want a better understanding of the work order process.

Overview: This workshop covers everything you ever wanted to know about work orders and provides current information about specific documentation demands and forms necessary to meet accounting requirements. You will not only analyze the why of work order systems, but you will also review the how to of the process.

SEPTEMBER 23-24, 2014 — ANCHORAGE, ALASKA

BILLS, BUCKS, AND BUSINESS

Who Should Attend: Accounting staff and any employee who wants to understand their personal impact on their utility's financial success.

Overview: This one-and-a-half-day workshop is based on the premise that "every employee and every task performed at the utility has an impact on the ultimate bill sent to a consumer/member." Employees will learn skills that help your system achieve financial security and long-term benefits for consumers/members. Also, your system's financial cornerstones will be revealed in terms that all employees can understand.

SEPTEMBER 24-25, 2014 — ANCHORAGE, ALASKA

NEW! SITUATIONAL SPANISH FOR UTILITY PERSONNEL

Who Should Attend: All utility employees who interact with Spanish-speaking customers.

Overview: This two-day specialized class is designed for utility employees who wish to develop communication skills when dealing with Spanish-speaking customers. Comprehension will be tested throughout the class by role-playing and verbal exams. No prior knowledge of Spanish is required.

SEPTEMBER 29-30, 2014 — BEND, ORE.

FRONT LINE LEADERSHIP #2: LEADERSHIP CHALLENGES

Who Should Attend: Front line supervisors and managers, and those front line employees who will be transitioning to a supervisory or managerial role in the future.

Overview: This is the second in a series of four sessions leading to a Certificate in Front Line Leadership from NWPPA. The front line leader's role in facilitating performance will be described, along with ways of dealing with challenges such as denial and reluctance to accept accountability.

OCTOBER 1-2, 2014 — BEND, ORE.

OPERATIONS MANAGER & LINE SUPERINTENDENT BOOTCAMP 2014-2015: SESSION #1

Who Should Attend: Newly appointed operations managers, line superintendents, or those who have leadership potential.

Overview: Day 1: *Project Management and Its Execution*. Participants will learn how to understand a project cycle and develop one that works. Day 2: *Legal and Regulatory Issues*. This one-day program will cover key legal and regulatory considerations for the operations of your utility, supervising legal and regulatory compliance; managing legal and regulatory risk; and key laws.

OCTOBER 1-2, 2014 — BOISE, IDAHO

ELECTRIC UTILITY SYSTEMS OPERATIONS

Who Should Attend: Any industry (utility or vendor) employee whose job performance will benefit from a basic understanding of the operations side of the utility business.

Overview: This popular two-day course presents a clear understanding of the technical heartbeat of the utility by providing employees with a comprehensive understanding of electric utility system operations, including generation (fossil fuel, hydro, and nuclear generation), transmission, and distribution (down to 120v/240v residential connections).

OCTOBER 7-8, 2014 — RENO, NEV.

METERING: INTRODUCTION AND BASIC APPLICATION

Who Should Attend: Metering, service, engineering, and operations personnel; service and meter sales representatives; purchasers of meter products; supervisors; and other individuals who require an understanding of revenue meters.

Overview: This two-day class will take you from start to finish on the basics of metering. You will begin with a screwdriver and a determination to dismantle your standard revenue house meter. After you learn the function of each part, the next step is getting to know how the meter fits into the big picture of revenue metering.

OCTOBER 7-8, 2014 — SPOKANE, WASH.

NORTHWEST WAGE & HOUR ANNUAL MEETING

Who Should Attend: Members of the Northwest Wage and Hour Group. Non-members may attend if they are part of a utility, are members of NWPPA, and it is the first time they have attended an NWWH Annual Meeting.

Overview: Join your peers at this annual meeting where labor relations leaders share their experiences, recommendations, and lessons learned about key labor relations issues. Back by popular demand, there will be three arbitration case studies to work through as well as presentations and panel discussions on FLSA and healthcare reform. More information can be found on page 5.

OCTOBER 8-10, 2014 — BEND, ORE.

QUALIFIED WORKER TRAINING

Who Should Attend: Individuals who do not hold an electrical journeyman certificate, engineers, technicians, meter readers, and

other operations personnel who are required by OSHA 1910.269 to have this training.

Overview: The course covers federal regulations related to entering a secured area; minimum approach distances or clearances; personal protective equipment; job briefings; substation entrance procedures; and opening padmount transformers, switchgear, and metering compartments. Opening and/or viewing electrical equipment in secured areas is typically to take information off of nameplates, readings from meters or gauges, etc.

OCTOBER 9, 2014 — PORTLAND, ORE.

IT SECTION MEETING

Who Should Attend: NWPPA utility and associate members who are involved in the information technology aspects of their organizations.

Overview: This meeting’s speaker is Zachariah Tanko from Tacoma Power. He will speak on Open Source tools used to breach networks and systems. The presentation will be followed by roundtable discussions on topics of interest to the attendees.

OCTOBER 15, 2014 — SPOKANE, WASH.

NEW! UNDERSTANDING THE 21ST CENTURY WORKFORCE: WHAT MAKES IT TICK?

Who Should Attend: Policymakers, general managers, CEOs, senior managers, mid-level managers, and human resources staff.

Overview: For the first time in history, four generations (Traditionalists, Baby Boomers, Gen Xers, and Millennials) have presented new challenges for managers and their employees in the

Continued on page 10

Powering a Clean Energy Future

A diverse mix of energy generated in Washington at Energy Northwest provides enough reliable, affordable and environmentally responsible power for more than one million Washington homes.

ENERGY NORTHWEST
www.energy-northwest.com

Facebook, Twitter, YouTube icons

TRAINING OPPORTUNITIES

workplace. These differences can affect everything, including recruiting, team building, dealing with change, motivating, managing, and maintaining and increasing productivity. In this interactive one-day session, participants will gain an understanding of what makes each generational group tick.

OCTOBER 15, 2014 — SPOKANE, WASH.

NEW! WORKFORCE PLANNING: THE KEY TO CREATING YOUR SUSTAINABILITY

Who Should Attend: Policymakers, general managers, CEOs, and senior and mid-level managers.

Overview: Organizations are raising the bar with regards to knowing who their current and future leaders are, and the capabilities they possess. A strategic approach is needed to examine future leadership requirements, assess current capabilities, and determine the steps necessary to close identified gaps.

OCTOBER 16, 2014 — SPOKANE, WASH.

NEW! BUILDING TEAM GREATNESS

Who Should Attend: Managers and supervisors who support teams in an office environment.

Overview: Join your public power peers at this class and develop leadership skills that foster team trust, collaboration, and focus. This highly interactive session will provide you with a solid understanding of effective team dynamics, the ingredients of a high-performing team, and how you can build and lead successful teams.

OCTOBER 21, 2014 — PORTLAND, ORE.

KEY TOPICS IN UTILITY ACCOUNTING

Who Should Attend: Employees who are new to utility accounting, or who need to understand the special requirements of utility accounting.

Overview: The class will begin with an overview of electric utility operations and terminology before moving on to the following topics: prescribed uniform system of accounts (for example, FERC or RUS); cash accounting versus accrual accounting; work order systems; the general ledger and subsidiary ledgers; and the four accounting cycles: revenue, collections, disbursements, and payroll.

OCTOBER 21-22, 2014 — VANCOUVER, WASH.

3 Cs 2014 WORKSHOP: CREDIT, COLLECTIONS, AND CUSTOMER SERVICE

Who Should Attend: Customer service, credit, and collections employees.

Overview: Customer service, credit, and collections employees constantly need to hone their communication skills, stay on top of legal issues, learn about new devices, and take care of themselves while coping with the stress of their jobs. New technologies are emerging, and billing and payment options abound; customer confusion and resistance to change often lands in the laps of 3 Cs staff to resolve.

OCTOBER 22-24, 2014 — PORTLAND, ORE.

LINEMAN SKILLS SERIES: DAY 1 — AC TRANSFORMERS, ADVANCED THEORY, AND PRACTICAL APPLICATION

Who Should Attend: Journeyman linemen, foremen/supervisors, engineers, and those involved in planning, scheduling, and engineering operations for a utility.

Overview: This advanced class provides attendees with a journeyman lineman's view of AC transformers. The curriculum includes a combination of electrical theory and hands-on practice. The overall program is to teach students how transformers are used to manage and control the flow of alternating current in electrical distribution systems.

OCTOBER 28, 2014 — STOCKTON, CALIF.

PATHWAYS TO LEADERSHIP SESSION 3: INSIDEOUT COACHING — MORE LEADERS COACHING, MORE OFTEN, FOR MORE IMPACT!

Who Should Attend: Directors, managers, graduates of Frontline Leadership, and newly appointed senior leaders.

Overview: InsideOut Coaching is designed to help organizations achieve performance breakthroughs by turning leaders and managers into confident and effective coaches. The G.R.O.W. Model represents the four stages of decision making; targeted questions at each stage provide the practical framework for holding effective coaching conversations.

OCTOBER 28-29, 2014 — PORTLAND, ORE.

LINEMAN SKILLS SERIES: DAY 2 — REGULATORS AND CAPACITORS: POWER QUALITY FOR LINEMEN

Who Should Attend: Electrical linemen, linecrew foremen, substation personnel, and electrical engineers.

Overview: This course is designed to help the student better understand the function, purpose, and application of regulators and capacitors. Students will observe the inner workings of a step voltage regulator and applied electrical theory. Students will also learn to work safely with various capacitors in different configurations and connections, while using hands-on demonstrations.

OCTOBER 29, 2014 — STOCKTON, CALIF.

ONLINE — OVERVOLTAGE PROTECTION WEBINAR (DISTRIBUTION ENGINEERING SERIES #3)

Who Should Attend: Engineers and senior technical personnel involved in the selection and location of lightning arrestors and proper system grounding.

Overview: This webinar is part of the Electric Utility Engineering Certificate Program that teaches critical concepts and skills in distribution engineering. The other two classes are *Distribution Engineering Planning & Analysis* (a four-day class) and *Overcurrent Protection* (a two-day class). This course will cover lightning theory, grounding, basic impulse insulation level (BIL), and the calculation of the margin of protection of the system and equipment.

OCTOBER 29, 2014 — ONLINE PRESENTATION

LINEMAN SKILLS SERIES: DAY 3 — PERSONAL PROTECTIVE GROUNDING

Who Should Attend: All electrical workers involved in personal protective grounding.

Overview: This course discusses protective grounding theory, emphasizing safety and the range of acceptable currents. It also covers visual inspection of grounding systems (mats, connectors, risers, and straps); special considerations and hazards (IEEE Standard 80); and personal protective grounds, including sizing, testing, inspection, maintenance, and use.

OCTOBER 30, 2014 — STOCKTON, CALIF.

EMPLOYER COLLECTIVE BARGAINING TEAM PREPARATIONS

Who Should Attend: General managers, operations managers, members of the employer bargaining team, and chief negotiators.

Overview: You will gain valuable and practical knowledge about the three phases of collective bargaining: preparation and defining the range/scope of negotiations; bargaining over issues (both non-economic and economic) and packaging of all remaining issues; package offers, offer variations, final offer, and achieving agreement or implementation of the final offer.

OCTOBER 30-31, 2014 — PORTLAND, ORE. NWPPA

Engineering analysis model proves beneficial to Elmhurst Mutual

The following is a case study of a Pacific Northwest utility successfully developing and integrating a detailed engineering analysis model into its toolbox.

Overview of the project

Elmhurst Mutual Power and Light Company is a member-owned electric utility located in Tacoma, Wash. The company provides electric service to approximately 14,000 customers.

In 2013, Elmhurst decided to update their Long Range System Plan. The purpose of the update was to review the capacity and configuration of the utility's medium-voltage distribution system and its ability to reliably and efficiently meet the projected load increase over the next 10 years.

Elmhurst worked with EES Consulting to build a detailed engineering analysis model of their 19 distribution circuits. A sample view of the completed model can be seen below in Figure 1.

Elmhurst keeps excellent records of the plant in service, so developing a detailed engineering analysis model was straightforward. First, the geographic layout of the feeders

was digitized over geographic maps of the system exported to AutoCAD. Conductor and service transformer sizes and phasing were added. Most of the laterals and service transformer records had phasing information. The locations of switches were known, and were added to simulate load transfer switching and (N-1) contingency analysis. Load was based on metered data at the substation and was allocated by connected kVA.

When digitizing the maps, EES noted locations where phasing data was missing and should be collected from the field. This list was turned over to Elmhurst for verification.

Innovations

An Elmhurst employee came up with a simple and fast way to perform field verification of distribution laterals and overhead service transformers. He used his mobile phone to call his office voicemail and record notes on phasing and

Continued on page 12

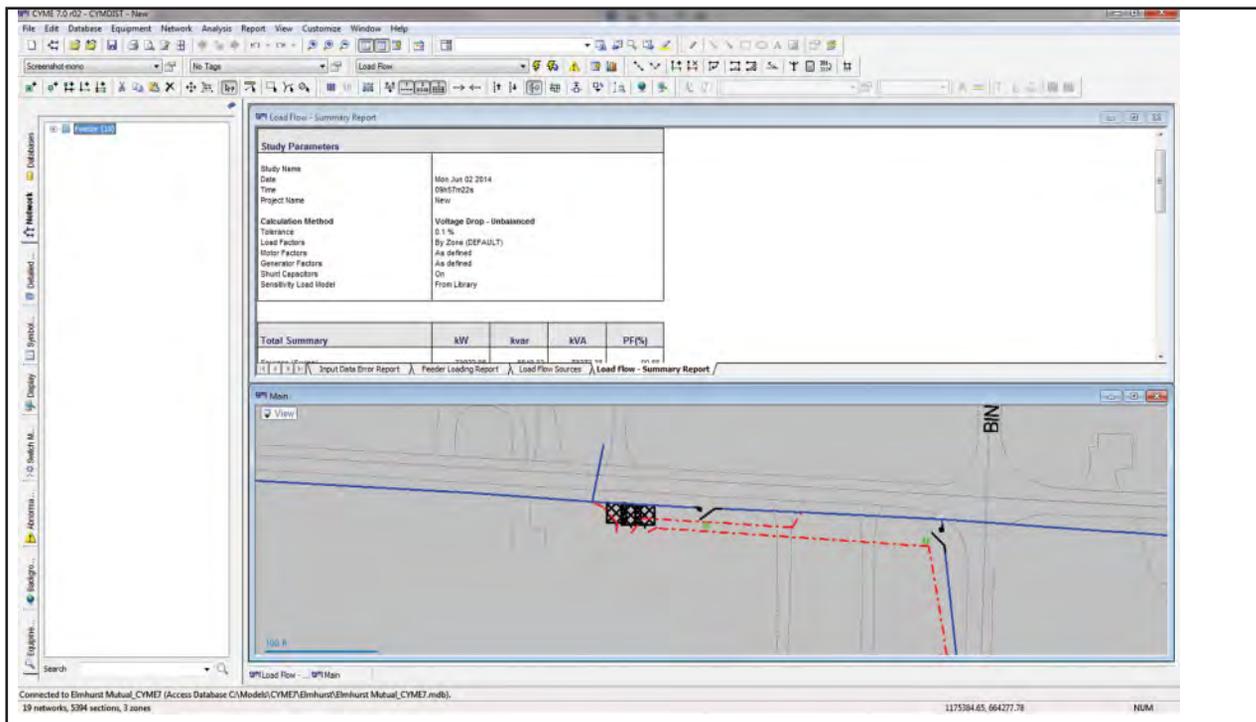


Figure 1. Sample view of the model

other details of what he saw as he drove along the feeder. When he returned to his office, he transferred the detail onto his system maps. This turned out to be a very rapid and cost-effective solution compared to contracting the field work. The schedule was compressed from about six weeks to less than one week to verify the data.

Benefits to Elmhurst

Elmhurst and EES used the completed model to run unbalanced load flows. This created a visual indication of the power flow through their distribution system, both at current and projected load levels over the next 10 years. We were able to identify areas of interest (such as line sections exceeding planning criteria), develop several possible solutions to each challenge, compare the alternatives, and select the projects that provide the best value.

One challenge is that Elmhurst is expecting rapid growth in one area of their service territory, and slow-to-moderate growth in other areas. The outcome of the study was a list of load transfers that will help Elmhurst spread the overall load more evenly between their circuits and substations, while simultaneously reducing line losses.

The table below shows the substation capacity at the year 10 forecast peak, before and after the recommended projects identified using the model.

	Without Recommended Projects % Planning Limit	With Recommended Projects % Planning Limit
Sub A	76%	68%
Sub B	68%	63%
Sub C	58%	50%
Sub D	41%	54%
Sub E	45%	56%

As a follow up to the planning study, EES and Elmhurst worked to correlate historic weather data with historic substation loading information. Then, using the engineering model, EES was able to forecast the impact of extreme weather on substation loading under N-1 contingency switching scenarios. Without a model, this analysis would have been very difficult or impossible.

Future work planned

The engineering analysis model EES and Elmhurst developed is a multifaceted tool; Elmhurst plans to further leverage their model in the coming months. They are working with EES to perform a distribution system protection study to review the configuration and settings of Elmhurst's protection scheme and its ability to reliably and efficiently isolate faults with a minimal impact to customers.

The engineering analysis model EES and Elmhurst developed is a multifaceted tool; Elmhurst plans to further leverage their model in the coming months. They are working with EES to perform a distribution system protection study to review the configuration and settings of Elmhurst's protection scheme and its ability to reliably and efficiently isolate faults with a minimal impact to customers.

Furthermore, the protection study will include arc flash analysis to assess the risk of working on energized distribution system components. The engineering analysis model will be central to this work.

Additionally, the model has been useful for studying growth. For example, a new housing development is anticipated, and Elmhurst plans to study the potential configurations for line extension(s) to this area using the model. This will allow them to select the design that best meets their criteria, such as lowest total losses, feeder loading guidelines, and more.

Finally, Elmhurst is transitioning to a new SCADA system. Conveniently, the SCADA vendor is able to incorporate data from the engineering model in order to create interactive real-time displays and other enhancements. Elmhurst will also be working toward an improved outage management system (OMS) now that they have SCADA and engineering analysis capabilities.

In summary, the engineering analysis model has become a very useful tool for Elmhurst. **NWPPA**

Tyson Reed, P.E. is a senior electrical engineer with EES Consulting, Inc. He can be contacted at (425) 889-2700 or reed@eesconsulting.com. Neal Norberg is the operations manager at Elmhurst Mutual Power and Light Company in Tacoma, Wash. He can be reached at (253) 531-4646.

by Sarah E. Smith

Less energy, more fish at Idaho fish hatchery

Energy efficiency and water supply upgrades transform an antiquated Idaho fish hatchery into a national model for the 21st century

Millions fewer kilowatt-hours in and millions more fish out — that’s the new measure of success at Dworshak National Fish Hatchery near Orofino, Idaho.

An unusual five-way partnership has created a win-win-win-win-win situation at one of the most remote and spectacular locations in the Federal Columbia River Power System. Together, a state, a tribe, and three federal agencies leveraged their diverse know-how and resources to save valuable energy and invaluable fish runs, originating in North-Central Idaho and fanning out across the region.

Chairman Silas Whitman of the Nez Perce Tribe, which co-manages the hatchery, says the unique collaboration is an example of “the cycle of life...and an effort I hope continues to build and build and build.”

Administrator Elliot Mainzer of Bonneville Power Administration, which funded about \$600,000 in improvements, says the cooperation behind the project became “a positive feedback mechanism in which one good act spurs another good act, and creates a cycle of virtue.”

Robyn Thorson, Pacific Region director of the U.S. Fish & Wildlife Service (USFWS), which manages the hatchery with the tribe, says it’s “a big story of place, people, and partnership.”

Lt. Col. Andrew Kelly of the Walla Walla District of the U.S. Army Corps of Engineers, which owns the dam, says, “This project management’s collaborative approach to problem-solving serves as a model for us all to follow.”

Dworshak Dam and National Fish Hatchery sit at the confluence of the Clearwater River and its North Fork, a place so propitious, people have gathered there to fish since time immemorial. On one riverbank lies the heritage site where the Nez Perce helped hungry members of the Lewis and Clark expedition build five dugout canoes for its journey to the Pacific in the fall of 1805. Two centuries later,



Twenty-first century teamwork and problem solving elevated the performance of the Dworshak National Fish Hatchery, managed by the Nez Perce Tribe and U.S. Fish and Wildlife Service, and earned it the Department of Interior’s 2013 Environmental Achievement Award. All photos by Tom Osborn, BPA.

the synergistic setting has continued to provide a rich confluence of intergovernmental cooperation and opportunity.

Within the hatchery, tiny salmon flash around the raceways like silver streaks. Within the dam, electrons fly to the grid from three hydroelectric generators totaling 400 megawatts.

Thanks to improvements paid for by BPA ratepayers since 2011, greater quantities of fish and electricity alike have been returned to the region. The energy efficiency and related refurbishments have enabled the hatchery to roughly double the number of fish it raises while using about half the water and energy. The project earned the Department of Interior’s Environmental Achievement Award for 2013.

The upgrades at Dworshak fit into the larger effort by BPA and its federal partners to rebuild threatened and endangered fish runs and to mitigate for effects of the 31 federal dams in the Columbia River Basin. This year’s forecasts for fish returns to the mouth of the Columbia are generally on the rise. They include an estimate of 227,000 spring Chinook — exceeding the 10-year average — as well as 1.5 million fall Chinook; 638,000 coho; 281,000 steelhead; and 347,000 sockeye salmon.

Continued on page 14



At an April celebration and tour of the hatchery, BPA Administrator Elliot Mainzer marvelled at the synergies arising from the shared efforts of a tribe, a state, and three federal agencies that produced one megawatt of energy efficiency and helped the hatchery meet its targets for fish production.

The hatchery was built in 1969 to offset the impact on North Fork steelhead from construction of the third-tallest dam in the U.S. — at 717 feet, far too high for fish passage. It shoulders a hefty roster of responsibilities every year: to rear and release 3.6 million young fish, or smolts, including 2.1 million summer steelhead and 1.5 million spring Chinook, fulfilling targets under the Lower Snake River Compensation Plan and FCRPS objectives. It also produces 300,000 coho through a tribal program.

Despite remaining one of the world's largest combined producers of steelhead and salmon, the hatchery had grown antiquated by the 21st century. A mostly analog plant in a digital world, it faced problems with aging equipment and water supply, creating major obstacles to meeting its yearly fish-production targets.

BPA's dual expertise — reflecting its history of supporting innovative energy-efficiency projects and operating one of the largest fish and wildlife programs in the world — found a fruitful outlet at Dworshak. For a relatively modest investment, the partnership was able to generate dramatic savings in electricity and water use, said Brad Miller of BPA's Energy Smart Reserved Power program. The efficiency measures resulted in \$431,000 in direct cost avoidance to BPA in both 2011 and 2012, meaning the project paid for itself in less than 17 months while helping the

“The level of cooperation achieved among the partners would have been almost unimaginable only a few years ago. And it has created a new model that is directly applicable to other fish hatcheries nationwide.”

Jack Christiansen,
USFWS aquatic engineer

hatchery meet its production targets. BPA also funds the power share of operations and maintenance costs of the hatchery, about \$3.2 million in fiscal year 2013.

At an April celebration, BPA executives joined partners on a tour. They learned how \$600,000 in refurbishments had already produced an average megawatt of energy savings — “with another megawatt on the way,” says BPA Energy Efficiency Engineer Tom Osborn.

Visitors viewed incubation trays in which fertilized eggs develop eyes (or “eye up”) in two weeks. By doubling the number of trays to 1,856 with BPA funding, the hatchery was able to incubate many more eggs using lower water temperatures on a less-challenging schedule. That meant operating energy-hungry boilers less, while greatly increasing the numbers of healthy fish released for the 500-mile journey to the Pacific Ocean.

Partnering with the nearby Clearwater Hatchery, which is operated by the Idaho Department of Fish and Game, the hatchery accessed a superior water supply from the reservoir behind Dworshak Dam, saving energy and reducing disease. The reservoir water is not only cleaner than water pumped up from the river, but flows down at a temperature closer to ideal for rearing fish.

“The biological gains and energy savings we made by being able to stay on reservoir water are fantastic,” said Scott Bettin of BPA's Environment, Fish and Wildlife group.

The hatchery also replaced pumps, pairing them with variable frequency drives for more efficiency. “We're using less horsepower to move the same amount of water,” Osborn said.

The entire project reflects a more nuanced and integrated way of operating.

“The level of cooperation achieved among the partners would have been almost unimaginable only a few years ago,” says USFWS Aquatic Engineer Jack Christiansen. “And it has created a new model that is directly applicable to other fish hatcheries nationwide.” **NWPPA**

Sarah E. Smith is a policy writer in the Public Affairs Department at Bonneville Power Administration. She can be contacted at sesmith@bpa.gov or (503) 230-5272.

by Kristine Lindemulder

iPads for line crews prove to be enormously beneficial, cost effective in the field

What can you expect when introducing new technology to a group of highly skilled utility workers? It's difficult to predict how a group of employees will receive news of changing technology. Computer technology itself was not foreign to them, having used Toughbook laptops for more than 10 years; however, integrating a new, dissimilar tool in place of the laptops had the potential to present some challenges. Would staff be eager to learn, or resistant to change? Would they pick it up quickly, or require weeks, even months, of additional training? These were a few of the questions considered by Emerald People's Utility District in 2012 when the decision was made to move forward with the implementation of iPads.

Why iPads? It was a financial decision initially. The existing Toughbooks were at or approaching their end of life and would need to be replaced, and iPads could provide all the same services currently being utilized on the Toughbooks, but for a fraction of the cost. Additionally, iPads were more portable and offered superior functionality, particularly to users with little computer experience. Frequently used apps and documents would be easy to find and use on an iPad, and it made sense to move to a tool that would reduce any unproductive time spent searching a complicated Windows operating system.

Emerald PUD System Engineer Doug Barab took on the task of transitioning the utility's servicemen and line crew foremen from laptops to iPads, which was executed in two phases. In phase one, Emerald's three servicemen, the



Emerald PUD Serviceman Neil Williamson uses his iPad before leaving the EPUD yard. All photos courtesy of Emerald PUD.

Toughbook "power users," were introduced to iPads. As hoped, they set aside their reservations and quickly adapted to the new devices. Used at first for some of the more basic functions, such as email communications, completion of timesheets, and calendar management, the uses soon grew to include interactive form entry, satellite mapping, and detailed recordkeeping. By the time Emerald's three line-crew foremen received their iPads in phase two, anticipation had grown among the crews from hearing the servicemen's reactions. Again, a success — the foremen were quick to familiarize themselves with the iPads and incorporate them into their daily routines. In the months that followed, information was routinely shared between the servicemen and foremen, which drove each of them to expand their iPad usage, and frequently find new ways to use the versatile tool.

Continued on page 16



Top: Emerald PUD Tree Crew Foreman Max Mullikin using an iPad at a job site. Right: An example of the photos that crews send in from the field for use in newsletters and social media posts.



“I admit, I was hesitant to go from laptop to iPad because I was sure we would lose some capabilities,” said Emerald PUD Serviceman Mark Raimer. “I was surprised with how much we gained. We use the iPads more than I ever expected; throughout the day, every day!”

“I use mine for everything: emails, service orders, mapping. I also do my time sheets and all outage forms, claim forms, and cable failure forms,” said Emerald PUD Serviceman Neil Williamson. “I couldn’t function without my iPad!”

“My iPad keeps track of everything I do: calendar appointments, documents, electrician authorizations, and these are just a few of the ways I use it,” said Emerald PUD Serviceman Del Casarez. “It’s my brain of information.”

Months later, Barab participated in a rapid process improvement meeting with the tree trimming crews to assist with streamlining department processes. In hearing about the challenges crews regularly faced, Barab recognized the familiar scheduling and paperwork issues he’d seen previously with the line crews and considered introducing iPads to this group. Although they had never used any electronic devices in their work, the positive feedback from the servicemen and line crew foremen was proof enough this could work. iPads were allocated to the five tree-crew foremen and the right of way coordinator, and the resulting process improvements were immediate.

With each of the operations teams now using iPads to manage jobs, coordinate schedules, locate service addresses,

communicate with office personnel, and much more, the benefits began to spill over into other departments. Customer Service began receiving fewer calls for assistance because crews could find what they needed on their iPads. Mapping additions were expedited because they were reported immediately, and work orders were easily kept up to date because they were submitted electronically. The Communications department started receiving photographs taken with the iPads for use in newsletters and social media. While crews have shaped the way they use iPads according to what works best for them, they continue to stay open-minded and look for new opportunities.

Electronic forms are one of the most common uses; iPads are used to complete outage reports and various other reports and forms electronically. In years past, line crews were required to complete the forms on paper and return to the office to submit them for processing. Having electronic access has eliminated unnecessary trips to the office, and provided an immediate means to fill out the forms quickly while the details of the work are still fresh.

The satellite mapping function has also been highly beneficial to crews. When customer addresses or gates are not visible due to overgrown vegetation, the satellite mapping tool is often helpful in locating them. If location information is not available through mapping, many other details are still provided. This helps the crew to identify the property owner, saving time for both the crew and Customer Service representative. Although the mapping

Another efficiency of the iPad is the weather app. By monitoring weather changes in the surrounding areas, crews are kept up to date and informed about possible outage-causing events, allowing additional time to prepare.

function has encountered various issues and has evolved over time, it is still one of the most widely used applications. Emerald is now on their fourth mapping application and each of the four apps has functioned differently: some use satellite imagery, some have more illustrated detail, others load more quickly. Depending on the user's preference and reason for use, one of the four apps will usually provide the information needed.

Another efficiency of the iPad is the weather app. By monitoring weather changes in the surrounding areas, crews

are kept up to date and informed about possible outage-causing events, allowing additional time to prepare.

Financially, the iPads continue to provide substantial savings. Aside from thousands of dollars saved early on based on the comparative costs of replacing the Toughbooks versus purchasing the iPads, the utility saves approximately \$800 per month on technical support, which is provided to Emerald by an outside contractor for all PCs and laptops. Because the iPads' software, security, and applications have proven to be easily updated, the maintenance is performed entirely in-house by a small group of people, in addition to their regular duties.

"Switching to iPads has presented many significant benefits to the utility, but the most gratifying of these is how it's affected the crews," Barab reflects. "I've watched crew workers with minimal computer skills or interest grow into creative and tech-savvy users. That's what is making this project a success." **NWPPA**

Kristine Lindemulder is the communications coordinator at Emerald People's Utility District in Eugene, Ore. She can be contacted at either (541) 744-7410 or kristine@epud.org.

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PURPA: It's not just for IOUs anymore

The Public Utility Regulatory Policies Act of 1978 (PURPA) is a federal law that, among other things, requires electric utilities to purchase wholesale power from certain eligible wholesale generators. Although a portion of PURPA establishes retail rate-setting principles applicable to regulated utilities, the heart of the statute lies in its mandate that electric utilities must purchase wholesale power from qualifying facilities (QFs). This is known as the “must-purchase” obligation. The price that the electric utility shall pay the QF for power is equal to the utility’s full avoided cost for power. Note that this does not mean the utility’s average cost of power, but the “incremental” cost that the utility would incur to acquire power but for the purchase from the QF. In most cases, the utility’s incremental avoided costs will be higher than its average system costs.

There may be a misconception in our region that PURPA only applies to investor-owned electric utilities that are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC). However, this is not the case. On its face, the PURPA “must-purchase” obligation applies to all “electric utilities” without limitation as to their jurisdictional status. The term “electric utility” is specifically defined in PURPA so as to include “municipalities” (although it expressly excludes federal power marketing agencies). The term “municipality” is itself defined very broadly to include any political subdivision or agency of a state that is authorized to “carry on the business of developing, transmitting, utilizing, or distributing power.” Thus, PURPA applies to consumer-owned utilities as well as investor-owned utilities.

Notwithstanding the fact that it applies to all electric utilities, the PURPA “must-purchase” obligation has historically affected only investor-owned utilities in the Pacific Northwest. This has been more for economic reasons than for legal reasons. The fact is that consumer-owned utilities in the Pacific Northwest have had access to preference power from the Bonneville Power Administration (BPA), which has kept their avoided cost for incremental power very low. By comparison, the investor-owned utilities have had to acquire their own power resources at a cost that is usually greater than BPA’s preference rate. This means that the investor-owned utilities have generally had higher avoided costs than the consumer-owned utilities. Predictably, the QFs prefer to sell their output to utilities having a higher avoided cost rate.

The market dynamics that have led QF developers to favor investor-owned utilities may be changing for three reasons. The first reason is that the investor-owned utilities have learned how to navigate the byzantine-state regulatory process so as to understate their avoided costs. In Oregon,

There may be a misconception in our region that PURPA only applies to investor-owned electric utilities that are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC). However, this is not the case.

for example, an investor-owned utility’s avoided cost is assumed to be “market” whenever the utility is resource sufficient. Given that the wholesale power markets are currently very low, it is no surprise that each utility in Oregon is suddenly resource sufficient (or will be in the immediate future). Further, the determination of whether a utility is resource sufficient or deficient is buried in its Integrated Resource Plan (IRP) — a document which is typically hundreds of pages long, exceedingly technical, and requires several years to change. By effectively tethering their avoided costs to market rates, and by insulating that determination from any reasonable scrutiny through the IRP process, the investor-owned utilities have drastically reduced what they must offer to pay QFs under PURPA.

The second reason why the market dynamics for QF power sales may be changing lies in BPA’s new rate-setting methodology. BPA previously offered full requirements contracts, pursuant to which it met the consumer-owned utilities’ full retail load requirements with its lowest-cost power. Beginning in 2012, however, BPA transitioned to the Tiered Rate Methodology (TRM). Under the TRM, the preference utilities’ access to BPA’s lowest (Tier 1) rate is fixed according to the utility’s load forecast for 2010 (its Contract Period High Water Mark or CHWM). Incremental increases in load above the CHWM must be served by sources other than Tier 1. This means that the consumer-owned utilities’ avoided cost for incremental power will no longer be tied to BPA’s lowest rates — and will have to be established on a case-by-case basis to reflect each utility’s above-CHWM power supply decisions.

The third reason why consumer-owned utilities may become targets for future QF power sales is geography. Consumer-owned utilities tend to be physically closer to eligible renewable and cogeneration facilities. As compared to more densely populated service territories along the I-5 corridor, many consumer-owned utilities’ rural service territories offer cheaper land, more commercially viable wind resources, better access to sunlight, more potential hydro-

electric or hydrokinetic sites, and more biomass cogeneration opportunities. While these have long been the preferred sites for locating QFs, in recent years the investor-owned utilities have gotten more aggressive about recovering interconnection, integration, transmission, and other costs associated with receiving, managing, and delivering QF power. If the historical differential in avoided costs between consumer and investor-owned utilities does indeed decline, as explained above, then QF owners will likely choose to sell their power output to the local consumer-owned utility in an effort to save on interconnection, integration, wheeling, and transmission costs.

Consumer-owned utilities need to be aware of these changing market dynamics so that they can better understand their risks, rights, and responsibilities under PURPA. At the most basic level, every consumer-owned utility that is forecasting a need to purchase above-CHWM power in the near future should include PURPA as part of their overall risk analysis. In simple terms, consumer-owned utilities should be aware of what their avoided costs for incremental power look like from the perspective of a QF developer.

Along with the potential risks, consumer-owned utilities should also know their responsibilities under PURPA. For example, even non-jurisdictional utilities in Oregon are required to file their avoided costs with the Oregon Public Utilities Commission. In addition, Congress amended PURPA in 2005 to require all non-regulated (consumer-owned) utilities with annual retail sales in excess of 500 million kilowatt-hours to formally consider implementing net metering, smart metering, interconnection, fuel sources, and fossil fuel generation efficiency standards.

Finally, consumer-owned utilities should be aware of their rights under PURPA. It is in the purchasing utility's interest, for example, to ensure that its avoided cost rates do not overstate its actual avoided costs. As part of the process of establishing its avoided costs, the purchasing utility may be entitled to take into account certain project-specific costs associated with interconnection and integration of QF power. The purchasing utility also is entitled to reasonable contractual protections such as financial security and minimum performance obligations.

To date, PURPA has largely been an issue affecting only investor-owned utilities in our region. This does not mean, however, that consumer-owned utilities are immune from PURPA's must-purchase obligation. Recent trends indicate that the avoided cost rates being offered to QFs by investor-owned utilities are falling precipitously. At the same time, the avoided cost rates offered by many consumer-owned utilities may no longer be constrained by the price of BPA's preference power. While this trend may not provide enough financial incentive to spur new QF development, it may well result in existing QF projects with expiring long-term power purchase agreements looking to consumer-owned utilities for replacement contracts. Consumer-owned utilities — particularly those that have both above-CHWM load forecasts and existing QF projects located nearby — would do well to plan accordingly. **NWPPA**

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Enkvist to head APA, ARECA

Lifelong Alaskan **Crystal Enkvist** has been selected for the position of executive director of Alaska Power Association (APA) and executive vice president of ARECA Insurance Exchange. Enkvist, who starts August 1, has served the association as its director of Member and Public Relations for the past 14 years. Prior to coming to APA, she was the public information officer at Anchorage Municipal Light & Power, and director of communications for the Anchorage Chamber of Commerce. Enkvist replaces **Marilyn Leland**, who has served as executive director and executive vice president of the organizations since 2006 and is retiring on August 1.



“I have known Crystal since she entered the Alaska electric utility program 16 years ago and have seen her mature into a strong and respected player in the industry, qualifying her to serve in this leadership role,” said **Meera Kohler**, president of the ARECA Insurance Exchange Board of Trustees. “We are looking forward to her leadership as we seek ways to enhance the services we provide to our membership.”

Enkvist holds a Master of Public Administration degree in public management as well as a bachelor’s degree in journalism and public communications from the University of Alaska Anchorage. She is also Accredited in Public Relations (APR) from the Public Relations Society of America.

The executive director is responsible for implementation of policies adopted by the boards of directors of both entities (APA and AIE), as well as management of the business activities of the organizations and their government relations program, including state and federal lobbying activities. **NWPPA**

Cowlitz customers can track daily usage

Cowlitz PUD (Longview, Wash.) announced that it is now offering a free-of-charge way to better track electric bills for its customers. MyUse benefits Cowlitz PUD through reduced demands on staff, greater customer satisfaction, and greater energy conservation.

A value-added feature of Exceleron’s pay-as-you-go electricity program, MyUse allows Cowlitz PUD customers the choice to view their daily energy consumption via smartphone or computer, regardless of whether they’ve opted into the MyPowerPay program.

MyUse is a hosted, Web-based platform that allows Cowlitz PUD customers with traditional billing (consumers who have not opted into the MyPowerPay program) to view their daily energy consumption within a user-friendly Web interface at www.MyUsage.com.

MyUse customers can view a graphical representation of their energy use for the past 30 days, plotted with the average high and low temperatures for each day. MyUse accounts help customers understand how their energy usage varies with the average daily temperature. The dashboard also displays their average energy use, the most recent meter reading, and a list of the alerts that have been sent via email. Additional tabs allow customers to view historical information regarding energy usage and alerts, dating back to when the MyUse account was created.

MyUse offers the choice of two types of free alerts sent via email: a daily usage alert, which states energy use over the past 24 hours; and a high-usage alert, which is automatically generated when energy usage in the past 24 hours exceeds a threshold set by the customer. **NWPPA**

Hicks, Scheller reach milestone



(L-R) Commissioner Lynn Heminger, Operations Supervisor — Wells Project Brian Hicks, Maintenance Coordinator John Scheller, and Commissioner Ron Skagen.

On May 27, Douglas County PUD (East Wenatchee, Wash.) Commissioners **Lynn Heminger**, **Ron Skagen**, and **Jim Davis** awarded Operations Supervisor — Wells Project **Brian Hicks** and Maintenance Coordinator **John Scheller** with their 25-year service awards.

Commissioner Heminger thanked the men on behalf of the citizens of Douglas County for their many years of service. Scheller thanked the commission and said, “It has been a good opportunity, a fun job, and I appreciate it.” Hicks agreed and said, “I have enjoyed the years spent here. Thank you for the opportunity.” **NWPPA**

Grays Harbor approves demolition contract

The Grays Harbor PUD (Aberdeen, Wash.) has approved a contract which will allow for the demolition of the Harbor Paper waste water treatment facility at no cost to the District or its customers.

On June 10, the PUD approved a contract with Hero Demolition LLC for the demolition and removal of the buildings and equipment that make up the facilities waste-water treatment plant. The contract will allow Hero Demo-

lition to take possession of and remove all salvageable materials in lieu of payment.

“I am thrilled that we were able to reach this agreement,” said Commission President **Russ Skolrood**. “This contract will allow the PUD to continue to meet its obligation to clean this portion of the Harbor Paper site and to do it without absorbing costs which could impact our customers.”

The demolition work will include the removal of all the wastewater treatment facilities buildings and structures, including the primary clarifier, three secondary clarifiers, solids pumping station building, secondary treatment pump house, and the aeration blower building. The company will also remove all mechanical equipment, piping, electrical, roofing, siding, and wood materials.

Under its agreement with Rayonier Properties, LLC, the PUD is obligated to clean and remove the facility’s water treatment system and remove solid byproducts, including piles of bark/rock mixture, sand ash, and boiler grate material. PUD staff is working to fulfill those responsibilities in a way that meets their obligations while having the least possible impact on the PUD’s customers. **NWPPA**

Lassen hires new AGM

The board, management, and staff of Lassen Municipal Utility District (Susanville, Calif.) are pleased to announce that **Doug Smith** has joined the team as LMUD’s new assistant general manager.

Smith has more than 21 years of experience in the energy industry, including more than 16 years working for public power utilities. Most recently, he worked as a self-employed consultant providing planning and performance bench-marking tools to utility clients. Prior to entering the consulting field, he spent 13 years at Grays Harbor PUD in Aberdeen, Wash., serving as assistant general manager for 11 years.

Smith has extensive experience in the utility industry, including overseeing customer service, human resources, communications, and government relations. He was instrumental in developing and implementing the conservation programs and managing power supply risk for Grays Harbor.

Before joining Grays Harbor, he spent four years as a key account services engineer at Platte River Power Authority in Fort Collins, Colo., providing energy efficiency and power quality services to Platte River’s four member municipal utilities commercial customers. Prior to that, he worked for Energy Engineering Associates in Austin, Texas, performing comprehensive energy audits and providing mechanical design services for industrial and institutional clients.



In addition to his work experience, Smith has stayed actively involved in the community, serving on the boards of various service and economic development organizations, including 11 years on the Aberdeen school board. **NWPPA**

Chelan won’t appeal water tax decision

On June 16, Chelan County PUD commissioners asked staff to begin negotiations with the city of Wenatchee (Wash.) on the amount of revenue from PUD water service inside city limits that is subject to Wenatchee’s utility tax.

The action follows a ruling by the state Appeals Court that the city has the authority to tax the portion of water service deemed “proprietary” (offered as a business service). The appeals court also sent the case back to Chelan County Superior Court to determine how much of the revenue collected from PUD water customers living in the city is subject to the tax.

Rather than immediately going back to court, commissioners agreed with legal staff to begin negotiations with the city now to develop the method to set what percentage of water revenue is proprietary and what is for governmental purpose, primarily fire suppression hydrants. The governmental purpose (for public good) revenue is not taxable.

The case dates back to May 2012 when the city and the PUD agreed to ask the court to resolve the dispute over the city’s utility taxing authority on PUD water service inside city limits.

Chelan PUD has continued to collect the 16-percent city tax and hold it while the issue was resolved. Once a method for determining how much is for governmental activities and not subject to tax, the PUD would plan to return that amount to PUD water customers living in Wenatchee, said **Carol Wardell**, PUD staff attorney. **NWPPA**

Lewis promoted at Salem Electric

Effective June 1, **O. Jeff Lewis** was named as the new Member Services manager at Salem Electric (Ore.).

Lewis was hired in 1989 as an energy analyst and promoted to Member Services supervisor in 2001. As Member Services manager, he will oversee Salem Electric’s various energy conservation programs and will be responsible for marketing, public information, and community involvement. **NWPPA**



Ryan Lane joins Lewis PUD

Lewis PUD (Chehalis, Wash.) is excited to announce that **Ryan Lane** joined Lewis as their superintendent on May 12. Lane has lived in Alaska for the last 30 years, working as a lineman for 24 years and as a superintendent for the last eight.

When Lane was asked of his future vision for Lewis PUD he said, “I am glad to have this opportunity with the Lewis PUD team and excited to be a part of the District’s goals. I look forward to cultivating the ground-work established in safety and crew efficiencies. Lewis PUD is a great place to work and I look forward to aligning myself with the District’s Mission Statement being: Power You Can Rely On; People You Can Trust.” **NWPPA**



lighting with LEDs. This upgrade will result in an estimated energy savings of 101,333 kilowatt-hours annually.

Dean Graumlich thanked OPALCO and the staff of the Friday Harbor Labs and then turned her attention to the students in attendance. “It’s exciting to see that our next generation of stewards — of the Friday Harbor Labs and of our planet — are placing a great value on energy efficiency, conservation, and renewable generation. You are creating new social norms that will serve us well,” she said.

OPALCO’s rebate program is funded by the Bonneville Power Administration to help incentivize energy-efficiency upgrades in San Juan County. The OPALCO Energy Savings staff has issued a total of \$268,478 in rebate checks to members with a collective estimated annual kilowatt-hour savings of 940,826 (from October 1, 2013, to May 31, 2014). **NWPPA**

OPALCO presents \$46K in rebates



(L-R) Professor Adam Summers, UW Friday Harbor Laboratories Interim Director Billie Swalla, OPALCO Energy Savings Specialist Elisa Howard, and UW Dean of the College of the Environment and Prentice and Virginia Bloedel Professor Lisa J. Graumlich gather for the award presentation on the deck of the dining hall at the UW Friday Harbor Labs.

OPALCO (Eastsound, Wash.) Energy Savings Specialist **Elisa Howard** presented a check for \$46,230 to University of Washington (UW) Friday Harbor Laboratories (FHL) Interim Director **Billie Swalla** and UW Dean of the College of the Environment **Lisa J. Graumlich**, who is also a Prentice and Virginia Bloedel professor. The Friday Harbor Labs completed a substantial lighting efficiency upgrade project in late March. A group of UW students, faculty, and community members gathered to celebrate completion of the work and the rebate award.

This retrofit was a component of a larger ESCO project to “green up” facilities. The lab upgraded to high-performance linear bulbs and ballasts, and replaced incandescent

We remember

On June 20, Efficiency Services Group (ESG) Chief Marketing Officer

Jim Brands passed away after a short battle with cancer. He was 61 years old.

Brands was born on January 13, 1953, in Portland, Ore., and was the fifth child of Dwane and Marion Brands. He grew up in NE Portland, and attended Madeleine Grade School and Central Catholic High School where he was a scholar-athlete. He graduated from Oregon State University in 1976 and was a member of the Sigma Phi Epsilon fraternity. In 1980, he married Jennifer Hensley and together they had two sons, Dennis and Peter.

With 35 years of industry experience, Brands was a well-known figure and friend in the Pacific Northwest electric utility arena. Prior to helping found ESG, he worked for the Canby Utility Board in Oregon for 14 years as the program manager in the conservation and communications areas. In July 1995, he began working at NWPPA as a training manager and stayed with the Association through July 2001.

From 1981 to the present, he lived in Canby, Ore., actively involved in his church, and coaching youth sports during the years his boys were growing up. Brands was a life-long golfer and enjoyed hiking, walking, travelling, and music. He is survived by his wife and sons.

To leave a condolence, please visit www.caring-bridge.org/visit/jimbrands. **NWPPA**



WWPI announces wood pole app

Everything you need to know about treated wood poles is now available at your fingertips with the free Wood Pole Guide smartphone app.

The free app is available at online stores for iPhones; Android and Windows smartphones; as well as iPads and Android tablets.

With a few quick taps, users can get information on the preservatives used in treating wood poles, the AWPAs standards for poles, and wood pole design data. Other sections include overviews of best management practices for treated wood, inspection, and handling.

The Engineering Tools section features two new calculators to help in selecting wood poles. The ANSI Dimension Calculator allows users to select the class and length, and determine the minimum circumference six feet from the butt. The Pole Weight Estimator provides a range of weights for poles by selecting the species, length, and class of pole. The range of weight estimates are based on industry data for various treatments.

The app features a searchable directory listing contact information for the leading treated pole and crossarm manufacturers in the U.S. and Canada.

The app is published by the North American Wood Pole Council, which represents the treated wood pole industry in the U.S. and Canada, providing information supporting the use of wood poles and crossarms.

Headquartered in Vancouver, Wash., the Western Wood Preservers Institute (WWPI) is a nonprofit member trade organization representing the interest of the preserved wood products industry throughout western North America for more than 60 years. For more information, visit www.wwpinstitute.org. **NWPPA**

DUECO expands to Wyoming, Montana

DUECO, Inc., the largest independently owned final-stage manufacturer of Terex aerial buckets and digger derricks in the nation, has expanded its representation of the Terex line to include the states of Wyoming and Montana. DUECO will now represent Terex in 17 states that span across the upper United States from Wyoming and Montana to the East Coast.

“We are excited that our third-generation, women-owned family company will continue a 59-year tradition of providing outstanding support to the utility and related industries as we look forward to serving customers in



Wyoming and Montana,” said Judie Taylor, president of DUECO. “Many of our current customers have operations in these states, so we will continue to build on strong relationships while also developing new ones. Our seasoned sales and service teams will begin providing support immediately.”

DUECO has manufacturing facilities in Waukesha, Wis., and Watertown, S.D., and has six service centers across the country. The company represents more than a dozen other OEMs; services all brands of utility trucks; provides expert parts and training support; and offers an expanding line of tools and accessories.

DUECO, Inc. is the largest provider of Terex bucket trucks, digger derricks, and cranes for the utility market in the nation, providing product and support in 17 states. For more information, visit www.dueco.com. **NWPPA**

Eaton introduces LumaWatt system

Power management company Eaton has announced the introduction of the LumaWatt™ Outdoor Wireless Control and Monitoring System from its Cooper Lighting Division. The lighting management and control system minimizes power consumption and energy costs by providing lighting where and when it's needed, specifically designed for area, roadway and parking garage/canopy applications.



“The LumaWatt system offers customers a simple, flexible and reliable lighting management and control solution, using multifunctional, factory installed sensors,” said Mark Eubanks, president, Eaton's Cooper Lighting Division. “Lighting standards and codes provide guidance for the automation of lighting systems, but taking advantage of these can be complicated. Our LumaWatt system makes implementation easy by incorporating motion sensing, daylight control, power metering, event monitoring, and performance reporting.”

The LumaWatt system eliminates the need for remote sensors, reducing installation costs and commissioning time. Multi-functional sensors are factory-installed and tested in each luminaire so reliability, area coverage, and location aren't concerns. Energy codes, such as ASHRAE and Title 24, can be met with the LumaWatt system's automation.

Eaton's Cooper Lighting Division delivers a range of innovative and reliable indoor and outdoor lighting solutions, as well as controls products specifically designed to maximize performance, energy efficiency, and cost savings. To learn more, visit www.cooperlighting.com. **NWPPA**

PEAK joins OMICRON

OMICRON is pleased to announce that PEAK Measure has joined OMICRON as their manufacturer representative for the Northwest Region. PEAK will represent OMICRON for Alaska, Idaho, Montana, Oregon, Utah, and Washington. PEAK Measure is in its fourth decade of providing sales, support, and service to customers in the Northwest.

“PEAK’s mission is to represent manufacturers such as OMICRON with technical competence, integrity, and commitment,” said Principal **John Bruns**. “PEAK Measure has a group of experienced professionals who enjoy working with customers on product solutions to make their systems and operations better and safer. We are extremely excited to be part of the OMICRON team.”

PEAK Measure has been a longtime associate member of NWPPA and supports various NWPPA activities, including its annual Engineering & Operations Conference; PEAK Measure Partner **Bill Rambo** is on the NWPPA E&O Committee.

“This is a partnership that will greatly benefit our customers and those of PEAK Measure in the Northwest,” said **Drew Welton**, OMICRON’s regional sales manager for North America. “The outstanding reputation and hard work of this top agency, along with OMICRON’s excellent support team, will bring our innovative testing solutions to a new level of customer awareness.”

OMICRON is an international world leader in providing innovative test solutions for protective relays, meters, and transducers, as well as diagnostic testing for power transformers, circuit breakers, and instrument transformers. For more information, visit www.omicronusa.com or www.peakmeasure.com. **NWPPA**

GTH announces 2014 Super Lawyers

Gordon Thomas Honeywell announced that 19 of its attorneys have been named 2014 Washington Super Lawyers, including six members of its Energy, Telecommunications & Utilities and Environmental & Natural Resources practice groups.

The Super Lawyers practicing in the energy, environmental, and natural resources areas are **Margaret Archer, Eric Christensen, Don Cohen, Brad Jones, and Bill Lynn**. In addition, practice member **Bill West** has been named a Rising Star.

Super Lawyers are selected through a process of peer review and independent evaluation, and represent the top five percent of practitioners in the state of Washington.

For more than 100 years, Gordon Thomas Honeywell has represented individuals, companies, and governmental agencies throughout the Pacific Northwest. It has become one of the region’s largest law firms by making sure that every client has strong, trustworthy legal counsel who anticipate problems and resolve them efficiently. For more information, visit www.gth-law.com. **NWPPA**

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HD expands footprint

HD Supply Power Solutions announced it has opened a new 60,000 square-foot facility in Kansas City, Kan. The facility will employ more than 50 associates, including 11 new jobs.

“At HD Supply Power Solutions, we are driven by our commitment to customer success, which means providing our customers with the very best service, supply chain solutions, innovative products, and value,” said **Steve Margolius**, president and CEO, HD Supply Power Solutions.

HD Supply Power Solutions (www.hdsupplypowersolutions.com) offers the industry’s most extensive portfolio of products, services, and solutions for the public power, investor-owned utilities, construction, and industrial markets. **NWPPA**

by Elizabeth Kelsey

EPA's new greenhouse gas rules would reshape the nation's energy landscape — or would they?

On June 2, the U.S. Environmental Protection Agency (EPA) made headlines with a proposed rule to limit power sector greenhouse gas (GHG) emissions to achieve a 30-percent reduction from 2005 levels by 2030.

The rule set off a political firestorm in Washington, even before its construction or methodology was understood. Environmental groups and industry associations were quick to laud or blast the rule, with some even issuing analyses of the costs and benefits before the text of the rule was available, adding to the confusion. Members of Congress and other politicians also reacted promptly to either defend or attack the proposal.

However, as the headlines subsided and the experts began digging into the 600-plus pages of language, it quickly became clear that what matters is not a state's emissions reductions since 2005, but each state's carbon intensity in 2012 — and, more importantly, what more each state can do to reduce its carbon footprint going forward.

Drafted under the little-used Section 111(d) of the Clean Air Act, EPA's proposal would charge each state with crafting a State Implementation Plan (SIP) to reduce its carbon emissions from the power sector; but it is not clear at this time how much each state might have to change its current trajectory, and whether some states will see cost increases, reliability impacts, or job losses. The public will have 120 days to comment on these and other concerns with the massive rule (until October 16, 2014).

Some things are certain. For one thing, once the rule is final, stakeholders are sure to file lawsuits scrutinizing several aspects of the plan, with the potential to bring the entire process screeching to a halt if the courts agree. Before that, the rule will continue to be a highly politicized lightning rod in the run-up to November congressional elections and as states and utilities try to figure out what it will really mean for them — and for the future of electric power in the U.S.

Will states get “credit” for early action?

The EPA created a complex calculation to determine each state's 2012 emissions rate — roughly equivalent to the pounds of CO₂ per megawatt-hour generated by affected (carbon-emitting) units — then modified it to account for additional generation from some low- or zero-emissions sources.

Regardless of a state's past efforts to reduce GHGs, the EPA assigned each state a “goal” number based on the amount of reduction the EPA believes the state can achieve

Because each state's existing carbon intensity — and its opportunities for future action — is unique, the percentage by which a state is asked to reduce its emissions does not necessarily correlate with how difficult it will be to do so.

going forward. To determine the goal rate, the EPA created another formula using four “building blocks” of emissions reduction strategies. These include 1) heat rate improvements to a state's existing carbon-emitting resources; 2) redispatch to combined-cycle gas units; 3) use or construction of new low- or zero-emissions resources; and 4) energy-efficiency measures.

Because each state's existing carbon intensity — and its opportunities for future action — is unique, the percentage by which a state is asked to reduce its emissions does not necessarily correlate with how difficult it will be to do so.

For example, hydro-heavy Washington state is expected to reduce its 2012 footprint by more than 70 percent — but because the state's emissions come from just one coal plant and a handful of natural gas plants, it can meet its goal largely by accelerating the already-planned closure of the coal plant. In contrast, West Virginia has few options for reducing its heavy reliance on coal, but is only called upon to reduce its emissions by 20 percent from 2012 levels.

How the West could be “one”

Soon after the rule's release, state officials in the West began making noises that joining California's existing cap-and-trade program might be an attractive option for nearby states. Early analyses suggest that California's existing GHG plans will largely suffice or go beyond what is required of the state by the EPA. While the state's economy-wide plan is beyond the scope of what the EPA is able to require, a relatively ready-made trading program may make it easier for California to benefit from its early actions — and for other states to link up with the program to comply with the new rule.

“Every state is going to have to take a look at its own power grid and its own emissions and make a decision as to how it wants to go about complying with these rules,” said

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Mary Nichols, chairwoman of the California Air Resources Board (ARB). “We are convinced that when they do that, they will look at California’s approach and that it has a lot to offer.”

There is also an open question on how to treat plants in one state that send power to another state, and how RTOs and different balancing authorities may factor into the mix. The more states dig into the details of potential seams and interstate credits, the more credible are the claims from the rule’s opponents that it would lead to a nationwide cap-and-trade system — for one thing, the mass-based approach would be easier to administer than a patchwork of “building blocks,” and the many seams issues make it more likely that one single scheme will be used rather than several regional ones.

First legal challenge already filed

The proposed rule has already seen a legal challenge from Murray Energy, which claims that the EPA lacks the authority to regulate carbon dioxide under Section 111 of the Clean Air Act because power plants are already regulated under Section 112. While courts typically decline to hear a case before an agency rule is final (expected in June 2015), this case will hardly be the last attempt to have weight in from the court.

One subject ripe for consideration is that the Clean Air Act envisioned a regulatory requirement to install emissions reduction technology directly on “point sources.” Therefore a major point of contention will be the EPA’s decision to lump all of a state’s carbon-emitting plants into one “system,” rather than setting smokestack-by-smokestack limits. Another will be the use of beyond-the-fence modifications — such as redispatch and energy efficiency — to reduce the frequency at which the highest-emitting resources run.

Both supporters and opponents of the GHG rule are claiming victory from a June 23 Supreme Court ruling that limited the agency’s reach with respect to permitting facilities. That opinion, issued by a divided court, said that the EPA went too far in assuming that the Clean Air Act required regulation of carbon dioxide emissions from small stationary sources such as shopping malls and farms. Instead, the Court replaces the logic of the “Tailoring Rule” — which the EPA crafted to justify reining in the scope of the Act — with a “bright-line” test that limits the requirement to obtain CO₂ permits to only those facilities that would need permits for other pollutants.

The ruling does not scuttle the broader plans for GHG regulation, but it does indicate that the Court does not intend to give carte blanche in deference to the agency’s efforts to limit GHGs.

Looking further, some groups are beginning to question what the EPA’s options are for setting Federal Implementation Plans (FIP) if states refuse to comply with the rule. There is no enforcement process included in the proposal, and no discussion of the process by which the EPA would determine that a state is not moving quickly enough or has

not submitted an adequate plan. The EPA has said it will take a year to review each state plan (the standard for review of other plans to reduce pollutants is four months), but officials have admitted they do not yet know what they will do if the EPA has to write an FIP.

At this point, it seems likely that changes from the initial EPA proposal to the final rule will be limited to incremental changes to each state’s target, or fleshing out interstate trading issues — the bigger questions of the EPA’s legal authority to craft such a rule and the assumptions behind the methodology will be addressed by the courts after the rule is final.

In the meantime, rhetoric and positioning abound

Industry groups are largely focused on how to shape and comply with the rule going forward, with NRECA taking the hardest line against the rule, and APPA and EEI — whose members are generally less coal heavy — threading a careful path that is neither full-scale repudiation or warm embrace of the rule. All three are expected to provide detailed comments on the rule, after consultation with their respective member utilities, before the October 16 deadline. Members of Congress and political candidates, however, are more focused on re-election than the details of compliance. For different reasons, both Democrats and Republicans will work to keep the rule in the headlines, while certain vulnerable Democrats seek to distance themselves from their Administration’s proposal.

The politics of the GHG rule have further exacerbated the partisan dynamic of the 113th Congress. The prospect of requiring senators to take tough votes on the EPA rule, and other Administrative initiatives, before November brought progress on the Senate Energy and Water spending bill to a halt because Democratic leaders declined to put their at-risk members on the record. Hearings in each chamber have grilled EPA officials past and present, looking for champions and weaknesses. Policy “riders” and resolutions on the rule have also featured heavily in floor debates.

As the politicians scramble to stake out positions on the proposed GHG rule, utilities and their internal and external consultants continue to parse the complex rule to determine exactly how their plants and consumers will be affected. **NWPPA**

Elizabeth Kelsey is a senior associate at Morgan Meguire LLC in Washington, D.C. She can be reached at either (202) 661-6180 or ekelsey@morganmeguire.com.



by Sonja M. Bert

TACOMA POWER AND PARTNERS SERVE AMERICA'S MILITARY



Tacoma Power at JBLM's Ft. Lewis Central Substation. All photos courtesy of Tacoma Power.

Power utilities serve a variety of residential, business, and government customers, but few have the unique privilege of providing electricity to those who serve the U.S. military, while also helping them save energy and money.

Tacoma Power, a division of Tacoma Public Utilities, supplies power to Joint Base-Lewis McChord (JBLM), home to the Army I Corps and 62nd Airlift Wing. The base sits about nine miles south of Tacoma, Wash. JBLM comprises the U.S. Army's Fort Lewis with the U.S. Air Force's McChord Air Force Base, which merged in 2010.

JBLM is a major economic driver in the state and across Pierce County. In 2012 and 2013, JBLM was Tacoma Power's second-largest customer; this year it captured the top spot. The utility supplies about 370 million kilowatt-hours of electricity annually to JBLM — 8 percent of total

power system sales. Retail businesses on base make up 5 percent of that total.

With its considerable electric consumption, JBLM plays a significant role in Tacoma Power's ability to meet its state conservation savings targets. In turn, by offering incentives to JBLM for wise energy use, the base can more easily meet its sustainability goals. Those savings will eventually lower electric bills for base ratepayers — a win-win-win.

“Our focus is to help JBLM reduce its energy costs by installing energy-efficient equipment. We provide financial incentives and technical assistance,” said Peter Meyer, Commercial/Industrial Conservation manager for Tacoma Power. “Ultimately, we have similar conservation-related goals, and look forward to maintaining a positive, ongoing, long-term relationship.”

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Ten new meters mounted on poles for 10 feeders at the end of the line provide quality control data and offer secure Bluetooth technology for remote monitoring.

The largest energy-savings project at JBLM for which Tacoma Power has provided a rebate is a custom retrofit, voltage optimization project at JBLM's Army Central substation. Voltage optimization technology reduces energy use by controlling voltage in the lower half of the allowable voltage range, per American National Standards Institute's standard C84.1.

Long-term commitments between Tacoma Power, BPA, the base, the U.S. Army Corps of Engineers, and private contractors, such as Native American-owned Salish Construction, were necessary to make JBLM's voltage optimization project successful. The biggest challenge — but the most successful and rewarding part of the project for the teams — was lining up the players and all aspects of the project, then making sure the voltage optimization operated correctly.

"It's a great example of how such a complex project with a lot of technical details and layers can successfully bring a large group of agencies with many players to the table," said Eric Waehling, energy program manager for JBLM. "Everyone had to form interagency agreements, learn about JBLM and about the new voltage optimization technology, then produce a project of this size that actually works."

To get a rebate from Tacoma Power, JBLM had to submit a pre-project measurement and verification analysis outlining how the voltage optimization system would perform. Construction and testing specifications identified through a utility grant agreement also had to be in place before full project implementation. JBLM Public Works must approve the design of all electrical distribution assets owned and operated by JBLM.

"For the past 18 years, BPA's Energy Efficiency group has been working directly with other federal agencies. Interagency agreements allow BPA to function as a 'partner' with federal agencies to implement energy-efficiency projects. This is the role BPA has with JBLM," said Tony Koch, mechanical engineer for BPA's Energy Efficiency Department. "Military bases have a lot of electrical distribution redundancy in order to have higher reliability on base. This adds complexity to a voltage optimization project. JBLM's Public Works electrical crews are short-handed, so all construction labor needs to be contracted. That adds to the complexity, particularly during approval processes with multiple players."

The voltage optimization project began in 2008. A preliminary study funded by BPA and performed by R.W. Beck (now Leidos) determined that optimizing voltage levels at JBLM's Army Central substation would lead to significant energy savings of about 1.5 million kilowatt-hours.

"The substation was about 40 years old," said Ron Cottrill, supervisor for JBLM's Exterior Electrical Utilities. "It serves about 40 percent of Fort Lewis (which is part of JBLM) with 20 to 25 percent of that being residential customers."

"In the winter, a lot of electric heat is used during cold snaps, so voltage levels need to be sufficient for end-of-line

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customers,” Meyer said. “Summer loads are typically lower, but they had no way to automatically optimize voltage levels prior to this upgrade.”

New SCADA and voltage-control software installed at JBLM’s Army Central helps ensure customers receive adequate voltage. The equipment also reduces the number of manual adjustments needed by JBLM’s Public Works staff to accommodate abnormal conditions during system maintenance. Regulators automatically gather data from meters at the substation, calculate theoretical end-of-line voltage for each feeder, determine optimal voltage at any given time, and then adjust those levels accordingly.

“There are 10 new meters mounted on poles for 10 feeders at the end of the line that provide quality-control data to the operators,” said Jesse Mitchell, high-voltage electrician at JBLM Public Works. “They also provide that data remotely to any mobile device through secure Bluetooth so we can read it while out in the field.”

The voltage provided to individual customers varies depending both on the distance from the customer to the substation, and on the total energy being consumed by the

customer and his or her neighbors. To accommodate this expected variation in voltage drop, ANSI C84.1 specifies that the acceptable service voltage range is from 114 to 126 volts.

“Utilities often set substation voltage near the top of the allowable range in order to keep the customer farthest from the substation above 114V under all possible switching configurations. Prior to voltage optimization, this resulted in many customers receiving a higher-than-necessary voltage most of the time,” explained Mark Pigman, principal engineer at Tacoma Power. “While customer equipment should operate properly throughout the voltage range, many types of equipment are more efficient in the lower portion of the voltage range. The voltage optimization project saves energy by allowing customer equipment to operate at a more efficient voltage.”

Based on a model from BPA’s original study, the savings estimate for the voltage optimization project amounted to 1.5 million kilowatt-hours per year. In the final metering and verification analysis, JBLM saw 2 million kilowatt-

Continued on page 30

hours of savings in the first year — more than originally projected. Tacoma Power estimates an annual savings of \$72,000 for JBLM. Tacoma Power's custom retrofit incentive equals \$0.23 per kilowatt-hours of first-year savings, or up to 70 percent of total project cost, whichever is smaller.

“The original project cost estimate was \$267,000, but ended up at nearly \$740,000, due to changes in scope and contracting mechanism,” said Teeraphan Chavanachat, a senior engineer for Tacoma Power. “We rebated JBLM 70 percent of the original estimate in the amount of \$187,000.”

The voltage optimization project was not without other challenges — particularly during construction. The teams faced long lead times in receiving equipment, and had to replace or repair some damaged equipment upon its arrival. For example, damage during shipping caused internal shorting in the new 900-kVAR capacitor bank and set the project back.

“The Corps, its contractors, and JBLM Public Works did a great job working through and overcoming those challenges,” Koch said.

In the end, the teams met Tacoma Power's program deadlines. After completing the equipment installation and testing it, the fully optimized voltage optimization system went online in December last year.

The voltage optimization project at JBLM's Army Central substation lays the groundwork for future voltage optimization projects at five other base substations. JBLM hopes to initiate phase two of analysis and design in 2015. In the meantime, other conservation projects are in the works.

“We hope to outfit areas of JBLM North and McChord Air Force Base with some new LED lighting on our streets and in our buildings in the near future,” Waehling said. “Tacoma Power is always great to work with.” **NWPPA**

Sonja M. Bert is a communication and marketing strategist at Tacoma Public Utilities in Washington. She can be contacted at either (253) 502-8223 or sbert@ci.tacoma.wa.us.

Working on the retail side

Over the years, Tacoma Power has worked on many other energy conservation projects at JBLM including lighting upgrades, refrigerator recycling, and compact fluorescent light bulb exchanges for residents. A more recent partnership with BPA helps some JBLM businesses achieve big energy savings.

Through the EnergySmart Grocer program, eight convenience stores received new efficient motors for walk-in refrigeration units, LED case lighting in those units and anti-sweat heat controls.

“In the Northwest, we can save quite a bit of energy with anti-sweat heat controls on refrigeration units that measure store temperature and humidity,” said Dan McDonald, associate director of PECL, Tacoma Power's contractor that implements BPA's energy efficiency program. “The sensors automatically regulate doorframe heat that prevents glass from fogging up, which would otherwise remain on all the time.”

Some general lighting upgrades add to those savings. In all, Tacoma Power provided more than \$97,000 in rebates for the convenience store projects to JBLM.

With the recent changes, the eight stores will garner slightly more than 642,000 kilowatt-hours in savings per year. That energy could fully power 50 Washington state homes, allow an electric car to travel 218,000 miles, or power 321,000 smart phones for one year. **NWPPA**



(L-R) During JBLM's Sustainment meeting in October 2013, Stephen Bicker of Tacoma Power presents a check for \$97,150 for energy-saving equipment upgrades in eight base convenience stores to Patrick McGhee of the Army Air Force Exchange Service and Col. H. Charles Hodges Jr.

JOB OPPORTUNITIES

The Job Opportunities is a service provided to NWPPA member systems and associate members. Member price is \$110 per listing for a 30-day period.

- Job Opportunities ads are also accepted from non-members. Ads are \$330 per listing for a 30-day period.
- Copy must be received before the 25th of the month prior to the month of publication (for example, February 25 for March issue).
- The *Bulletin* is mailed by the 15th of each month.
- Complete the online Job Opportunities ad placement form at www.nwppa.org.
- NWPPA reserves the right to edit all listings in order to fit size requirements in the publication.

POSITION: Utility Operations Engineer
COMPANY: Brown & Kysar Inc. (Battle Ground, Wash.)
SALARY: DOQ.
DEADLINE TO APPLY: July 18, 2014.
TO APPLY: Send current resumé to Rick Vermeers at rickv@bki.cc.

POSITION: Safety Manager
COMPANY: Mountain Power Construction Company (Post Falls, Idaho)
SALARY: DOE.
DEADLINE TO APPLY: July 19, 2014.
TO APPLY: Please send resumé to info@mountainpower.com.

POSITION: Hydro Engineer II (Electrical)
COMPANY: Placer County Water Agency (Auburn, Calif.)
SALARY: \$96,855-\$123,612 annually.
DEADLINE TO APPLY: July 25, 2014.
TO APPLY: Apply online at www.pcwa.net.

POSITION: Journeyman Lineman
COMPANY: Copper Valley Electric Association (Glennallen, Alaska)
SALARY: \$43.50 per hour.
DEADLINE TO APPLY: July 25, 2014.
TO APPLY: A CVEA application is required. Application packet can be found at www.cvea.org in the Careers section. Submit application by email at jobs@cvea.org, fax to (907) 822-5586, or mail to CVEA, Attn. Nancy Heidelberg, P.O. Box 45, Glennallen, AK 99588.

POSITION: Transmission and Distribution Manager
COMPANY: Tacoma Public Utilities (Tacoma, Wash.)
SALARY: \$169,374.40-\$217,152.00 annually.
DEADLINE TO APPLY: July 25, 2014.
TO APPLY: Apply online only at www.cityoftacoma.org/jobs.

POSITION: Assistant Engineering Services Supervisor
COMPANY: Homer Electric Association, Inc. (Homer, Alaska)
SALARY: DOE.
DEADLINE TO APPLY: July 26, 2014.
TO APPLY: Application may be completed online at www.homerelectric.applicantpro.com/jobs.

POSITION: CEO/General Manager
COMPANY: Tongue River Electric Cooperative (Ashland, Mont.)
SALARY: Commensurate with qualifications.
DEADLINE TO APPLY: July 31, 2014.
TO APPLY: Send comprehensive resumé, cover letter, and a minimum of three professional references or letters of recommendation to treco@rangeweb.net or to TRECO, Box 138, Ashland, MT 59003.

POSITION: Lineman
COMPANY: City of Cheney (Cheney, Wash.)
SALARY: \$40.23 per hour.
DEADLINE TO APPLY: August 4, 2014.
TO APPLY: Job description and application can be found at www.cityofcheney.org or by calling (509) 498-9203. Mail applications to City of Cheney, 609 2nd St., Cheney, WA 99004 or email to mshuller@cityofcheney.org.

POSITION: Journeyman Lineperson
COMPANY: Wasco Electric Cooperative (The Dalles, Ore.)
SALARY: \$41.42 per hour.
DEADLINE TO APPLY: August 15, 2014.
TO APPLY: Submit resumé with cover letter to Manager of Operations, Wasco Electric Cooperative, P.O. Box 1700, The Dalles, OR 97058 or email to info@wascoelectric.com.

POSITION: Dispatch Manager - Regular
COMPANY: Matanuska Electric Association (Palmer, Alaska)
SALARY: DOE.

DEADLINE TO APPLY: Open until filled.
TO APPLY: Complete and submit an MEA employment application, found at www.mea.coop.

POSITION: Senior Engineer
COMPANY: Golden Valley Electric Association (Fairbanks, Alaska)
SALARY: DOE.
DEADLINE TO APPLY: Open until filled.
TO APPLY: Application and full job description can be found online at www.gvea.com. GVEA application must be submitted; resúmes alone will not be considered.

POSITION: Power Plant Operator
COMPANY: Chelan County PUD (Wenatchee, Wash.)
SALARY: DOE.
DEADLINE TO APPLY: Open until filled.
TO APPLY: Apply immediately by uploading a resumé at www.chelanpud.org, under Careers.

POSITION: Engineer II
COMPANY: Homer Electric Association (Homer, Alaska)
SALARY: DOE.
DEADLINE TO APPLY: Open until filled.
TO APPLY: Complete online application at <http://homerelectric.applicantpro.com/jobs>.

POSITION: Engineering Manager
COMPANY: Pend Oreille County PUD #1 (Newport, Wash.)
SALARY: DOQ.
DEADLINE TO APPLY: Open until filled.
TO APPLY: Application and job description are available for download at www.popud.org. Application, resumé, and cover letter can be mailed to P.O. Box 190, Newport, WA 99156, Attn. Human Resources, or emailed to careers@popud.org.

POSITION: Journeyman Lineman
COMPANY: Beartooth Electric Cooperative (Red Lodge, Mont.)
SALARY: \$35.12 per hour.
DEADLINE TO APPLY: Open until filled.
TO APPLY: Send cover letter and resumé to Eric Elton, Line Superintendent, Beartooth Electric Cooperative, P.O. Box 1110, Red Lodge, MT 59068, or email to eelton@beartoothelectric.com.

POSITION: Database Administrator
COMPANY: Columbia REA (Dayton, Wash.)
SALARY: \$5,800-\$7,500 monthly.
DEADLINE TO APPLY: Open until filled.
TO APPLY: Submit a cover letter and resumé to Columbia REA, Attn. Human Resources Dept., P.O. Box 46, Dayton, WA 99328, or email to jobs@columbiarea.coop.

POSITION: Journeyman Lineman
COMPANY: City of Blaine (Blaine, Wash.)
SALARY: \$6,474 monthly, plus benefits.
DEADLINE TO APPLY: Open until filled.
TO APPLY: Submit cover letter, resumé, and application found at www.cityofblaine.com. **NWPPA**

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