Powering Ahead

2017 Annual Report

COLUMBIA RIVER PUD

A COMMUNITY-OWNED UTILITY

General Manager John Nguyen and Board Member Debbie Reed address the crowd at our Customer Appreciation Dinner.

GENERAL MANAGER'S MESSAGE

Columbia River PUD spent 2017 powering ahead toward a brighter future.

Every day, our employees work diligently to fulfill our mission – ***"To provide quality services at the lowest practical cost."***

As part of this commitment, we work to improve our services, control our costs, and meet the expectations of our customers. With this in mind, Columbia River PUD spent 2017 focused on powering ahead and continuing the work of fulfilling our mission for the benefit of all our customers.

Proactively maintaining and improving our electrical distribution system ensures that we continue to deliver safe, efficient, and reliable service to our customers, and prepares us for new growth in our service areas.

Throughout 2017, the PUD completed many important capital improvement projects, including:

- Installation of new voltage regulators in Goble.
- Replacement of oil circuit breakers at Scappoose Substation.
- Addition of overhead line re-conductors from Bennett Road to Hazen Road, on West Lane Road, and on Parkdale Road.
- Upgrade of relays at Dutch Canyon Substation.

In 2017, we also broke ground on the site of the future Betsy Johnson Substation in Scappoose. This new substation will help ensure we are able to safely

and reliably serve Scappoose and the surrounding communities as new businesses and industry continue to drive growth in the area. We anticipate the substation construction will be completed by the end of 2018.

Promoting energy efficiency and controlling costs remain important in our efforts to help customers save money and to keep our rates as low as possible.

In 2017, we provided customers with more than $600,000 in rebates for these energy efficiency efforts, which saved 5.55 million kilowatt hours.

We also launched an innovative voltage reduction demand response program that has reduced our fixed costs by lowering the demand charges we pay to Bonneville Power Administration, our wholesale power provider.

Continuously reviewing and updating our internal processes ensures that the PUD continues to meet customer expectations efficiently and effectively.

In 2017, we implemented a new Outage Management System that predicts the location of outages and the number of customers affected. Our dispatchers will now have more tools to restore power more quickly and to improve our outage communications with our customers.

We implemented a new Geographic Information System that streamlines our engineering design and estimation processes. With the use of a mobile app, field workers will now be able to complete tasks without the need to return to the office, allowing us to complete customer requests more timely and efficiently.

We also completed a comprehensive review of our current enterprise system and evaluated alternative solutions that could better manage our critical business functions while providing our customers with more and improved services. Following an extensive analysis, we selected a new, more cost-effective system that will help promote efficient business processes. This system will also better meet our customers' needs by providing them with access to energy usage details and self-service options for updating their account information. The system is expected to be implemented in 2019.

We recognize the importance of customer input, and strive to connect with our customers using the communication channels they prefer.

In the fall of 2017, we announced a change to our office hours beginning January 2018, in response to feedback we received in our 2017 customer survey. Our customers indicated that extended office hours would better serve their needs. Our Board agreed and elected to extend our office hours so that customers had the option of doing business with us both earlier and later in the day. We've had a very positive response to this change.

Our 2017 customer survey also revealed that our customers utilized social media sites to gain access to local businesses and important events in our community. In response, the PUD increased our use of social networking sites, and began creating video content as an added resource for our customers.

I am proud of these and the many other efforts of our employees in helping the PUD power ahead in 2017. I know they are working hard, and always working in the best interest of you, our customers.

On behalf of our Board and staff, thank you for the opportunity to serve you.

John Nguyen
General Manager

BOARD OF DIRECTORS

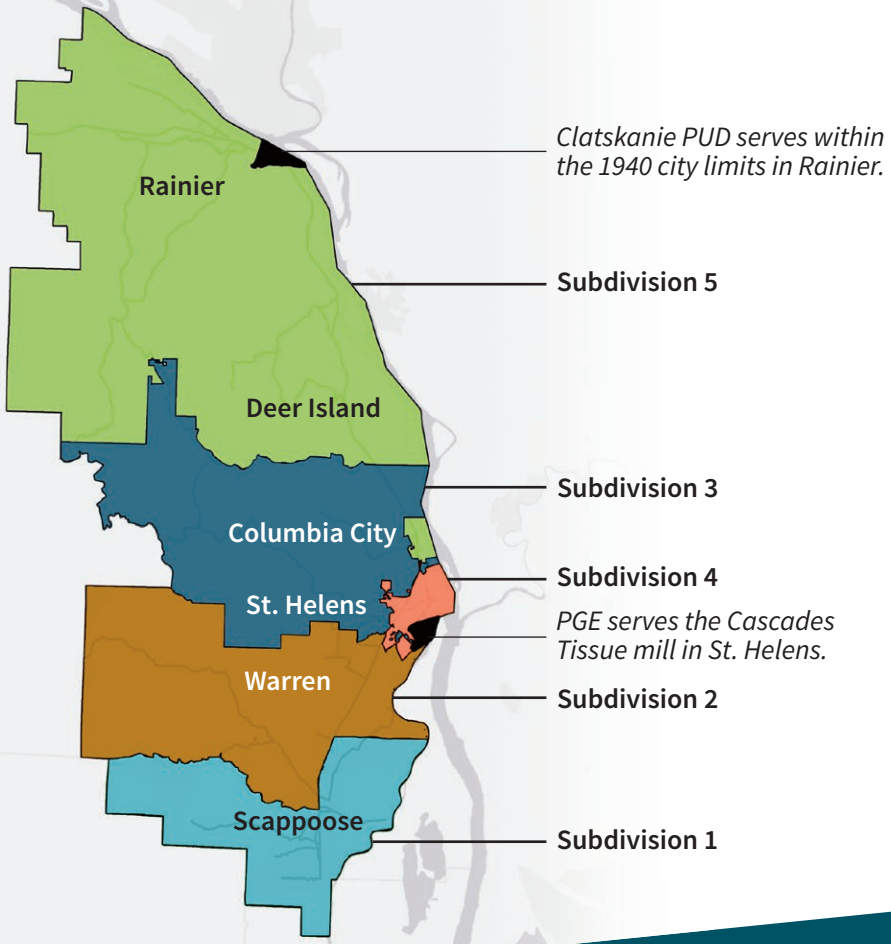
Debbie Reed
Subdivision 1
1 year of service

Craig Melton
Subdivision 2
3 years of service

Rob Mathers
Subdivision 3
1 year of service

Jake Carter
Subdivision 4
5 years of service

Harry Price
Subdivision 5
3 years of service



The PUD is governed by a five-member Board of Directors, elected by the voters within the District.

The Board sets the PUD's rates and policies, and hires the General Manager.

The Board of Directors meets in public session on the third Tuesday of each month at 6 p.m. at the PUD office in Deer Island.

For more information, contact Board Secretary Heidi Ralls at **(503) 397-1844** or hralls@crpud.org.

LEADERSHIP TEAM

John Nguyen
General Manager
31 years of service

Lil Guisinger
Accounting & Finance Supervisor
1st year of service

Heidi Ralls
Administration Supervisor
18 years of service

Libby Calnon
Community & PR Supervisor
20 years of service

Kristen Dean
Cust. Accounts & Billing Supervisor
1 year of service

Tim Lammers
Energy Services Supervisor
20 years of service

Branden Staehely
Engineering Supervisor
4 years of service

Sonia Wendelschafer
Human Resources Manager
15 years of service

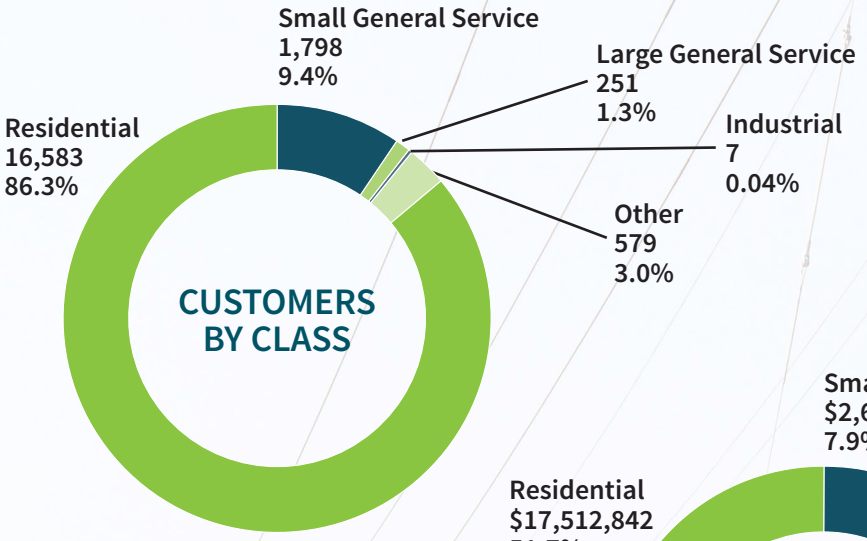
Rick Calnon
Information Technology Supervisor
22 years of service

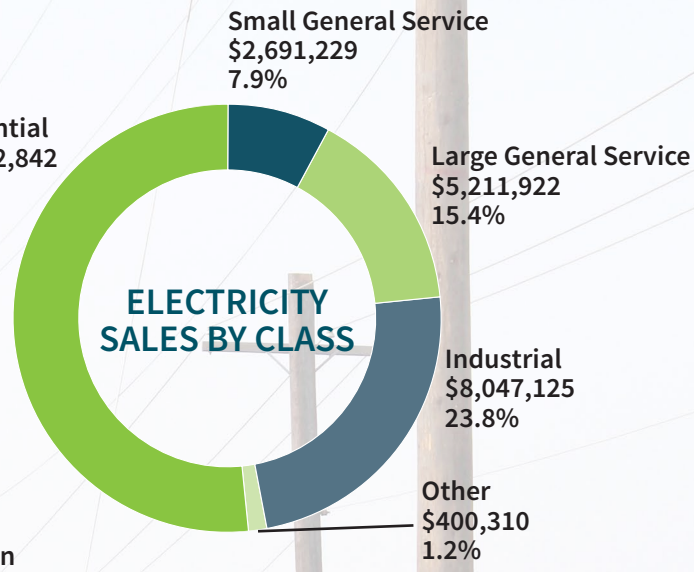
Eli Crape
Operations Supervisor
24 years of service

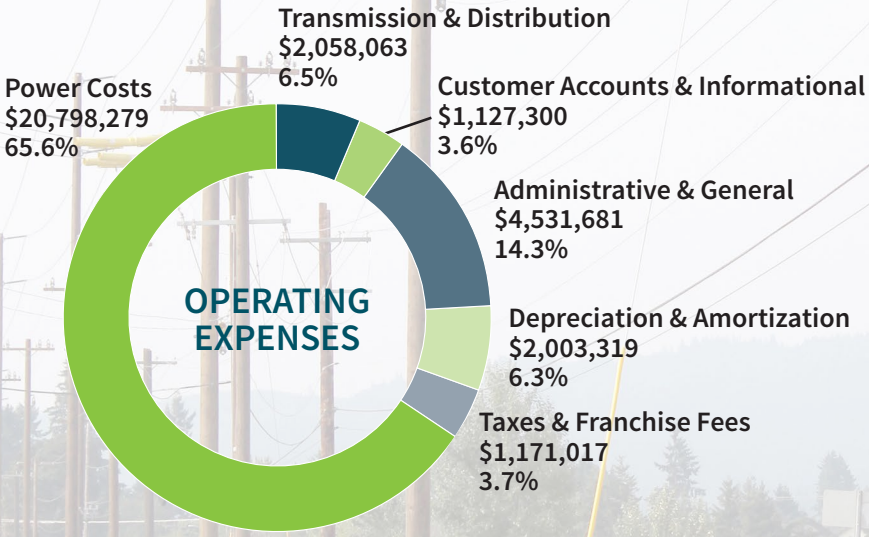
Our Leadership Team reports to the General Manager, who oversees the utility's day-to-day operations.

2017 AT A GLANCE

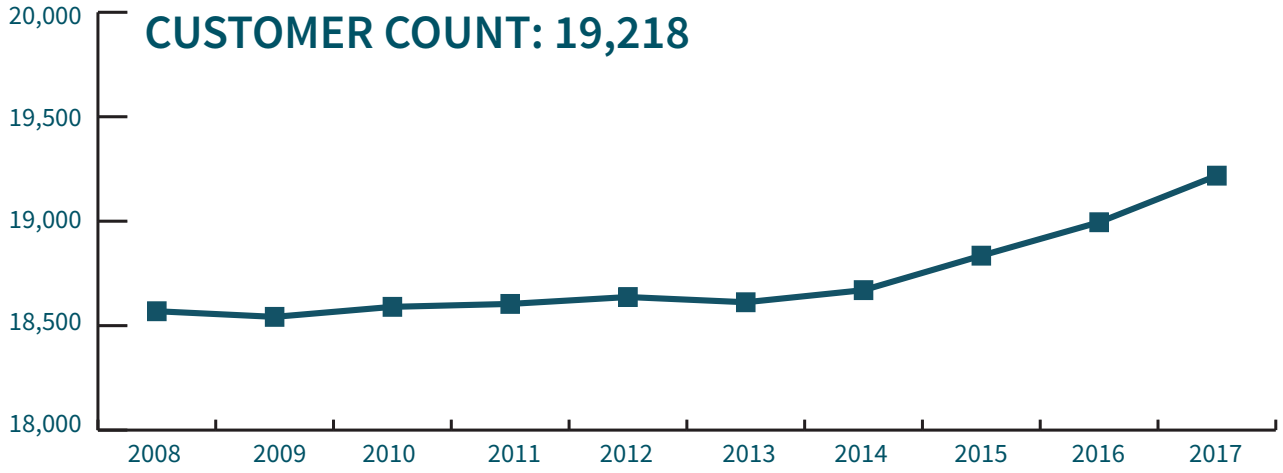
Statistical data about Columbia River PUD and its service territory







CUSTOMER COUNT: 19,218



46

Employees at year-end

$35.2M

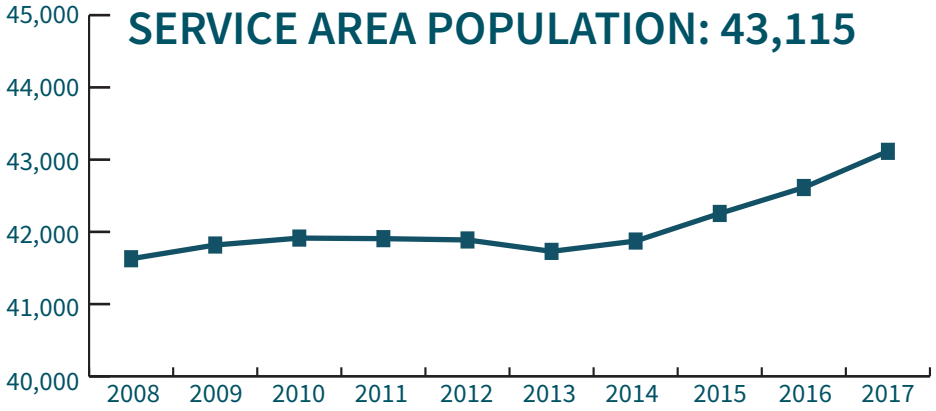
2017 Operating & Capital Budget

A+

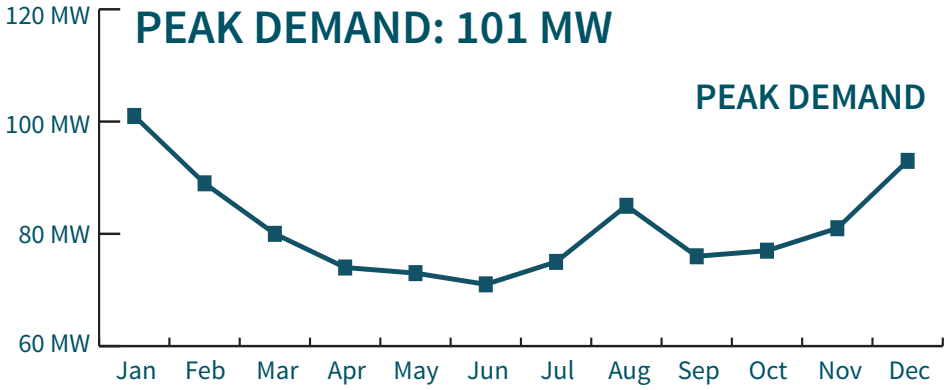
Stable

S&P Credit Rating

SERVICE AREA POPULATION: 43,115



PEAK DEMAND: 101 MW



The PUD's peak demand in 2017 was 101 megawatts, recorded on January 5. The PUD's record demand is 103 megawatts, in January 2008.

Breaking ground on our new substation in October were, from left: Board Member Debbie Reed, Board Member Harry Price, State Senator Betsy Johnson, Board President Jake Carter, County Commissioner Margaret Magruder, Board Member Craig Melton, General Manager John Nguyen, and Board Member Rob Mathers.

STRENGTHENING OUR POSITION

We strengthened our financial position in 2017 by remaining committed to our long-standing practice of investing surplus cash and earnings while using customer contributions for capital assets.

In 2017, we hired EES Consulting to conduct a Cost of Service Analysis (COSA). The COSA showed we would need to raise rates to accommodate rising wholesale power costs from Bonneville Power Administration (BPA), which raised its rates in October. As a result, we implemented new rates effective Oct. 1, representing a system-wide rate increase of 5.1%.

Although the COSA-recommended rate increase was 6%, our Board of Directors authorized drawing down cash reserves by $456,700 in 2017 and $305,500 in 2018 to limit the rate increase to 5.1% and thereby offset the financial impact to customers.

A portion of the rate increase will assist with the financing of added capital construction. Our largest capital expense is the construction of a new substation in Scappoose, which we are building without incurring any additional debt.

Our rates remain 23% lower than the statewide average, and about 35% lower than the national average.

Year-End Cash Reserves Increase
A colder than average winter precipitated increased energy usage, which resulted in an increased revenue stream for the PUD. As a result, our year-end cash balance of $10.2 million was $2.1 million more than anticipated in our 2017 budget.

Long-Term Debt Decreases
In 2017, we made progress toward our goal of being debt-free by 2020. We issued no new debt in 2017, and we made a principal payment of $1.15 million to reduce our outstanding debt to $3.2 million at the end of 2017.

2017 FINANCIAL STATEMENTS

Condensed Statement of Net Position (in thousands)	2017	2016	2015
Assets			
Utility Plant (Net)	$34,436	$34,518	$33,864
Cash and Other Current Assets	$15,263	$13,530	$12,530
Deferred Charges and Other	$6,000	$6,436	$3,778
Total Assets	**$55,699**	**$54,484**	**$50,172**
Liabilities			
Non-Current Liabilities	$8,020	$9,619	$7,740
Current Liabilities	$5,718	$5,431	$5,655
Deferred Credits	$1,090	$1,118	$985
Total Liabilities	**$14,828**	**$16,168**	**$14,380**
Net Position			
Net Investment in Plant	$31,240	$30,174	$28,390
Restricted for Debt Service	$9	$91	$85
Unrestricted	$9,622	$8,051	$7,317
Total Net Position	**$40,871**	**$38,316**	**$35,792**

Condensed Statement of Net Revenues, Expenses, and Changes in Net Position (in thousands)	2017	2016	2015
Revenue and Other Income			
Charges for Electric Services	$33,863	$31,060	$28,563
Other Electric Revenue	$264	$288	$292
Total Operating Revenue	**$34,127**	**$31,348**	**$28,855**
Interest Earnings	$131	$70	$50
Other Income	$55	$23	$58
Total Revenue and Other Income	**$34,313**	**$31,441**	**$28,963**
Expenses			
Cost of Power	$20,798	$19,052	$17,603
Operating Costs	$10,892	$9,779	$11,434
Total Expenses for Services	**$31,690**	**$28,831**	**$29,037**
Interest and Amortization of Debt	$68	$86	$478
Total Expenses	**$31,758**	**$28,917**	**$29,515**
Increase (Decrease) in Net Position	**$2,555**	**$2,524**	**($552)**
Total Net Position - Jan. 1, 2017	**$38,316**	**$35,792**	**$36,344**
Total Net Position - Dec. 31, 2017	**$40,871**	**$38,316**	**$35,792**

Condensed Statement of Cash Flows (in thousands)	2017	2016	2015
Net Cash Provided by Operating Activities	$4,485	$3,975	$1,555
Net Cash Used in Capital and Related Financing Activities	($3,197)	($3,562)	($3,574)
Net Cash Provided by Investing Activities	$214	$69	$66
Net Increase (Decrease) in Cash and Cash Equivalents	**$1,502**	**$482**	**($1,954)**
Cash and Cash Equivalents - Jan. 1, 2017	**$8,723**	**$8,242**	**$10,195**
Cash and Cash Equivalents - Dec. 31, 2017	**$10,225**	**$8,723**	**$8,242**

Linemen Kevin Engstrom, Travis Weber, John Shaffer, and Chuck Long perform regular maintenance at our Scappoose Substation.

MAINTAINING RELIABLE SERVICE

To ensure we provide our customers with safe, reliable service, we use a five-year capital plan to schedule investments in infrastructure. This long-range planning lets us pay for capital projects with operating revenues instead of long-term borrowing, which keeps costs down and rates low for our customers.

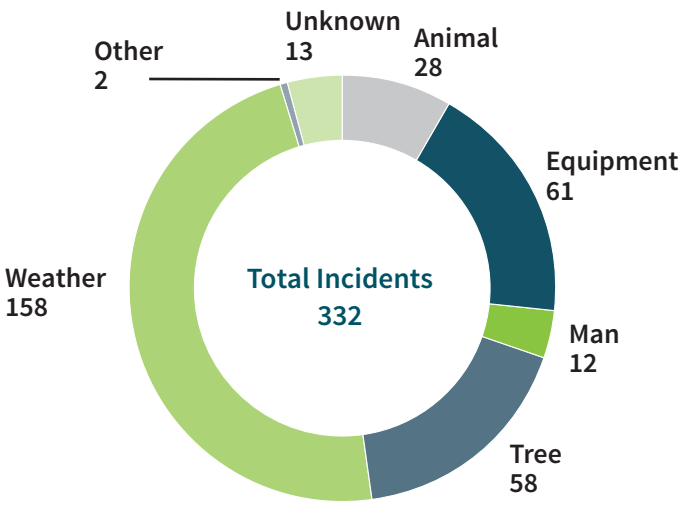
We completed several capital projects in 2017 to help us continue to provide service safely, reliably, and affordably:

- **We upgraded overhead power lines on West Lane Road, near our future substation site.** The widening of West Lane Road to accommodate new industrial development meant that our facilities needed to be moved. We took advantage of this opportunity to also upgrade our power lines to ensure we have capacity to serve these new loads reliably, both now and in the future.
- **We replaced two oil circuit breakers at Scappoose Substation.** We follow a five-year plan for testing and maintenance at our eight substations. During 2017, our maintenance plan included the replacement of two oil circuit breakers at Scappoose Substation. Regular preventative maintenance extends the life of our substation equipment and reduces equipment-related outages.
- **We installed four banks of voltage regulators in the Goble area.** Adding these regulators ensures we can serve customers in the Goble area reliably during peak usage times, even in the event that Goble Substation must be taken out of service.
- **We upgraded overhead lines from Bennett Road to Hazen Road.** This allows for load growth in the Warren area and helps us reroute power during outages.
- **We upgraded overhead lines on Parkdale Road.** The new lines will prepare for load growth in the Deer Island and Goble areas, and ensures voltage levels are maintained during peak usage periods.

2017 OUTAGE SUMMARY

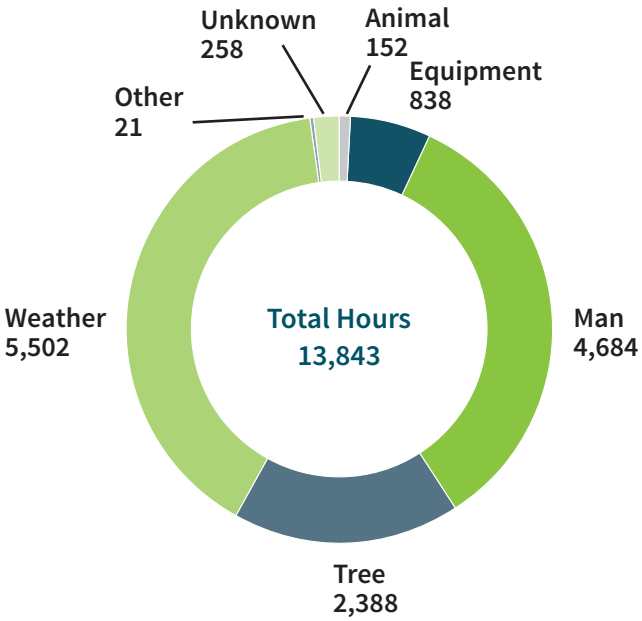
Outage Incidents by Cause

Excluding major events



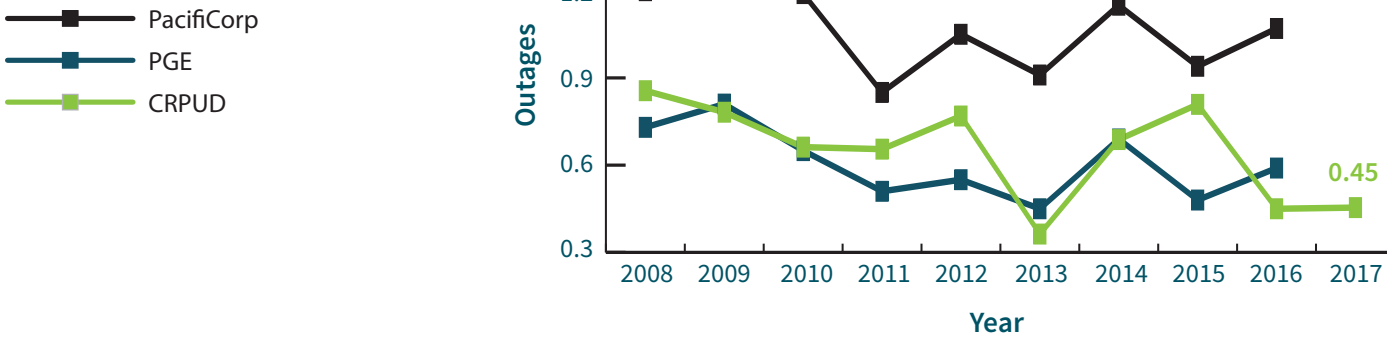
Outage Hours by Cause

Excluding major events



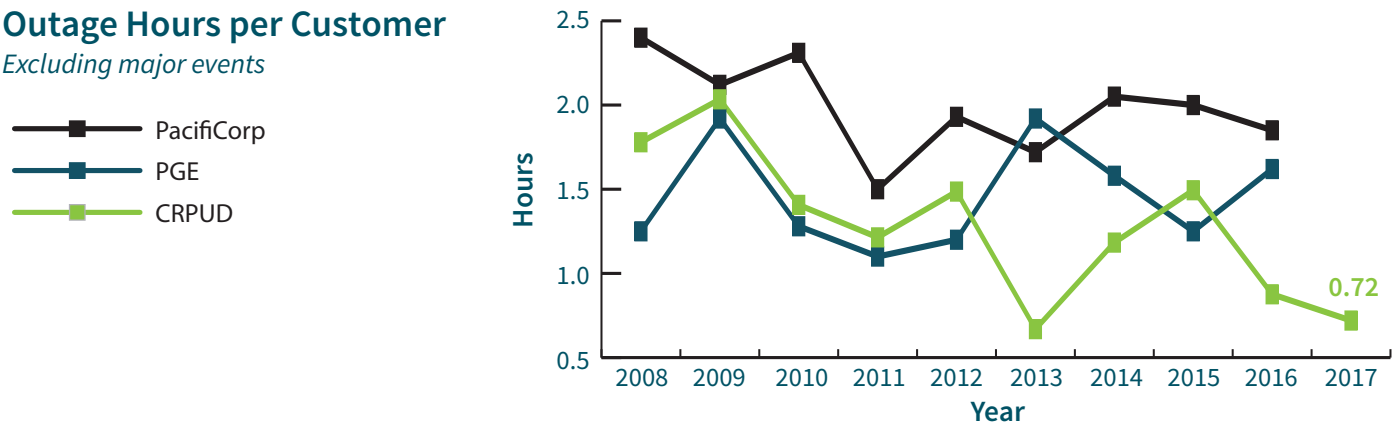
Outage Incidents per Customer

Excluding major events



Outage Hours per Customer

Excluding major events



Lineman Kevin Engstrom installs a new LED streetlight for the City of St. Helens. The city's LED project was one of 41 lighting upgrades in our service area in 2017 that combined to save more than 3 million kilowatt hours.

5,553,168

Kilowatt hours saved through energy efficiency measures in 2017.

427

Average Columbia County homes that can be powered with the energy savings from those measures.

First-Year Energy Savings from Efficiency Programs

Measured in millions of kilowatt hours saved

39.26M kWh

Our Energy Experts have helped customers save more than **39 million** kilowatt hours in the last 10 years. That's enough to power **3,019** average Columbia County homes for a year.

POWERED BY SAVINGS

Our wholesale power provider, Bonneville Power Administration, has historically relied on the clean, low-cost power of the region's hydroelectric system. As the region has grown, so too has demand for electricity.

Building new generation resources is expensive, and can lead to higher electric rates. Energy efficiency provides a more affordable alternative.

The most cost-effective and least risky energy resource for power in the region is increased efficiency of electricity use. By encouraging customers to use less energy, we can minimize the amount of power we must purchase from sources other than hydropower, which in turn keeps electric rates lower for all of our customers.

In 2017, our efficiency efforts realized 5.55 million kilowatt hours of savings – enough to power 427 average Columbia County homes for a year.

A major industrial lighting project was the main driver, capturing more than 2.1 million in kWh savings. The City of St. Helens also converted all of its streetlights to LEDs, which saved an additional 435,000 kWh.

Residential heat pump installations combined to save more than 255,000 kWh annually, which is equal to the average energy usage of 19 Columbia County homes. We processed rebates for 68 ductless heat pump installations and 59 air source heat pump installations.

Our residential weatherization rebate program conserved more than 91,000 kWh. This program provides incentives for customers who add insulation or upgrade to energy-efficient windows.

We offered special incentives through our low-income program. We paid $46,000 in rebates to low-income customers, resulting in more than 32,000 kWh saved.

We are committed to promoting these energy-saving opportunities to our customers. These measures reduce energy costs, cut energy waste, and improve comfort. Conserving energy helps us keep our rates affordable by limiting our need to add infrastructure. On a larger scale, it reduces the need for additional energy generation in the region.

General Manager John Nguyen and Energy Services Supervisor Tim Lammers present Dyno Nobel with a $44,159.77 check for energy upgrades at the plant. Accepting the check on behalf of Dyno Nobel are Instrumentation & Electrical Supervisor John Albertini, Process Engineer Kristina Balch, and Site Manager John Bob.

EMBRACING NEW TECHNOLOGY

GIS Analyst Josh Tallman and Joint Use Coordinator Brooke Sisco train using our new staking system.

Technology plays a significant role in our effort to serve customers efficiently and effectively. Our extensive use of technology solutions allows us to serve more customers per employee, which helps keep costs down and rates low.

For decades, the PUD relied upon in-house applications that were developed and supported by our IT staff. Thanks to their efforts, we were among the first utilities in Oregon to offer online payment systems, and our outage management and geographic information systems replaced outdated paper processes in the 1990s.

In the years since, companies have developed off-the-shelf systems that now rival our in-house systems. In 2017, we transitioned two critical systems to off-the-shelf solutions, and laid the groundwork for another critical upgrade in 2018.

New GIS In Place

The first system implemented in 2017 was a new Geographic Information System (GIS), which combines staking, asset management, and work management into a new map-based system. This system provides real-time information about our distribution system through both desktop computers in the office and iPads in the field.

This technology has a number of benefits that will be useful across multiple departments in the utility:

- It streamlines the design process by allowing our engineers to design jobs directly in our GIS and follow them through the work order construction process. This eliminates double data entry and speeds up the design process. A mobile app allows our engineers to complete tasks in the field without having to return to the office.
- It provides our linemen in the field with maps of our distribution system that are updated in near-real-time. Previously, our linemen were provided with static maps that were updated periodically.
- It shares information with our enterprise information system to provide cost information to our accounting department.

Our new GIS software will make staking jobs, like the one performed above by Field Engineer Karl Webster, more efficient.

Outage Management Upgraded
The second system implemented in 2017 was a new Outage Management System (OMS). This system is integrated with both our GIS and our automated metering information systems.

The OMS provides a robust tool set that can predict outage locations and identify affected customers to allow us to more quickly determine trouble spots and their severity. It provides our operations team with more tools to be able to prioritize outage response and allocate resources to quickly restore power to customers.

The OMS also improves our ability to efficiently communicate with customers about the severity of outages. Its predictive capability provides us more accurate and timely information that can be communicated to customers.

Enterprise Update Is Next
In 2017, our Enterprise Evaluation Team researched potential replacements for our enterprise information system. Following a process that included in-house demonstrations, site visits, and conference calls with utilities using other systems, we determined the iVue System from NISC would best meet our needs going forward.

We are now in the early stages of an Enterprise Implementation Project that is expected to be complete in 2019. The iVue System will provide more features for customers, such as an interactive app that provides real-time usage data and in-app payment options. It also offers a number of in-house benefits, including lower upgrade costs, streamlined support, and a large network of neighboring utilities who use the software and can serve as resources for best practices.

NEW TECHNOLOGY LOWERS PEAK DEMAND CHARGES

In late 2017, we implemented an innovative strategy to reduce our peak demand charges from BPA, which in turn lowers operating costs for the PUD.

As part of our monthly wholesale power bill, we pay a system demand charge, which is based upon our peak electricity usage during the month. Upgrades to our existing Supervisory Control and Data Acquisition (SCADA) system gave us the ability to better optimize voltage across our system during times of peak demand to lower peak usage.

This in-house solution reduced demand charges for the PUD by an estimated $12,000 in the final quarter of 2017.

In addition to lowering operating costs, reducing peak demand alleviates strain on our distribution system.

The overall results are just excellent, as far as I can see.

- Rob Mathers
PUD Board Member

9.23
Overall Performance Score (Scale of 1-10)

8.99
Overall Outage Response

8.90
Prompt, Courteous, and Knowledgeable Employees

KEEPING OUR CUSTOMERS SATISFIED

In a customer satisfaction survey conducted in 2017, we found our customers overwhelmingly approve of our performance. We earned an overall performance score of 9.23 on a scale of 1-10, with 61% rating us a perfect 10.

It was the highest overall performance score we have ever received, topping the previous best score of 9.11 on a survey conducted in 2006.

"I'm very pleased with the results of this survey," said General Manager John Nguyen. "The high marks underscore our commitment to providing exceptional service to customers. The survey also lets us know what's important to our customers, and the areas we can focus on."

Customers also gave us the highest ever rating for outage response. The average score was 8.99, with 57% of customers giving us a 10 out of 10. The previous best score for outage response was 8.60 in 2006.

"We heard lots of good comments about service and reliability," said Carolyn Shoemaker of ActiDyne Survey Research in Scappoose, OR, who conducted the survey. "People said this was one of the toughest years ever weather-wise, and they got through outages quickly."

More than 1,000 customers completed the survey between March 27 and May 12.

Serviceman Chuck Long and Apprentice Lineman Patrick Hart use a 4-wheeler to reach a trouble spot during a January outage.

Energy Specialist Cyrus Collins hands out LEDs to customers during our Customer Appreciation Dinner.

CUSTOMERS CHOOSE NEW OFFICE HOURS

Our customers told us how we can better meet their needs, and we listened.

In the 2017 survey, customers indicated we could better meet their needs by opening our office earlier and closing later. The majority of our customers commute out of the area for work. The survey results told us that opening at 7:00 a.m. and closing at 5:30 p.m., Monday through Thursday, would allow us to meet the needs of the largest number of our customers.

In addition to better serving customer needs, the change in office hours helps our line crews when they are working on large construction and maintenance projects.

“For bigger jobs, this change will mean more time on the job and less time driving each week,” said Operations Supervisor Eli Crape. “That helps us work more efficiently.”

Our Board voted in September to change our office hours starting on Jan. 2, 2018.

A fifth-grade student at Columbia City Elementary School shows off her turbine as part of our Energy Education in Schools program.

DEVELOPING THE LOCAL ECONOMY

Community-owned utilities like Columbia River PUD can be economic development powerhouses. PUD Directors are local residents, elected by voters within the PUD's service area to represent the needs and interests of the community we serve.

The PUD's Board and staff are active in many efforts to create a vibrant, sustainable local economy. Our goal is for local residents to have access to family wage jobs and for successful businesses and industries to locate here and contribute to a tax base that supports local services.

We work toward this goal in a number of ways:

First and foremost, we provide reliable and affordable service. Our electric rates for large commercial and industrial customers are among the lowest in the Portland Metropolitan area. Companies considering a move to Columbia County often note that our rates are the most competitive of all the sites they are considering. And, thanks to our consistent efforts to maintain and improve our distribution system, and our focus on tree trimming, our reliability ratings are excellent.

Second, as participants in the Columbia County Economic Team, we have built partnerships within our community and are always working to establish new connections with potential new business and industry partners. We support county-wide efforts to attract and retain companies that provide sustainable, family wage employment.

Third, through our energy efficiency programs, we help existing and new businesses cut energy costs and improve their bottom lines. It is our goal to help ensure the businesses in our service area remain competitive now and in the future.

Fourth, through our industry partnerships, we are working to ensure that Bonneville Power Administration can remain a vital component of the Northwest's economic engine.

Finally, we work to stay abreast of technological advancements in the utility industry and in electricity storage and generation. By understanding these changes and their impacts on our industry, we can ensure that we will remain in a position to serve our customers effectively, efficiently, and affordably for years to come.

PUD Board Member Debbie Reed, Oregon Governor Kate Brown, and PUD General Manager John Nguyen attend Cascades Tissue's Grand Opening in Scappoose.

ABOVE: Columbia River PUD received the Columbia County Economic Team's 2017 award for Commitment to Business Attraction and Retention. Pictured are PUD General Manager John Nguyen, Board President Jake Carter, CCET Executive Director Chuck Daughtry, and PUD Board Members Craig Melton, Debbie Reed, Rob Mathers, and Harry Price.

BELOW: Community & Public Relations Supervisor Libby Calnon gives a presentation during a South Columbia County Coffee & Commerce meeting hosted by the PUD.

MAKING OUR MARK

The PUD was honored to receive Columbia County Economic Team's award for Commitment to Business Attraction and Retention.

We are proud to see our efforts once again recognized by our peers and by our community.

"The PUD has proven to be an agile and competent CCET partner in our business recruitment and retention efforts."

Chuck Daughtry
CCET Executive Director

Thank you for the opportunity to serve you.

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