WPUDA: Representing 28 not-for-profit, community-owned and operated utilities that bring electricity, water, wastewater service and wholesale telecommunications to more than 1.7 million people in Washington.

Mission
The mission of the Washington Public Utility Districts Association is to support, protect and enhance its members’ ability to provide not-for-profit, locally controlled utility services for the people of Washington.

Services
The association represents PUDs in state, regional, and national legislative and policy processes; provides information about PUDs and policy issues to members and the public; offers training and development programs for utility leaders; and provides opportunities for PUD leaders and staff to meet, share information, and plan cooperative activities.

wpuda.org
Executive Director’s Message
Public power is willing to discuss restoration of “residential exchange” benefits for customers of investor-owned utilities, but BPA must follow the law.

Power Partners
Yakama Nation to receive share of Priest Rapids power, will work with Grant County PUD on future renewable energy projects.

Moving to Olympia
After 70 years in Seattle, Washington PUD Association will make its presence known in the state capital with “green” headquarters building.

Singing the Salmon Home
Grant, Chelan PUDs fund Okanagan Nation Alliance effort to restore sockeye to Skaha Lake in British Columbia.

The Public Power Story
Skagit County PUD provides water for a growing community while working to preserve the environment.

Supporting Renewable Energy is a SNAP
Award-winning Chelan County PUD program links producers of small-scale renewable energy with customers who want to buy “green.”

Mutual Aid
PUD repair crews respond to calls for help.

Preserving Net Neutrality
Washington PUD Association adopts policy supporting open access to broadband services.

On the cover:
First Nation youth in Penticton, B.C., release sockeye salmon fry into the Okanagan River as part of an Okanagan Nation Alliance effort to reintroduce sockeye to Skaha Lake that is being paid for by the Grant and Chelan County PUDs as part of their fish and wildlife programs.

Photo: Kathy Kiefer, Grant PUD
Resumption of “residential exchange” benefits must follow the law

By Steve Johnson, Executive Director

Let’s set the record straight.

Ever since Bonneville Power Administration suspended residential exchange “credits” to the investor-owned utilities at the end of May, there has been a lot of hand wringing over the impact on some of the IOUs’ residential and small-farm customers.

But where was the hand wringing six years ago when BPA increased those credits by almost $300 million a year, and then illegally passed the high cost of those credits on to its public power customers?

Public power has expressed its willingness to meet with BPA and the investor-owned utilities – that’s Puget Sound Energy, Pacific Power and Avista in Washington state – to reach an agreement that allows the resumption of residential exchange credits. But, implicit in this is that the resumption of payments must “follow the law” and recognize the financial burden that past payments placed on public power.

Some background is in order.

The “residential exchange” credit was created by the Northwest Power Act of 1980 as a way to share some benefits of the federal hydroelectric system with customers of privately owned utilities – beyond the option they have always had of forming their own public power utilities and getting low-cost power from BPA.

The law established guidelines for calculating this residential exchange. Congress also said the cost of this program should not increase the rates paid by BPA’s “preference” public power customers, including Washington’s public utility districts, beyond what they would pay had the law not been passed.

For much of the 1990s, this credit averaged about $48 million a year.

Then in 2001, BPA abandoned the guidelines set out in the law in favor of a contract settlement with the investor-owned utilities that resulted in a much higher residential exchange of $300 million to $350 million a year.

At the same time, BPA raised its wholesale rates for public power utilities by more than 40 percent. Much of that rate increase was to cover the inflated cost of residential exchange.

Despite protections in the law, the burden of paying this additional residential exchange “credit” fell directly on the customers of the region’s consumer-owned utilities.

Several public power utilities and organizations filed suit with the 9th U.S. Circuit Court of Appeals to protect their customers.

After several years, the court ruled in April that the settlement between BPA and the investor-owned utilities violated the Northwest Power Act. As a result, BPA suspended the residential exchange credit while it decides how to respond to the court’s ruling, although it has continued to collect almost $28 million a month from the consumer-owned utilities.

While we understand the financial pinch this may have put on some IOU customers, from the PUD perspective, our customers have been severely “pinched” for the last six years.

The court did not rule that the residential exchange program was illegal – only that BPA overstepped its bounds when it decided how much that credit should be. There is no reason that the residential exchange can not be restored, once BPA brings payments back in line with the Northwest Power Act.

The fact is that BPA made a mistake six years ago that has hurt hundreds of thousands of customers of the region’s consumer-owned utilities. It’s time to set that injustice right; those customers deserve some relief.

The fact is that BPA made a mistake six years ago that has hurt hundreds of thousands of customers of the region’s consumer-owned utilities. It’s time to set that injustice right; those customers deserve some relief.

Steve Johnson is executive director of the Washington PUD Association. He can be reached at sjohnson@wpuda.org.
Six years after the Yakama Nation challenged Grant County PUD for the right to operate the Priest Rapids and Wanapum hydroelectric dams on the Columbia River, the PUD has agreed to provide the tribe with low-cost power in return for a role in future renewable energy projects developed by the tribe.

“It is a remarkable achievement that demonstrates what amazing things can be accomplished when we aren’t beating each other up,” acknowledged Ray Wiseman, general manager of Yakama Power, the tribe’s newly formed utility, during a festive signing ceremony at the Yakama Nation’s Legends Casino in Toppenish that included traditional Native American songs and dancing.

Grant PUD Commission President Randy Allred said the agreement marked a “new era of trust and respect between the tribe and Grant PUD.”

Under the historic agreement, the Yakama Nation will be allocated power from the Priest Rapids Project, which includes the Priest Rapids and Wanapum dams, along with 22 other “at-cost” purchasers. Grant PUD will market the power, worth an estimated $2 million to $8 million a year, on behalf of the Yakama Nation. The tribe will use the money to expand its power utility and on fish and wildlife programs.

Through 2009, the Yakama Nation will receive 20 average megawatts annually, or more than 175,000 megawatt-hours. That will drop to 15 average megawatts from

continued on page 4
The agreement will continue for the life of the PUD’s new federal license to operate the dams, expected to be issued this year. The typical license is for 50 years.

In return, Grant PUD will receive the rights to 75 percent of the “renewable energy credits” for the first 75 average megawatts of any renewable energy generation developed by the tribe. Grant PUD will also have the first opportunity to join in any new generation projects developed by the tribe.

Initiative 937, the state’s new “renewable energy portfolio” law, requires electric utilities with at least 25,000 customers to get 15 percent of their power from renewable sources by 2020. Renewable energy projects with the tribe could include cogeneration at Yakama Forest Products, a tribal enterprise that manages more than 300,000 acres of commercial timberlands, small hydroelectric generation at Cle Elum Dam or the Wapato Irrigation Project, or wind projects on the 1.2 million acre Yakama Indian Reservation.

The historic agreement also settles a lawsuit filed by the tribe in 2002, after an abortive attempt to wrest control of the Priest Rapids Project from the Grant PUD.

During the summer of 2001, the Yakama Nation joined with Portland-based PacifiCorp, to file a competing license application for the Priest Rapids Project with the Federal Energy Regulatory Commission. At the time, the tribe said it felt Yakama Power could extend the benefits of the hydroelectric project to “new areas and people,” and do more to protect the environment and enhance cultural and recreational resources.

PacifiCorp and the Yakama Nation submitted their initial “consultation document” in November. But on New Year’s Eve, PacifiCorp backed out after signing a new power-purchase contract with Grant PUD that included a non-compete clause.

A month later, in January 2002, the Yakama Nation also dropped its bid for control of the dams, but filed a complaint with FERC in an effort to force the PUD to sell at-cost power to its start-up Yakama Power.

After FERC dismissed the complaint, the tribe appealed to the 9th U.S. Circuit Court. As part of the agreement announced in June, the Yakama Nation agreed to drop its complaint.
Yakama Power, which got its start by purchasing PacifiCorp’s distribution facilities within the reservation for $575,000, currently provides about 6 megawatts of power to commercial customers, including the Legends Casino and Yakama Forest Products lumber mill. However, the utility could ultimately serve about 15,000 people who live on the reservation, which is 50 percent larger than the state of Rhode Island.

Yakama Power was the second Indian-owned utility (after the Confederated Tribes of the Umatilla Indian Reservation near Pendleton, Ore.) to negotiate a power-sales contract with the Bonneville Power Administration. The tribe will eventually get up to 25 megawatts a year from BPA.

This was the third agreement signed recently between Grant PUD and the Yakama Nation.

In August 2006, the Yakama Nation became a participant in the Hanford Reach Fall Chinook Protection Program, created two years earlier, and a comprehensive Salmon and Steelhead Agreement.

The Hanford Reach Fall Chinook Protection Program, also signed by Chelan and Douglas County PUDs, the Colville Confederated Tribes, and several state and federal agencies, calls on dam operators to manage flows to protect fall chinook in the Hanford Reach stretch of the Columbia River.

The Salmon and Steelhead Agreement provides a framework to resolve issues related to salmon, steelhead and other species affected by operation of the Priest Rapids Project.

As part of the agreement, Grant PUD is completing the installation of a $30 million fish bypass facility at Wanapum Dam. Grant PUD is also in the process of installing more efficient turbines to increase power generation using less water. The PUD expects to spend about $800 million over the next 50 years on dam improvements, fish management and habitat protection.

FERC’s predecessor, the Federal Power Commission, issued Grant PUD a 50-year license to build and operate the two dams in 1955.

Construction of Priest Rapids Dam, 24 miles below Vantage, was started in 1956. The dam, named for a Wanapum religious leader, Smowhalla, began operations in 1961.

Construction of Wanapum Dam, 18 miles above Priest Rapids and named for a local Native American tribe, got under way in 1959. The dam came online in 1963.

Grant PUD financed the dams, which together produce about 2,000 megawatts, with long-term revenue bonds. No tax dollars or government appropriations were used for construction of either dam.

Initially, Grant PUD received 36.5 percent of the electricity generated by the Priest Rapids Project, with the rest going “at cost” to utilities in the Grant Purchasers Group, which included other PUDs, Seattle City Light, and the state’s investor-owned utilities. In 1999, FERC ruled that Grant PUD would get 70 percent of the electricity when the license is renewed, with 30 percent allocated to the purchasers group and four Idaho co-operatives.

Grant PUD currently serves about 42,000 customers.
s soon as construction workers began framing the second floor of the new Washington Public Utility Districts Association headquarters building in Olympia, officials popped on hard hats and climbed up to check the view.

From a small cantilevered conference room at the front of the building they could see the dome of the state Capitol, just as the architects had promised.

“You can’t see the governor’s office, but you can see the building she works in,” quipped past President Jack Janda, a second-term commissioner for Mason County PUD No. 1. After more than 70 years paying rent in Seattle, the Washington PUD Association is moving to its own building in Olympia this summer.

“Olympia is where we do most of our work,” explained WPUDA Executive Director Steve Johnson. “This is where we need to be.”

Formed in 1936 as the Washington Public Utility Commissioners Association, WPUDA is a voluntary association representing 28 consumer-owned public utility districts that provide electricity, water and sewer services, and wholesale broadband telecommunications to 1.7 million customers in communities across the state.

The association is building a headquarters for its 10 staff members at 210 Union Avenue – just two blocks east of Capitol Way and within easy walking distance of the Capitol campus. Staff members expect to move into the building in September.

Johnson said proximity to the Capitol was important to PUD commissioners – locally elected officials who set rates and determine policy for their public utility districts, and who often interact with state officials.

“If we were going to make the move, location was critical,” Johnson said. “The commissioners wanted a building that would be visible, that would make a statement that the Washington PUD Association is now in Olympia and that we’re here for the long run.”

As part of that statement, commissioners also decided the new WPUDA headquarters would strive to be a LEED-certified Platinum building – the highest possible rating from the U.S. Green Building Council.

Established in 1999, the Leadership in Energy and Environmental Design rating system is recognized as the benchmark for the design, construction, and operation of “green” buildings.
According to the U.S. Green Building Council, buildings account for about 40 percent of the nation’s total energy usage and two-thirds of the electricity. A “green” design can greatly reduce energy and water consumption, thus reducing operating costs. The LEED program also focuses on providing a healthy indoor environment for workers by encouraging natural lighting, access to fresh air, and adequate ventilation.

LEED certification for the WPUDA headquarters was actually a “unifying feature” for the association, Johnson said. Initially, some PUD commissioners objected to the move because it would disrupt the staff. It was basically that argument that had kept the association headquartered in Seattle for seven decades, even after WPUDA opened a lobbying office in Olympia.

But nearly all the PUDs rallied around the idea of an energy-efficient, environmentally friendly headquarters once the difficult decision was made to move to Olympia. “We started out talking about being LEED-certified Silver,” Janda said. “But the more we learned, we decided it wouldn’t take much more to be certified Platinum, and that would really send a message about the public utility districts being leaders in promoting energy efficiency.”

LEED promotes environmental sustainability by recognizing building performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. The WPUDA headquarters is expected to be the first new-construction LEED-certified Platinum building in the state.

The most obvious “green” feature of the new headquarters will be more than 160 solar panels covering the east, west and south slopes of the roof, which will provide 40 percent of the energy the building uses.

The solar panels, worth about $250,000, were donated by REC Silicon, a subsidiary of Norway-based Renewable Energy Corporation and the world’s largest producer of solar-quality silicon for solar applications. REC Silicon operates a silicon purification plant in Moses Lake and is Grant County PUD’s largest single customer.

Less obvious “green” building features are the high-efficiency siding, insulation and windows that, together with the heating and air-conditioning system and photovoltaic roof panels, will result in 78 percent less energy consumption than a building built to current “code,” according to Court Olson, senior project manager with Olympic Associates and a LEED-approved professional.

WPUDA also gets LEED credits for redeveloping an existing building site (which has less impact on the environment), water efficiency, and using construction materials chosen for their recycled content or low

continued on page 8
emissions, resulting in a healthier indoor environment. “Most of our materials also come from within 500 miles of Olympia, which cuts down on the environmental impact, and nearly all of our construction waste is recycled, so the entire construction process is environmentally friendly,” Olson said. “That’s part of the LEED concept.”

After researching potential building sites for almost four years, in 2003 WPUDA purchased a two-story, 1960s-era office building across from Olympia’s Centennial Park for about $500,000. The association approved a construction budget of $3 million and broke ground in August 2006.

The look of the new, 11,000-square-foot building was developed by the design-build team of Mountain Construction and the Helix Design Group.

Although outside the Olympia downtown historic district, the building is flanked by two century-old homes that are on the Olympia Heritage Register, so the plans had to be approved by the city with those historical neighbors in mind.

The house on the corner of Union and Washington was built in 1907 by Dr. John Mowell and now houses the Washington Council of Police and Sheriffs. The house on the corner of Union and Franklin was also built in 1907 by J.F. Kearney, an Olympia grocer. It has been home to the Olympia YWCA since 1948.

Olson said the design team incorporated a hipped roof, tall, narrow windows, and “awnings” to blend in with the historic residences. To further soften the look of a modern office building, the design features a courtyard in front with a flowing “brook” fed entirely from water collected from the roof.

Although WPUDA must wait for several months after completion of construction for the official review and LEED certification by the U.S. Green Building Council, Olson said the design-build team expects to achieve a few more points than necessary to reach the Platinum certification level, so there is a comfortable buffer towards reaching that goal.

WPUD and staff will occupy the second floor, with about 4,200 square feet of space available for lease on the ground level. The building also features underground parking for about 20 cars.

For more information about the Leadership in Energy and Environmental Design program, go to www.leedbuilding.org.

“Now you know what we do out here”

When REC Silicon, which donated the solar panels for the Washington PUD Association’s new headquarters in Olympia, broke ground last fall on a $600 million expansion at its Moses Lake plant, Goran Bye, president and CEO, noted there is already a 25 percent chance that solar cells anywhere in the world have REC silicon inside, as do 50 percent of laptop computers or flat-panel televisions.

With facilities at Moses Lake and Butte, Mont., REC Silicon is already the world’s largest producer of solar-grade polysilicon, highly refined silicon whose crystalline structure acts as a conductor of electricity. The new 20-story plant at Moses Lake will almost double the company’s output.

“If we think that this plant will live 25 to 30 years, it means that we produce silicon that will in turn produce solar cells to energize some 2 million homes around the globe,” Bye said at the groundbreaking. “Now you know what we do out here.”

REC Silicon is a division of the Oslo, Norway-based REC Group, a pioneer in the relatively young photovoltaic industry.

Originally known as Fornybar Energi, the company was founded in Norway in 1996 to focus on investments in renewable energy. In 2000, Fornybar joined with ScanWafer and SolEnergy, two other upstart solar-energy companies, to form a new holding company that became known as the Renewable Energy Corporation, or REC.

In addition to being the world’s largest producer of solar-grade polysilicon, REC is also the leading producer of silicon wafers for solar applications and is a major producer of solar cells and modules. The company has wafer and solar cell production facilities in Norway and solar module manufacturing facilities in Sweden.

REC landed in Moses Lake in 2002, taking a majority share in Solar Grade Silicon, a joint venture with Advanced Silicon Materials, then part of the Japanese industrial group Komatsu Ltd. Three years later, REC acquired the remaining shares of SGS, along with Advanced Silicon Materials’ other polysilicon plant in Butte, Mont.

The Moses Lake plant now produces only solar-grade silicon.

REC considered both Moses Lake and Butte when it decided to expand its U.S. operations, but Bye said Moses Lake won out in large part because of reliable, low-cost power and the working relationship the company has developed with the Grant PUD.

REC is already Grant PUD’s largest single customer and its usage is expected to almost double to between 90 and 100 megawatts when the new plant goes online. That relationship also convinced the company to donate solar panels for the WPUDA headquarters.

“REC is pleased to be a part of this progressive project with WPUDA,” Bye said, “and their pursuit of clean energy alternatives for Washington State and its power consumers.”
n a crisp, bright morning in May, a crowd of mostly First Nation youth gathered along the Okanagan River in Penticton, B.C., to help release more than 70,000 sockeye salmon fry into the river. Their elders stood nearby beating traditional skin drums and singing blessing songs to remind the salmon to return.

This is the third year of a 12-year initiative to reintroduce sockeye into Skaha Lake, just above Okanagan Falls in British Columbia, funded by the Grant and Chelan County Public Utility Districts.

In addition to the ceremonial release, the Okanagan Nation Alliance, the tribal council for the seven member bands of the Okanagan Nation, released another 1.4 million fry this year, bringing the total since the program began to more than 4.4 million. The fry live in the lake a year before beginning their migration to the ocean.

Shayla Lawrence, a biologist with the Okanagan Nation Alliance Fisheries Department, said the first adult sockeye, released as part of a pilot project in 2003, are expected to return from their 1,500-mile journey to the ocean and back in October.

Along the way, the sockeye will have navigated nine major hydroelectric dams on the Columbia River, including Wells Dam, operated by the Douglas County PUD, Rocky Reach and Rock Island dams, operated by the Chelan County PUD, and Wanapum and Priest Rapids dams, operated by the Grant County PUD, and four federal hydroelectric dams.

But once they reach McIntyre Dam, a relatively small flood-control and irrigation-diversion dam on the Okanagan River about 20 miles north of the U.S.-Canadian border, the fry continue on page 10
their long trek home comes to a stop.

Built in 1915 and updated in 1954, McIntyre Dam, does not allow for fish passage, blocking sockeye and other anadromous fish from reaching Skaha Lake and, eventually entering the 84-mile-long Okanagan Lake, which once provided spawning and rearing habitat for tens of thousands of Okanagan River sockeye.

About 50 percent of the overall river was also lost as salmon habitat when the Okanagan River was straightened and “channelized” during the 1950s.

That leaves the relatively shallow, warmer waters of Osoyoos Lake, which sits astride the international border just north of Oroville in Okanagan County, as the only rearing habitat for naturally spawning sockeye in the Okanagan Basin.

[The name of the river, which flows almost 140 miles from its headwaters near Vernon, B.C. to the U.S.-Canadian boundary, changes spelling from Okanagan to Okanagan as it crosses into the United States. It then flows another 87 miles before reaching the Columbia River.]

Although Okanagan River sockeye are not listed as threatened or endangered under the U.S. Endangered Species Act, their numbers have declined substantially since the 1970s and they are considered at risk in Canada’s Okanagan Basin. On average, only about 15,000 sockeye now return annually to spawn in the Okanagan River. They are the last remaining salmon stock that returns to the Okanagan Basin in significant numbers.

It was concern over the steep decline of sockeye in the Okanagan Basin that prompted the Okanagan Nation Alliance to propose reintroduction of sockeye salmon to Skaha Lake.

Shayla Lawrence, a biologist with the Okanagan Nation Alliance Fisheries Department, said the gradual reintroduction will determine if there is any negative impact on a native population of kokanee, a freshwater variety of sockeye that don’t migrate downriver. At one time, kokanee were so plentiful in the three lakes linked by the Okanagan River – Okanagan, Skaha and Osoyoos – that early settlers reportedly “raked them out” for use as fertilizer. But they too have been in decline.

If the reintroduction is successful, the Okanagan Nation Alliance will turn its attention to McIntyre Dam, either installing fish ladders or a bypass channel, or even breaching the dam to let the river flow free, Lawrence said. Eventually, the ONA would like to see sockeye return to Okanagan Lake, which is now blocked by a small outlet dam on the Okanagan River.

The Okanagan Nation Alliance, Fisheries and Oceans Canada, the B.C. Ministry of the Environment and the Confederated Tribes of the Colville Reservation completed an initial assessment of the reintroduction program in 2003, with funding from the Bonneville Power Administration, culminating in a pilot release of 350,000 sockeye fry raised at the federal Shuswap River Hatchery in Lumby, B.C.

Grant PUD became involved the following year. At the time, Grant PUD was working with several state and federal agencies and tribes to develop a salmon and steelhead agreement for its Priest Rapids hydroelectric project. The PUD offered to help with the Skaha Lake sockeye reintroduction, and later made support of the program part of its Priest Rapids agreement. Chelan PUD entered into an agreement to support this program a year later.

In 2006, Grant and Chelan County PUDs entered into Inter-local Agreements with the Okanagan Nation Alliance that cover the remaining 10 years of the 12-year program.

Both PUDs have extensive fish and wildlife programs.

Over the last decade, Grant PUD has invested more than $200 million in salmon protection efforts. To achieve 95 percent survival of young salmon and steelhead passing through the Priest Rapids Project, the PUD also spills an average of 50 percent of the river flow during juvenile salmon migration, resulting in salmon and steelhead returning to spawn in record numbers.

Grant PUD has entered into historic agreements to protect salmon and steelhead runs in the mid-Columbia, including the Hanford Reach Fall Chinook Protection Program, the Salmon and Steelhead Settlement Agreement, and NOAA Fisheries Biological Opinion for the Priest Rapids Project.

Similarly, Chelan PUD was part of the country’s first Habitat Conservation Plan for anadromous fish. Under these landmark accords, the PUD agreed to a performance standard of “no net impact” on salmon and steelhead runs passing its hydroelectric projects.

Wanapum tribal elder Rex Buck and wife Angela attended the celebration with daughter-in-law Alyssa Buck and grandson River.
An innovative fish bypass system at Chelan PUD’s Rocky Reach Dam includes a pipe that is nearly a mile long and up to 9 feet in diameter to take millions of young salmon and steelhead around the dam every year. The bypass was developed through seven years of prototype testing and cost about $107 million to build.

Grant and Chelan PUDs will cover the entire cost of the Skaha Lake reintroduction project, about $19 million over the next 10 years. That includes extraction of eggs from returning adults taken from Osoyoos Lake, fertilization and incubation at the Shuswap River Hatchery, and the release of fry into the Okanagan River at Penticton, where they will move downstream to Skaha Lake.

“Our goal is to rebuild the sockeye population and restore them to their historic habitat in order to have healthy and productive salmon runs that can again be harvested by Okanagan people,” explained Grand Chief Stewart Phillip, chairman of the Okanagan Nation Alliance.

For the time being, returning adults will still be blocked at McIntyre Dam, but Lawrence said a future phase of the project will be to collect returning adult sockeye prior to spawning and release them into Skaha Lake.

First, however, biologists need to determine whether a parasite they are finding in some of the naturally spawning sockeye they have examined, Parvicapsula, is a threat to the kokanee. So far, Lawrence said, biologists believe the sockeye are being infected during their time at sea and the parasite can only be spread in salt water.

Biologists have also marked the hatchery-raised fry in a variety of ways so they can identify them when they return as adults. That includes clipping some adipose fins for easy visual recognition and 100 percent thermal marking of the otolith, or “ear” bone of the fish.

According to Chaptikwl – the Syilx teachings passed down from generation to generation – Coyote brought salmon to the Okanagan River basin. With programs like the Skaha Lake reintroduction, the Okanagan Nation Alliance, with help from Grant and Chelan PUDs, are working to make sure the sockeye never disappear.

Kathy Kiefer is public affairs officer for Grant County PUD. Thomas Dresser, Fish & Wildlife and Water Quality manager for Grant PUD, also contributed to this article.
The Skagit County Public Utility District has been providing safe drinking water to customers in Skagit County for more than 70 years. It was created by the voters of Skagit County in 1936. Within 10 years, the PUD purchased the private water systems that served the cities of Mount Vernon, Burlington and Sedro-Woolley and consolidated them into one large water system serving most of the Skagit Valley.

The district’s customer base has since swelled to approximately 70,000 customers served through 600 miles of pipeline.

Initially, each city maintained its own water filtration facility, but in 1954 the PUD replaced the aging and worn out filter plants with a new well near the Skagit River. During the early 1960s, the district began diverting water from streams in the Cultus Mountains to the newly constructed Judy Reservoir, which became the PUD’s primary water supply.

Judy Reservoir (named after L.B. Judy, the district’s first general manager) brought a dependable supply of high-quality, gravity-fed water to the valley. The consolidated storage and treatment facility also meant that chlorinated water could be delivered through 11 miles of transmission lines to Sedro-Woolley and Mount Vernon. The transmission lines loop together in Burlington, creating a strong backbone for the valley’s water supply.

In 1990, as the Safe Drinking Water Act was gaining momentum, the district constructed a new 12-million-gallons-per-day filtration plant to meet new treatment requirements. This plant features direct filtration and chlorine dioxide treatment, followed by chlorination prior to distribution.

Prior to construction of the filtration plant, the district needed to treat Judy Reservoir with copper sulfate to kill the algae. Unfortunately, that left a slight odor to the water and also upset the natural food chain of the algae population. After the filtration plant went online, Skagit PUD was able to discontinue the use of copper sulfate and allow the algae to grow naturally. The filtration process now removes all algae.

The district now has plans to double the capacity of the filter plant to meet the needs of the rapidly growing area. Along with this expansion, the PUD will construct a new pumping station on the Skagit River to augment flows from the Cultus Mountain streams.

The new pumping station will be capable of delivering up to 36 million gallons per day from the river to Judy Reservoir, and will ensure that sufficient water is available to meet projected demands for the next 40 years.

While 97 percent of the district’s water demands are within the cities of Mount Vernon, Burlington, Sedro-Woolley and the surrounding areas, the PUD also provides water to several rural and remote parts of the county through satellite water systems.

Over the past 12 years, the district has rescued six troubled water systems, most of which were experiencing issues with algae and taste and odor problems. The district is committed to providing safe, affordable drinking water to all customers, and will continue to invest in infrastructure to meet the needs of a growing community.

With hard work and creativity, the district will keep pace with new regulations and population growth, while providing its customers with safe, affordable drinking water.
which are fed by small wells.

One such system is a reverse osmosis treatment facility, which serves a small community on Guemes Island, where saltwater intrusion has affected groundwater supplies. Another system, on Fidalgo Island, receives its water from an Anacortes transmission line, which also serves the City of Oak Harbor and Whidbey Naval Air Station. In the past year, the district has also constructed a new water system to serve the small community of Marblemount, at the western edge of the north Cascades.

Over the years, conservation and environmental stewardship have become increasingly important for the district.

The Skagit River and its tributaries support some of the healthiest salmon runs in the Northwest and form the only stream system in Washington to support all five species of Pacific Northwest salmon, as well as bull trout and steelhead.

The district participates in local watershed management and planning efforts to protect in-stream flows necessary to maintain salmon spawning and rearing habitat, while also ensuring adequate water to meet current and future demands of its customers.

In 1996, the district entered into a memorandum of agreement with other public water suppliers, local government agencies, local tribes, and state resource management agencies that provides for coordinated water-resource management for the next 50 years and ensures minimum in-stream flows to protect fish habitat.

Projections show the population of Skagit County could grow by 45 percent in the next 20 years, with most of that growth expected to occur in the PUD’s service area. To meet the needs of this growing and changing community, the district is continually planning for the future.

The district has completed a third clearwell for additional storage at its water filtration plant, installed over four-miles of new transmission pipeline, and is planning to double the capacity of its treatment plant, and replace its largest transmission pipeline in the next two years. In addition, the PUD will undertake numerous distribution system improvements throughout the Skagit Valley.

With hard work and creativity, the district will keep pace with new regulations and population growth, while providing its customers with safe, affordable drinking water.
hen Chelan County PUD introduced an alternative-power program in the fall of 2001, skeptics were as easy to find as apples in the local orchards.

Why should a utility with a legacy as a producer of clean, renewable hydropower venture into the uncharted territory of solar and wind generation?

As it turns out, most of the reasons given then – that alternative energy was forward-thinking, that customers wanted it, that it was “the right thing to do” – have proven valid. And most of the misgivings have evaporated in the sun and the wind.

The PUD’s program has enjoyed success because its goal was simple: Link customers who want to produce small-scale solar and wind power with customers who want to buy that power and who appreciate knowing where that power is produced.

Chelan PUD’s program is called SNAP, for Sustainable Natural Alternative Power. It’s completely voluntary. Customers support solar or wind power by paying extra on their utility bills. They can sign up for SNAP as an automatic monthly payment or they can pay a little more on other schedules. Suggested amounts range from $2.50 per month for individuals to $100 for businesses.

The PUD acts as a facilitator, collecting the funds from SNAP purchasers and using that money to pay SNAP producers for the power they generate.

On the generation side, the solar and wind equipment is owned, maintained and operated by the individual producers. Generation from the solar and wind installations is added to the PUD’s existing hydropower base and transferred across the electrical grid.

The utility does not install systems, but provides advice during installation and has staff to inspect and connect systems to the grid.

Producers are limited to installations of 25 kilowatts or less, and the program is only available to producers within the PUD’s service territory. In every case, the renewable generation is metered separately from the home or business’ power usage. A standard electric meter base is wired backward so that 100 percent of the power production is recorded by the PUD’s meter readers.

To keep the program simple and straight-
Green Power in Washington

According to the state Department of Community, Trade and Economic Development (CTED):

- Fifteen of the 16 utilities in Washington required by law to offer green power options to customers have active programs. Two additional utilities, Orcas Power and Light and Pacific County PUD, voluntarily operate green power programs.
- Between January and September 2006, customers purchased 209,664,821 kilowatt-hours, or 23.9 average megawatts, of green power through voluntary programs. Green power sales in 2006 increased an estimated 67 percent over 2005 sales.
- 31,909 utility customers in Washington are now participating in these voluntary utility programs, a 9 percent increase in customer participation since 2005.
- In 2005, Washington’s electric utilities included in their standard rate-base power sales to retail customers 49.2 aMW of wind power, 67 aMW of biomass-fueled electricity and 8.8 aMW of electricity generated from landfill gas.

For more information: www.cted.wa.gov

SNAP Milestones

August 2001
SNAP is introduced. A homeowner in Chelan, the Federal Building in Wenatchee and Wenatchee Valley College are the first solar producers

May 2002
SNAP gets its first wind turbine, at a ranch southwest of Wenatchee

June 2003
SNAP earns a national innovation award from the Interstate Renewable Energy Council

July 2003
Alcoa endowment provides $1 million in materials and start-up for installing solar panels at schools and non-profit agencies. International Brotherhood of Electrical Workers pays for electricians to complete the installations.

December 2003
10-kilowatt solar array is installed on the Bank of America Performing Arts Center in downtown Wenatchee

2005
20-kW wind turbine in Manson becomes the fourth wind turbine in the program

2006
Alcoa endowment projects completed

forward, SNAP was structured to rely on customer support for its success. No subsidies or rebates are offered. Producers’ returns are determined directly by the amount of support from SNAP participants.

The formula is this: Price per kWh = total SNAP contributions ÷ total kWh of SNAP power produced.

For example, this past year PUD customers contributed $28,800 to the SNAP program. Local solar, wind and small hydro producers in the program generated a total of 136,000 kilowatts during the same period. The amount paid to the local SNAP producers worked out to 21 cents per kWh ($28,800 divided by 136,000 kWh).

The PUD also pays producers the wholesale market value of the power they contribute to the grid, in addition to their share of the voluntary contributions.

Producers are paid once a year, on or around Earth Day on April 21.

While the formula allows for a clean, supply-and-demand system of payments, it’s also one of SNAP’s drawbacks. Six years into the program, the number of producers has grown significantly, but the number of supporters has leveled off. As a result, recent payments have been smaller.

In its first year, with just three producers, SNAP paid $1.50 per kilowatt hour (kWh), the maximum allowed under the program. This year, with 45 producers, the payout was 21 cents per kWh. So far, the PUD has been unable to find the magic formula for boosting participation. However increasing attention to climate change issues may heighten awareness and interest.

Fortunately, state production incentives approved by the Legislature in 2005 have also kicked in, and producers can earn additional amounts ranging from 15 cents to 54 cents per kWh.

SNAP began with a 300-watt photovoltaic system at the home of renewable-energy consultant Randy Brooks.

Within a few months, Wenatchee Valley College and the Federal Building in Wenatchee added their own 10-kW systems. In May 2002, a farm couple living on a windy ridge in the southern part of Chelan County put up SNAP’s first wind turbine.

The program also received a boost in 2003 when the community foundation at Alcoa, owner of an aluminum smelter south of Wenatchee, provided $450,000 in materials and non-electrical labor to install solar panels at all Chelan County schools and seven nonprofit agencies. The International Brotherhood of Electrical Workers donated all the electrical labor needed to install the systems.

The schools and agencies that received solar panels split their proceeds from generation with the Alcoa foundation, which uses the money for more community projects.

Having photovoltaic panels in the schoolyards gives teachers the added bonus of including solar energy in their science lessons. The PUD is working with the schools to set up monitoring stations so students can watch the output of their panels and, using computer software, make

continued on page 16
SNAP … continued from page 15

10 kilowatt solar installation at the Performing Arts Center of Wenatchee was paid for by the Alcoa Community Solar Endowment.

Comparisons to the output at other schools. Knowing that some of the money is going to support local schools also encourages continued customer payments into the SNAP program.

When PUD engineer Jim White first suggested the SNAP concept, he encountered considerable skepticism among utility staff. Would customers who pay less than 3 cents per kilowatt-hour for power generated by the utility’s Columbia River dams be interested in alternative sources of energy? Would anyone pay extra for a commodity if they weren’t forced to do so?

Utility surveys indicated that more than 60 percent of consumers liked the idea of alternative power. The question was would they actually support an alternative energy program when it came time to write a check?

White was confident they would. His goal was 3 percent participation by PUD customers. Thus far, SNAP has maintained customer participation of about 2 percent.

Customers who participate in SNAP say they do so to support development of new renewable sources of energy. It’s one more way to reduce dependence on foreign oil, they say. They also like the idea of purchasing power from their neighbors.

And although the output remains small – 133 kilowatts is the total capacity – the concept is big.

SNAP has raised customer awareness of renewable sources of power and put Chelan County on the state’s solar map. The program earned a National Renewable Energy Recognition Award from the Interstate Renewable Energy Council, and spawned similar programs at Okanogan and Ferry county PUDs and at the Golden Valley Electric Cooperative in Fairbanks, Alaska. White has been invited to speak at conferences and workshops around the country.

“SNAP provides an opportunity that didn’t exist beforehand,” White said. “If customers want it, we’re offering it. If they don’t, they don’t have to participate.”

In 2002 – one year after SNAP’s inception – SNAP moved Washington state from last place to sixth place in the nation for making solar energy cost-effective, according to a report by the National Renewable Energy Lab. In the past six years, Washington has seen significant growth in small solar projects and installed solar capacity has grown to nearly 1 megawatt.

Since 2002, utilities with more than 25,000 customers have also been required by state law to offer a voluntary green power product. (Unfortunately, hydropower is not considered renewable under state law.) Utilities are required to report annually on the progress of these voluntary green power programs to the Washington Utilities and Transportation Commission (for investor-owned utilities) and the Department of Community, Trade and Economic Development (for consumer-owned utilities, including PUDs). According to CTED’s 2006 report, estimated annual 2006 green power sales increased 67 percent over 2005 sales.

While SNAP can’t take all the credit for opening the door to solar power in Washington, it can at least be acknowledged for cracking a window.

“I remember saying in the beginning that if SNAP could work in a place like Chelan County it could work anywhere,” White noted. “SNAP has driven a wedge into old ways of thinking about alternative energy. “It generates a small amount of power, but it is breaking down institutional barriers within the utilities about customer-owned generation,” he added. “Utilities are working through the issues related to putting power on their systems. It’s a fundamental shift in thinking.”

Susan Gillin is Chelan County PUD Customer Service Administrator. For more information about the SNAP program, go to www.chelanpud.org/snap.html. Questions about the program should be addressed to Jim White, senior Energy Services engineer, at (509) 661-4829 or e-mail to james.white@chelanpud.org. To receive a free, short video on SNAP, call (509) 661-8008 or e-mail susan.gillin@chelanpud.org.

State production incentives boost solar in Washington

In 2005, the state Legislature approved additional incentives for small-scale solar and wind generation in Washington. Individual producers are eligible to receive up to $2,000 per year.

The actual amount depends on whether the power is generated using equipment manufactured in Washington state.

Solar producers using solar modules and inverters manufactured in Washington receive up to $0.54 per kWh. If just the inverter is made in Washington, they would receive $0.18/kWh. Energy generated with modules and inverters manufactured outside Washington are eligible to receive $0.15 per kWh.

Although there are inverter manufacturers in the state, there are currently no module manufacturers. A module plant is under construction in Arlington.

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Mutual-aid agreements help PUDs face Northwest storms

By Mike Thorne

When public utility districts face major power outages — and here in the Pacific Northwest we all know that major storms can blow in pretty much anytime from October through March — they can rely on each other for help in getting power restored to their customers as quickly as possible.

Most of the state’s electric-service PUDs have signed mutual-aid agreements to help each other when a major storm or other natural disaster causes more damage than a utility can handle by itself.

The Washington Public Utility Districts Association Mutual Aid Plan and Agreement provides the organizational framework, terms and conditions under which PUDs provide assistance to each other in response to emergencies.

This agreement is intended to apply to emergency situations such as storms and earthquakes that may cause so much electric-system damage or destruction that a single utility could never provide for public safety and restore electric service in a timely manner.

It also meets the Federal Emergency Management Agency requirement to be reimbursed for eligible costs in the event of a major disaster or emergency. All costs associated with a mutual-aid call-out are initially paid by the PUD that requested the help.

The only time a PUD wouldn’t honor a request is when its own service area is also severely affected and it, too, needs every available crew.

While Snohomish PUD is generally prepared for even major storms, with its tree trimming program, enhanced weather monitoring, and recent system improvements, last year’s back to back record snow and wind storms that knocked out power to over half of its 310,000 customers dramatically showcased the value of mutual-aid agreements in place.

Snohomish PUD eventually received mutual-aid assistance from Benton, Douglas, Franklin, Grant, Cowlitz, Chelan and Okanogan county PUDs, and Peninsula Light.

“Even a great deal of communication and preparation go into the eventual use of mutual-aid or contract crews,” said Erin McClatchey, Snohomish PUD construction superintendent whose team is responsible for bringing in outside crews during storms.

McClatchey said PUDs around the state get together in the fall, prior to the storm season, to update the mutual-aid agreements and discuss coordination issues.

When Snohomish PUD has prior warning of a major storm, staff will contact private contractors to get a feel for where their crews are working and how many outside crews may be available in an emergency.

When Snohomish PUD has prior warning of a major storm, staff will contact private contractors to get a feel for where their crews are working and how many outside crews may be available in an emergency.

Once the storm hits and PUD service crews determine the severity of the damage, storm managers make the decision whether to bring in contract crews or request help from other PUDs.

Snohomish PUD also assigns a two-person team to help each of the contract or mutual-aid crews that respond to an emergency. These “crew guides” help ensure that repair crews who may be unfamiliar with the area get to their assigned outage locations, assist with any questions the crews may have regarding Snohomish PUD construction standards, and maintain field notes and all follow-up paperwork.

The crew guides are also responsible for ensuring that outside crews get all their meals and take their required rest breaks.

Although Snohomish PUD has mutual-aid agreements with most of the other PUDs in the state, assistance will usually come from Eastern Washington, since westside PUDs are usually dealing with their own outages. Likewise, Eastern Washington PUDs generally get help from their westside counterparts.

“We most definitely appreciate the assistance of other public utility districts that provide mutual-aid crews and reciprocate with aid to them whenever possible,” said Chao Li, Snohomish PUD senior storm manager.

“Sometimes we need all the help we can get to maintain that service level. Mutual-aid crews are skilled professionals who can be a vital part of our restoration process during a major storm event.”

Mike Thorne is Communications & Marketing Representative for the Snohomish County PUD.
The genius of the Internet is its promise of unlimited accessibility. With limited exceptions, any consumer with an Internet connection and a computer can post any content, visit any web site, attach any device, and provide any service.

While the openness of the Internet is universally praised, it is no longer guaranteed, at least for broadband services. Recent U.S. Supreme Court and Federal Communications Commission rulings define broadband networks as unregulated “information services,” which means that the operators of broadband networks are no longer under any legal obligation to keep their networks open and neutral to all legal Internet content, services and equipment.

In the absence of a net neutral ethic, network operators— including telecommunications and cable providers—are free to adopt conflicting and proprietary standards for the attachment of consumer equipment, steer consumers to certain web sites over others, block whatever Internet services or applications they like, and make their preferred applications perform better than others.

This concern is not just theoretical. Broadband network providers are already taking advantage of their unregulated status. Cable operators have barred consumers from using their cable modems for virtual private networks and home networking, and have blocked streaming video applications. Some telephone and wireless companies already block Internet telephone traffic—also known as Voice Over Internet Protocol or VoIP—to protect their own revenues streams. Manufacturers are marketing equipment designed specifically to “filter” out (i.e., block) VoIP traffic.

The problem is likely to become worse in the near future. One telephone company executive recently announced openly that his company intends to establish a higher-priced “tier” of service reserved exclusively for content providers chosen by the network operator. This raises the concern that consumers and start-up content providers will be relegated to the “slow lane” on the information superhighway.

Such discrimination is a real possibility because network operators have economic incentives to discriminate. Network operators today are more than just passive providers of transmission capacity (the “pipe”). They also own and provide the content (services and applications) and the equipment. By giving their own applications and content preferential access to the network, or that of affiliated companies, they can extract greater profits than if they operate the network on a nondiscriminatory, net neutral basis.

As a result, Congress is now being urged to enact legislation—or the FCC to adopt rules—that ensures the Internet remains open.
NET NEUTRALITY continued from page 19

open and accessible to all.

Cable and DSL companies currently dominate the “last-mile” broadband infrastructure – the “pipes” that deliver broadband to the home – and do so on their own terms. The intention to act as “gatekeeper” to the Internet is clearly reflected in AT&T CEO Edward Whitacre’s recent response to a question about Web-based businesses:

How do you think they’re going to get to customers? Through a broadband pipe. Cable companies have them. We have them. Now what they would like to do is use my pipes free, but I ain’t going to let them do that because we have spent this capital and we have to have a return on it. So there’s going to have to be some mechanism for these people who use these pipes to pay for the portion they’re using. Why should they be allowed to use my pipes? The Internet can’t be free in that sense, because we and the cable companies have made an investment and for anybody to expect to use these pipes for free is nuts!

In America, 95 percent of high-speed broadband Internet customers are served by ISPs affiliated with either cable companies or telephone companies. This dominance is not the result of winning in a competitive market, but rather the result of leveraging their control of physical facilities.

Broadband networks have become an essential lifeline of our economy and society, carrying on-line commercial transactions, interactive games, news and information on current events, local and national advertising, telemedicine and distance learning, and videoconferencing.

Broadband service providers increasingly provide many of the same services as public libraries, local and national newspapers, banks, and broadcasters. Allowing the dominant cable and telephone industries to control access to these sources of information, entertainment and commerce could endanger First Amendment rights as well as our high-tech economy.

Jon Liebowitz, a commissioner at the Federal Trade Commission, describes the benefits of an open Internet this way:

In this day and age, Internet access is even more vital than some traditional government services because the Internet is both a repository of information, like a library, and a shared public space, like a park, to which everyone should have access. However delivered, inexpensive or free high-speed Internet access is essential to bridge the digital divide and boost technological literacy. Columbia University professor Tim Wu has noted,

“Network neutrality is best defined as a network design principle. The idea is that a maximally useful public information network aspires to treat all content, sites, and platforms equally. This allows the network to carry every form of information and support every kind of application. The principle suggests that information networks are often more valuable when they are less specialized – when they are a platform for multiple uses, present and future.”

Open access policies have been adopted by much of the rest of the developed world. Countries like Japan and France now have vigorous inter- and intra-platform competition in their broadband markets, primarily because of the successful implementation of nondiscriminatory, open access policies.

But in this country, the FCC in August 2005 eliminated open access principles from the national broadband sector.

This action further fueled the net neutrality controversy, as the FCC repeated the claims of the major telephone and cable companies that they can only afford to invest in their networks if they are allowed to vertically integrate services with their infrastructure and are allowed to discriminate how others may use their networks.

The FCC claims to have removed these principles in the name of creating incentives for infrastructure development. But history shows that it is the threat of competition, not its removal, which spurs innovation and investment.

In the first few years following the 1996 Telecommunications Act, competition took hold as new providers entered the industry.

While these newcomers to the broadband field were ultimately throttled by the incumbent network operators, they did make a major contribution to the landscape.

They were the source of immense innovation and sought to find niches in which they could survive. As a result, they introduced new business practices (e.g., electronic back office operations), led the way in deploying new facilities (e.g., DSL), and developed new applications (e.g., Voice over Internet Protocol (“VoIP“)) driving incumbents to emulate the innovations.

The incumbents then were allowed to extinguish the competition.

The principles of nondiscrimination, net neutrality and open access are fundamental ingredients for the successful deployment of broadband technologies.
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TOURS:
Confluence Technology Center, Wenatchee
Co-owned by Chelan County PUD and the Port of Chelan County, the Confluence Technology Center houses Chelan PUD’s fiber terminus and network operations. The 90,000-square foot facility features conference and meeting space with leading-edge videoconferencing capabilities, along with high tech business, office and data storage space for lease.

Rock Island Dam
Completed in 1932, Rock Island Dam was the first dam to span the Columbia River. It has a generating capacity of 624 megawatts.

Chiwawa & Tumwater Dam Fish Hatcheries
The Chiwawa Hatchery was built in 1989 to rear spring chinook through the winter prior to release from the hatchery. It is an integral part of the Chelan PUD steelhead hatchery program, begun in the 1960s.

City of Wenatchee Wastewater Treatment Plant
The City of Wenatchee Wastewater Treatment Plant receives an average of 3.2 million gallons of wastewater each day.

WORKSHOP SESSIONS:

Track A
Implementing the Municipal Water Law
Municipal Water Law & Other Water Rights Issues
Watershed Planning & Setting In-stream Flows
Roundtable Discussion for PUD Commissioners
Emerging Issues Affecting Water Rates
Innovations in System Financing

Track B
Ensuring Water System Security
Managing Water Loss for Greater Efficiency
Customer Education & Public Information for Water Use Efficiency
Hot Topics in Management
Customer Service: External Issues
Customer Service: Internal Issues

Track C
Inspecting New Installations
Pump Installation & Maintenance
Innovations in Cross-Connections & Backflow Prevention
Hot Topics in Operations
Automatic Control Valve R & Operations
Fire Hydrant Flushing & Repairs

DINNER
Dinner on Wednesday is sponsored by HDR Engineering

LUNCH
Lunch on Thursday is sponsored by Foster Pepper.

To register, or for more information, contact Lena Mendiola at WPUDA (206) 467-0147 or lmendiola@wpuda.org.
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