



Journal

November 2014

BPA launches 15-minute scheduling

At 11:04 a.m. on Oct. 21, Portland General Electric became the first BPA customer to schedule energy in 15-minute increments. BPA began offering the opportunity to schedule energy in intervals less than 30 minutes for the first time that day.

Historically, our region's power producers have scheduled energy transactions on the hour and, more recently, on the half hour. The option of buying, selling and transmitting energy in the shorter time frame provides more market flexibility to respond to unexpected changes in power generation and demand, making more effective use of available transmission lines to deliver energy.

BPA's road to offering the 15-minute scheduling option required innovation, investment and hard work.

"This accomplishment underscores our commitment to operate our transmission system efficiently and, if possible, to reduce renewable energy integration costs. I am proud of the hard work BPA did to implement this important new tool," said BPA Administrator Elliot Mainzer.

After being the first to take advantage of the new scheduling tool, PGE explained its value.

"We're working with BPA and utilities throughout the region to find ways to improve the flexibility and efficiency of the grid," said Jim Piro, president and CEO of PGE. "Fifteen-minute scheduling is part of an ongoing, collaborative effort to assure that we can continue to provide our customers with reliable electric service at a reasonable cost."

By offering 15-minute scheduling, BPA meets requirements to help remove barriers to integrating variable energy resources included in Federal Energy Regulatory Commission Order 764. BPA currently has more than 4,500 megawatts of wind energy connected to its transmission system and expects that number to increase as state and national policies and other factors drive additional development of renewable resources.

"The shift toward 15-minute scheduling is a significant step forward for the Northwest and will help to reduce costs to consumers as well as to integrate more renewable energy into our electric system," said

Cameron Yourkowski, senior policy adviser at Renewable Northwest. "Kudos to Bonneville for making this work. This is an important step in the effort to modernize our grid."

The new 15-minute scheduling option could provide many benefits for BPA and its customers if the practice is widely adopted. Principal among those is the possibility of reducing the amount of balancing reserves BPA must hold to move hydropower generation up or down as the energy produced by other generators connected to its system strays from the amount scheduled.

"The Northwest is blessed with abundant clean energy resources, led by the hydropower system," said John Prescott, president and CEO of PNGC Power. "BPA has been proactive in taking steps to increase the efficient operation of its transmission system, and the implementation of 15-minute schedules is a positive step forward for the region's energy markets."

BPA makes 31st consecutive Treasury payment

BPA made its annual payment to the U.S. Treasury in October, on time and in full for the 31st consecutive year. The total payment for fiscal year 2014, which ended Sept. 30, was \$991 million.

"We are proud to uphold our commitment to U.S. taxpayers by once again making our Treasury payment on time and in full," said Elliot Mainzer, BPA administrator. "This longstanding and consistent record of payments reflects our sound fiscal management and value to the region, while clearly demonstrating an enduring commitment to our financial obligations."

BPA's cumulative payments to the U.S. Treasury during these 31 years amount to over \$24.8 billion.

This year's payment includes: \$567 million in principal; \$333 million in interest; \$53 million in irrigation assistance payments; and \$38 million in other payments. Of the \$991 million total payment, \$147 million was paid by applying Treasury credits for non-power-related fish mitigation efforts and other credits, including interest earnings.



This year, Energy Northwest and BPA began using a collaborative, integrated approach to optimize the unified debt portfolio of all debt obligations borne by BPA ratepayers. Energy Northwest develops, owns and operates a diverse mix of electricity generating resources, including the Northwest's only nuclear generating facility. BPA backs \$5.36 billion of Energy Northwest debt.

In this year's transaction, Energy Northwest issued BPA-supported bonds to refinance approximately \$321 million of outstanding regional cooperation debt previously issued by Energy Northwest. This refinancing freed up BPA resources that are now being used instead to make an additional payment to the U.S. Treasury to extinguish \$321 million of federal debt with a higher interest rate, thereby obtaining about \$130 million of net present value savings.

During fiscal year 2014, BPA repaid \$567 million of federal debt principal, including the additional early repayment of \$321 million associated with the regional cooperation debt transaction described above. BPA also repaid

\$214 million of nonfederal debt principal, of which \$205 million was related to Energy Northwest projects.

In addition to the U.S. Treasury payment, BPA paid operations and maintenance expenses for the U.S. Army Corps of Engineers, Bureau of Reclamation and U.S. Fish and Wildlife Service projects directly funded by BPA. This direct funding amounted to \$358 million in fiscal year 2014.

BPA is self-financed and primarily recovers its costs through revenue from the sale of electric power and transmission services. It receives no annual appropriations from the U.S. Congress. BPA establishes its rates prospectively, looking forward over two years. To assure full and timely payments to the Treasury for the benefit of American taxpayers, BPA requires that its rates be established to provide at least a 95 percent certainty of making annual scheduled Treasury payments over two consecutive years. This equates to a 97.5 percent certainty of making annual scheduled payments in a single year of the rate period. The last time BPA missed a Treasury payment was 1983.

Connolly named VP of Generation and Asset Management



Kieran Connolly has been named BPA vice president of Generation and Asset Management in Power Services. Connolly's appointment leaves only one executive position vacant among the five in BPA Power Services.

"Managing the federal system with our partners to meet the multiple purposes it serves is fundamental to the success of BPA and the region," said BPA Administrator Elliot Mainzer. "Kieran's knowledge, background and experience are ideally suited for this position as we continue to manage power system operations in a changing and challenging Northwest energy landscape."

Since April 2007, Connolly has served as BPA manager of Generation Scheduling, which includes hydroelectric duty scheduling of the 31 dams in the Federal Columbia River Power System, day-ahead system planning and policy issues that impact real-time power system operations. Before that, Connolly was manager of Regional Coordination within Power Services. That job required understanding of long-term system modeling, coordination with Canada and fish operations.

"Kieran has great knowledge of the federal power system and very impressive and diverse experience over a 23-year tenure at BPA," said Mark Gendron, senior vice president of Power Services. "Kieran's analytical, leadership, collaborative and problem-solving skills will be invaluable for BPA in his new role. He is perfectly suited to lead the organization to preserve and enhance the federal generation assets that provide tremendous economic, environmental and operational value to the region."

Connolly began his career at BPA in 1991 as a supply system analyst. He holds a B.S. degree in Business Economics from Willamette University and a Master's in Business Administration from the University of Portland. He lives in Beaverton, Ore., with his wife, Allison, and their three children.

"I am honored to be asked to fill this role at a time when the hydro system is being asked to do so much," Connolly said. "I look forward to ensuring the system continues to provide incredible value to Northwest ratepayers."

Small steps to a smarter grid

This is an abridged version of the original story, which is part of a series BPA is producing to capture the successes and lessons learned during the Pacific Northwest Smart Grid Demonstration Project. The stories are posted at www.bpa.gov/goto/smartgrid.

NorthWestern Energy serves one of the largest, most geographically diverse territories of any utility in the region. With infrastructure that spans over 28,000 miles of transmission and distribution lines across three states — Montana, South Dakota and Nebraska — planning ahead is important. Especially as the 500,000 poles, components and wires get older.

A plan to upgrade its basic distribution system was in the works when the opportunity arose to take part in the \$178 million Pacific Northwest Smart Grid Demonstration Project. Improving upon existing infrastructure using smart grid technologies just made business sense.

“We weren’t quite ready for it,” said George Horvath, manager of automation and technology for NorthWestern. “We expected that the technologies would advance, change and be improved over two to three times during the course of the project.”

So going small scale was NorthWestern’s solution.

With its \$2.1 million investment, NorthWestern also planned to learn from the other participants, including 11 utilities across five states, five technology firms and two universities. Battelle Northwest leads the project. Using American Recovery and Reinvestment Act stimulus funds, the Department of Energy matched the participants’ contributions, including BPA’s \$10 million investment.

NorthWestern recruited about 200 residential customers and two commercial buildings in Montana. Residents’ homes were fitted with switches to control appliances, as well as programmable thermostats and energy system display devices.

Residents were trained to program the equipment and to use a web portal that showed past energy use, as well as the energy consumption of every device connected to the network. The benefits were twofold. Customers could see their energy use to better understand ways to save, and NorthWestern gained insight into what customers want and what they were willing to do to conserve energy.

Residential customers were also set up for time-of-use pricing. These pricing programs help a utility control some of the consumers’ electrical load in response to grid conditions and the price of electricity.

While Montana has a flat residential rate, the demonstration project offered a regional price. So for testing purposes, the rate fluctuated. Each customer received a signal that displayed the price of electricity as low, medium or high, depending on the time of day, the day of the week and the month or season.

Customers responded by adjusting and programming the equipment, attached to a home area network, based on the pricing schemes. As a result, load decreased during peak times of use.

If a customer used less energy when prices were high, NorthWestern credited the customer’s monthly bill. As of September 2014, total savings from the time-of-use pricing totaled \$13,787 for all customers.

The system also gave the utility direct control over some residential customer loads.

“Now we are able to send demand response events directly to the homes,” said June Pusich-Lester, NorthWestern’s demand side management engineer.

With the ability to control home appliances using two-way communications, NorthWestern reduced home temperatures or turned off appliances when the price was high in the middle of the day. Demand response and time-of-use methods provide flexibility while saving money.

The demonstration project also enabled NorthWestern to test distribution automation, or self-healing technology. Computer systems quickly react to electrical issues in the utility’s distribution system, such as a fault, without the need for human intervention.

Since October 2012, the system has already automatically reconfigured and mitigated the need for service on the feeder for two outages in Helena, Mont. That means shorter outages for customers and resource savings for NorthWestern.

With the five-year project nearing its completion, the findings will inform future smart grid investments.

“We will continue to invest in the basic infrastructure and incorporate new technologies where they make sense,” Horvath said. “This project provided a foundation for us to evaluate something much larger going forward.”

Public Involvement [updates & Notices]

AGENCY PROJECTS

Quarterly Business Review [Regionwide]

The next QBR will be held Nov. 4. The QBR is an ongoing forum that focuses on BPA's actual financial results in the current fiscal year compared to financial forecasts, such as the start-of-year target, as well as other current agency topics. At these meetings BPA will also report on how actual spending compares to rate case assumptions. For information, go to www.bpa.gov/goto/QBR. **SEE CALENDAR**

BP-16 Rate Case [Regionwide]

BPA expects to publish notice of its upcoming initial rate proposal in the Federal Register on Dec. 4. The BP-16 rate proceeding will set rates for wholesale power, transmission, and ancillary and control area services for fiscal years 2016 and 2017. BPA anticipates that the formal rate-setting process will conclude in late July 2015, when the administrator issues a final record of decision. Parties expecting to participate in the formal rate hearing may attend a scheduling conference call on Dec. 5. The prehearing conference is scheduled for Dec. 10. For information, go to www.bpa.gov/Finance/RateCases/BP-16/Pages/default.aspx. **SEE CALENDAR**

POWER

Rate Period High Water Mark public process [Regionwide]

BPA held a comment period and series of public meetings on the establishment of Rate Period High Water Marks that will be used to set power rates for fiscal years 2016 and 2017. BPA has made its final determinations and is in the process of completing the computations consistent with those final determinations. BPA anticipates posting final RHWM outputs for the FY 2016-2017 rate period on Oct. 28. For more information, go to www.bpa.gov/goto/RHWM.

Conservation billing credits public process [Regionwide]

During BPA's Energy Efficiency Post-2011 Review, customers expressed an interest in pursuing conservation activities that do not depend on funding through the Energy Efficiency Incentive. In response, BPA proposes to offer conservation billing credits. The program would focus on independent conservation activities by BPA customers and their potential to reduce the administrator's need to acquire other conservation resources. BPA is accepting comments about the proposed change to the billing credit policy and the proposed billing credit contract language until Nov. 14. For information, go to www.bpa.gov/PublicInvolvement/Cal/Pages/IndividualEvent.aspx?item=413.

ENVIRONMENT, FISH AND WILDLIFE

Walla Walla Basin Spring Chinook Hatchery Program [Umatilla County, Ore.]

BPA has prepared a draft environmental impact statement for the Confederated Tribes of the Umatilla Reservation's proposal to construct and operate a hatchery at an existing fish facility on the south fork of the Walla Walla River. BPA is accepting comments on the draft through Nov. 24. For information, go to www.bpa.gov/goto/WallaWallaHatchery.

Mid-Columbia Coho Restoration Program, proposed Natapoc Hatchery [Chelan County, Wash.]

BPA is evaluating an adjustment to the location of the proposed Natapoc Hatchery, a facility associated with the Mid-Columbia Coho Restoration Program. The proposed facility would be located alongside the Wenatchee River. For information, go to www.bpa.gov/go/midcolumbiacoho.

CLOSE OF COMMENT

Submit comments to www.bpa.gov/comment.

Nov. 14 – Conservation billing credits

Nov. 24 – Walla Walla Basin Spring Chinook Hatchery Program draft environmental impact statement

CALENDAR OF EVENTS

Quarterly Business Review

- **Nov. 4**, 10 a.m. to 2:30 p.m., BPA Rates Hearing Room
1201 Lloyd Blvd., Suite 200, Portland, Ore.

BP-16 Rate Case scheduling conference call

- **Dec. 5**, 9 a.m. to undesignated end time
Phone bridge: 877-336-1828; participant code: 2906902

BP-16 Rate Case prehearing conference

- **Dec. 10**, 9 a.m. to undesignated end time, BPA Rates Hearing Room
1201 Lloyd Blvd., Suite 200, Portland, Ore.

FOR MORE INFORMATION

Information on other projects under environmental review is available at www.bpa.gov/goto/NEPA.

For information about the National Environmental Policy Act in general, go to www.bpa.gov/goto/environmentalplanning.

The Journal is a monthly publication of the Bonneville Power Administration. If you have questions or comments, or you want to be added to the mailing list for any project, call toll free 800-622-4519.

To order copies of documents, call: 800-622-4520 or 503-230-7334. Written comments may be sent to: BPA, P.O. Box 14428, Portland, OR 97293-4428. Email address: comment@bpa.gov. BPA home page: www.bpa.gov. For details on BPA environmental reviews listed above, including site maps and documents issued to date, see www.efw.bpa.gov/environmental_services/nepadocs.aspx. Process Abbreviations: EA-Environmental Assessment, EIS-Environmental Impact Statement, ESA-Endangered Species Act, FONSI-Finding of No Significant Impact, NOI-Notice of Intent, ROD-Record of Decision.

