Journal

June 2010

More powerful turbine arrives in NW

A 45-ton piece of a hydroelectric turbine took a 2,720-mile journey last month. Its destination was the U.S. Army Corps of Engineers' Chief Joseph Dam in eastern Washington, where it will boost the renewable power generated by the Columbia River. Chief Joseph Dam is the second-largest hydropower producing dam in the United States and the largest operated by the U.S. Army Corps of Engineers.

The upgraded turbine runner — the part of a hydroelectric turbine that rotates under the action of water to generate electric power — is the first of 10 new, more efficient runners to be installed at Chief Joseph by 2014. The new runners and related refurbishment will increase the dam's power generation by more than 40 megawatts and boost the efficiency of the turbines to 95 percent or better. That is enough to power another 30,000 Northwest homes from the same amount of water passing through the turbines, compared to the 50-year-old runners being replaced.

"This turbine and the others to follow help us use the available water as efficiently as possible, which is especially important in a dry year like this one," said Steve Oliver, BPA's vice president for generation asset management.

BPA is financing the approximately $120 million in upgrades through an agreement with the Corps of Engineers.

The new turbine runner is lowered onto a truck for its trip to Chief Joseph Dam.

DC line still hot after 40 years

For 40 years, electricity consumers on the West Coast have enjoyed a unique power-sharing arrangement that takes advantage of seasonal weather differences. This relationship is possible because of a colossal direct current transmission line that spans 846 miles, connecting the Pacific Northwest to Southern California. The DC line is the backbone of the Pacific Intertie — the largest single electricity transmission link in the United States. And it was the first ultra-high-voltage DC line in the nation.

"This was one of BPA's — and the nation's — greatest engineering feats," said BPA's Transmission Services Vice President Brian Silverstein. "It took technological breakthroughs and political triumphs, and ultimately paved the way for future long-distance interties around the world."

The direct current line came to life May 21, 1970. The Celilo Converter Station, the northern end of the DC line, was dedicated Aug. 25, 1970.

Celilo and its counterpart, the Sylmar Converter Station near Los Angeles, convert alternating current into direct current and send it on its way (more efficiently than AC) to the other station where it is converted back into AC.

In spring and early summer, Northwest rivers usually provide more water for power generation than the region needs, so power flows south. (It is offered in the region first and only sent south if it is surplus to Northwest needs.) The revenues from sales of this surplus help keep Northwest rates lower.

At other times, such as in winter and at night, California power plants generate more electricity than local consumers need. When temperatures in the Northwest are low and heating needs rise, and in dry years like this one, the power often flows north.

Because the two regions can back each other up, thanks to the intertie, less power has been generated at fossil-fuel power plants.

Technological advances by BPA engineers helped make the long-distance direct current line feasible. New computer techniques were developed to integrate the DC link with the parallel 500-kV AC system. This was the first time a high-voltage DC line was embedded in an AC network.

Spring snow too little too late

BPA now estimates it will likely finish the fiscal year with negative net revenues of approximately $230 million. This shortfall was reported in BPA's second quarterly review published April 30 and is a direct result of the Northwest's low snowpack. Reduced stream flows have resulted in $450 million less revenue than BPA anticipated at the beginning of the fiscal year.

Traditionally, BPA's sales of surplus power — power available beyond BPA's commitments to its customers — have represented about a fifth of the agency's revenues. Revenues from these sales help keep Northwest electricity rates down.

"We had hoped a wet spring would help snowpack across the Columbia River Basin, but that didn't happen. We are now looking at the fifth lowest runoff since the hydro system has been in existence," said BPA Administrator Steve Wright.

The agency is dipping into its reserves to cover costs. This depletion of reserves, however, reduces BPA's ability in the future to handle additional financial risks, such as another below-average water year.

In good years, hydropower provides ample clean, renewable and low-cost electricity. Snowpack, rather than rain, is most critical since the hydropower system has limited storage for water. In an ideal spring, the snow melts gradually so that water is available to power generators at federal dams throughout the summer.

Agencies file fish protection plan

Four federal agencies, including BPA, recently completed and filed with the U.S. District Court of Appeals a supplement to the 2008 Biological Opinion on operating the federal hydropower system to protect endangered salmon and steelhead.

"The region should be proud of what the federal government, states, tribes and communities together have accomplished for fish," said NOAA Fisheries, lead agency for the filing. "The 2010 Supplemental BiOp is legally and biologically sound, and provides strong protection for Northwest salmon and steelhead."

Judge James Redden had encouraged the federal agencies to revisit and supplement the 2008 BiOp in a voluntary remand to formally incorporate actions developed last fall by the Obama administration in an Adaptive Management Implementation Plan. The remand also reviewed and adjusted the 2008 BiOp to make sure it reflects the latest scientific information and fresh consultation with federal and independent scientists. The voluntary remand is the latest step in Columbia River salmon litigation that has been in court since 1993.

The three-month review found that, two years into its implementation, the BiOp remains consistent with the new information that has emerged, including updated adult salmon return data, new information on cormorant predation on fish and more details on the possible biological effects of climate change on Columbia River salmon and steelhead. The supplement includes several additional actions to more carefully track and mitigate the potential impacts of climate change, such as a regional water temperature database.

For more information, go to *www.salmonrecovery.gov*.

Carbon changes everything, Wright says

"The biggest thing in the electric power industry today is seeking to address the impacts of carbon and climate change," BPA Administrator Steve Wright told the Northwest Power and Conservation Council last month. Find a link to the speech at *www.nwcouncil.org*.

Whatever the nation does to address climate change, carbon costs are expected to become the driving force in power resource costs, Wright explained, and that will affect utilities' generation and transmission decisions.

Wright also emphasized the importance of energy efficiency.

"Energy efficiency is job one," Wright said, because it costs substantially less than other resources, and it is carbon-free.

Wright went on to discuss the importance of renewable resources and briefed the Council on the full scope of BPA's current efforts.

Greening BPA from the inside, out

From composting cafeteria waste to planting the roof, BPA is rolling out sustainability practices to green the agency from the inside out.

Composting reduces waste sent to landfills and costs the agency 55 percent less than trash pick up. BPA also is e-cycling, collecting unusable electronics and disposing of them responsibly; and piloting a mixed recycling project.

Storm water runoff and energy consumption at BPA headquarters will soon be lower, thanks to a new green roof being installed by the General Services Administration, which owns the BPA headquarters building. GSA is funding the project with $4.5 million in funding received

from the American Recovery and Reinvestment Act. Green roofs are large gardens that cover the surface of roofs. Planted in soil installed over impermeable barriers, green roofs provide shade and cooling and absorb and filter rain water, reducing and purifying storm water runoff. The project is part of BPA's plan to reduce its total water use by 20 percent by 2020.

BPA's sustainability efforts implement federal sustainability goals contained in Executive Order 13514, which President Barack Obama issued in October 2009.

Public Involvement [Updates & Notices]

AGENCY PROJECTS

Debt Management [Regionwide]

Because of the financial impacts of this year's low water, BPA is reaching out to interested parties to engage in debt management discussions prior to the rate case. Two workshops are scheduled. SEE CALENDAR. Presentation materials will be posted prior to each workshop at *www.bpa.gov/corporate/finance/Debt_Management/presentations.*

Integrated Program Review [Regionwide]

Interested parties are invited to review the agency's program cost levels during the Integrated Program Review. BPA will accept comment on proposed program spending levels through July 29. Workshops have been scheduled to address major program category cost forecasts. A draft schedule of workshops to be held through July is posted at *www.bpa.gov/corporate/Finance/IBR/IPR/.*

2012 BPA Rate Proceeding [Regionwide]

BPA will conduct a combined power and transmission rate proceeding, the 2012 BPA Rate Case (BPA-12), to set rates for the FY 2012–2013 period. This rate case is expected to begin in late 2010. Pre-rate case workshops will be held through the summer to help customer utilities and others become familiar with and work through cost allocation issues informally before the formal proceedings. For information, go to *www.bpa.gov/corporate/ratecase/2012/.* SEE CALENDAR.

Energy Efficiency post-2011 proposal [Regionwide]

BPA has been conducting a public process to engage customers and other stakeholders in the role BPA should play to facilitate the continued successful development of energy efficiency at the lowest cost to the region. Using information gathered in this process, BPA drafted a proposed framework to define the agency's future role. Phase two of the public process, discussing implementation details, is expected to begin this month. BPA will schedule public workshops/workgroups. For information, go to *www.bpa.gov/Energy/N/post-2011/.*

FISH AND WILDLIFE — PROJECTS UNDER REVIEW

Klickitat Hatchery Program EIS [Klickitat County, Wash.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/.*

Yakama Nation – Mid-Columbia Coho Restoration Project [Chelan and Okanogan Counties, Wash.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Mid-Columbia_Coho_Restoration_Project/.*

Northeast Oregon Hatchery Program, Grande Ronde-Imnaha Spring Chinook Hatchery Project [Wallowa County, Ore.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Grande_Ronde/.*

POWER — PROJECTS UNDER REVIEW

Draft Resource Program [Regionwide]

The draft Resource Program examines the agency's projected power supply needs for 2012–2019 under Regional Dialogue contracts. BPA expects to release a final Resource Program this summer. For information, go to *www.bpa.gov/power/P/ResourceProgram/Index.shtml.*

TRANSMISSION — PROJECTS UNDER REVIEW

I-5 Corridor Reinforcement Project [Oregon and Washington]

BPA is proposing a new 500-kilovolt transmission line from a new substation near Castle Rock, Wash., to a new substation near BPA's Troutdale Substation, Troutdale, Ore. A draft EIS is scheduled for spring 2011 followed by another formal comment period. For information, go to *www.bpa.gov/go/i5.*

Big Eddy-Knight Transmission Project [Wasco County, Ore., and Klickitat County, Wash.]

BPA is proposing a new 500-kV transmission line between BPA's existing Big Eddy Substation in The Dalles, Ore., and a new substation (Knight) under an existing BPA line near Goldendale, Wash. BPA expects to issue a draft EIS in early fall. For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Big_Eddy_Knight/.*

Walla Walla-Tucannon River Transmission Line Rebuild [Walla Walla and Columbia counties, Wash.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Walla Walla-Tucannon River Rebuild/.*

Albany-Eugene Transmission Line Rebuild [Lane and Linn counties, Ore.]

For information, go to *www.bpa.gov/go/albany-eugene.*

Bandon-Rogue No.1 Transmission Line Rebuild [Coos and Curry counties, Ore.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Bandon-Rogue_Rebuild/.*

Juniper Canyon I Wind Interconnection Project [Klickitat County, Wash.]

For more information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Juniper_Canyon_Wind/.*

Grand Coulee Dam Line Replacement [Okanogan, Grant and Douglas counties, Wash.]

The Bureau of Reclamation asked BPA to construct six new 500-kV overhead transmission lines at Grand Coulee Dam to replace aging underground lines between the dam's third powerhouse and the 500-kV spreading yard. A draft EA will be released in July 2010. BPA is currently planning to hold a public meeting in August 2010 in Grand Coulee to seek comment on the draft EA. The final EA is

scheduled for October 2010. For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Grand_Coulee/.*

Whistling Ridge Energy Project [Skamania County, Wash.]

In May, BPA released a joint draft EIS with the Washington Energy Facility Site Evaluation Council. BPA and EFSEC are planning to hold joint public meetings June 16 and 17. BPA will accept comments through July 19. For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Whistling_Ridge/.* SEE CALENDAR.

Antelope Mountain Communication Project [Deschutes County, Ore.]

BPA proposes to construct a new 616 square-foot communications building and 80 foot microwave tower at the Antelope Communications Site on Pine Mountain near Bend, Ore., to help BPA maintain and operate the transmission system safely and reliably. BPA is accepting comments through June 14. For information, go to *www.bpa.gov/corporate/public_affairs/docs/2010/.*

Transmission Services Facility Project [Vancouver, Wash.]

BPA is considering building a new office building on its Ross Complex in Vancouver to meet workspace needs. BPA will produce a preliminary EA in summer 2010. For information, go to *www.efw.bpa.gov/pdf/Transmission_Services_September_2009.pdf.*

Central Ferry-Lower Monumental Transmission Line Project [Garfield, Columbia and Walla Walla counties, Wash.]

BPA is proposing a new 500-kV transmission line between the new BPA Central Ferry Substation in Garfield County and BPA's Lower Monumental Substation in Walla Walla County, Wash. BPA expects to issue a draft EIS in summer 2010. For information, go to *www.bpa.gov/go/centralferry.*

Horn Butte Wind Project [Gilliam and Morrow counties, Ore.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Horn_Butte_Wind_Project/.*

FISH AND WILDLIFE — PROJECTS UNDER CONSTRUCTION

Chief Joseph Hatchery Program [Okanogan County, Wash.]

Construction will begin this month on a project to benefit chinook salmon in the Okanogan subbasin and the Columbia River below Chief Joseph Dam. For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Chief_Joseph/.*

Lyle Falls Fish Passage Project [Klickitat County, Wash.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Lyle_Falls/.*

TRANSMISSION — PROJECTS UNDER CONSTRUCTION

Albeni Falls-Sand Creek Transmission Line Project [Bonner County, Idaho]

Construction began in mid-May and is scheduled to be completed by late 2010. BPA will rebuild a 25-mile section of the existing transmission line on an existing right-of-way from Albeni Falls Dam to one mile north of BPA's Sandpoint Substation. For information, go to *www.transmission.bpa.gov/PlanProj/Transmission_Projects/default.cfm?page=albe.*

McNary-John Day Transmission Line Project [Sherman and Umatilla counties, Ore., Klickitat and Benton counties, Wash.]

For information, go to *www.transmission.bpa.gov/PlanProj/Transmission_Projects/.*

Leaning Juniper II-Jones Canyon Substation Expansion Wind Interconnection Project [Gilliam County, Ore.]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Leaning_Juniper/.*

Palisades-Goshen Transmission Line Reconstruction [Bonneville and Bingham counties, Idaho]

For information, go to *www.efw.bpa.gov/environmental_services/Document_Library/Palisades/.*

SUPPLEMENT ANALYSES

SA-429 Bell-Boundary #1 — Pend Orielle County, Wash.

SA-430 Lancaster-Noxon #1 mile 1-63 — Kootenai and Bonner counties, Wash., Idaho and Sanders counties, Mont.

SA-431 Lancaster-Noxon #1 mile 64-73 — Sanders County, Mont.

CALENDAR OF EVENTS

To view BPA's public involvement calendar, go to *www.bpa.gov/corporate/public_affairs/Calendar/.* For Americans with Disabilities Act accommodations, please call toll free 800-622-4519.

Integrated Program Review (general manager meeting): June 8, 9 a.m. to noon, Rates Hearing Room, 905 N.E. 11th Ave., Portland, Ore.

Debt Management: Rates Hearing Room, 905 N.E. 11th Ave., Portland, Ore.

- **June 8,** 1 to 4 p.m.
- **June 18,** 9 a.m. to noon

2012 BPA Rate Proceeding: Rates Hearing Room, 905 N.E. 11th Ave., Portland, Ore.

- **Power: June 16,** 9 a.m. to 5 p.m.
- **Transmission and wind/generation inputs: June 17,** 9 a.m. to 5 p.m.

Whistling Ridge Energy Project

- **June 16,** 6:30 to 9:30 p.m., Underwood Community Center, 951 Schoolhouse Road, Underwood, Wash.
- **June 17,** 6:30 to 9:30 p.m., Rock Creek Center, Skamania County Fairgrounds, 710 S.W. Rock Creek Drive, Stevenson, Wash.

CLOSE OF COMMENT

- **June 14 —** Antelope Mountain Communication Project
- **July 19 —** Whistling Ridge Energy Project
- **July 29 —** Integrated Program Review

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. E-mail 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.

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