

Journal

May 2010

Seeking a safer turbine for fish

Engineers are developing the first of a new generation of advanced hydroelectric turbines for the Federal Columbia River Power System to provide safer passage for fish, under a contract awarded by the U.S. Army Corps of Engineers last month.

The \$10.9-million contract awarded to Voith Hydro Inc. of York, Pa., calls for design and manufacture of a new runner for an aging hydroelectric turbine at Ice Harbor Lock and Dam on the Snake River near Burbank, Wash. A runner is the part of a turbine that rotates in water to generate power.

The contract, funded by BPA, calls for multiple design cycles using state-of-the-art computer modeling and tests with physical models to examine water flow and pressures. Private and government biological and engineering experts will collaborate in the design process, which is unique because it makes fish passage improvements a primary goal, ahead of power and efficiency gains.

The need to replace the Turbine Unit Number 2 runner at Ice Harbor presented the opportunity to pursue a new design with fish passage improvement as a priority. The Unit-2 runner has experienced numerous mechanical problems during its 30-plus years of operation. The benefits



Ice Harbor Dam

will extend beyond Ice Harbor, because several dams have turbines also nearing the end of their design life.

Development and post-installation testing are expected to improve understanding of fish passage through the turbine environment, with potential application to other hydropower sites. The improved turbine components are slated for operation in 2015 and will help meet goals of the 2008 Biological Opinion that protects salmon and steelhead listed as threatened or endangered.

BPA celebrates line energization

Congressman Norm Dicks joined BPA, local governments and customers in Shelton, Wash., in late April to celebrate the completion of a 14.5 mile line between BPA's Olympia and Shelton substations. The line was upgraded from 115 kilovolts to 230 kilovolts to keep pace with electricity demand and ensure reliable system operations in Washington's Olympic Peninsula.

"I'm pleased that the work was shovel ready for construction last summer when we needed the stimulus effect as we do today," said Dicks. "This project helped to put \$28 million into our local economy creating badly needed jobs to the Northwest."

"This line will help us meet the area's needs well into the future," said Brian Silverstein, senior vice president of Transmission Services. "This is one of many investments we are making, along with investments in energy efficiency, new transmission lines and updates to federally-owned hydro projects that demonstrate our commitment to modernizing Northwest electricity service."

Feds file fish ops plan

The federal agencies' spring operations plan for the 2010 fish migration season was filed Monday, April 19, with District Court Judge James Redden. The agencies include NOAA Fisheries, the U.S. Corps of Engineers, Bureau of Reclamation and BPA.

The plan calls for both spilling water and transporting fish on barges, known as a "spread-the-risk" strategy. While NOAA Fisheries' analysis of previous years' data shows



that in dry years barging juvenile steelhead and spring chinook produces significantly better adult returns, scientists have varying views on both spill and transportation.

Biologists will closely track the fish that travel downriver through both means. They will also use the opportunity to examine the effectiveness of recent improvements to the hydropower system designed to protect fish. The results will help inform future decisions on whether to transport Snake River fish or leave them to migrate in the river in future low water years.

In a joint statement, the federal agencies said that difficult choices were involved. "We have reservations about keeping some fish in the river under difficult conditions, when they will likely also face poor ocean conditions," they wrote. "Continuing FCRPS operations in future years that consistently result in survival levels below those anticipated in the 2008 BiOp [biological opinion] could call into question the BiOps that rely on those levels of survival."

On the positive side, there's been significant progress in protecting salmon and steelhead since the 2001 drought, which is an important strength going into this year.

To view the court filing and media statement, go to www.salmonrecovery.gov.

Education video series launched

BPA launched a Web-based education video series called "The BPA Science Lab."

"We envision this series as a resource for parents searching for a science fair project, teachers looking for hands-on science activities for their students, or just curious youngsters looking for a cool thing to do," explained education coordinator Cheri Benson.

The series will feature BPA engineers, chemists, geologists and biologists leading short, hands-on experiments appropriate for grades 4–12. The series will be available on www.bpa.gov/go/sciencelab and on BPA's YouTube channel.

The first video, "How to Build a Motor," features background on how turbines generate electricity through dams in the Northwest and will fit in well with science, physics or electronics classes. The series features two energetic electrical engineers from BPA who explain the project and provide encouragement to kids to pursue careers in the sciences.

New passage takes fish to safe water

The U.S. Army Corps of Engineers has built a new wall in the middle of the Columbia River below The Dalles Dam to guide young salmon quickly to the deepest, safest part of the river downstream. The wall is expected to increase overall survival rates for young salmon going through

that dam by as much as 4 percent. It's been completed just in time for the 2010 fish migration season.

While other dams have been retrofitted with fish slides or corner collectors to smooth the ride through each dam, the main hindrance to fish at The Dalles was not the dam itself, but shallow water where predators lurk and cross-currents prevented the salmon from moving downstream. The long, curved spillway wall between the eighth and ninth spillways on the dam will direct fish downstream to the deepest part of the river.

General Construction Company of Poulsbo, Wash., built the spillway wall for the Corps under a \$45 million construction contract. BPA will repay the U.S. Treasury 74 percent of the cost of this particular capital project.

Reel in some dough

The Northern Pikeminnow Sport Reward Fishery Program kicks off May 1 in the lower Columbia and Snake rivers. This annual program provides cash to anglers who catch pikeminnow, a large member of the minnow family that consume millions of young salmon and steelhead in the Columbia and Snake rivers. Research shows that reducing the number of pikeminnow helps salmon and steelhead survival.

Anglers earn \$4 to \$8 for northern pikeminnow nine inches and larger caught in the lower Columbia (mouth to Priest Rapids Dam) and Snake (mouth to Hells Canyon Dam) rivers. The more pikeminnow an angler catches, the more the fish are worth. The first 100 are worth \$4 each; the next 300 are worth \$5 each, and, after 400 fish are turned in, they are worth \$8 each. As an added incentive, specially tagged fish are worth \$500. The program goes until Sept. 30.

Since 1991, more than 3 million pikeminnow have been removed from the Snake and Columbia rivers through the sport reward program. Last year, anglers caught approximately 142,000 pikeminnow. As a result, pikeminnow predation on juvenile salmon is estimated to have been cut by 40 percent.

The program is administered by the Pacific States Marine Fisheries Commission and is funded by BPA. For more information, call 800-858-9015 or go to www.pikeminnow.org.

BPA seeks comment on future EE role

BPA is conducting a 45-day public comment period to get input from stakeholders on the role BPA should play to facilitate the continued successful development of energy efficiency at the lowest cost to the region. BPA's proposal is designed to help its public power customers meet 85 percent of their consumers' new electricity demand over the next 20 years through energy efficiency.

The agency has been collaborating with its utility customers and other stakeholders for more than a year to develop the proposal. The plan offers BPA's customers more flexibility in designing and implementing programs and supports securing energy efficiency at the lowest cost possible. In addition to providing tried and true regional programs, BPA will offer new programs in other market segments that can clearly benefit from economies of scale and a regional presence.

"Energy efficiency is the cleanest and cheapest new energy resource available in the Pacific Northwest," Energy Efficiency Vice President Mike Weedall said. "Investing in energy efficiency helps the region preserve and stretch the tremendous value of the Columbia River system. That's good for the economy, and it's good for the environment."

See the public involvement section for links to more information. Comment period closes May 26.

Public Involvement [Updates & Notices]

AGENCY PROJECTS

Integrated Program Review [Regionwide]

BPA will kick off its Integrated Program Review May 10. Customers, constituents, tribes and other interested parties are invited to review the agency's program cost levels. At least 11 workshops have been scheduled to address major program category cost forecasts for power, transmission and corporate business units. A draft schedule of workshops to be held May through July is posted at www.bpa.gov/corporate/Finance/IBR/IPR/.

Quarterly Business Review [Regionwide]

BPA will hold its Quarterly Business Review May 4. This meeting will provide a closeout for the second quarter of FY 2010, present the FY 2010 third quarter budget and include an asset management overview. A final agenda and presentation materials will be posted a day or two before the meeting at www.bpa.gov/corporate/Finance/IBR/QBR/. SEE CALENDAR.

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 this month 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. Several regional meetings were held in April and a public comment period on the proposed framework is open until May 26. For information, go to www.bpa.gov/Energy/N/post-2011/.

FISH AND WILDLIFE – PROJECTS UNDER REVIEW

Chief Joseph Hatchery Program [Okanogan County, Wash.]

This program, sponsored by the Confederated Tribes of the Colville Reservation, would 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/.

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.]

A ROD authorizing construction, operations and maintenance is planned for spring 2011, after NOAA Fisheries Service's review of the program's Hatchery and Genetic Management Plan. 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 scoping summary report was released in February summarizing public comment. A draft EIS is scheduled for spring 2011 followed by another 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.]

Iberdrola Renewables, Inc., has asked BPA to interconnect up to 150 megawatts from the proposed Juniper Canyon I Wind Project. This would require BPA to expand its existing Rock Creek substation to construct an additional 230-kV terminal and install communication and metering equipment. BPA expects to complete its environmental review and make a decision in spring 2010. 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 Wind Interconnection Project [Skamania County, Wash.]

BPA is preparing a joint draft EIS with the Washington Energy Facility Site Evaluation Council to be available in May. BPA and EFSEC are planning to hold joint public meetings in June. For information, go to www.efw.bpa.gov/environmental_services/Document_Library/Whistling_Ridge/.

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 fall or winter 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

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 is scheduled to begin in mid-May and 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-427 Addy-Cusick — Stevens County, Wash.

SA-428 Midway-Rocky Ford — Grant County, Wash.

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.

May 3 — Quarterly Business Review: 1 to 4 p.m., Rates Hearing Room, 905 N.E. 11th Ave., Portland, Ore.

Integrated Program Review: Rates Hearing Room, 905 N.E. 11th Ave., Portland, Ore.

- **May 10 — Kick-off,** 9 a.m. to 1 p.m.

- For the full list of workshops, go to www.bpa.gov/corporate/Finance/IBR/IPR/.

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

- **May 11 — Power,** 9 a.m. to 5 p.m.

- **May 12 — Wind/Generation Inputs,** 9 a.m. to 5 p.m.

- **May 26 — Power/Transmission,** 9 a.m. to 5 p.m.

- **May 27 — Wind/Generation Inputs,** 9 a.m. to 5 p.m.

CLOSE OF COMMENT

May 26 — Energy Efficiency post-2011 proposal

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.

