

factsheet

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Investing in the Northwest transmission system



The Pacific Northwest's growing population and need for clean, renewable energy is placing new demands on the Bonneville Power Administration's already strained transmission grid. Most renewable energy will come from wind generation, and most wind farms are located away from population centers, which means that additional high-voltage transmission is needed to ensure reliable delivery of that energy.

To meet these needs, BPA is proposing adding four new high-voltage transmission lines to its network. One line – the McNary-John Day line – has already undergone environmental review and has been

approved. Construction begins this summer. The other three lines will begin environmental reviews this year.

Together, the four transmission lines would add more than 225 miles of high-voltage transmission to the Pacific Northwest's federal transmission grid, improving reliability and delivering about 3,700 megawatts of energy for the region. About 2,800 megawatts would come from additional renewable energy.

BPA is proceeding with review of these projects as a result of the Network Open Season process. In 2008, BPA conducted its first Network Open Season



to manage its customer requests for long-term transmission service more effectively. During this process, customers signed agreements committing to take the requested transmission service and backing their requests with significant security.

BPA studied its transmission system and identified where existing capacity was available and where the system needed upgrades. The four transmission line projects, described below, are positioned geographically to reinforce BPA's transmission network and facilitate the transfer of energy associated with Network Open Season requests. The lines would also provide certain reliability benefits and set the stage for BPA to accommodate future transmission service requests to meet the region's growing energy needs. Each line is an independent, stand-alone project but would benefit from the development of the other lines.

The Projects

McNary-John Day

McNary-John Day is a 79-mile, 500-kV line that will start at BPA's McNary Substation in Oregon and cross the Columbia River next to existing lines, just north of the substation, into Washington. The line will run parallel to the Columbia River for 75 miles, mostly within existing rights-of-way, then cross the Columbia River back into Oregon and end at BPA's John Day Substation. Environmental review for this line was completed in February 2009. BPA will begin construction in summer 2009.

This line responds to requests for transmission service in the area. Many of the requests are driven by the need to help move power from large wind generation projects constructed or proposed in eastern Washington and Oregon. Reinforcing the transmission system in this area will help accommodate these new resources. McNary-John Day will allow BPA to transmit power

from this area to where it is needed west of the Cascade Mountains.

Big Eddy-Knight

Big Eddy-Knight is a proposed 28-mile, 500-kV transmission line that would start at BPA's existing Big Eddy Substation just east of The Dalles, Ore., and run to a new Knight Substation proposed for construction northwest of Goldendale, Wash.

A public process and environmental review will determine if and where the proposed transmission line would be built.

Like the McNary-John Day line, this line is being proposed to respond to requests for transmission service and help accommodate the many large wind generation projects proposed for southeast Washington and northeast Oregon. This line would further enhance BPA's ability to more reliably transmit power to major areas where it is needed.

Central Ferry-Lower Monumental

Central Ferry-Lower Monumental is a proposed 40-mile, 500-kV transmission line that would start at a new BPA Central Ferry Substation proposed near Pomeroy, Wash., and would run to BPA's existing Lower Monumental Substation east of Pasco, Wash. A public process and environmental review will determine if and where the proposed transmission line would be constructed.

Like the McNary-John Day and Big Eddy-Knight lines, this line is being proposed to respond to requests for transmission service and help accommodate many large wind generation projects proposed for southeast Washington. The line would allow BPA to provide long-term transmission service to requests totaling approximately 2,196 MW.

I-5 Corridor Reinforcement

The I-5 Corridor Reinforcement is a proposed 500-kV line that would be at least 70 miles long.

The proposed line would run between a new substation near Castle Rock, Wash., to a new substation near BPA's existing Troutdale Substation in Troutdale, Ore. A public involvement process and environmental review will help BPA determine if and where the proposed transmission line would be constructed.

Southwest Washington and northwest Oregon, including Vancouver, Wash., and Portland, Ore., have high concentrations of industrial, commercial and residential energy demands. The part of BPA's transmission system that serves this area experiences high energy demands during the summer, due in part to recent increases in commercial and residential air conditioning use. When air conditioning loads are high, this area is further congested as large amounts of energy are transferred.

Facilitating the delivery of power from the hydro and thermal generation plants that serve this area has led to increasing congestion on BPA's system. The additional requests for firm transmission service through the Network Open Season process further increase the likelihood that the system will or is reaching or exceeding its capacity. If an additional line is not constructed, congestion could raise serious reliability concerns and, possibly, lead to power interruptions in the area.

This line would help ease congestion in the area, allowing BPA to fulfill transmission requests, accommodate transmission service for existing and new generation, improve system reliability and meet continued load growth.

The I-5 Corridor Reinforcement project perhaps best illustrates the added benefit of building all four transmission lines, where the combined improvement to the system is significantly greater than the projects' individual benefits to the region. While the I-5 project responds to specific requests for transmission along its path, provides for future capacity as the need

for power increases, and provides for maintaining system reliability, the synergy with the other three transmission lines allows more of the wind power being developed east of the cascades to make its way to population centers west of the cascades.

Next Steps

BPA will identify a contractor to construct the McNary-John Day line in spring 2009. The contractor will start building the line in summer 2009 and is scheduled to complete construction in late 2012.

BPA will soon begin public and environmental review processes under the National Environmental Policy Act (NEPA) for the other three lines – Big Eddy-Knight, Central Ferry-Lower Monumental and I-5 Corridor Reinforcement. The environmental review process for each project is expected to take about 18 to 36 months to complete.

The NEPA review includes several steps before BPA will decide whether to proceed with construction of each proposed project. During a process called scoping, BPA will introduce each project and present line alternatives to the public to solicit comments. This helps BPA identify any potential issues to consider in the environmental review document when designing a line or choosing a route.

Next, BPA will review all comments received during this scoping process before developing a draft environmental impact statement (EIS) for each proposed project. The draft EIS will analyze the potential environmental impacts of the alternatives. Each draft EIS will be issued for public review and comment and at least one public meeting will be scheduled for each project during the public review period. BPA then will consider feedback and comments to each draft EIS and prepare and issue a final EIS for each project that responds to comments and makes any necessary changes to the EIS.

BPA then will prepare and publish a Record of Decision (ROD) for each project that documents its decision on that project. Each ROD will state whether BPA has decided to build the proposed line, and, if so, which routing alternative it chooses. The ROD also will describe the factors that BPA considered in choosing a particular alternative.

BPA takes seriously its dual charge to be responsible stewards of the environment and provide transmission

system reliability. The NOS and NEPA processes ensure BPA can continue to operate a safe, reliable transmission system adequate to meet the region's energy needs while ensuring environmental issues are fully considered and impacts are avoided or minimized where possible.