

Capital Projects Anticipated to be Submitted for Agency Approval Through September 2016

Capital Projects Estimated >\$7 Million in Direct Costs

| Project Title | Business Unit | Total Cost \$Millions | Sustain/Expand | Project Description |
|--|---------------|-----------------------|----------------|---|
| Hot Springs - Garrison Fiber Upgrade | Transmission | \$ 11.4 | Expand | Replace 120 miles of fiber and associated hardware. |
| Reactor Program | Transmission | \$ 15.9 | Expand | Upgrade reactors at three substations to minimize the need to take lines out of service when the system is experiencing high voltages. |
| Kalispell-Hot Springs Fiber Upgrade | Transmission | \$ 8.0 | Expand | Install fiber optic cable between Kalispell and Kerr substations in conjunction with the Kalispell to Kerr line rebuild. |
| Fault Duty Replacements | Transmission | \$ 13.1 | Expand | Replace 11 breakers and 44 disconnect switches with higher rated equipment to meet NESC, ANSI and IEEE standards. |
| Hungry Horse-Columbia Falls Fiber Upgrade | Transmission | \$ 16.3 | Expand | Replace 120 miles of fiber and associated hardware to achieve compatibility with the remainder of the system and retire Conkelley substation. |
| Lower Monumental Powerhouse 2nd 500 kV Generation Tie Line (L0368) | Transmission | \$ 13.9 | Expand | Add a 500 kV breaker, disconnect switches, associated equipment and approximately 1 mile of 500 kV overhead transmission line. |
| Bonneville Hood River Line Rebuild | Transmission | \$ 29.5 | Expand | Rebuild 70 year old 115kV line. |
| Sustain Programs FY17 - 22 | Transmission | \$ 1,512.5 | Sustain | Multi-year replacement program for CC, PSC, ROW, PSC, Steel Lines, Substations and Wood Poles. |
| Port of Portland Land Purchase (Sun Dial) | Transmission | *-- | Expand | Purchase lots 11 and 12 from Port of Portland to support future expansion needs of the transmission hub at the site. |
| Midway - Ashe 230kV New Double Circuit Line | Transmission | \$ 16.1 | Expand | Construct a double circuit 230kV line between BPA Midway and Ashe substations and replacing the DOE Midway- Hanford Electric Works # 2 line. |
| I-5 Corridor Reinforcement Project | Transmission | *-- | Expand | Construct two 500kV Substations and a 79-mile transmission line to serve loads and accommodate transmission service requests along the I-5 corridor. |
| Ross HMEM Garage Replacement | Facilities | *-- | Expand | Replace existing and inadequate facility. |
| Covington Maintenance Headquarters | Facilities | *-- | Sustain | Replace existing facility. |
| Billing Information System Replacement | IT | \$ 10.0 | Expand | This initiative is for the purchase or development of a billing system capable of billing for BPA's wholesale power sales and transmission sales contracts. |
| Business Systems Disaster Recovery | IT | \$ 15.0 | Expand | Business systems that support mission critical functions must be placed in a geographically distant data center to support business continuity. |
| McNary Exciter Replacement | Federal Hydro | *-- | Sustain | Replace the existing exciters. |
| McNary Turbine Replacement | Federal Hydro | *-- | Sustain | Replace existing turbines. |
| The Dalles Transformer Replacement G1, G3,G5-8 | Federal Hydro | *-- | Sustain | Replace the existing transformers. |
| Black Canyon Units 1 & 2 Upgrades | Federal Hydro | *-- | Sustain | Upgrades to increase the reliability of the powerplant. |
| Hungry Horse Powerplant Crane Controls | Federal Hydro | *-- | Sustain | Replacements as part of the plant rebuild at Hungry Horse. |
| Grand Coulee Drumgate Floating Bulkhead | Federal Hydro | *-- | Expand | Purchase a floating bulkhead to facilitate work. |
| Grand Coulee Crane Control Upgrades | Federal Hydro | *-- | Sustain | Replace crane controls in left and right powerhouses. |
| Grand Coulee Firehouse | Federal Hydro | *-- | Expand | Build a replacement firehouse. |
| Grand Coulee Crane Controls | Federal Hydro | *-- | Sustain | Replace crane controls in the third powerhouse. |
| Black Canyon Dam Switchyard | Federal Hydro | *-- | Sustain | Bring switchyard up to code, address safety issues. |
| Grand Coulee G19-G21 Modernization and Unit Uprate | Federal Hydro | *-- | Expand | Uprate from 690 MW to 770 MW. |

This information has been made publicly available by BPA on 12/1/2015 and does not contain Agency-approved Financial Information.

* Contract has not been awarded - cost estimate is confidential