

Major Capital Projects ¹ - End-of-Project Target Performance						Q4 2012	
Project	Description	Direct Capital \$M ²			In-Service Date		
		Target	Forecast	Actual ³	Target	Forecast	
Transmission							
Spacer Damper Replacement Program (FY08-12)	Replace all spring type double and triple bundle spacer-dampers on the 500 kV system.	\$ 65.2	\$ 45.3	\$ 44.8	9/30/2012 for 95% completion	2/8/13	
Sustain Steel Program Defective Damper Replacements	Replace approximately 1,700 mile of defective PPI spacer dampers.	\$ 15.0	\$ 12.9	\$ 12.9	Achieve 90% to 120% of workplan for FY12	Achieved 118% of workplan for FY12	
Spectrum Relocation (3G 1710-1755 MHz Project)	Vacate radio frequencies as required by P.L. 108-494.	\$ 48.6	\$ 43.8	\$ 39.3	3/31/13	12/1/13	
Land Acquisition and Rebuilds (Access Roads)	Includes road improvements in or near transmission corridors.	\$ 15.5	\$ 18.9	\$ 18.7	9/30/10	11/30/12	
500 kV Spare Transformer Project	Acquire 5 spares and relocate 2 existing transformers to be used as spares. The spares will be placed strategically across the system.	\$ 41.0	\$ 41.0	\$ 31.4	12/31/13	1/10/14	
FY10 - TEAP Fleet Equipment Replacement Program	Heavy duty and specialized vehicle replacement program for FY10, FY11 and part of FY12.	\$ 29.6	\$ 26.1	\$ 19.6	3/31/12	9/15/13	
#KC SONET Phase II Spur Healing	Complete the digital microwave and radio conversion in Oregon.	\$ 18.0	\$ 17.9	\$ 9.0	12/31/15	12/15/14	
#NC Analog Microwave Replacement	Complete the digital microwave and radio conversion in NW Washington.	\$ 13.6	\$ 9.9	\$ 5.4	12/31/15	12/15/14	
Alvey Substation 500 kV Shunt Reactor	Add a 500 kV shunt reactor for voltage stabilization.	\$ 10.9	\$ 10.3	\$ 3.6	4/30/12	11/30/14	
NEPA - I-5 Corridor Reinforcement	Conduct NEPA study, preliminary engineering and design.	\$ 45.0	\$ 42.6	\$ 26.7	1/31/13	1/11/13	
West of McNary Reinforcement Group 2 Big Eddy Knight	New 500 kV substation and 28 miles of 500 kV transmission line.	\$ 180.0	\$ 174.5	\$ 118.2	Substation Energized 3/31/2013 Shunt Reactor Energized 11/30/14	Substation Energized 4/30/2014 Shunt Reactor Energized 9/30/14	
Condon Wind Voltage Control	Install ring bus, transformer bank and breaker to control voltage fluctuations on the DeMoss-Fossil-Maupin 69kV line.	\$ 9.4	\$ 14.1	\$ 12.9	5/31/11	11/30/12	
DC RAS Upgrade	Replace the DC RAS controllers at Celilo with upgraded units at the Ross and Munro control centers.	\$ 11.8	\$ 11.0	\$ 6.3	11/30/13	11/30/13	
Synchrophasor Project	5-year effort to acquire, install, test, and implement synchronized Wide Area Measurement (WAM) and control technology at BPA.	\$ 32.5	\$ 29.5	\$ 15.9	Achieve FY12 items in workplan	1 FY12 item delayed	

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Transmission - continued						
Wood Pole Line Sustain Program FY10 - FY13	Implement a stable, sustained wood pole replacement program. The four year plan includes cumulative cost and work plan completion targets.	\$75.1 to \$93.9 for FY10 - FY12	\$ 86.9	\$ 84.9	90% to 100% of workplan and 270 miles	<80% of workplan and 204 miles
Steel Lines Sustain Program FY11 - FY13	Implement a stable, sustained steel line replacement program. The four year plan includes cumulative cost and work plan completion targets.	\$12.9 to \$16.1 for FY11 - FY12	\$ 16.1	\$ 15.5	Achieve 90% to 150% of workplan	98%
System Protection and Control (SPC) Sustain Program FY11 - FY13	Implement a stable, sustained SPC replacement program. The four year plan includes cumulative cost and work plan completion targets.	\$17.5 to \$21.9 for FY11- FY12	\$ 6.3	\$ 6.3	Achieve 90% to 100% of workplan	49%
Control Replacement COI Series Capacitors	Replace the protection and control systems for the series capacitor banks for the California-Oregon Intertie.	\$ 15.7	\$ 12.6	\$ 6.9	3/30/14	2/11/14
Ross - Schultz Fiber Replacement	Replace the obsolete and limited 36 strand fiber with standard 72 strand fiber.	\$ 34.0	\$ 28.8	\$ 1.5	9/15/17	9/15/17
#DC Microwave Analog Spur Replacement	Complete the digital microwave and radio conversion in Northeast Washington.	\$ 39.5	\$ 34.5	\$ 4.9	8/30/17	6/8/17
Central Oregon Transformer Addition	Install a second 500/230 kV transformer bank at BPA's Ponderosa substation.	\$ 29.1	\$ 29.5	\$ 27.2	10/31/13	7/31/13
Central Ferry to Lower Monumental (Little Goose Area Reinforcement)	Construct a 38 mile 500 kV transmission line between Central Ferry and Lower Monumental substations.	\$ 90.0	\$ 90.0	\$ 18.8	12/31/13	2/27/15
Celilo Mercury Containment and Abatement	Contain and abate the mercury contamination at the Celilo Converter Station.	\$ 10.8	\$ 10.7	\$ 5.0	5/31/13	5/31/13
Central Ferry Generation Interconnection	Generation interconnection request. Construction of a new 500/230 kV substation and related fiber communications work.	\$ 98.4	\$ 76.9	\$ 76.2	5/30/12	11/30/12
Rights-of-Way Access Roads and Land Rights Acquisition Program FY12 to FY15	Initial authorization of \$15.9 million for FY 2012 and \$11.0 million for FY 2013. Targets to be established after IPR review.	<\$15.9 for FY12 <\$11.0 for 2013	\$4.7 for FY12	\$ 4.7	9/30/13	9/30/13
Jordan Butte 1 and 2 Wind Generation Interconnection	Generation interconnection request G0362. Design and construct a new 500/230 kV Longhorn substation.	\$ 50.9	\$ 47.2	\$ 0.0	12/1/14	12/1/14
Summit Ridge Wind Generation Interconnection	Generation interconnection request. Install a new 230 kV ring bus to loop in the Big Eddy - Maupin 230 kV line.	\$ 11.3	\$ 11.3	\$ -	9/1/13	9/1/13
P25 Two-Way Mobile Radio Upgrade	Replace and upgrade the mobile two-way radio system to P25 technology.	\$ 64.5	\$ 60.0	\$ 0.6	9/30/17	9/30/17

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Switchgear Replacement for Fault Duty FY12	Replace under-rated switchgear identified in annual screening process.	\$ 14.9	\$ 12.7	\$ 0.5	12/31/14	10/31/13
Pacific DC Intertie Upgrade	Modernize the Celilo converter terminal and upgrade capacity from 3100 MW to 3220 MW for north to south power flow with a future upgrade path to 3800 MW.	TBD	\$ -	\$ -	TBD	
Puget Sound Area Northern Intertie (PSANI) Memorandum of Agreement	Install a 500/230 kV transformer bank addition at Raver Substation.	\$ 56.4	\$ 56.4	\$ -	9/30/16	10/1/16
Horse Butte Wind Interconnection	Interconnect UAMPS wind project.	\$ 10.2	\$ 10.0	\$ 4.7	11/30/12	9/30/13
MT to WA Transmission System Upgrade - NEPA	NEPA and preliminary engineering and design for the former CUP West project.	\$ 7.2	\$ 7.1	\$ 0.4	3/31/15	3/30/15
#JC Microwave Upgrade	Complete the digital conversion for the upper part of the #JC communications ring.	\$ 13.5	\$ -	\$ -	9/1/18	

Federal Hydro						
Grand Coulee and Hungry Horse SCADA Replacement	Replace SCADA systems at Grand Coulee and Hungry Horse.	\$ 46.8	\$ 46.8	\$ 30.7	9/30/15	9/30/15
Grand Coulee Exciter Replacement	Replace 6 original excitation units in Powerhouse 3.	\$ 20.9	\$ 19.9	\$ 14.6	11/30/13	11/30/13
Grand Coulee Left Powerhouse Transformer Replacement	Replace transformer banks K1, K5, K7, K8 and purchase one spare transformer bank.	\$ 15.7	\$ 15.7	\$ 8.7	10/31/14	12/31/14
Grand Coulee 500kV Switchyard Relay Replacement	Replace the protective relays and microwave transfer trip between the third power plant and 500kV switchyard and between the 230kV and 500kV switchyards.	\$ 7.6	\$ 7.6	\$ 1.3	9/30/14	9/30/14
Grand Coulee Pre Overhaul - Winding Replacement G19, G20	Replace the stator core and windings on units G19 and G20.	⁴ N/A	⁴ N/A	\$ 0.9	5/31/13	5/31/13
Grand Coulee Pre Overhaul - Crane Rehabilitation	Complete refurbishment of the six third power plant cranes.	\$ 23.4	\$ 23.4	\$ 10.4	12/31/12	4/28/13
Grand Coulee Pre Overhaul - High Voltage Cable Replace.	Install overhead, high-voltage cables to transfer power from the third power plant.	\$ 46.7	\$ 46.7	\$ 24.2	12/31/12	12/31/13
Grand Coulee Pre Overhaul - Materials Storage Building	Construct a storage building to create the space needed in the third power plant.	\$ 10.2	\$ 10.2	\$ 6.1	2/28/13	1/31/13
Grand Coulee - Keys Pump Generating Station - Reliability	Replacements and upgrades to maintain the current capability of the station.	\$ 61.4	\$ 61.4	\$ -	9/30/21	9/30/21
Chief Joseph Turbine Runner Replacement for Units 5 - 14	Replace the turbine runners and rehabilitate the turbines on units 5 - 14.	\$ 111.0	\$ 101.5	\$ 33.4	9/30/15	9/30/15

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Chief Joseph Turbine Runner Replacement, Units 1 - 4, 15 - 16	Replace the turbine runners and rehabilitate the turbines on units 1 - 4, 15 - 16.	\$ 62.9	\$ 62.9	\$ 33.4	4/1/17	4/1/17
Chief Joseph Governor Replacement	Upgrade the 27 governors with digital controls and replace associated equipment.	\$ 10.7	\$ 10.7	\$ -	8/19/17	8/19/17
The Dalles Powerhouse Governor Upgrade	Upgrade of the governors with digital controls and replacement of associated components.	\$ 21.8	\$ 21.8	\$ 7.0	9/30/14	9/30/14
McNary Main Unit 1-4, 7-12 Stator Winding Replacement	Replace stator windings that are over 50 years old.	\$ 80.0	\$ 80.0	\$ 45.8	12/31/14	4/1/15
McNary Governor Replacement	Upgrade the 14 governors in the McNary powerhouse with digital controls.	\$ 9.3	\$ 9.3	\$ -	1/29/18	1/29/18
Bonneville PH2 Station Services Replacement	Upgrade Powerhouse 2 station service with new transformers and switchgear.	\$ 12.1	\$ 12.1	\$ 9.2	5/31/13	5/31/13
John Day Governor Upgrade	Upgrade of the governors with digital controls and replacement of associated components.	⁴ N/A	⁴ N/A	\$ 0.1	10/23/14	10/26/16
Ice Harbor Turbine Runner Replacement	Replace the poor condition turbine runners in units 2 & 3 and incorporate a more fish-friendly design.	\$ 68.4	\$ 68.4	\$ 8.2	7/31/15	6/15/15
Lower Snake Exciter Replacement	Replace 6 exciters at Little Goose, 3 at Lower Monumental and 3 at Lower Granite.	\$ 12.9	\$ 12.9	\$ 8.1	2/27/13	2/27/13
Hills Creek Powerhouse Turbine and Unit Rehabilitation	Replace turbine runners and generator windings on units 1 and 2 at Hills Creek.	\$ 24.1	\$ 24.1	\$ 3.1	8/12/14	3/31/15
Black Canyon Third Generating Unit	Add a third generating unit at Black Canyon. The capacity of the unit will be between 10 and 15 MW.	⁴ N/A	⁴ N/A	\$ 2.8	12/31/14	12/31/14
Palisades Turbine Rehabilitation and Runner Replacement	Replace the turbine runners and rehabilitate the turbines on the four Palisades units.	\$ 28.8	\$ 28.8	\$ 4.7	5/31/16	5/31/16
Dexter Spillway Gate Rehabilitation	Rebuild the seven tainter spillway gates at Dexter.	\$ 18.0	\$ 16.7	\$ 15.1	9/15/13	12/20/12
Big Cliff Spillway Gate Rehabilitation	Rebuild the three tainter spillway gates at Big Cliff.	\$ 11.0	\$ 11.0	\$ 1.7	12/30/13	12/30/13

IT

RODS Replacement Project	Develop, build and deploy hardware and software to replace the current RODS functionality.	\$ 14.9	\$ 14.6	\$ 14.6	9/30/12	9/30/12
Desktop Modernization Project	Deploy Windows 7, Office 2010 and end-user devices.	\$ 9.1	\$ 9.0	\$ 4.3	3/31/14	3/31/14

Facilities

Eastside Alternate Operating Facility	Spokane-area facility for redundant transmission and power scheduling functions and alarm monitoring.	\$ 18.5	\$ 18.5	\$ 1.2	3/31/14	3/31/14
Tri Cities Maintenance Headquarters	Construct Tri-Cities maintenance headquarters.	\$ 14.2	\$ 15.7	\$ 0.3	12/31/13	7/1/14

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