

Major Capital Projects¹ - End-of-Project Target Performance

Q3 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	\$ 45.0	\$ 43.6	9/30/12	9/30/12
Sustain Steel Program Defective Damper Replacements	Replace approximately 1,700 mile of defective PPI spacer dampers.	\$ 15.0	\$ 12.7	\$ 7.8	Achieve 90% to 120% of workplan for FY12	Achieve 94% 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	\$ 28.9	3/31/13	12/1/13
Land Acquisition and Rebuilds (Access Roads)	Includes road improvements in or near transmission corridors.	\$ 15.5	\$ 18.8	\$ 18.3	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	\$ 40.9	\$ 31.0	12/31/13	12/30/13
FY10 - TEAP Fleet Equipment Replacement Program	Heavy duty and specialized vehicle replacement program for FY10, FY11 and part of FY12.	\$ 29.6	\$ 27.5	\$ 19.6	3/31/12	9/15/13
Redmond 230 - 115 kV Transformer Addition	Install an additional transformer at the Redmond substation.	\$ 13.8	\$ 15.5	\$ 15.5	11/1/11	8/30/11
#KC SONET Phase II Spur Healing	Complete the digital microwave and radio conversion in Oregon.	\$ 18.0	\$ 17.9	\$ 8.8	12/31/15	12/15/14
#NC Analog Microwave Replacement	Complete the digital microwave and radio conversion in NW Washington.	\$ 13.6	\$ 10.0	\$ 5.0	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	\$ 42.8	\$ 25.6	1/31/13	1/11/14
West of McNary Reinforcement Group 2 Big Eddy Knight	New 500 kV substation and 28 miles of 500 kV transmission line.	\$ 180.0	\$ 161.5	\$ 98.9	Substation Energized 3/31/2013 Shunt Reactor 11/30/14	Substation Energized 4/30/2014 Shunt Reactor 8/29/14
Condon Wind Voltage Control	Install ring bus, transformer bank and breaker to control voltage fluctuations on the DeMoss-Fossil-Maupin 69kV line.	\$ 9.4	\$ 12.0	\$ 10.2	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	\$ 11.2	\$ 4.8	11/30/13	11/30/13
Ostrander 500-230 kV Transformer Bank Addition	Replace transformer bank at McLoughlin with a new transformer bank at Ostrander.	\$ 22.4	\$ 19.7	\$ 19.7	11/30/11	5/18/12
Synchrophasor Project	5-year effort to acquire, install, test, and implement synchronized Wide Area Measurement (WAM) and control technology at BPA.	\$ 32.5	\$ 29.8	\$ 12.8	Achieve FY12 items in workplan	All FY12 items to be delivered

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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	\$ 92.8	\$ 71.8	Achieve 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	\$ 18.6	\$ 9.2	Achieve 90% to 150% of workplan	114%
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	\$ 9.2	\$ 4.3	Achieve 90% to 100% of workplan	54%
Control Replacement COI Series Capacitors	Replace the protection and control systems for the series capacitor banks for the California-Oregon Intertie.	\$ 15.7	\$ 15.1	\$ 3.6	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	\$ 31.8	\$ 0.6	9/15/17	2/10/17
#DC Microwave Analog Spur Replacement	Complete the digital microwave and radio conversion in Northeast Washington.	\$ 39.5	\$ 31.9	\$ 3.3	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	\$ 28.0	\$ 12.7	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	\$ 82.9	\$ 11.2	12/31/13	2/27/15
Celilo Mercury Containment and Abatement	Contain and abate the mercury contamination at the Celilo Converter Station.	\$ 10.8	\$ 10.8	\$ 4.8	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	\$ 77.3	\$ 75.0	5/30/12	9/30/12
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	\$7.1 for FY12 \$13 for 2013	\$ 2.4	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	\$ 64.5	\$ 0.5	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	\$ 13.0	\$ 0.1	12/31/14	10/31/13
Pacific DC Intertie Upgrade	Modernize the Celilo converter terminal and upgrade capacity from its present rating of 3100 MW to 3220 MW for north to south power flow with 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	\$ 10.1	\$ 3.7	11/30/12	11/30/12
MT to WA Transmission System Upgrade - NEPA	NEPA and preliminary engineering and design for the former CUP West project.	\$ 7.2	\$ 7.2	\$ -	3/31/15	3/31/15

Federal Hydro						
Grand Coulee and Hungry Horse SCADA Replacement	Replace SCADA systems at Grand Coulee and Hungry Horse.	\$ 46.8	\$ 46.8	\$ 28.6	9/30/15	9/30/15
Grand Coulee Exciter Replacement	Replace 6 original excitation units in Powerhouse 3.	\$ 20.9	\$ 19.9	\$ 13.5	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	\$ 6.4	10/31/14	10/31/14
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	\$ 0.7	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	\$ 8.3	12/31/12	12/31/14
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	\$ 17.2	12/31/12	12/31/12
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	\$ 5.5	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	\$ 28.7	9/30/15	9/30/15
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	\$ 28.7	4/1/17	4/1/17

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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 Roof Replacement	Replace the entire powerhouse roof.	\$ 7.0	\$ 6.9	\$ 4.4	10/30/12	11/6/12
The Dalles Powerhouse Governor Upgrade	Upgrade of the governors with digital controls and replacement of associated components.	\$ 21.8	\$ 21.8	\$ 1.0	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	\$ 40.4	12/31/14	4/1/15
Bonneville PH2 Station Services Replacement	Upgrade Powerhouse 2 station service with new transformers and switchgear.	\$ 12.1	\$ 12.1	\$ 7.0	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	\$ 7.7	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	\$ 7.0	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	\$ 2.3	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	\$ 2.7	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	\$ 2.8	5/31/16	5/31/16
Dexter Spillway Gate Rehabilitation	Rebuild the seven Tainter spillway gates at Dexter.	\$ 18.0	\$ 16.7	\$ 14.8	9/15/13	12/20/12
Big Cliff Spillway Gate Rehabilitation	Rebuild the three Tainter spillway gates at Big Cliff.	\$ 11.0	\$ 11.0	\$ 0.7	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	\$ 14.7	\$ 13.3	9/30/12	9/30/12
Facilities						
Eastside Alternate Operating Facility	Spokane-area facility for redundant transmission and power scheduling functions and alarm monitoring.	\$ 18.5	\$ 18.5	\$ 1.0	3/31/14	3/31/14

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