

e-FILING REPORT COVER SHEET

REPORT NAME: **RE – 18 (3) 2015 New Construction Budget Report**

COMPANY NAME: PORTLAND GENERAL ELECTRIC COMPANY

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes

If yes, please submit only the cover letter electronically.

Submit confidential information as directed OAR 860-001-0070 or the terms of an applicable PROTECTIVE ORDER.

If known, please select designation: RE (Electric)

Report is required by: OAR

Statute **ORS 757.105 and ORS 759.100**

Order **Send to Melanie Forsyth**

Other **Utility Program**

Is this report associated with a specific docket/case? No Yes

If Yes, enter docket number: Not Applicable

Key words: Electric Utility Annual New Construction Report

If known, please select the PUC Section to which the report should be directed:

Economic and Policy Analysis

Electric and Natural Gas Revenue Requirements



Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204
PortlandGeneral.com

March 12, 2015

E-Filed only

Oregon Public Utility Commission
3930 Fairview Industrial Dr., SE
Salem, OR 97308-1088
pucfiling.confirmation@state.or.us

Attn: Filing Center

RE: Report 18 (3) – PGE New Construction Budget Report

Enclosed for filing is Portland General Electric Company's New Construction Budget Report for the 2015 calendar year. This report is being provided per OAR 860-027-0015 and the 2015 OPUC E-Report Filing requirements. No hardcopy will be submitted.

Should you have any questions, please contact me at 503-464-7580 or Josh Kliever, Manager – Corporate Planning at 503-464-8652.

Sincerely,

A handwritten signature in blue ink that reads "Alex Tooman for".

Patrick G. Hager
Manager, Regulatory Affairs

Encls.

Includes E-File Report Cover Sheet

cc: Josh Kliever



PUBLIC UTILITY COMMISSION OF OREGON
 3930 FAIRVIEW INDUSTRIAL DRIVE, SE
 PO BOX 1088, SALEM OR 97308-1088

ELECTRIC COMPANY NEW CONSTRUCTION BUDGET FOR 2015

GENERAL INSTRUCTIONS

1. EACH ENERGY AND LARGE TELECOMMUNICATIONS UTILITY OPERATING WITHIN THE STATE OF OREGON AND HAVING GROSS OPERATING REVENUES OF \$50,000 OR MORE PER YEAR IS REQUIRED TO FILE A NEW CONSTRUCTION BUDGET ANNUALLY ON OR BEFORE DECEMBER 31ST, AND REPORT INFORMATION ON NEW CONSTRUCTION, EXTENSION, AND NEW ADDITIONS TO PROPERTY OF THE UTILITY IN ACCORDANCE WITH OREGON ADMINISTRATIVE RULE 860-027-0015.
2. THE CONSTRUCTION BUDGET SHOULD BE RETURNED TO THE PUBLIC UTILITY COMMISSION OF OREGON, 3930 FAIRVIEW INDUSTRIAL DRIVE, PO BOX 1088, SALEM, OR 97308-1088, NO LATER THAN DECEMBER 31ST OF THE YEAR PRECEDING THAT FOR WHICH THE BUDGET IS MADE.

PROJECT NARRATIVE

FOR MAJOR PROJECTS (THE THREE LARGEST PROJECTS IN TERMS OF COST AND ALL PROJECTS GREATER THAN \$10 MILLION) A NARRATIVE SUPPLYING THE FOLLOWING INFORMATION IS REQUIRED:

1. PROJECT DESCRIPTION: INCLUDE A BRIEF TECHNICAL SPECIFICATION OF THE PROJECT, OWNERSHIP, IF JOINTLY OWNED, OPERATING DATE, STAGE OF CONSTRUCTION, AND OTHER RELEVANT INFORMATION.
2. NEED FOR THE PROJECT: PROVIDE ALL PREPARED INFORMATION DOCUMENTING THE NEED FOR THE PROJECT, INCLUDING THE SPECIFIC NEED THE PROJECT IS INTENDED TO FILL. ECONOMIC COMPARISONS WITH ALTERNATIVES ARE TO BE PROVIDED. ALL THE UNDERLYING ASSUMPTIONS OF THE ECONOMIC ANALYSES ARE TO BE SPECIFIED.
3. CONTINGENCIES: PROVIDE A LISTING OF EXISTING OR POTENTIAL FUTURE PROBLEMS WHICH MIGHT IMPACT THE FINAL COST OR SUCCESSFUL COMPLETION AND OPERATION OF THE PROJECT, SUCH AS LICENSING PROBLEMS, LABOR DIFFICULTIES, LITIGATION, ETC.
4. RECONCILIATION WITH PRIOR BUDGET: EACH SUCCESSIVE YEAR'S BUDGET CAN BE EXPECTED TO REFLECT DIFFERING ESTIMATES OF PROJECT COSTS AS THE PROJECT PROGRESSES. FOR EACH MAJOR PROJECT, PREPARE A RECONCILIATION WITH THE PRIOR BUDGET'S ESTIMATES AND PROVIDE SPECIFIC REASONS FOR THE CHANGES.

IN ADDITION, PLEASE PROVIDE COPIES OF PREPARED DOCUMENTATION OR PLANS DESCRIBING GENERATION TRANSMISSION, AND GENERAL PLANT PROJECTS EXCEEDING \$1,000,000 IN TOTAL COST AND FOR WHICH CONSTRUCTION WILL COMMENCE IN THE BUDGET YEAR. INFORMATION SUBMITTED SHOULD CONTAIN:

1. A BRIEF PROJECT DESCRIPTION: INCLUDE THE PROJECT FUNCTION (E.G., PRODUCTION, TRANSMISSION, DISTRIBUTION, GENERAL PLANT, THERMAL, HYDRO, OR OTHER), PROJECT IDENTIFICATION.
2. LOCATION: INCLUDE A STARTING AND ENDING DATE
3. TOTAL BUDGETED COST.

FULL NAME OF ELECTRIC COMPANY			
Portland General Electric			
ADDRESS: PO BOX OR STREET NUMBER	CITY	STATE	ZIP CODE
121 S.W. Salmon St.	Portland	OR	97204
CERTIFICATION: I CERTIFY THAT THE INFORMATION REPORTED IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.			
SIGNATURE	TITLE	DATE	
	SUP FINANCE, CFO TREASURER	2-9-15	

SCHEDULE B: ELECTRIC COMPANY NEW CONSTRUCTION BUDGET (SYSTEM)	COMPANY: Portland General Electric	BUDGET YEAR: 2015
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INSTRUCTIONS

1. REPORT SIZE OF MAJOR PRODUCTION PROJECTS ONLY, AND PERCENT OWNERSHIP, SCHEDULED OPERATING DATES, AND EXPENDITURES REQUIRED TO COMPLETE PROJECT FOR MAJOR PRODUCTION, TRANSMISSION, AND GENERAL PLANT PROJECTS.
2. MAJOR PROJECTS ARE DEFINED AS THOSE PROJECTS HAVING A TOTAL ESTIMATED COST TO COMPLETION EXCEEDING \$10 MILLION.
3. UNDER DISTRIBUTION, REPORT SPECIFIC LINE ITEM EXPENDITURES FOR THE BUDGET YEAR ONLY. ALL EXPENDITURES FOR DISTRIBUTION FOLLOWING THE BUDGET YEAR SHOULD BE AGGREGATED FOR THE YEAR AND ONLY TOTAL DISTRIBUTION EXPENDITURES REPORTED FOR THE PERIOD.
4. NON-MAJOR PROJECT EXPENDITURES WITHIN EACH CATEGORY SHOULD BE AGGREGATED AND ONLY THE TOTALS REPORTED.
5. REPORT ALL EXPENDITURES IN THOUSANDS OF DOLLARS.

DESCRIPTION	SIZE	PERCENT OWNERSHIP %	SCHEDULED OPERATING DATE (MO/YR)	EXPENDITURES (B.Y. = BUDGET YEAR; B.Y. + 1 = THE FIRST YEAR AFTER THE BUDGET YEAR, ETC.)						REQUIRED TO COMPLETE	TOTAL ⁽⁴⁾
				PRIOR TO B.Y. ⁽¹⁾	B.Y. ⁽²⁾	B.Y. + 1 ⁽³⁾	B.Y. + 2 ⁽³⁾	B.Y. + 3 ⁽³⁾	B.Y. + 4 ⁽³⁾		
MAJOR PRODUCTION PROJECTS:											
Tucannon River Wind Facility		100%	Dec-15	385,788	11,141	94	0	0	0	0	397,024
Carty Generating Facility		100%	Dec-16	165,262	162,593	36,011	0	0	0	0	363,865
Port Westward 2		100%	Jun-15	127,907	12,471	300	300	300	300	0	141,578
North Fork - Down Stream Migrant Surface Collector		100%	Jun-16	22,573	15,596	856	0	0	0	0	39,025
Round Butte Rewind Generators 2 & 3		66.67%	Feb-15	2,567	330	0	0	0	0	0	2,897
West Side Hydro Structural/Reliability Upgrades		100.00%	Dec-18	0	5,919	11,655	9,145	5,310	0	0	31,428
NON-MAJOR PRODUCTION PROJECTS				41,686	42,293	43,262	44,317	45,452	46,679		263,689
TOTAL PRODUCTION PROJECTS				745,783	249,743	92,177	53,762	51,062	46,979	0	1,239,507
MAJOR TRANSMISSION PROJECTS:											
Blue Lake/Gresham - Substation Upgrades			Jun-18	1,100	8,650	8,032	2,742	345	0	0	20,869
NON-MAJOR TRANSMISSION PROJECTS				3,870	5,234	5,354	5,485	5,625	5,777		31,345
TOTAL TRANSMISSION PROJECTS				4,970	13,884	13,386	8,227	5,970	5,777	0	52,215
DISTRIBUTION (SEE INSTRUCTION 3):⁽⁴⁾											
STATION EQUIPMENT					34,304						
POLES, TOWERS AND FIXTURES					19,476						
OVERHEAD CONDUCTORS AND DEVICES					31,631						
UNDERGROUND CONDUCTORS AND DEVICES					36,968						
UNDERGROUND CONDUIT					886						
LINE TRANSFORMERS					7,199						
SERVICES					22,901						
METERS					2,918						
STREET LIGHTING AND SIGNAL SYSTEMS					3,451						
OTHER:					480						
TOTAL DISTRIBUTION				169,831	160,214	163,883	167,882	172,180	176,829		1,010,819
MAJOR GENERAL PLANT PROJECTS:											
2020 Vision Next Wave			Jul-15	39,143	13,937	0	0	0	0	0	53,080
Customer Engagement Transformation			Jul-18	3,000	45,778	34,418	19,505	3,071	0	0	105,772
Underground Core Crew Bldg Purchase			Dec-14	3,979	0	0	0	0	0	0	3,979
Portland Service Center Upgrade			Dec-15	0	17,467	0	0	0	0	0	17,467
NON-MAJOR GENERAL PLANT PROJECTS				71,076	68,796	70,371	72,088	73,934	75,930		432,196
TOTAL GENERAL PLANT PROJECTS				117,220	145,978	104,789	91,593	77,005	75,930	0	612,515
TOTAL NEW CONSTRUCTION BUDGET				1,037,805	569,820	374,236	321,464	306,217	305,515	0	2,915,056

1) Based on 2014 OPUC Construction Budget Schedule B report.

2) Budget includes costs that were approved at the October 2014 Board of Directors meeting and tie to the approved 2015 Operating Plan & Budget. These budgets are subject to change with future Board of Directors approval.

3) Based on 2015 forecast with 2016, 2017, 2018, 2019 trended for inflation by Global Insight Chained Price Index - Public Utilities - Nov 2014 with the exception of Major Projects which forecasts at the time of the time the Operating Plan & Budget was established.

4) Total does not necessarily equal total project cost due to timing and expenditures prior to 2014.

7) Includes the 2015 portion of five major Distribution projects which are detailed in the Major Project narrative (> \$10 million): Construct Marquam Substation, West Union 115kV Conversion, Horizon Phase II, Proactive Underground Cable Program, and Shute Substation - Construct New Substation

SCHEDULE B: ELECTRIC COMPANY NEW CONSTRUCTION BUDGET (SYSTEM)				COMPANY: Portland General Electric						BUDGET YEAR: 2015	
DESCRIPTION	SIZE	PERCENT OWNERSHIP %	SCHEDULED OPERATING DATE (MO/YR)	EXPENDITURES (B.Y. = BUDGET YEAR; B.Y. + 1 = THE FIRST YEAR AFTER THE BUDGET YEAR, ETC.)						REQUIRED TO COMPLETE	TOTAL [4]
				PRIOR TO B.Y. (1)	B.Y. (2)	B.Y. + 1 (3)	B.Y. + 2 (3)	B.Y. + 3 (3)	B.Y. + 4 (3)		
2015 OPUC Construction Budget B											
Trojan Decommissioning	-	-	-	-	-	-	-	-	-	-	-
Independent Spent Fuel Storage Installation	-	67.50%	-	2,430	2,614	2,809	2,863	2,772	2,824	77,998	94,311
Non-Major Decommissioning Projects	-	67.50%	-	1,249	0	0	0	0	0	2,877	4,126
Total Decommissioning Projects				3,679	2,614	2,809	2,863	2,772	2,824	80,875	98,437

- 1) Based on 2014 OPUC Construction Budget Schedule B report.
- 2) Budget includes costs that are subject to future Board of Directors approval.
- 3) Based on capital forecast 2016-2019.
- 4) Total does not necessarily equal total project cost due to timing and expenditures prior to 2014.

**Project Narrative
Projects Greater Than \$10 Million**

Title	Start	End	Amount	Notes
West Union - 115kV Conversion (P35570)	1/1/2014	5/9/2016	\$16,200,000	<p>This project will convert West Union substation to 115kV. Work includes installing a second transformer, metalclad switchgear, and two new feeders and replacing the existing distribution box structure with a new metalclad switchgear. The second transformer will be the existing Sunset WR1 transformer, which will be replaced under a different project. The purpose of this project is to provide service to new industrial load north of Hwy 26 and offload the heavily-loaded Sunset-Pauling feeder.</p> <p>Currently, West Union substation has two feeders that are mostly overhead; serving urban, rural, and remote locations. West Union substation has only one transformer; N-1 feeder and transformer redundancy is not available. In the event of an extended transformer outage, PGE must roll a mobile substation to West Union, which could result in a 12-18 hour outage. New industrial customers on Jacobson Rd will be served by a feeder that also serves rural and remote load and is primarily overhead. The Sunset-Pauling feeder exceeds its summer planning loading guideline during peak summer conditions. This feeder serves Quality and Reliability Program (QRP) customers in a high-reliability area on Evergreen Parkway. Future load additions to this feeder could result in reliability concerns for customers.</p>
Shute Substation – Construct New (P35571)	2/1/2013	12/1/2015	\$17,800,000	The purpose of this project is to build a new substation to provide service to manufacturing load growth in Hillsboro. This load growth is temporarily served by Sunset substation, which will not be sustainable in the long-term.
Portland Service Center Upgrade (P35835)	5/1/2014	12/31/2015	\$18,900,000	This project will upgrade Portland Service Center (PSC) in order to optimize operations and resiliency of the site. PSC is the second largest line center in the PGE service territory and supports the highest density of historical neighborhoods in Portland. The scope includes construction, remodeling, seismic, furniture, IT infrastructure, and temporary lease and relocation costs.
Blue Lake/Gresham - System Upgrades (P35329)	1/1/2014	6/1/2018	\$21,270,000	This project will construct the new Blue Lake-Gresham 230kV circuit and the new Blue Lake-Troutdale BPA #2 230kV circuit. It also encompasses rebuilding the Blue Lake 230kV substation yard to a 6-position ring bus and adding new breaker positions at Gresham substation. Antiquated and underrated equipment in the Gresham 230kV yard will be replaced. New fiber communications will be constructed between Blue Lake and Gresham and between Blue Lake and Troutdale BPA.

**Project Narrative
Projects Greater Than \$10 Million**

Title	Start	End	Amount	Notes
				<p>Currently, an outage of one or more 230kV circuits in the Blue Lake/Gresham area can cause an overload to another 230kV circuit or bulk power transformer in the area. These overloads can occur on both PGE facilities and PacifiCorp facilities. These overloads would violate the NERC Transmission System Planning Performance standards for transmission planning.</p>
Horizon Phase II Project (P35802)	6/1/2014	12/31/2017	\$29,800,000	<p>Additional bulk power transformation in the Hillsboro area is required no later than June, 2018 to accommodate load growth and maintain compliance with the NERC Transmission Planning (TPL) standards. Installing the second 230kV source into Horizon substation eliminates the loss of the entire substation for the loss of a transmission circuit.</p> <p>Project scope includes: Install a second bulk power transformer at Horizon substation. Provide a second source to Horizon substation by constructing a new 4.4-mile 230kV line segment to create a Horizon-St Mary's-Trojan 230kV circuit. Replace underrated equipment at Sunset substation and install a second 115kV capacitor bank for voltage support. Replace relays and associated equipment at St Mary's, Trojan, and Orenco substations to support the Horizon and Sunset upgrades. Perform communication upgrades at multiple sites to increase reliability of the communication network.</p>
West Side Hydro Structural/Reliability Upgrades (P35959)	1/1/2015	12/31/2018	\$31,400,000	<p>This project provides funding from 2015 to 2018 to enhance the capability of four West Side Hydro Powerhouses and other structures to withstand seismic hazards, improve plant reliability over the duration of the new FERC operating license, and address personnel safety issues during routine and extreme events.</p> <p>The four facilities that are included in the scope of this project are:</p> <ol style="list-style-type: none"> 1) Sullivan Powerhouse and Facility Improvements 2) River Mill Powerhouse, Gatehouse, and Facility Improvements 3) Faraday Powerhouse Replacement and Facility Improvements 4) Oak Grove Powerhouse and Facility Improvements
SAM: Proactive Underground Cable Program (P35908)	1/1/2015	12/31/2019	\$39,100,000	<p>Strategic Asset Management's (SAM) charge is to ensure long-term system reliability by identifying asset-related risks in the T&D system, and advocating for risk reduction activities that are optimal in nature, meaning they are specifically focused and have high economic value compared to other work.</p>

**Project Narrative
Projects Greater Than \$10 Million**

Title	Start	End	Amount	Notes
				<p>Project Scope: Underground cable was selected for analysis by PGE due to concerns about the age of the asset class and the possibility that failures could rapidly escalate in the near term. SAM developed an economic life model that examined PGE's cable population (approximately 11,300 conductor miles) and ascertained which sections were most likely to fail. SAM then assessed the consequences of cable failure, identifying sections that have the highest number of customers and/or loading, and thus would most negatively impact customers should they fail. From this effort, a prioritized list of advisable, proactive cable projects was developed, consisting of injection or replacement of 203 conductor miles of cable. The \$36 million will be used to address this work over the next five years.</p>
Construct Marquam Substation (P35679)	1/1/2014	12/31/2018	\$53,700,000	<p>This project will construct Marquam substation with a 12-position 115kV Gas Insulated Switchgear (GIS) breaker and a half bus and 3-50 MVA transformers. Harrison substation will also be reconstructed with a six-position ring bus and 1-28 MVA transformer. The work includes an upgrade to the 115kV bus at Eastport substation and replaces motor operated switches with circuit switchers; upgrades relays at Urban substation; installs and reconfigures 115kV transmission lines to serve the new Marquam and upgraded Harrison substations; installs distribution infrastructure and circuits to serve the existing downtown network system currently served by Stephens substation; and installs associated fiber communications and materials.</p> <p>Stephens substation, currently serving approximately 25 MVA in the core network has old, antiquated, non-standard equipment. The growing South Waterfront area currently served by Urban substation will need additional capacity. There is currently no adequate substation backup plan for network substations (Canyon and Stephens). Marquam substation installation will improve on efficiencies by removing non-standard 11kV feeders from the PGE system, providing adequate future backup to the existing core network, and providing future service to the growing South Waterfront district.</p>
North Fork – Install Down Stream Migrant Surface Collector. (P26389)	01/01/2004	6/30/2016	Estimated at \$66,000,000	<p>This job constructs and installs a floating fish collector facility, fish transport pipe and a tertiary dewatering facility at North Fork Dam. The floating surface collector will be installed to attract and collect juvenile migrating fish. The existing fish facilities do not meet current regulatory criteria. As part of relicensing and PGE's response to the Endangered Species Act, we will be required to upgrade our facilities. Migrating fish will pass through the surface</p>

**Project Narrative
Projects Greater Than \$10 Million**

Title	Start	End	Amount	Notes
				<p>collector to a new fish transport pipe. The fish pipe will be provided to transport the juvenile fish through the dam and along the backside of the dam to a new tertiary dewatering facility to be constructed on the right bank adjacent to the spillway. Fish exiting this facility will bypass the three Clackamas River dams through the migrant fish by-pass pipe that is to be provided by another job.</p> <p>This job calls for significant design effort beginning about 5 years before the start of construction. This modification is expected to significantly improve the downstream migrant by-pass efficiency at the North Fork Dam in a cost-effective manner.</p>
Field Voice Communication System (P35938)	6/30/2014	12/31/2017	Estimated \$52,700,000 to \$68,300,000	<p>This project replaces the transmission & distribution regionally based crew analog radio system that was installed in the mid-1990s with a territory-wide digital radio system, which should allow higher quality communications, increased flexibility in dispatching our crews, higher reliability, and increased safety. The project would replace approximately 1200 mobile (vehicle-based) and portable (handheld) units.</p> <p>The proposed timeline for the project is as follows: Mid-2014: \$250k for consultant work to:</p> <ol style="list-style-type: none"> 1. Evaluate availability of spectrum for purchase and make a recommendation for the acquisition of radio spectrum within PGE Service territory. If PGE cannot acquire radio spectrum available for purchase, the project will not move forward 2. Assess terrain of PGE's service territory for appropriate equipment to provide best coverage. Some spectrums are better than others based on terrain. Additionally, PGE may need to install more repeaters/transmitters with the new digital system in effort to provide desired coverage. <p>Future years:</p> <ul style="list-style-type: none"> • 2015: Approximately \$10mm: Acquire radio spectrum and issue RFP to choose vendor to install the equipment & radios • 2016: Approximately \$30mm: Acquire necessary easements, transmitters & repeaters and start installing equipment throughout the different regions of the service territory. • 2017: Approximately \$30mm: Finish acquiring transmitters & repeaters and finish installing equipment throughout the different regions of the

**Project Narrative
Projects Greater Than \$10 Million**

Title	Start	End	Amount	Notes
				<p>service territory. After transmitters & repeaters installation is complete, vendor will replace the vehicle based radios at each line crew center along with the portable radio units.</p>
2020 Vision Enterprise Program	10/15/2009	12/31/2016	Estimated at \$155,000,000	<p>The 2020 Vision Enterprise Program modernizes and consolidates Portland General Electric's technology infrastructure to ensure that the future technology path will accommodate the changing needs of PGE and its customers. The 2020 Vision program, comprised of a number of individual projects, represents the transformation of PGE's current Enterprise Technology landscape into a flexible and integrated technology platform that supports PGE's business from end to end. It replaces obsolete technologies and streamlines a number of applications and vendors PGE uses in order to gain efficiencies, better meet customer and PGE needs for accurate "real-time" information, and provide a solid foundation for future Smart Grid technologies.</p> <p>Phase I of the 2020 Vision establishes the foundation that underpins all future work and consists of two main components: modernizing PGE's financial systems and creating the foundation for a single enterprise-wide work and asset management system. These two components, along with the Infrastructure and Project Office project, and replacing the company's time collection system comprise the projects necessary to complete Phase I of the 2020 Vision Program. Phase I was completed in mid-2013.</p> <p>The second phase, called the Next Wave of the program will upgrade or replace the following PGE systems at a total estimated cost of \$84 million.</p> <ul style="list-style-type: none"> • Maximo Mobile and Scheduling • Geospatial Information System and Graphic Work Design Replacement (GIS/GWD) • Outage Management System Replacement (OMS)
Customer Engagement Transformation (CET) (Multiple projects)	1/1/2014	7/30/2018	Estimated at \$103,000,000	<p>This program is a set of initiatives targeted specifically at the Customer Service functional areas. The CET program includes both large and small initiatives that focus on process improvements, business strategies, operational efficiencies, employee development, and replacement of PGE's customer information system (CIS) and meter data management system (MDMS). The primary drivers for the CET program include obsolescence of customer</p>

**Project Narrative
Projects Greater Than \$10 Million**

Title	Start	End	Amount	Notes
				<p>systems, changing customer behaviors and expectations, planning for emerging channels, and a new competitive landscape. Projects will be implemented in several waves, starting in 2014 through 2018. Projects include:</p> <ul style="list-style-type: none"> • Replace Banner CIS • Replace Meter Data Consolidator • Quality, Metrics & Performance Management • Knowledge Management & Governance • Workforce Planning & Management • Enterprise Data Quality • Employee Advocacy & Engagement • Customer Program Automation • Interactive Voice Response (IVR) Fitness
Port Westward Unit 2 (P35205)	1/31/2013	6/30/2015	Estimated at \$300,000,000	<p>Port Westward Unit 2 will be a flexible capacity resource for PGE located adjacent to the existing Port Westward Unit 1, with nameplate capacity of 220 MW. The project will consist of twelve state-of-the-art, highly efficient natural gas-fired reciprocating engine-generator sets (Wärtsilä model 18V50SG). The engineering, procurement, and construction (EPC) contractor for the project is Columbia River Power Constructors (a joint venture of Black & Veatch Construction Inc. and Harder Mechanical Contractors Inc.). The equipment purchase agreement (EPA) supplier is Wärtsilä North America.</p> <p>PGE estimates that final completion of the plant will require approximately \$20 million of capital expenditures in 2015.</p>
Carty Generating Plant (P35769)	6/1/2013	5/30/2016	Estimated at \$450,000,000	<p>Carty Generating Station is a base load combined cycle gas plant located adjacent to the Boardman Coal Plant, with a nameplate capacity of 441 MW (fired) output. The major equipment for the project will be provided by Mitsubishi, including the 501GAC gas turbine, heat recovery steam generator (HRSG), and steam turbine. The engineering, procurement, and construction (EPC) Contractor is Abeinsa, Abener, Abengoa, Teyma Partnership.</p>
Tucannon River Wind Farm (P35654)	6/3/2013	12/31/2015	Estimated at \$500,000,000	<p>Tucannon River Wind Facility is a fully-permitted wind generation facility located in Columbia County, Washington. The contracting structure includes an asset purchase agreement with Puget Sound Energy (PSE), a balance of plant agreement with Renewable Energy Systems (RES), and turbine supply agreement with Siemens Energy (SEI). The project has a nameplate capacity of</p>

**Project Narrative
Projects Greater Than \$10 Million**

Title	Start	End	Amount	Notes
				<p>266.8 MW and an annual average capacity of approximately 101 MWa.</p> <p>PGE estimates that final completion of the wind farm will require approximately \$29 million of capital expenditures in 2015.</p>

**Project Narrative
Projects Greater Than \$1.0 Million Starting in 2015**

Title	Start	End	Amount	Notes
Corporate Security Software Failover (35920)	1/1/2015	12/31/2015	\$1,023,416	This project will provide failover capability by use of a redundant system to be hosted at the Carver Readiness Center. Loss of network connectivity will result in the inability access, document, and communicate with PGE physical security assets. The system is critical to compliance as documented in CIP V3 R6, R7, and R9.
OG: Switchyard Upgrade (P35941)	7/1/2015	10/31/2016	\$1,023,488	This project is to replace oil circuit breakers (OCB) with modern SF6 gas breakers. Associated cap-and-pin insulators, and disconnect switches in the Oak Grove 115kV switchyard will also be replaced. Existing string bus and structures will remain, unless they are discovered to be damaged/corroded. Engineering will be completed in mid-2015 with construction scheduled for mid-2016.
Update Network Firewalls (P35864)	1/1/2015	12/31/2015	\$1,028,046	This project intends to deploy new Firewall technologies to support current and future PGE business initiatives. Current hardware is nearing end of life and cannot support systems such as myTime, mySafety and others that are cloud based. The project scope includes the purchase and deployment of new application firewalls and next generation firewalls as well as detailed level design and network implementation procedures.
App Segmentation Phase 1 (P35866)	1/1/2015	12/31/2015	\$1,044,139	This project seeks to leverage the Phase 1 "Network Segmentation" project and build out the corresponding "Application" environment. This will include the purchase of necessary hardware / software to build out the application development and test environments in PGE's segmented network. This will allow for the full utilization of the segmented network as it was designed. As part of this build out, current production applications will have to be "migrated" or moved to new / existing hardware in the segmented network. This will be done in conjunction with new functionality build out of test / development application environments to maintain functionality and system availability.
BR: Replace 12 High-PCB Transformer (P35953)	1/1/2015	12/1/2015	\$1,127,116	This project replaces twelve transformers at the Beaver Plant currently contain PCBs in concentrations greater than 50 ppm. These are the last transformers with a PCB concentration greater than 50ppm at PGE's generation facilities. There are potential changes to environmental regulations that would require the removal of equipment containing over

**Project Narrative
Projects Greater Than \$1.0 Million Starting in 2015**

Title	Start	End	Amount	Notes
				50 ppm PCB from service. The purpose of this project is to meet the PCB elimination goal of removing all greater than 50 ppm PCB equipment from generation facilities and substations by 2015.
OG: Install Flowline Non-Slip Coat (P35949)	1/1/2015	12/1/2015	\$1,467,085	This project applies a 2' wide non-slip coating to the top of the Oak Grove flowline to improve safety for plant personnel inspecting the pipeline. The Oak Grove flowline is approximately 6.4 miles long and conveys water from Lake Harriet to the Oak Grove Powerhouse located at Three Lynx. The pipeline follows native topography with many hills, and valleys. The exterior of the 9' diameter pipeline is uncoated, with the bottom third bearing on native soil. The pipeline is inspected twice a week by West Side Hydro personnel who walk the entire flowline looking for damage, leaks, etc. The inspection involves walking the top of the pipeline from Harriet to Three Lynx.
Sunset – Install 3 new D1X feeders (P35810)	1/1/2015	12/31/2015	\$1,990,167	Install the Sunset-D1X2, D1X4, and D1X6 feeders to support load growth at a key customer site. The conduit and substation infrastructure for the new feeders was installed as a part of the original D1X project; therefore, only the feeder cable, digital temperature sensing fiber, and feeder terminations need to be installed in this project.
Upgrade PeopleSoft 9.2 – HR (P35849)	9/1/2015	9/1/2016	\$2,010,360	This project will upgrade PeopleSoft Human Capital Management from version 9.1 to version 9.2 and upgrade PeopleTools if required. This project has three important aspects: First, PeopleSoft will no longer support 9.1 for certain tax updates and therefore we will be required to move forward. This sunset is 2017 and the organization needs enough time to deploy the upgrade. Second, this proposal is in conjunction with Finance's proposal to upgrade to 9.2. This programmatic approach would allow us to capitalize on joint project manager and change manager and possibly (if available) the same implementation partner. We would expect to realize savings from a joint approach. Additionally, we will be expending \$12,000 per year after September 2014 for extended support on 9.1 so the sooner we upgrade the sooner we realize this cost avoidance. Third, this upgrade completely changes the look and usability of PeopleSoft allowing managers and employees much better navigate and help drive more employee self-service.

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Title	Start	End	Amount	Notes
1WTC03 Floor Upgrade (P35859)	1/1/2015	12/1/2015	\$2,161,027	This project will upgrade the third floor of the 1 World Trade Center building. Having identified work groups and their adjacencies on a single floor will contribute significantly to team collaboration, communication and work groups' efficiency. The new sustainable design features better introduction of outside light into the work space, energy savings, low emitting workstation components for better indoor air quality, material from sustainable practice forests and 69% of the workstations are recyclable at the end of their useful life. The new office system supports PGE's direction of a more collaborative work environment.
BR: Upgrade MCC's for HRSG's (P35956)	1/1/2015	9/30/2016	\$2,348,877	This project requests funding for the purchase and installation of six (6) new arc resistant, 480V, 3 phase, 600 amp bus motor control centers (MCC's), with National Electrical Manufacturers Association (NEMA) 3R walk-in enclosures, to replace Beaver HRSG MCC units 21 through 26. The existing MCC's will be removed and salvaged. The current design scope includes utilizing the existing concrete MCC foundations and existing conduit and conductors. The current budget supports replacement of approximately 50% of the existing circuit conductors from the MCC's. All six MCC's will be ordered in 2015, with three delivered and installed in 2015 and the remaining three units delivered and installed in 2016.
Round Butte Transmission Upgrades (P35834)	1/1/2015	12/31/2016	\$2,419,437	This project will implement a Special Protection Scheme at Round Butte to mitigate the effect of a 200MW total generation limit for the loss of either the Grizzly BPA-Round Butte 500kV circuit or the Redmond BPA-Round Butte 500kV circuit. It also upgrades transmission line, bus, and transformer protective relays that have experienced mis-operation issues, or for which PGE has little operational familiarity. Finally, it installs a series reactor in the bus on the tertiary of the 500kV transformer that will reduce the fault current at the transformer terminals and two 230kV breakers on the Cove PACW-Round Butte 230kV transmission line positions.
Estacada Capacity Addition (P35820)	1/1/2015	12/31/2015	\$2,707,209	This project replaces all antiquated equipment at the Estacada substation. The substation yard will be expanded to accommodate the inclusion of a new control enclosure, which will house SCADA, communications, and standard protection equipment. Real-time loading information will be

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Title	Start	End	Amount	Notes
				available, as well as the real-time status of protective devices (i.e., circuit switchers and feeder breakers). Estacada BR1 will be swapped with PGE transformer No. 10103, resulting in a 7 MVA increase in winter transformer capacity. A third feeder breaker will be added to the "new" Estacada BR1, and 2000' of Estacada-Faraday will be reconducted, resulting in 100% N-1 redundancy for all feeder and transformer contingencies. No load will be left unserved, due to capacity constraints, for any N-1 contingency.
Network Access Management (P35861)	1/1/2015	12/30/2015	\$2,713,580	PGE business needs are forcing the development of an expanded corporate network, expanded energy and plant networks as well as dozens of wireless networks and various locations. This growth cannot be met or supported with current resources and current tools. The Network Access Management project seeks to design an environment where these disparate networks are integrated together and centrally managed for compliance, safety, reliability and efficiency.
AMI Infrastructure Improvements (P35855)	1/1/2015	7/31/2016	\$1,060,916	This project will purchase new Tower Gateway Basestations (TGBs) for the Automated Metering Infrastructure (AMI) system. Additional storage will be purchased for the Sensus Radio Network Infrastructure (RNI) servers and the Interval Data Store servers.
Purchase Customer Meters (P35892)	1/1/2015	12/31/2020	\$2,917,644	This project will purchase meters for 2015 new customer connects, system replacements and spare meter inventory. The 2015 request is ~\$500k more than the 2014 budget due to higher anticipated needs.
CS Install New CTG LCI (P35889)	1/1/2015	6/30/2016	\$2,923,501	This project proposes the replacement of Coyote Springs' Unit 1 Load Commutated Inverter (LCI), which is the starting mechanism of the combustion turbine. The scope includes the replacement of the controller and network switch, new 12 pulse converter to replace the 6 pulse converter, new isolation transformer, water to water heat exchanger, and new power feed cabling. The existing building remains in place, but will require modification of an additional door, flooring supports, and possibly floor stiffeners.
PeopleSoft Financials 9.2 Upgrade (P35853)	1/1/2015	12/1/2015	\$3,012,107	This project upgrades PeopleSoft Financials to version 9.2 which includes 11 modules within PeopleSoft and the underlying toolkit, PeopleTools 8.53.

**Project Narrative
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Title	Start	End	Amount	Notes
				PeopleSoft financials is our core financial application. It is overly-burdensome to keep current with the latest application fixes. Oracle acknowledges that the current process of applying system updates (or bundles and patches) is so inefficient and time-consuming, that most customers elect not to apply any updates. As a result we have not been able to take advantage of numerous break-fixes and enhancements made available in Oracle's software update packages. Version 9.2 introduces PeopleSoft Update Manager (or PUM) which allows for streamlined updates and lower total cost of ownership.
Faraday Switchyard 115kV Upgrade (P35828)	9/1/2014	12/1/2015	\$3,181,550	This project constructs a 115kV five position ring bus at Faraday Switchyard, with future expansion capability to a seven position ring bus. In addition, other antiquated 57kV and 115kV equipment will be replaced and protection upgrades will be made to the 115kV remote terminals in order to elevate the 115kV protection schemes of all West Side Hydro facilities to current PGE standards.
Abernethy Substation Capacity Addn (P35815)	1/1/2015	12/31/2016	\$4,842,071	This project will add capacity to the Abernethy Substation over a two year period. In 2015, expand Abernethy substation northwest fence to allow for the installation of an additional distribution power transformer. Perform necessary permitting, removals, grading, and fencing upgrades to allow for 2016 substation construction. Perform various Distribution reconductors. In 2016, install a second distribution power transformer, metalclad switchgear, and capacitor banks at Abernethy substation. Relocate an existing feeder position to the new metalclad, and add a new feeder. Perform new distribution circuit installation and upgrade existing distribution circuits to accommodate new feeder addition.
Purchase Distribution Transformers (P35890)	11/1/2014	12/31/2020	\$7,199,029	This project purchases distribution transformers for new customer connects, existing customer upgrades, and system replacements. This requests a 5% increase over the 2014 Budget/Forecast which is supported by 2015 forecasted new connects increasing by 5% over 2014 connects forecast.
NF: Generator 2 Rewind (P35937)	1/1/2015	12/30/2016	\$7,247,668	This project provides for the rewind of the stator and rotor on North Fork generator number 2. Inspections and testing indicated the conductors in

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Title	Start	End	Amount	Notes
				the coils have lost bonding with the insulation. This results in the conductors vibrating within the coil during operation. The conductor vibration will increase exponentially with operating time leading to generator winding failure.