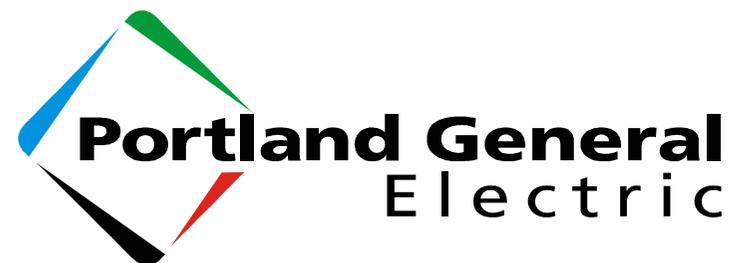




2010 Power & Gas Leaders Conference

Bank of America
Merrill Lynch
September 28 - 29, 2010



Cautionary Statement

Information Current as of August 5, 2010

Except as expressly noted, the information in this presentation is current as of August 5, 2010 — the date on which PGE filed its Quarterly Report on Form 10-Q for the quarterly period ending June 30, 2010 — and should not be relied upon as being current as of any subsequent date. PGE undertakes no duty to update the presentation, except as may be required by law.

Forward-Looking Statements

This presentation contains statements that are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended.

Forward-looking statements include statements regarding earnings guidance; statements regarding future load, hydro conditions and operating and maintenance costs; statements regarding the future impact of Senate Bill 408; statements regarding future capital expenditures; statements regarding future financings and PGE’s access to capital and cost of capital; statements regarding PGE’s future liquidity; statements regarding the cost, completion and benefits of capital projects; statements regarding future generation and transmission projects, including those set forth in the Company’s Integrated Resource Plan; statements concerning future operation of the Company’s Boardman coal plant; statements concerning the outcome of the 2011 general rate case and the timing of a final order from the OPUC; statements regarding the outcome of any legal or regulatory proceeding; as well as other statements containing words such as “anticipates,” “believes,” “intends,” “estimates,” “expects,” “should,” “conditioned upon,” and similar expressions. Investors are cautioned that any such forward-looking statements are subject to risks and uncertainties, including reductions in demand for electricity and the sale of excess energy during periods of low wholesale market prices; the outcome of the 2011 general rate case filing; regulatory approval and rate treatment of the smart meter project and Phase III of the Biglow Canyon Wind Farm project; operational risks relating to the Company’s generation facilities, including hydro conditions, wind conditions, disruption of fuel supply, and unscheduled plant outages, which may result in unanticipated operating, maintenance and repair costs, as well as replacement power costs; the costs of compliance with environmental laws and regulations, including those that govern emissions from thermal power plants; changes in weather, hydroelectric and energy market conditions, which could affect the availability and cost of purchased power and fuel; changes in capital market conditions, which could affect the availability and cost of capital and result in delay or cancellation of capital projects; unforeseen problems or delays in completing capital projects, resulting in the failure to complete such projects on schedule or within budget; the outcome of various legal and regulatory proceedings; and general economic and financial market conditions. As a result, actual results may differ materially from those projected in the forward-looking statements. All forward-looking statements included in this presentation are based on information available to the Company on the date hereof and such statements speak only as of the date hereof. The Company assumes no obligation to update any such forward-looking statements, except as required by law. Prospective investors should also review the risks and uncertainties listed in the Company’s most recent Annual Report on Form 10-K and the Company’s reports on Forms 8-K and 10-Q filed with the United States Securities and Exchange Commission, including Management’s Discussion and Analysis of Financial Condition and Results of Operations and the risks described therein from time to time.

Portland General Investment Highlights

“Pure-play” electric utility

- Vertically integrated, regulated electric utility
- Attractive service territory and constructive regulatory dialogue
- Regulated ROE of 10.0%

Operational excellence

- Diversified, high-performing generation portfolio
- Well-managed power supply operations
- High quality, well-maintained T&D system
- Strong overall customer satisfaction

Low-risk growth plan

- Significant regulated capital investments as identified in Integrated Resource Plan drive rate base growth
- Natural gas-fired generation and renewable resource investment opportunities
- Track record of completing projects on time and within budget

Prudent financial strategy

- Investment grade ratings of BBB / Baa2 (unsecured)
- Target capital structure: 50% debt, 50% equity
- Focus on maintaining a strong balance sheet and adequate levels of liquidity

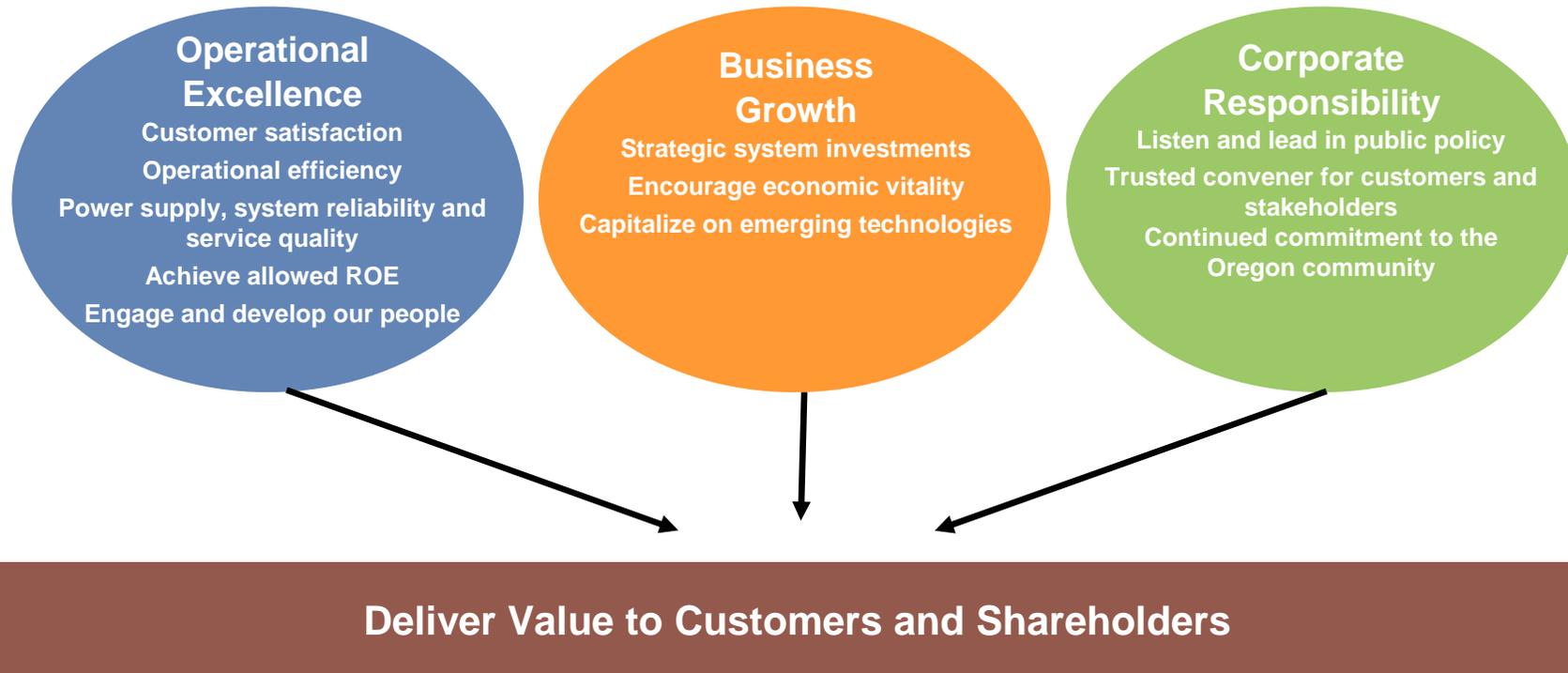
Stability:
Dividend Yield

**Attractive total
return proposition**

Growth:
Earnings Per Share

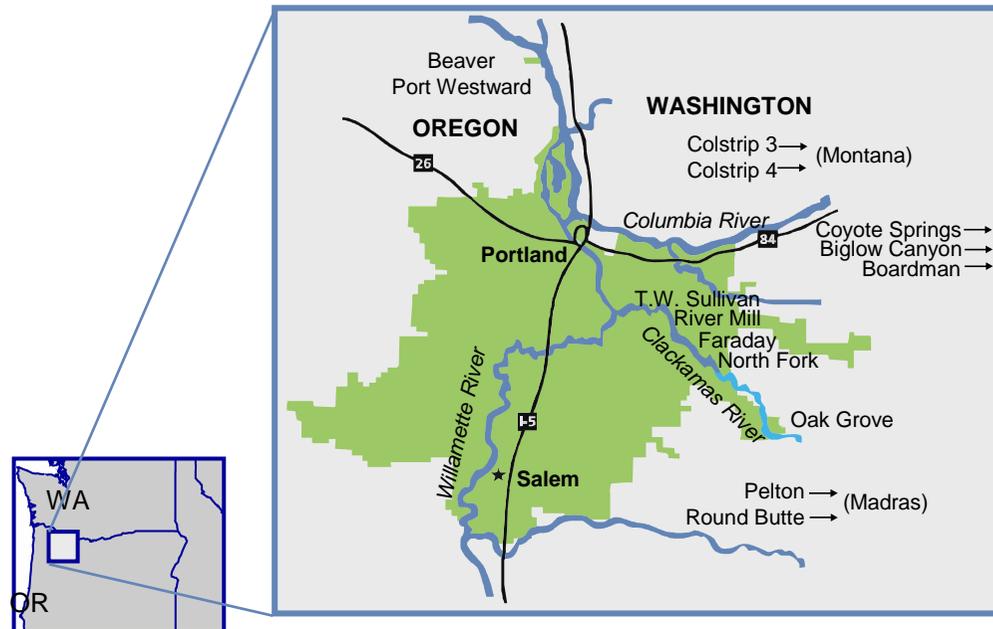
Portland General Strategic Direction

Mission: To be a company our customers and communities can depend upon to provide electric service in a safe, responsible and reliable manner, with excellent customer service, at a reasonable price.

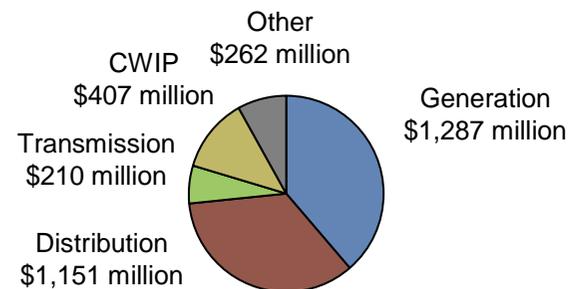


Attractive Regulated Business Profile

- Vertically integrated electric utility
 - Single state jurisdiction
 - Virtually 100% regulated business
 - No holding company structure
- Attractive, compact service territory with 821,638 retail customer accounts⁽¹⁾
- Opportunities for investment in core utility assets
- Diversified and growing customer base



Net Utility Plant



Net Utility Plant – \$3,317 million⁽²⁾

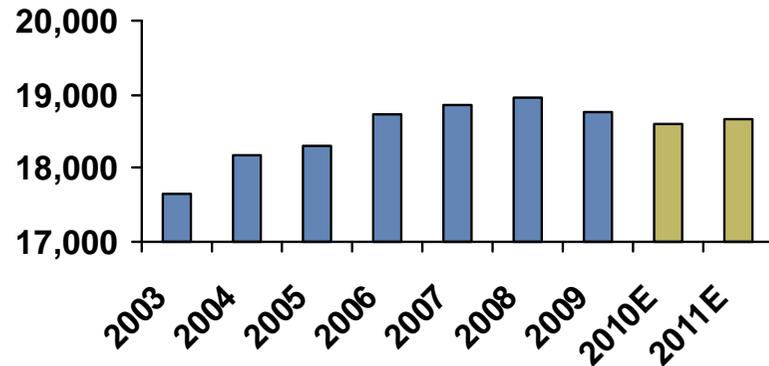


1) As of June 30, 2010.
 2) Source: 2009 FERC Form 1.

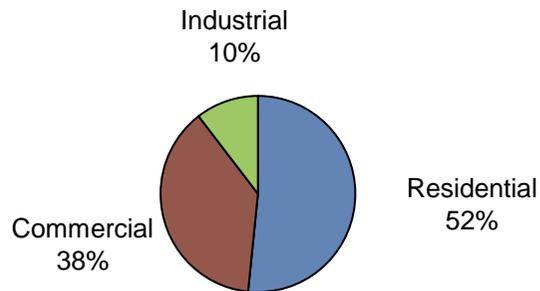
Attractive Service Territory

Weather Adjusted Annual Load ⁽¹⁾

Annual Load
(thousands of MWH)



2009 Retail Revenues by Customer Group



Total = \$1.6 Billion

- Compounded annual load growth⁽²⁾ and customer growth of 1.0% from 2003 - 2009
 - Oregon is a leading in-migration state
- 2009 loads⁽²⁾ declined 2.4% from 2008
 - Primary driver: Industrial declines in commodity and resource industries
- 2010 loads⁽³⁾ are forecast to be down approximately 1% – 1.5% compared to 2009
- 2011 loads⁽³⁾ are forecast to be flat compared to 2010

Key Drivers:

- Pulp & paper company materially down from previous forecast and new customer ramp-up continues but slower than expected
- Decline in commercial sector due to continued economic pressure
- Long-term annual load growth forecast of 1.9% through 2030⁽⁴⁾

1) Adjusted for weather and certain industrial customers.

2) Adjusted for weather.

3) Adjusted for weather and based on a June 2010 forecast

4) Per the November 2009 IRP: PGE's forecasted 1.9% long-term annual load growth does not reflect new Energy Trust of Oregon (ETO) forecasted energy efficiency (EE) activities to the extent that they exceed historical levels embedded into the load forecast. Including all ETO forecasted EE activities, PGE's forecasted long-term annual load growth is 1.7%

Constructive Regulatory Environment

- **Oregon Public Utility Commission**
 - Governor-appointed Commission with staggered four-year terms (Ray Baum-Chair 8/2011, John Savage 3/2013, Susan Ackerman 3/2012⁽¹⁾)
- **Return on Equity & Capital Structure**
 - 10.0% allowed return on equity
 - 50% debt and 50% equity capital structure
- **Forward Test Year**
 - Filed General Rate Case on February 16, 2010 for 2011 test year
- **Net Variable Power Cost Recovery**
 - Annual Update Tariff
 - Power Cost Adjustment Mechanism: contains deadband and earnings test
- **Decoupling**
 - Effective February 1, 2009 for initial two-year trial period
 - Requested for the mechanism to continue in the 2011 General Rate Case
- **Renewable Portfolio Standard**
 - Standard requires PGE to serve 25% of its retail load from renewable sources by 2025
- **Renewable Adjustment Clause (RAC)**
 - PGE can recover costs of renewable resources through a separate tracking mechanism
- **Integrated Resource Plan**
 - Acknowledgement standard
 - 2009 IRP: long-term analysis outlining 20-year resource strategy

1) Susan Ackerman appointed to fill out remainder of Lee Beyer's term effective March 1, 2010.

Operational Excellence

Operational Efficiency

- Ongoing capital investments to improve quality of service, reduce costs and generate adequate shareholder return
- Smart Meter Program
 - Capex: \$140-\$145 million
 - Projected annual operational savings of \$18 million

Customer Satisfaction

- Received top deciles customer satisfaction rankings in both residential and general business customer sectors
- Ranked first in the nation for number of renewable power customers by the National Renewable Energy Laboratory



Well Maintained, High-Quality System

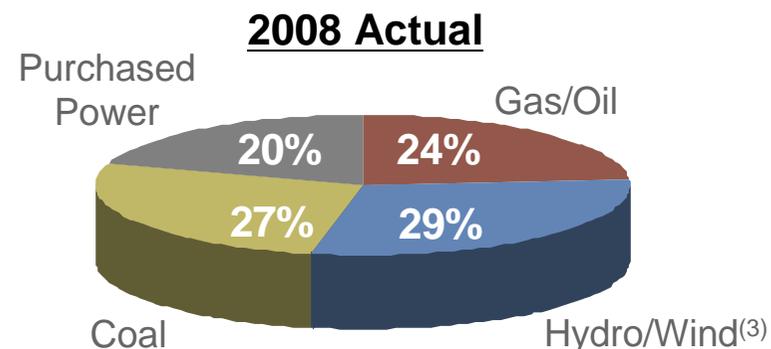
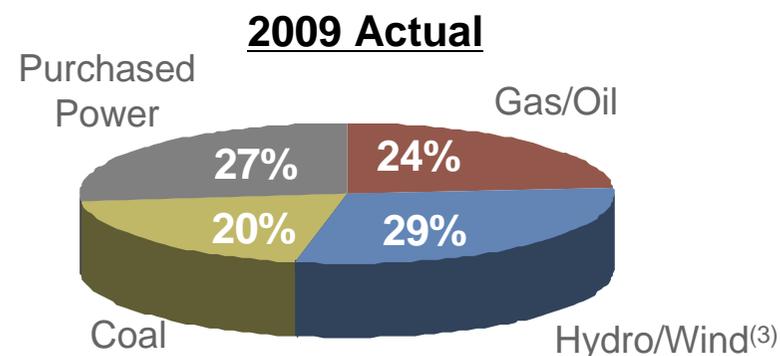
- PGE-operated generating plants were at 92% availability in first half of 2010
- On-going infrastructure investments
 - Invested more than \$775 million in transmission, distribution, and existing generation during the last 5 years

Operational Excellence

Resource Capacity (at 12/31/09) ⁽¹⁾

	Capacity	% of Total Capacity
Hydro		
Deschutes River Projects Clackamas/Willamette River Projects	298 MW	6.6%
Hydro Contracts	698	15.4
	<u>1,187</u>	<u>26.2</u>
Natural Gas/Oil		
Beaver Units 1-8	529 MW	11.7%
Coyote Springs	233	5.1
Port Westward	413	9.1
	<u>1,175</u>	<u>25.9</u>
Coal		
Boardman	374 MW	8.3%
Colstrip	296	6.5
	<u>670</u>	<u>14.8</u>
Wind⁽²⁾		
Wind Contracts	35 MW	0.8%
Biglow Canyon Phases I & II	100	2.2
	<u>135</u>	<u>3.0</u>
Net Purchased Power		
Short-/Long-term	1,363 MW	30.1%
Total	4,530 MW	100.0%

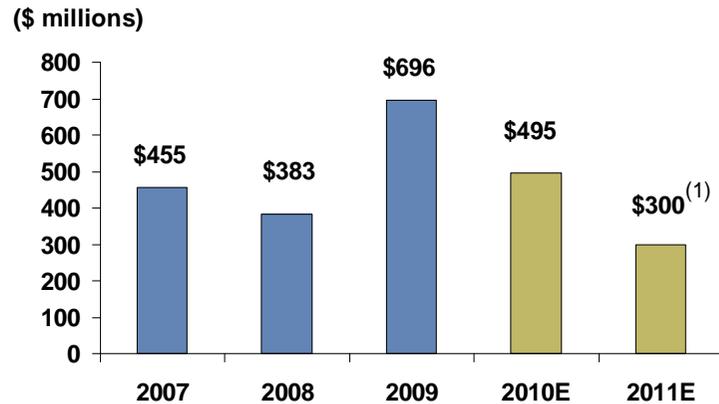
Power Sources as % of Retail Load



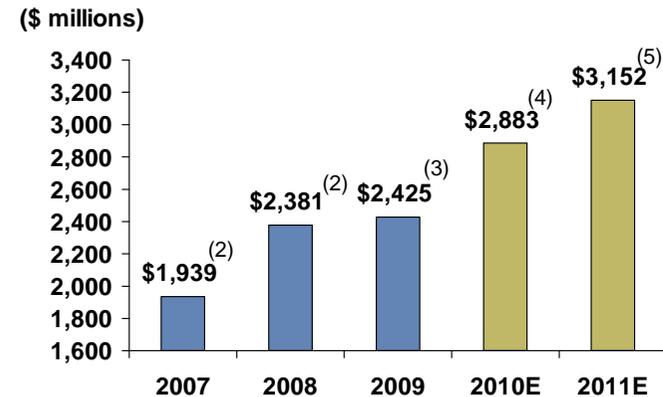
- 1) Capacity of a given plant represents the megawatts the plant is capable of generating under normal operating conditions, net of electricity used in the operation of the plant.
- 2) Wind generation is expressed in average megawatts to reflect capacity factors.
- 3) Includes PGE owned and purchased hydro resources and PGE owned and purchased wind resources.

Business Growth

Capital Expenditures



Rate Base (Average)



- Attractive, near-term regulated growth opportunities through capital investment focused on renewable resources and core utility assets
- 2010 capital investments funded through cash from operations and new debt issuances. Significant new capital investments beyond 2010 expected to be funded through cash from operations and issuances of debt and equity, with a targeted capital structure of 50/50

1) Does not include potential additional IRP self-build options and assumes PGE's BART III Proposal.

2) As filed in the OPUC regulatory Results of Operations Report.

3) Includes the 2009 General Rate Case average rate base of \$2.278 billion plus Biglow Canyon Phase II and Smart Metering project.

4) Includes 2009 General Rate Case average rate base of \$2.278 billion plus Biglow Canyon Phase II & III, Smart Metering and Selective Water Withdrawal projects.

5) Based on stipulations reached in the 2011 General Rate Case.

Business Growth: Biglow Canyon

Biglow Canyon Wind Farm

- Columbia Gorge, eastern Oregon
- 450 MW total installed capacity
- Total cost approximately \$1 billion
- Completion of Biglow Canyon Phase III will bring PGE's load served by renewables to approximately 11% ⁽¹⁾



	Phase I	Phase II	Phase III
Nameplate Capacity	125 MW, 76 turbines	150 MW, 65 turbines	175 MW, 76 turbines
MW per unit	1.65 Megawatts	2.3 Megawatts	2.3 Megawatts
Cost (w/AFDC)	\$255 million	\$321 million	\$390 million
Online date	December 2007	August 2009	September 2010
Vendor	Vestas	Siemens	Siemens

Business Growth: General Rate Case

- General rate case filed in February 2010 based on a 2011 test year
- Reached agreement among PGE, the OPUC staff and customer groups on all items related to revenue requirement, which have resulted in the following outcomes compared to the initial request:

	<u>Initial Request</u>	<u>Stipulations</u>
Revenue Increase	\$125 million	\$52 million
Net Revenue Increase ⁽¹⁾	7.4%	3.0%
2011 Average Rate Base ⁽²⁾	\$3.2 billion	\$3.1 billion
ROE & Capital Structure	– 10.5% ROE and 50/50 capital structure	– 10.0% ROE and 50/50 capital structure
Power Cost Adj. Mech.	– Deadband fixed at \$10 million above and below NVPC baseline – 90/10 sharing outside of deadbands – Earnings test eliminated	– Deadband fixed at \$30 million above and \$15 million below NVPC baseline – 90/10 sharing outside of deadbands – Earnings test continued
Boardman Auto. Adj. Clause	– PGE allowed to change prices to reflect an OPUC determined operating life	– Supported by most parties
Decoupling	– Continue with current mechanism	– Continue with current mechanism until December of 2013

1) Initially requested a rate increase of 7.4% which was comprised of a 9.4% increase related to Investment and O&M costs offset by a 2% reduction related to decreased power costs. The stipulated rate increase of 3.0% is comprised of a 6.0% increase related to Investment and O&M costs offset by a 3% reduction related to decreased power costs.

2) The reduction of average rate base from \$3.2 billion to \$3.1 billion consists primarily of the following two items: Removal of four projects to be completed in 2011 for which PGE expects to file a deferred accounting application (\$43 million) and revised capital expenditures for Biglow Canyon Phase III (\$34 million).

Business Growth: General Rate Case (cont'd)

- Summary of revised revenue requirement increase in millions:

	General Rate Case	Net Variable Power Costs	Total
Original Filing	\$158	(\$33)	\$125
Revenue requirement stipulations	(48)	-	(48)
Cost of capital stipulation	(15)	-	(15)
NVPC update ⁽¹⁾	5	(15)	(10)
Filing as revised	<u>\$100</u>	<u>(\$48)</u>	<u>\$52</u>

- PGE is in the process of aligning 2011 budgets to reflect stipulation agreements
- A final decision by the OPUC is expected by the end of 2010, with rates effective January 1, 2011
- General rate case filings, testimony, exhibits and stipulations are available at www.puc.state.or.us under Docket # UE 215

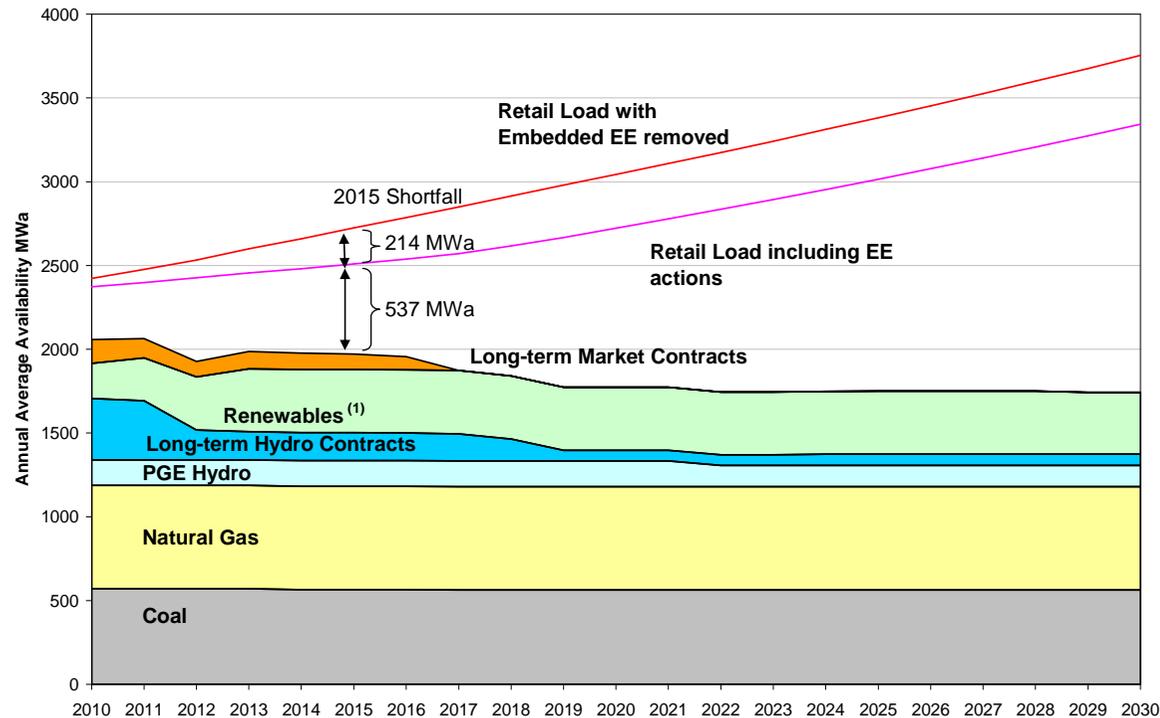
Business Growth

Load Growth

PGE's long-term retail load is expected to grow consistently while certain long-term power purchase contracts expire, driving the need for additional generation capacity.

In 2015 we project an energy and capacity shortfall of 873 MWa and 1,724 MW, respectively.

Load/Resource Forecast ⁽²⁾



Note: Assumes 1.9% long-term annual load growth through 2030 and energy supply based on plant capabilities under normal hydro and operating conditions.

- 1) Includes 122 MWa needed to meet 2015 Renewable Portfolio Standard
- 2) Load/Resource Forecast Data from 2009 Integrated Resource Plan.



Business Growth: Integrated Resource Plan

Integrated Resource Planning Process

- Under OPUC guidelines, PGE is required to file an Integrated Resource Plan (IRP) within two years of acknowledgment of the previous plan
- The IRP requires that the primary goal must be the selection of a portfolio of resources with the best combination of expected costs and associated risks and uncertainties for the utility and its customers
- The goal is to have OPUC acknowledgement of the IRP Action Plan. Acknowledgement is not approval for rate-making purposes but the Commission has stated that it will give “considerable weight” to utility actions that are consistent with the acknowledged IRP
- This is an open public planning process

Schedule:

- November 2009: IRP filed
- April 2010: Filed addendum to IRP proposing 2020 alternative plan for Boardman
- July 2010: OPUC revised the timeline for review of the IRP to be more in line with the Oregon Environmental Quality Commission (OEQC) schedule
- Year-end 2010: OPUC order expected on the IRP

Business Growth: Integrated Resource Plan (cont'd)

2009 Integrated Resource Plan (IRP) includes:

- A long-term analysis of resource requirements to serve customers
- Expected resource requirements to include expansion of energy efficiency, additional renewable resources, purchase power agreements and new facilities to meet energy and capacity needs
- Potential Capital Projects :
 - **New energy resources**
 - 300 – 500 MW natural gas facility (approximate capital cost \$1,300 - \$1,400/kw)
 - Earliest date available - 2015
 - 122 MWA of renewable resources⁽¹⁾ (approximate capital cost \$2,200 - \$4,100/kw)
 - Earliest date available 2012
 - **New capacity resources**
 - Up to 200 MW natural gas fired facility (approximate capital cost \$1,100 - \$1,400/kw)
 - Earliest date available 2013
 - **Emissions controls at Boardman Coal Plant**⁽²⁾
 - Oregon Environmental Quality Control adopted a rule requiring installation of emissions controls in three phases (2011-2017) with the plant operating through 2040 (approximate capital cost \$520-\$560 million)
 - PGE is pursuing an alternative 2020 plan
 - **Transmission**
 - Cascade Crossing – 200 mile, 500-kV transmission line
 - Approximate capital cost \$825 million for double circuit line
 - Expected to be complete by 2015-2016



Prudent Financial Strategy

Target Capital Structure 50% Debt, 50% Equity

Recent Financing

Debt Issuance

- Completed issuance of \$249 million in 2010
 - Issued \$70 million of First Mortgage Bonds (FMBs) in January at 3.46%
 - Remarketed \$121 million of Pollution Control Bonds backed by FMBs in March at 5.00%
 - Issued \$58 million of FMBs in June at 3.81%

Equity Issuance

- Additional equity issuance is not expected until after 2010. When issuing equity, a number of factors come into consideration, including, items such as cash flow, capital requirements and market conditions

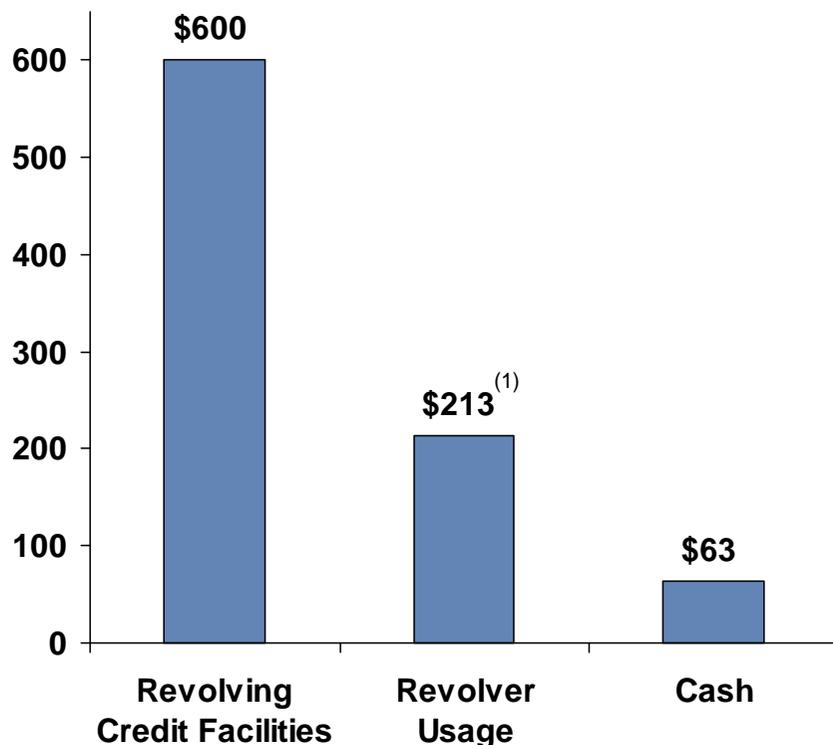
Issuance proceeds to fund:

- FMBs maturities of \$186 million in 2010
- Capital projects

Prudent Financial Strategy

Liquidity (as of 06/30/10)

(\$ millions)

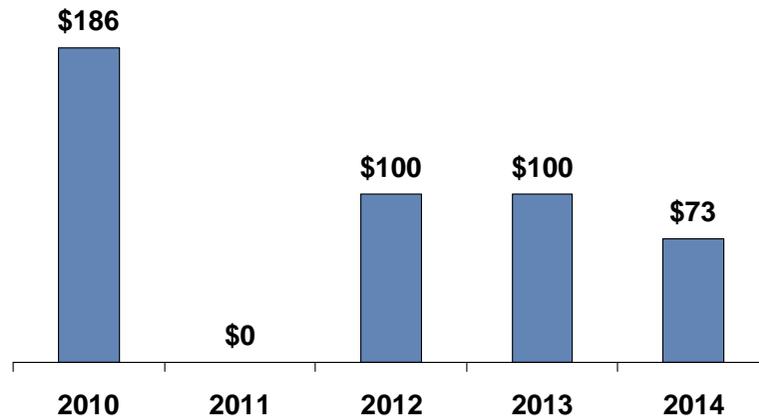


- \$370 million revolving credit facility
 - \$360 million matures in July 2013
 - \$10 million matures in July 2012
- \$30 million revolving credit facility matures in June 2012
- \$200 million revolving credit facility matures in December 2012
- Margin deposits posted by PGE as of June 30, 2010 were \$270 million ⁽²⁾
 - Margin deposits create a cash flow timing difference but have minimal impact on earnings
 - Margin roll-off ⁽³⁾
 - Approximately 29% in 2010
 - \$74 million letters of credit
 - \$4 million cash
 - Approximately 46% in 2011
 - \$80 million letters of credit
 - \$45 million cash

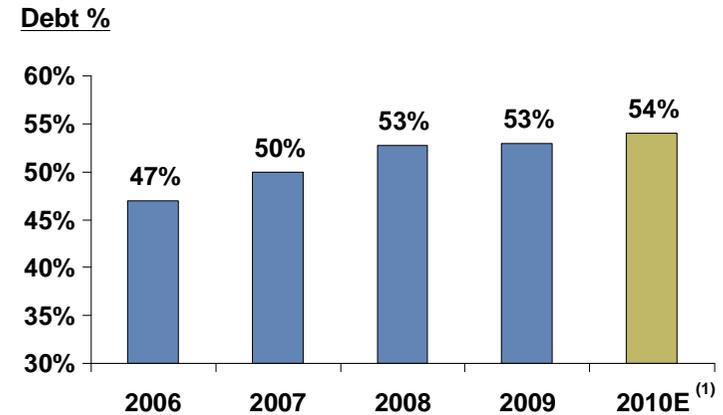
1) Represents 100% letters of credit. On June 30, 2010, there were no draws on the revolver and no outstanding commercial paper.
 2) Consists of \$77 million in cash and \$193 million in letters of credit.
 3) Assumes market prices remain unchanged from June 30, 2010.

Prudent Financial Strategy

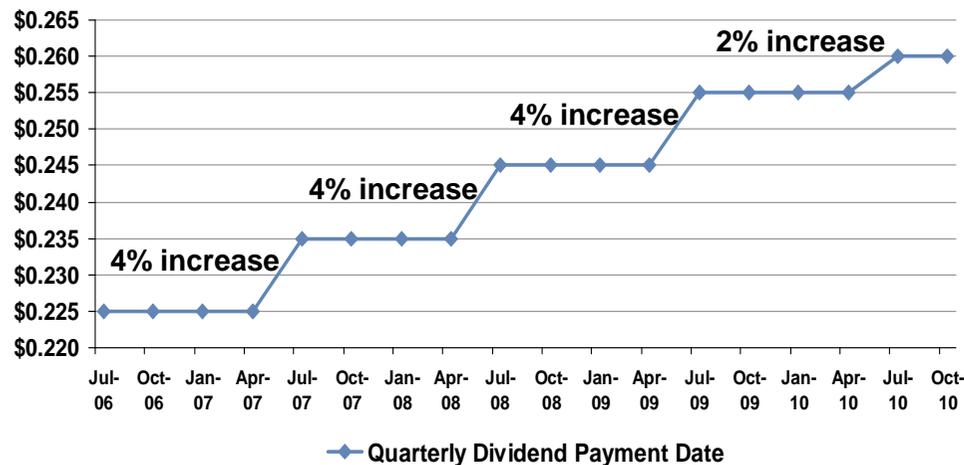
Manageable Near-term Debt Maturities



Debt/Capitalization



Dividend Growth ⁽²⁾



Credit Ratings

	Senior Secured	Senior Unsecured	Outlook
S&P	A-	BBB	Stable
Moody's	A3	Baa2	Stable

Portland General Investment Highlights

“Pure-play”
electric
utility

Operational
excellence

Low-risk
growth
plan

Prudent
financial
strategy

Stability:
Dividend Yield

**Attractive total
return proposition**

Growth:
Earnings Per Share

Investor Relations Contact Information

William J. Valach

Director, Investor Relations

503-464-7395

William.Valach@pgn.com

Emilie L. Witkowski

Analyst, Investor Relations

503-464-8586

Emilie.Witkowski@pgn.com

Portland General Electric Company

121 S.W. Salmon Street

Suite 1WTC0403

Portland, OR 97204

www.PortlandGeneral.com

Appendix

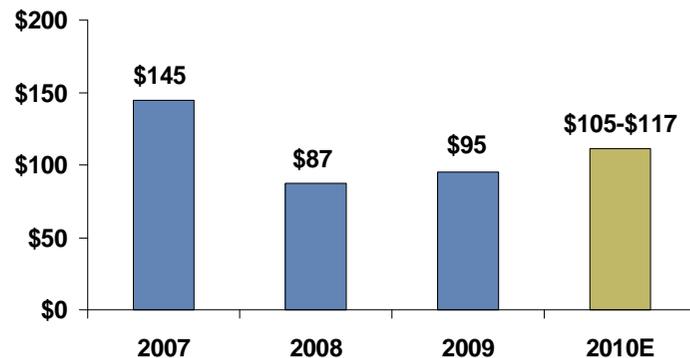
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- 2009 IRP Capacity Action Plan p.29
- Renewable Portfolio Standard p.30
- Estimated RPS Position by year p.31
- Smart Grid p.32
- Boardman p.33-36

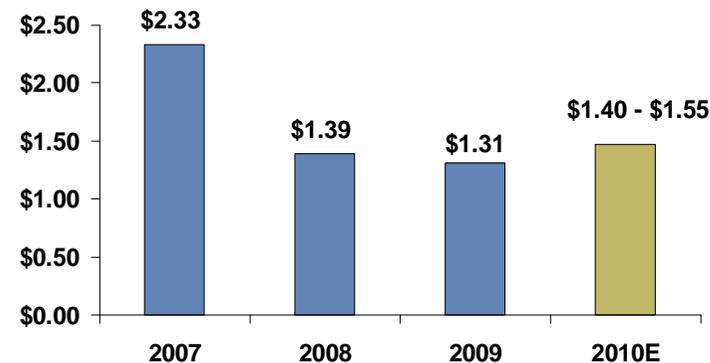
Recent Financial Results

Net Income

(\$ millions)



Earnings per Share (diluted)



Key Items (\$ earnings per diluted share)

2007

- Boardman deferral (+\$0.26)
- California settlement (+\$0.06)
- Non-qualified benefit plan assets (+.05)
- Senate Bill 408 (+\$0.18)

2008

- Trojan Refund Order Provision (-\$0.32)
- Non-qualified benefit plan assets (-\$0.19)
- Beaver oil sale (+\$0.10)
- Senate Bill 408 (-\$0.10)

2009

- Boardman Deferral (-\$0.15)
- Selective Water Withdrawal (-\$0.05)
- Non-qualified benefit plan assets (+\$0.07)
- Senate Bill 408 (-\$0.11)

2010

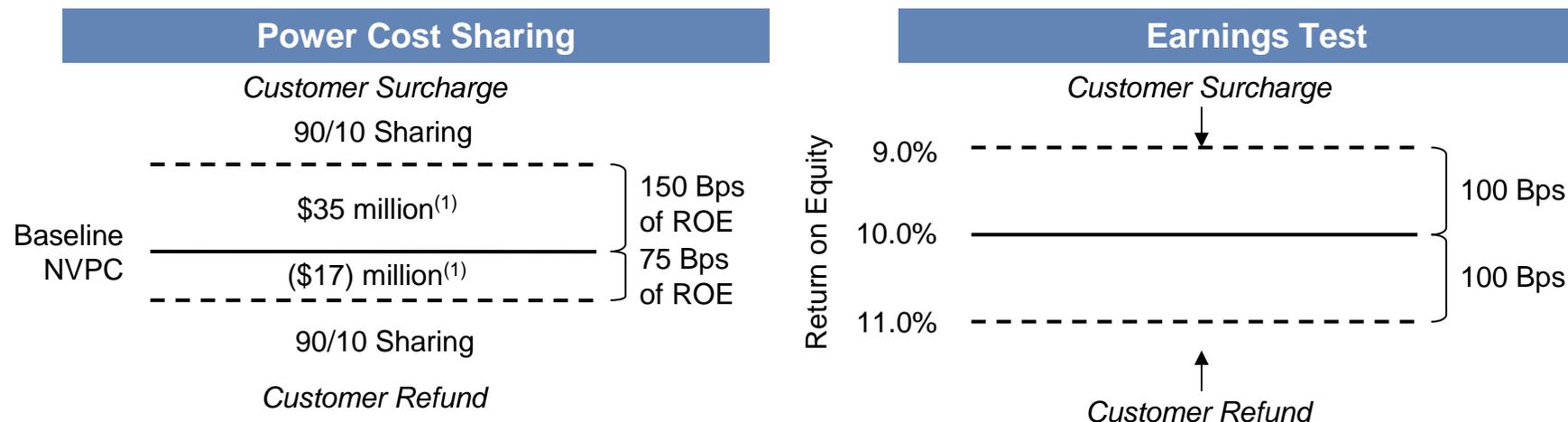
- As of August 5, 2010, earnings guidance was increased by \$.10 to \$1.40 to \$1.55 per diluted share

Recovery of Power Costs

Annual Power Cost Update Tariff

- Annual reset of rates based on forecast of net variable power costs (NVPC) for the coming year
- Following OPUC approval, new prices go into effect on or around January 1 of the following year

2010 Power Cost Adjustment Mechanism (PCAM)



- PGE absorbs 100% of the costs/benefits within the deadband, and amounts above or below the deadband are shared 90% with customers and 10% with PGE
- An annual earnings test is applied as part of the PCAM
 - Customer surcharge occurs to the extent it results in PGE’s actual ROE being no greater than 9.0%
 - Customer refund occurs to the extent it results in PGE’s actual ROE being no less than 11.0%

1) Deadband for 2010 is \$35 million above and \$17 million below baseline NVPC.

Decoupling Mechanism

- The decoupling mechanism is intended to allow recovery of reduced revenues resulting from a reduction in sales of electricity resulting from customers' energy efficiency and conservation efforts
 - A condition of the decoupling mechanism is a reduction in the Company's allowed ROE from 10.1% to 10.0% which reflects the OPUC's view of a reduction in Company risk. The ROE refund is estimated at approximately \$1.9 million annually
- Implemented under a new two-year tariff that includes a Sales Normalization Adjustment mechanism (SNA) for residential and small non-residential customers (≤ 30 kW) and a Lost Revenue Recovery mechanism (LRR), for large non-residential customers (between 31 kW and 1 MWA)
 - The SNA is based on the difference between actual, weather-adjusted usage per customer and that projected in PGE's recent general rate case. The SNA mechanism covers approximately 57% of base revenues
 - The LRR is based on the difference between actual energy-efficiency savings (as reported by the ETO) and those incorporated in the applicable load forecast. The LRR mechanism covers approximately 20% of base revenues
- On January 31, 2009, PGE filed an application with the OPUC to defer, for later rate-making treatment, potential revenues associated with the new decoupling mechanism as well as revenues associated with an ROE refund
- Mechanism effective February 1, 2009 for an initial two year trial period
- Estimated customer refund for 2009: \$6.8 million ⁽¹⁾
- Estimated customer collection through Q2 2010: \$8.3 million ⁽¹⁾

(in millions)	Q1	Q2	6 months YTD
Sales Normalization Adjustment	\$5.6	\$3.6	\$9.2
ROE Adjustment	(\$0.5)	(\$0.5)	(\$1.0)
Loss Revenue Adjustment		\$0.1	\$0.1
Total adjustment	\$5.1	\$3.2	\$8.3



1) Subjected to review and approval by the OPUC

Decoupling Mechanism

Simplified Decoupling Example

Assumptions:

- Residential customer
- Monthly Kwh usage: 1,000
- Cost per Kwh: \$0.10
- Weather adjusted decrease in monthly usage: 10%
- PGE cost structure: 50% power costs and 50% all other costs

Analysis:

Base monthly bill:	$1,000 \times \$0.10 = \100
Revised monthly bill due to energy efficiency and/or conservation:	$900 \times \$0.10 = \90
Reduction in revenue from customer	$= \$10$

PGE cost structure of lost revenue:

- \$5 in power costs
- \$5 in all other costs (fixed costs)

Financial impact on PGE:

- Power costs: Approximately \$0 earnings impact on PGE, assuming power sold on the market at PGE average cost in prices
- All other costs: Approximately \$0 earnings impact due to \$5 booked as a regulatory asset for future recovery from customers through the decoupling mechanism

Oregon Senate Bill 408

- Beginning January 1, 2006, a utility tax law, Oregon Senate Bill 408 (SB 408), requires the OPUC to track estimated income taxes collected by Oregon utilities in rates and compare this amount to adjusted taxes paid to taxing authorities by the utility or corporate consolidated group. The OPUC may establish deferral accounts to capture the difference
- SB 408 requires an annual rate adjustment if difference between taxes authorized to be collected by the utility and taxes paid by the utility to taxing authorities exceed \$100,000
- Report for prior calendar year is filed in October with the refund or collection beginning in June of the following year
- Primary issue for PGE is the so called “double whammy” effect, due to the OPUC adopting a fixed reference point for margins and effective tax rates. The double whammy can result in unusual outcomes and increased financial volatility in certain situations. The OPUC stated in the final order that it will be responsive to concerns related to the consequences of the double whammy problem, and may address those concerns in other regulatory proceedings
- Historical/expected outcomes:
 - 2006: Customer refund of approximately \$37.2 million plus accrued interest
 - 2007: Customer collection of \$14.7 million plus accrued interest
 - 2008: Customer refund of approximately \$10 million plus accrued interest
 - 2009: Customer refund of approximately \$13 million plus accrued interest ⁽¹⁾
- Protection of federal tax normalization rules is a key element of SB 408. As a result of significant accelerated tax depreciation in 2010, the protection of normalization will come into effect. A customer collection of approximately \$4 million has been recorded year-to-date through June 30, 2010

1) In the second quarter of 2010, the OPUC revised its administrative rules concerning the application of SB 408, which are effective beginning with the 2009 reporting period. Based on PGE’s evaluation of the revised rules, their application could result in a collection from customers ranging from \$6 million to \$10 million for the year ended December 31, 2009. Based on uncertainties relating to the regulatory process, PGE continues to reflect the \$13 million refund on the consolidated balance sheet and will continue to evaluate the amount recorded as the 2009 filing proceeds through the OPUC review process.

Energy Action Plan

2009 Integrated Resource Plan – Energy

Energy Action Plan in MWa ⁽¹⁾	
	2015
Thermal Resource Actions	
Combined Cycle Combustion Turbine	406
Combined Heat & Power	2
Boardman Lease Contract	-
Renewable & EE Resource Actions	
ETO Energy Savings Trust	214
Existing Contract Renewals	66
RPS Compliance	122
Biomass	-
Geothermal	-
Solar PV	-
To Hedge Load Variability	
Short and Mid-term Market Purchases	100
Subtotal ⁽²⁾	909
(Surplus) / deficit met by market	(36)
Total Resource Actions	873

Capacity Action Plan

2009 Integrated Resource Plan – Capacity

Capacity Action Plan in MW ^{(1) (2)}	
Winter	
2015	
Thermal Resource Actions	
Combined Cycle Combustion Turbine	441
Combined Heat & Power	2
Boardman Lease Contract	-
Renewable & EE Resource Actions	
Existing Contract Renewals	167
RPS Compliance	18
Biomass	-
Geothermal	-
Solar PV	-
To Hedge Load Variability	
Short and Mid-term Market Purchases	100
Capacity Only Variability	
Flexible Peaking Supply	200
Customer-Based Solutions (Capacity Only)	
Dispatchable Standby Generation	67
Demand Response	60
Seasonally Targeted Resources	
ETO Capacity Savings Target	315
Bi-seasonal Capacity	202
Winter-only Capacity	152
Total Incremental Resources	1,724

1) Data from Integrated Resource Plan Addendum filed in April 2010, which assumes normal hydro.
 2) Based on winter peak. Summer peak capacity action plan is 1,468 MW for 2015.

Renewable Portfolio Standard

Additional Renewable Resources

- Integrated Resource Plan addresses 122 MWa of wind or other renewable resources necessary to meet requirements of Oregon's Renewable Portfolio Standard by 2015

Renewable Portfolio Standard

- Renewable resources can be tracked into rates, through an automatic adjustment clause, without a general rate case. A filing must be made to the OPUC by the sooner of the on-line date or April 1st in order to be included in rates the following January 1st. Costs are deferred from the on-line date until inclusion in rates and are then recovered through an amortization methodology

<u>Year</u>	<u>Renewable Target</u>
2011	5%
2015	15%
2020	20%
2025	25%

- Biglow Canyon Wind Farm brings PGE's retail load served by renewables to approximately 11% by the end of 2010

Estimated RPS Position by Year (1)

- PGE will be in compliance with 2015 renewable resource requirement with addition on 122 MWa of renewables resources

	2011	2015	2020	2025
<u>Calculate Renewable Resource Requirement:</u>				
PGE retail bus bar load	2,442	2,624	2,886	3,179
Remove incremental EE	(16)	(86)	(135)	(135)
Remove Schedule 483 5-yr. load	<u>(27)</u>	<u>(28)</u>	<u>(28)</u>	<u>(28)</u>
A) Net PGE load	2,399	2,510	2,723	3,016
Renewable resources target load %	5%	15%	20%	25%
B) Renewable Resources Requirement	120	376	545	754
<u>Existing renewable resources at Bus:</u>				
Vansycle Ridge	8	8	8	8
Klondike II	26	26	26	26
Klondike II dedicated to PGE green tariff	-5	0	0	0
Sale of RECs	0	0	0	0
Biglow Canyon Phase I (year-end 2007)	48	48	48	48
Biglow Canyon Phases II and III (year-end 2008, 2010)	114	114	114	114
Post-1999 Hydro Upgrades	9	9	9	9
Pelton Round Butte LIHI Certification	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>
C) Total Qualifying Renewable Resources	250	255	255	255
<u>Compliance position & RECs banking:</u>				
D) Excess/(deficit) RECs B4 new IRP Actions (C less B)	130	(122)	(290)	(499)
E) IRP Action Plan* - additional resources for 2015 compliance	0	122	122	122
F) Total PGE renewable resources (C plus E)	250	377	377	377
G) % of load served via RPS renewables (F divided by A)	10.4%	15.0%	13.9%	12.5%
H) Excess/(deficit) RECs after IRP Actions (D plus E)	130	-	(168)	(377)
I) Cumulative Banked RECs after IRP Actions	709	1,408	1,185	200
J) Cumulative Non-LIH Banked RECs after IRP Actions	509	1,208	985	-180
* Previously approved action from the 2007 IRP				

Smart Grid

Smart Meters

- Provides two-way communications with residential and commercial customers
 - Vendor: Sensus Metering Systems
 - Technology: FlexNet radio frequency technology
 - Deployment: 850,000 residential and commercial customer meters
 - Installed approximately 800,000 meters as of July 30, 2010 with the remainder of the meters estimated to be installed by the end of 2010
 - Estimated cost: \$140 million - \$145 million
 - OPUC approved limited term tariff: June 1, 2008 through December 31, 2010. After 2010, the project costs, net of savings, would be permanently incorporated into rates in a future rate case
-
- **Distribution System**
 - Pursuing direct load control programs
 - Optimizing distribution system through advanced technology



Boardman Coal Plant: 2040 Contingent Plan

- In June 2009, pursuant to the Regional Haze Program and Best Available Retrofit Technology (BART) Determination process, the Oregon Environmental Quality Commission (OEQC) adopted a rule that would require the installation of emissions controls at Boardman under a phased-in approach:
 - Phase 1: Installation of low NOx burners and modified over-fire air to address NOx with estimated completion by July 2011 with a total cost of \$28 million⁽¹⁾⁽²⁾
 - Phase 2: Installation of semi-dry scrubber and bag house to address SO₂ and particulate matter with estimated completion by July 2014 with a total cost of approximately \$290 million
 - Phase 3: Installation of Selective Catalytic Reduction for additional NOx controls with estimated completion by July 2017 with a total cost of approximately \$180 million
- Phases 1 and 2 would meet existing federal BART requirements.
- Phase 3 would meet the existing requirements to make reasonable progress towards haze emission reduction goals.

1) The estimated \$28 million for installation of low NOx burners and modified over-fire air to address NOx represents 100% of total costs, excluding AFDC

2) Under a separate rule PGE plans on installing mercury controls by 2011 with an estimated cost of \$8 million

Boardman Coal Plant: BART II Proposal

- In April 2010, PGE filed an addendum to its 2009 IRP seeking acknowledgment of an alternative plan to the June 2009 rule. Under the alternative plan, PGE would cease coal-fired operations at Boardman in 2020 (BART II Proposal).
- This proposal was submitted to the OEQC, as a petition, requesting an amendment to Regional Haze rule, under which PGE would do the following:
 - Installation of low NOx burners and modified over-fire air to address NOx by July 2011 with a cost of \$28 million ⁽¹⁾ ⁽²⁾
 - Use a lower sulfur coal to fire the plant's boiler
 - Cease coal-fired operations in 2020
- The IRP addendum requested OPUC acknowledgement to proceed with installation of all emissions controls required by the June 2009 rule and operate Boardman through at least 2040 if the OEQC does not approve PGE's BART II Proposal.

- 1) The estimated \$28 million for installation of low NOx burners and modified over-fire air to address NOx represents 100% of total costs, excluding AFDC
- 2) Under a separate rule PGE plans on installing mercury controls by 2011 with an estimated cost of \$8 million

Boardman Coal Plant: BART III Proposal

- In August 2010, PGE submitted an alternative Boardman 2020 plan, BART III, to the OEQC
- The BART III Proposal was developed, after concluding that the proposals released by the DEQ in June were unworkable. The BART III Proposal includes the following:
 - Use a lower sulfur coal to fire the plant's boiler
 - Installation of low NOx burners and modified over-fired air by July 2011 with cost of \$28 million⁽¹⁾ ⁽²⁾
 - Installation of selective non-catalytic reduction system (SNCR) by July 2014
 - Installation of dry sorbent injection systems (DSI) to address SO₂ and mercury by July 2014
 - Contingent upon successful pilot testing, PGE would meet a 0.4 lb SO₂/MMBtu limit using DSI
 - Cessation of coal-fired operations in 2020
- Emission controls proposed in BART III would cost approximately \$75 million, and would require an additional \$14.5 million per year in operation and maintenance costs
- PGE requests OPUC acknowledgement to proceed with installation of all emissions controls required by the June 2009 rule and operate Boardman through at least 2040 if the OEQC does not approve PGE's BART III Proposal

1) The estimated \$28 million for installation of low NOx burners and modified over-fire air to address NOx represents 100% of total costs, excluding AFDC

2) Under a separate rule PGE plans on installing mercury controls by 2011 with an estimated cost of \$8 million

Boardman Coal Plant: Recent Developments

- On June 10, 2010, the IRP schedule was suspended so that the forthcoming OEQC and Oregon Department of Environmental Quality (DEQ) actions could be considered
- On June 17, 2010, the OEQC denied PGE's BART II Proposal to revise the Regional Haze rule to incorporate its 2020 closure plan and directed the DEQ to begin a rulemaking that provides a broader range of emission reduction options consistent with an early closure
- On June 28, 2010, DEQ announced three new options for Boardman
 - PGE believes the DEQ proposed options would impose greater costs, price volatility risks and power availability risks on its customers than PGE's proposal to close Boardman in 2020
- On July 8, 2010, OPUC revised the timeline for review of the IRP to be more in line with the OEQC schedule
- On August 10, 2010, PGE replied to the OPUC with comments and analysis to DEQ proposed options
- In August 2010, PGE submitted its BART III Proposal to the OEQC
- In September 2010, there is a DEQ public comment period
- In November 2010, DEQ will submit final rulemaking package to OEQC
- OEQC decision on rule changes and OPUC acknowledgment of IRP are expected by year-end

