





# Investor Presentation December 2016



## Cautionary Statement



#### **Information Current as of October 28, 2016**

Except as expressly noted, the information in this presentation is current as of October 28, 2016 — the date on which PGE filed its Quarterly Report on Form 10-Q for the quarter ended September 30, 2016 — 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**

Statements in this news release that relate to future plans, objectives, expectations, performance, events and the like may constitute "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 the expected capital costs for the Carty Generating Station and the recovery of those costs; statements regarding future load, hydro conditions and operating and maintenance costs; statements concerning implementation of the company's integrated resource plan; statements concerning future compliance with regulations limiting emissions from generation facilities and the costs to achieve such compliance; as well as other statements containing words such as "anticipates," "believes," "intends," "estimates," "promises," "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; the sale of excess energy during periods of low demand or low wholesale market prices; 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; failure to complete capital projects on schedule or within budget, or the abandonment of capital projects, which could result in the company's inability to recover project 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 markets 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; 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 news release 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 statement. 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.

## **PGE Value Drivers**



Clear focus: 100% regulated utility

Attractive service area

Progressive environmental and renewable position

Focus on operational effectiveness and efficiency

Strong financial position

Generation and T&D resiliency initiatives strengthen infrastructure

## STRONG PLATFORM FOR STAKEHOLDER VALUE



## **The Company**

**The Strengths** 

**The Execution** 







#### PGE at a Glance



#### Quick Facts:

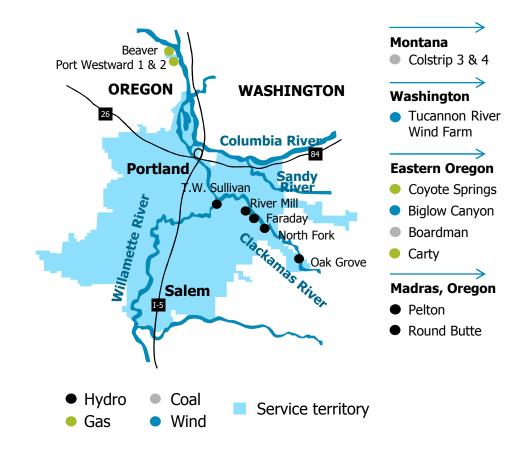
- Vertically integrated generation, transmission and distribution
- ~863,000 customers<sup>(1)</sup>
- 46% of Oregonians
- Majority of Oregon's commercial and industrial activity

#### Financial Snapshot<sup>(2)</sup>:

Revenue: \$1.9 billion

Earnings per share: \$2.04

Net Utility Plant Assets: \$6.0 billion



## Strategic Direction



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

#### The path forward is guided by:

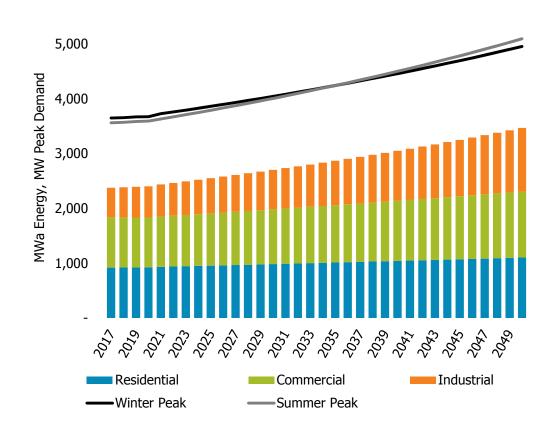
- Strong relationships with customers and community
- Empowering employees
- Opportunity to grow the business
- Delivering value to all stakeholders



## Attractive, Growing Service Area



#### Long-Term Load Growth



- Long-term forecast ~1% annually through 2050
- Driven by:
  - Residential customer growth
  - Industrial deliveries growth
  - Energy efficiency

## Constructive Regulatory Environment



#### Regulatory Construct

- Oregon Public Utility Commission
- 9.6% allowed return on equity
- 50% debt and 50% equity capital structure
- Forward test year
- Integrated Resource Planning (IRP)
- Renewable Portfolio Standard (RPS)

#### **Regulatory Mechanisms**

- Net variable power cost recovery
  - Annual Power Cost Update Tariff (AUT)
  - Power Cost Adjustment Mechanism (PCAM)
- Decoupling through 2019
- Renewable Adjustment Clause

Governor-appointed three-member commission

Chair: Lisa Hardie [D]<sup>(1)</sup> May 2020
John Savage [D] Mar 2017
Stephen Bloom [R] Nov 2019



## STRONG PLATFORM FOR STAKEHOLDER VALUE



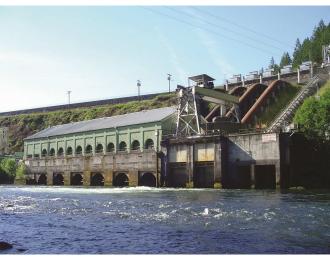
## **The Company**

## **The Strengths**

#### **The Execution**







## Key Strengths



- 1 High customer satisfaction
- 2 Diverse generation and customer base
- 3 High quality utility operations
- 4 Solid financial performance
- 5 Strong financial position

## 1. High Customer Satisfaction





## Top Quartile System Reliability Edison Electric Institute



Top Quartile Customer Satisfaction
TQS Research, Inc.



Most Trusted Brand & No. 1 for Dedication to the Environment

Market Strategies International



Top Ranked Renewable Energy Program
National Renewables Energy Laboratory

All customer satisfaction and reliability measures consistently top quartile

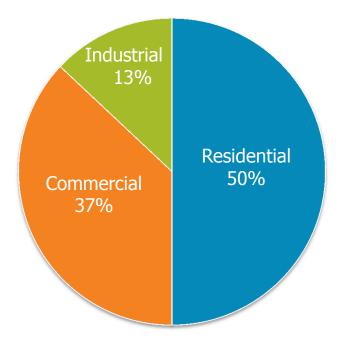
## 2. Diverse Generation and Customer Base



# Retail Revenues by Customer Class

(2015)

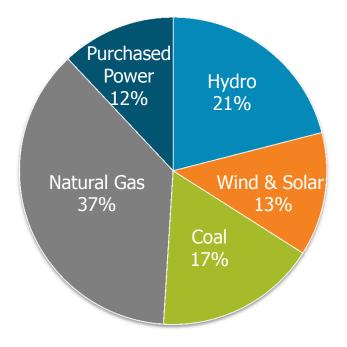
Total = \$1.78B



# Power Sources as a Percent of Retail Load

(2016 AUT)<sup>(1)</sup>

Total = 2,120 MWa



## 3. High Quality Utility Operations



- Highly dependable PGE generation portfolio with five-year average availability of 92%<sup>(1)</sup>
- Strong power supply operations to stabilize and optimize power costs
- Progressive approach to reduce coal generation – Boardman 2020 Plan and Colstrip 2035 Plan
- Generation and T&D initiative focused on improving efficiency, reliability and resiliency to meet customer needs and expectations
- Ongoing investment in technology to improve service and capture efficiencies

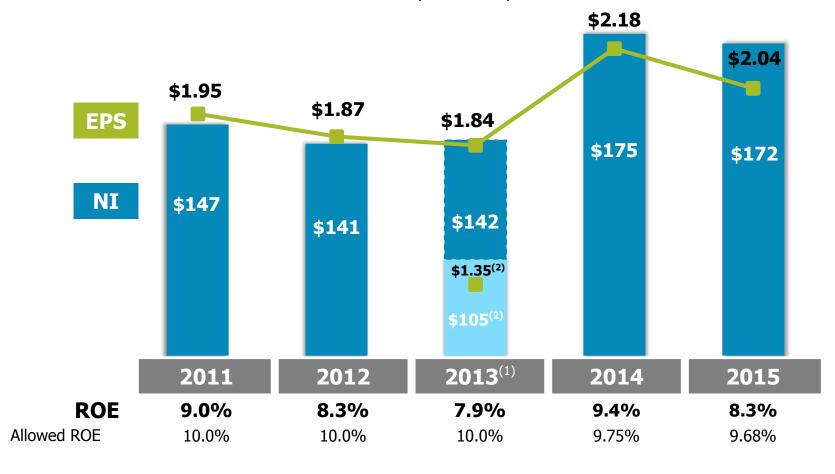


## 4. Solid Financial Performance



# Net Income, Earnings per Share, and ROE 2011 - 2015



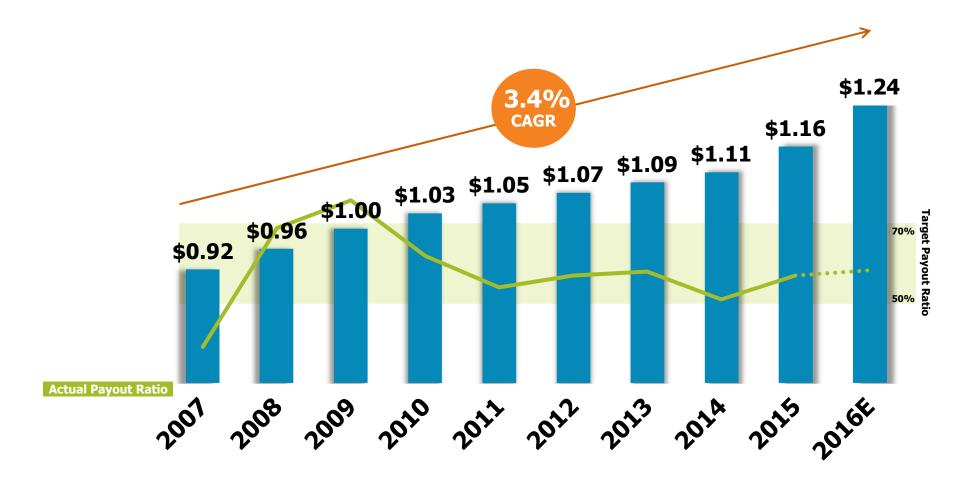


<sup>(1) 2013</sup> displays full-year non-GAAP adjusted operating earnings, which excludes the negative impact of the Cascade Crossing expense (\$0.42 EPS) and the customer billing refund (\$0.07 EPS)

<sup>(2)</sup> GAAP earnings for year-end 2013 were \$105 million or \$1.35 per diluted share

## 4. Consistent Dividend Growth





Annual dividend increases expected to be in the 5-7% range(1)

Note: Represents annual dividends paid

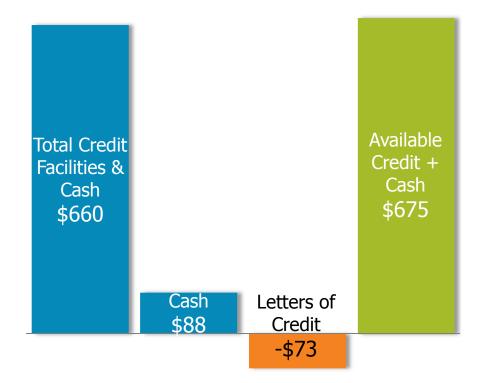
<sup>(1)</sup> Based on the company achieving earnings and cash flow estimates and other factors influencing dividends and subject to approval of the Board of Directors

## 5. Strong Liquidity Position for Growth



## **Revolving Credit Facilities**(1)

(in millions)



#### **Financial Resources**

- Investment grade credit ratings
- Manageable debt maturities
- Target capital structure of 50% debt and 50% equity

	S&P	Moody's
Senior Secured	A-	A1
Senior Unsecured	BBB	A3
Outlook	Stable	Stable

(1) All values as of 9/30/2016

## STRONG PLATFORM FOR STAKEHOLDER VALUE



#### **The Company**

### **The Strengths**

#### **The Execution**







## New Generation: Baseload Resource



#### Carty Generating Station: Placed in-service on July 29, 2016



Carty Generating Station, a 440 MW natural gas baseload plant near Boardman, OR

Capital costs, including AFDC, approved in 2016 GRC:	\$514M
Total estimated cost, including AFDC, for completion:	\$640-\$660M <sup>(1)</sup>
Carty plant in service as of 9/30/2016:	\$615M
Estimated time frame to complete litigation:	2-4 years

<sup>(1)</sup> Total estimated cost does not reflect any amounts that may be received from sureties under the performance bond, the original contractor, or contractor's parent company

## 2016 Integrated Resource Plan



## Continuing PGE's shift to a less carbon-intensive portfolio

#### Areas of Focus

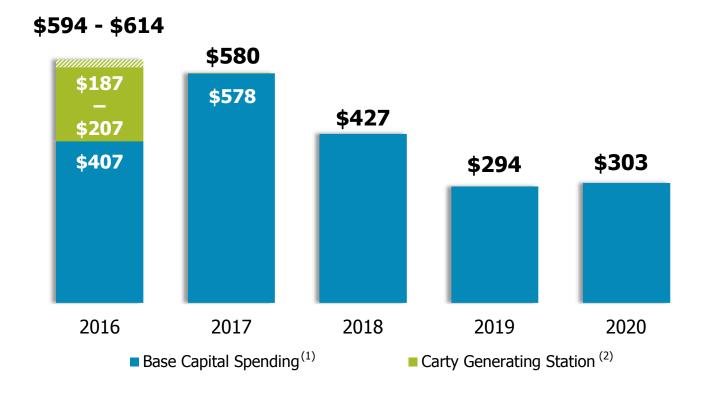
- Energy efficiency (135 MWa) and demand side actions (77 MW)
- Investment / acquisition of renewables (175 MWa) to meet Oregon Clean Electricity Plan: IRP will position PGE to comply with 27% requirement by 2025
- Filling up to 850 MW capacity deficit to ensure reliability
  - 375-550 MW long-term annual dispatchable resources
  - Up to 400 MW annual capacity resources



## Forecasted Capital Expenditures



\$ millions



#### Outlook

Additional spending has been approved by the board of directors as part of a longer term program focused on improving the efficiency, reliability and resiliency of PGE's infrastructure to meet customer needs.

Capital additions that could result from the Request For Proposal following acknowledgment of the Integrated Resource Plan have not been estimated and are not shown.

Note: Amounts do not include AFDC

- (1) Consists of board-approved ongoing Cap Ex and hydro relicensing per the Form 10-Q filed on October 28, 2016
- (2) Total estimated cost does not reflect any amounts that may be received from sureties under the performance bond, the original contractor, or contractor's parent company

## **PGE Value Proposition**



High quality utility operations

Attractive service territory

Strong financial position

Progressive reduction in carbon footprint & intensity

Generation and T&D resiliency initiatives

Future infrastructure investment opportunities

Strong Platform executing

**Sustained Long Term Growth** 

## PGE Investor Relations Team



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# Portland General Electric Appendices



### Diversified Resource Mix



#### **Resource Capacity**<sup>(1)</sup>

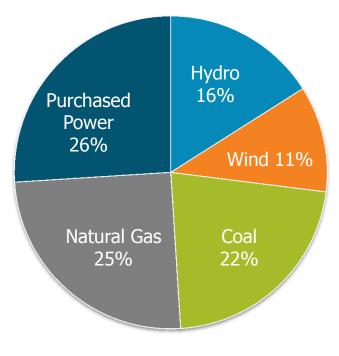
as of 12/31/2015

	Capacity in MW	% of Total Capacity
Hydro <sup>(2)</sup>		
Deschutes River Projects	303	7%
Clackamas/Willamette River Projects	192	4%
Hydro Contracts	592	13%
	1,087	24%
Natural Gas/Oil <sup>(2)</sup>		
Beaver Units 1-8	508	11%
Coyote Springs	243	5%
Port Westward Unit 1	395	9%
Port Westward Unit 2	225	5%
	1,371	30%
Coal <sup>(2)</sup>		
Boardman	518	11%
Colstrip	296	6%
	814	17%
Wind		
Biglow Canyon <sup>(3)</sup>	450	10%
Tucannon River <sup>(4)</sup>	267	6%
Wind and Solar Contracts	52	1%
	769	17%
Purchased Power	568	12%
Total	4,609	100%

#### Power Sources as a Percent of Retail Load

(2015 Actuals)

Total = 18,831,000 MWh



<sup>(1)</sup> Carty, a 440 MW natural gas plant, was added as a resource on July 29, 2016 and will be included in the 12/31/2016 disclosure.

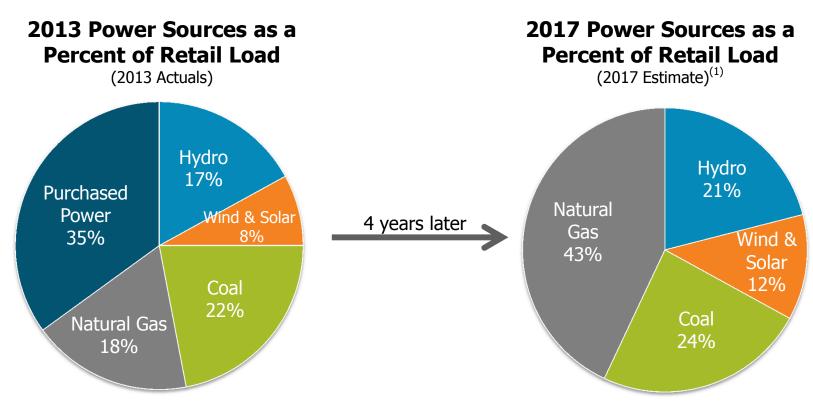
<sup>(2)</sup> Capacity of a given plant represents the megawatts the plant is capable of generating under normal operating conditions, net of electricity used in the operation of the plant.

<sup>(3)</sup> With respect to Biglow Canyon, capacity represents nameplate and differs from expected energy to be generated, which was a 26% capacity factor in 2015.

<sup>(4)</sup> With respect to Tucannon River Wind Farm, capacity represents nameplate and differs from expected energy to be generated, which was a 32% capacity factor in 2015.

## Changing Generation Portfolio





#### **Changes driven by:**

- New generation: Port Westward Unit 2 (natural gas, Q4 2014), Tucannon River (wind, Q4 2014), and Carty (natural gas, July 2016)
- Next requirements under Oregon's RPS (requiring a portion of PGE's retail load to be serviced by renewable resources): 20% by 2020, 27% by 2025, 35% by 2030, 45% by 2035 and 50% by 2040

<sup>(1)</sup> Based on an estimated forecast which includes new generation from Carty Note: For both charts, hydro and wind/solar include PGE owned and contracted resources

## Financing Activity



#### **Equity Issuances**

Equity Forward Sale Agreement

Draw pursuant to forward

Draw pursuant to forward

Net remaining shares available for issuance:

Equity Over-Allotment

Date	Shares	Net Proceeds
June 2013	11.1 million	
August 2013	0.7 million	\$20 million
June 2015	10.4 million	\$271 million
	0	
June 2013	1.7 million	\$46 million

#### Long-term Debt (\$ in millions)

#### **Issued:**

1554641			
Amount	Issuance Date	Coupon	Maturity
\$100	8/15/14	4.39%	2045
\$100	10/15/14	4.44%	2046
\$80	11/17/14	3.51%	2024
\$75	1/15/15	3.55%	2030
\$70	5/19/15	3.50%	2035
\$140	1/6/16	2.51%	2021
\$50	5/4/16	~1.1%	Nov 2017
\$75	6/15/16	~1.1%	Nov 2017
\$25	10/31/16	~1.1%	Nov 2017

#### Matured/Redeemed:

Amount	Date
\$70	Matured – Jan 2015
\$67	Redeemed – May 2015
\$75	Redeemed – Jan 2016
\$58	Redeemed – Jan 2016

## **Generation Plant Operations**



#### Track record of high availability

	2011	2012	2013	2014	2015
PGE Thermal Plants	90%	92%	84%	89%	89%
PGE Hydro Plants	100%	99%	100%	100%	99%
PGE Wind Farm	97%	98%	98%	94%	97%
PGE Wtd. Average	93%	94%	89%	92%	93%
Colstrip Unit 3 & 4	84%	93%	66%	83%	93%

#### Generation Reliability and Maintenance Excellence Program

- Corporate strategy started in 2007 to increase availability of PGE's generation plants and increase predictability of plant dispatch costs for power operations
- Key Elements
  - Reliability Centered Maintenance (RCM) modeling for PGE's generating plants and incorporation of models into PGE's maintenance management system (Maximo)
  - Root Cause Analysis (RCA) for unplanned generation outages, which expedites communication across PGE's fleet on both resolution and prevention actions
  - Internal training on technical skills, including inspection, welding and metallurgy – supporting both RCM and RCA efforts

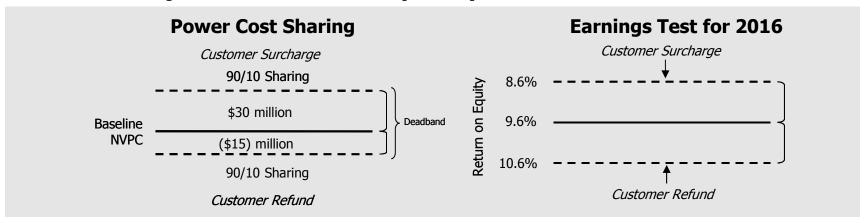
## Recovery of Power Costs



#### **Annual Power Cost Update Tariff**

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

#### **Power Cost Adjustment Mechanism (PCAM)**



- PGE absorbs 100% of the costs/benefits within the deadband, and amounts outside the deadband are shared 90% with customers and 10% with PGE
- An annual earnings test is applied, using the regulated ROE as a threshold
- Customer surcharge occurs to the extent it results in PGE's actual regulated ROE being no greater than 8.6%; customer refund occurs to the extent it results in PGE's actual regulated ROE being no less than 10.6%

#### 2016 General Rate Case



#### Oregon Public Utility Commission Order

Overall increase in customer prices: 0%

Return on Equity: 9.6%

Capital Structure: 50% debt, 50% equity

Cost of Capital: 7.51%

Rate Base: \$4.4 billion<sup>(1)</sup>

Annual revenue requirement increase: \$12 million

#### **Customer Prices**

Base Business: January 1, 2016

Carty: August 1, 2016

Customer price changes:

Base business reduction of 2.5%

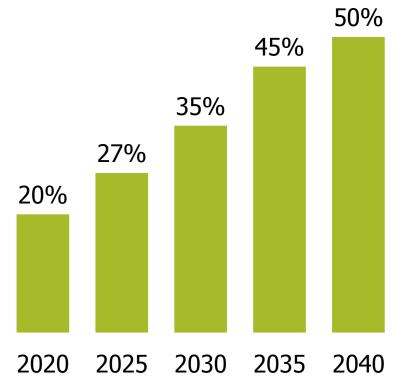
Carty increase of 2.5%

## Clean Electricity Plan and Coal Transition Plan



#### Key Elements of Plan

- Increase the renewable portfolio standard to 50 percent in 2040
- Transitions Oregon off coal-fired generation by 2035
- Includes PTCs in power costs, beginning with AUT filing for 2017
- Reaffirms state's commitment to energy-efficiency programs
- Encourages transportation electrification
- Increases access to solar energy for more Oregonians
- Flexibility to achieve goals while working with the Oregon Public Utility Commission



New renewable portfolio standards

#### Current Renewable Portfolio Standard



#### **Additional Renewable Resources**

PGE's 2009 Integrated Resource Plan addressed procurement of renewable resources to meet the 2015 requirement of Oregon's Renewable Portfolio Standard (RPS). To help meet this standard PGE built Tucannon River Wind Farm, a 267 megawatt, 116 turbine wind resource located in southeastern Washington.

	2011	2015	2020	2025	2030	2035	2040
RPS	5%	15%	20%	27%	35%	45%	50%

Renewable Portfolio Standard qualifying resources supplied approximately 10% of PGE's retail load in 2012, 2013, & 2014, and 15% of retail load in 2015.

#### **Renewable Adjustment Clause (RAC)**

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

## **Executing on New Generation**



#### Tucannon River Wind Farm

Capacity: 267 MW

In-service date: Dec. 2014

Project cost: \$525 M







#### Port Westward Unit 2

Capacity: 220 MW

Fuel: Natural Gas Reciprocating Engines

In-service date: Dec. 2014

Project cost: \$311 M

## Decoupling Mechanism



The decoupling mechanism is intended to allow recovery of margin lost due to a reduction in sales of electricity resulting from customers' energy efficiency and conservation efforts.

This includes a Sales Normalization Adjustment (SNA) mechanism for residential and small nonresidential customers ( $\leq$  30 kW) and a Lost Revenue Recovery Adjustment (LRRA), for large nonresidential 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 2015 general rate case. The SNA mechanism applies to approximately 61% of 2015 base revenues.
- The LRRA is based on the difference between actual energy-efficiency savings (as reported by the ETO) and those
  incorporated in the applicable load forecast. The LRRA mechanism applies to approximately 26% of 2015 base
  revenues.

In PGE's 2016, PGE and parties stipulated to the extension of the decoupling mechanism for three years, through the end of 2019. In addition, the use-per-customer baseline was adjusted for new connects with lower energy usage.

#### **Recent Decoupling Results**

(in millions)	2014	2015	YTD Q3 2016
Sales Normalization Adjustment	\$(6.6)	\$(6.9)	\$3.8
Lost Revenue Recovery Adjustment	\$1.4	\$(1.9)	\$0.0
Total adjustment	\$(5.2)	\$(8.8)	\$3.8

Note: refund = (negative) / collection = positive

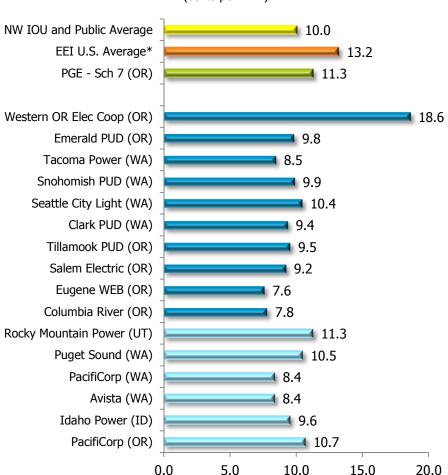
## Average Retail Price Comparison

Residential and Commercial – Winter 2016



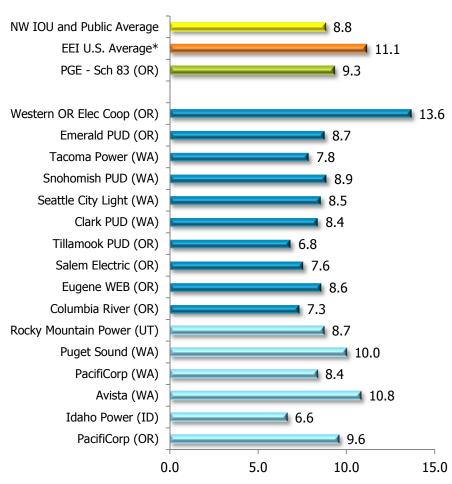
## Residential Electric Service Costs Northwestern Investor-Owned and Public Utilities

1,000 kWh per Month (cents per kWh)



# Commercial Electric Service Prices Northwestern Investor-Owned and Public Utilities

40 kW Demand - 14,000 kWh per Month (cents per kWh)



<sup>\*</sup> This average is based on Investor-owned utilities only.

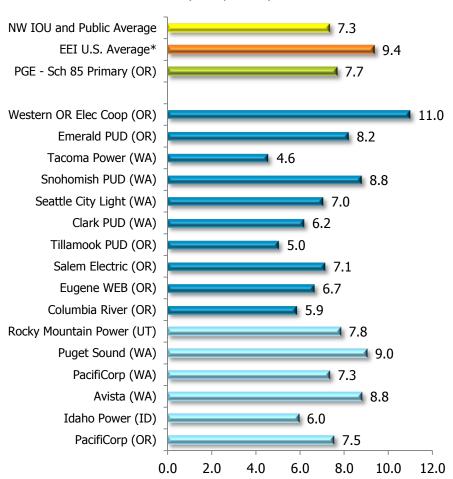
## Average Retail Price Comparison

Small and Large Industrial – Winter 2016



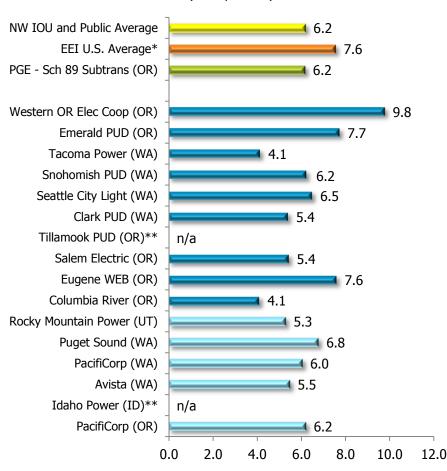
#### Small Industrial Electric Service Prices Northwestern Investor-Owned and Public Utilities

1,000 kW Demand - 400,000 kWh per Month, Primary Voltage (cents per kWh)



#### Large Industrial Electric Service Prices Northwestern Investor-Owned and Public Utilities

50,000 kW Demand - 32,500,000 kWh per Month, Subtransmission Voltage (cents per kWh)



<sup>\*</sup> This average is based on Investor-owned utilities only.

<sup>\*\*</sup> Idaho Power does not report a price to EEI for large industrial customers at this usage and demand level. Tillamook PUD does not offer a large general service tariff on their web site.