

# Investor Presentation

Portland General Electric  
December 2019



# Cautionary statements

## Information Current as of November 1, 2019

Except as expressly noted, the information in this presentation is current as of November 1, 2019 — the date on which PGE filed its Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 — and should not be relied upon as being current as of any subsequent date. PGE undertakes no duty to update this presentation, except as may be required by law.

## Forward-Looking Statements

Statements in this presentation 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 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; general economic and financial market conditions; severe weather conditions, wildfires, and other natural phenomena and natural disasters that could result in operational disruptions, unanticipated restoration costs, or liability for third party property damage; and cyber security breaches of the company’s customer information system or operating systems, which may affect customer bills or other aspects of our operations. 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 expressly disclaims any current intention to update publicly any forward-looking statement after the distribution of this presentation, whether as a result of new information, future events, changes in assumptions or otherwise. Prospective investors should also review the risks, assumptions and uncertainties listed in the company’s most recent annual report on form 10-K and in other documents that we file 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 values

100% regulated utility

High-growth service area

Investing in a reliable and clean energy future

Focusing on operational effectiveness and efficiency

Delivering exceptional customer experiences

Building a smarter more resilient grid

# The company



# PGE at a glance

## Quick facts

- Vertically integrated electric company encompassing generation, transmission and distribution
- 892,000 customers in 51 Oregon incorporated cities
- 46 percent of Oregon's population lives within PGE service area
- 75 percent of Oregon's commercial and industrial activity occurs in PGE service area

## Financial snapshot

- 2018 revenue: \$2.0 billion
- 2018 diluted earnings per share: \$2.37
- Net utility plant assets: \$7.0 billion<sup>(1)</sup>

## 3,800+ MWs of Generation

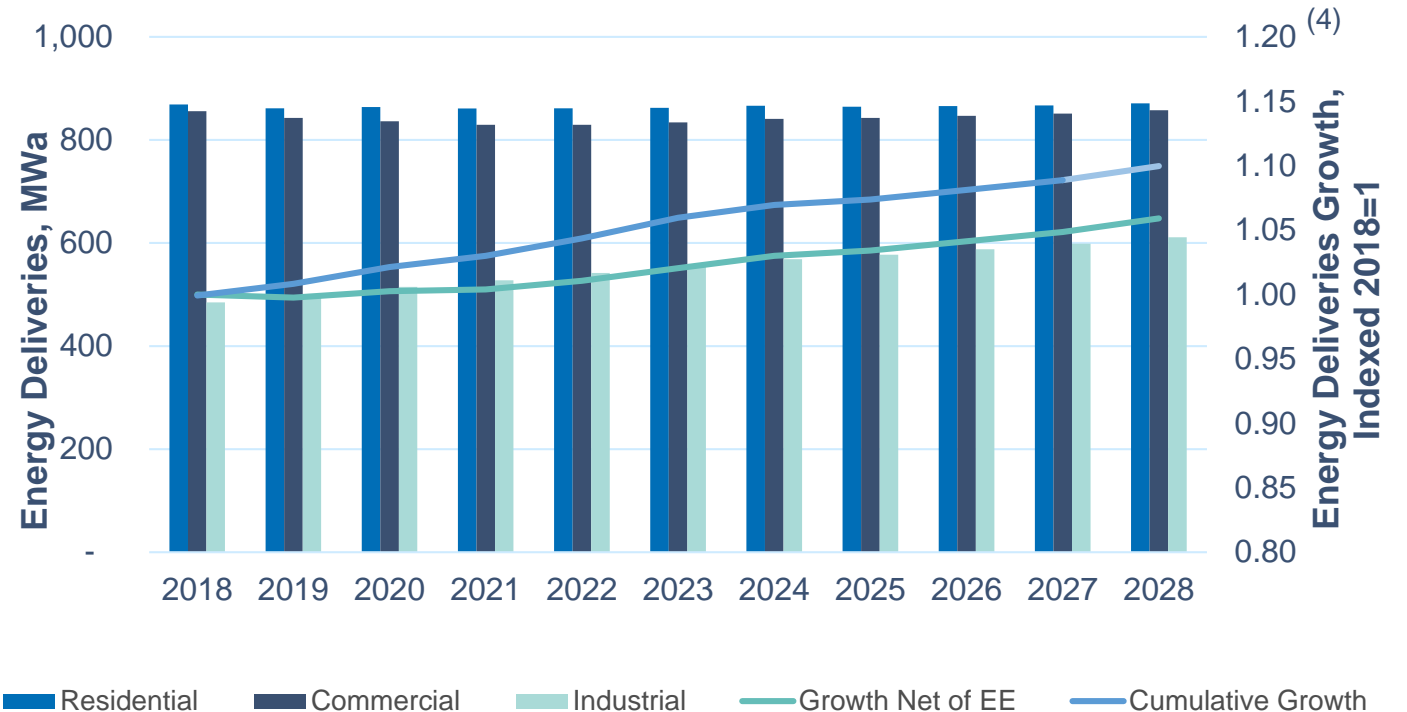


1. As of 9/30/2019

2. Wind component expected to be operational by December 2020

# Attractive, growing service area

- 1%+ average annual customer count growth<sup>(1)</sup>
- Oregon's annual GDP growth averaged 2.8% over the past two decades<sup>(2)</sup>
- Oregon median household income growth ranked the second fastest in the nation<sup>(3)</sup>
- Industrial segment growth driven by high tech and data centers<sup>(4)</sup>
- Unemployment in our service area remains low at 3.5%, below the national average of 4.0%<sup>(5)</sup>



1. Forecasted growth until 2028
2. U.S. Bureau of Economic Analysis
3. US Census Bureau, data for 2018
4. Sector load growth shown is net of energy efficiency
5. PGE-3 County Average, September 2019, Source: State of Oregon Employment Department



# Constructive regulatory environment

## Regulatory construct

- Forward test year
- Integrated Resource Planning (IRP)
- Renewable Portfolio Standard (RPS)
- Proven track record of achieving reasonable settlements

## Regulatory mechanisms

- Net variable power cost recovery
  - Annual Power Cost Update Tariff (AUT)
  - Power Cost Adjustment Mechanism (PCAM)
- Decoupling through 2022
- Renewable Adjustment Clause (RAC)

## Regulatory body

- Public Utility Commission of Oregon
- Governor-appointed three member commission serving four-year terms

	Term expiration
Megan Decker [D] (Chair)	March 2021
Stephen Bloom [R]	Nov 2019
Letha Tawney [D]	May 2020

- Mark Thompson [R] was nominated by Governor Kate Brown to join the Commission to replace Commissioner Bloom
- Confirmation by the Oregon Senate is expected in November 2019

# 2019 general rate case

## Key Items

- Approved price increase: 0.5%
- Return on equity (ROE): 9.5%
- Cost of long-term debt: 5.1%
- Capital structure: 50% debt, 50% equity
- Rate base: \$4.75 billion

## Requests approved by the Commission:

- Energy storage projects associated with renewables can be included in future Renewable Adjustment Clause (RAC) filings for cost recovery pursuant to a showing of prudence and an appropriate nexus of the storage facility with renewables
- Use of trended weather method in the load forecast for price setting purposes
- Decoupling was expanded to include additional existing customers with demands of up to 200 kW and was extended through 2022



# Key strengths

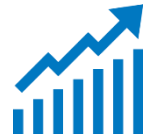


# Focus on customers



**Top quartile  
system  
reliability**

Edison Electric  
Institute



**Top quartile  
customer  
satisfaction**

TQS Research, Inc.  
and Market Strategies  
International



**Most trusted brand  
& environmental  
champion**

Market Strategies  
International



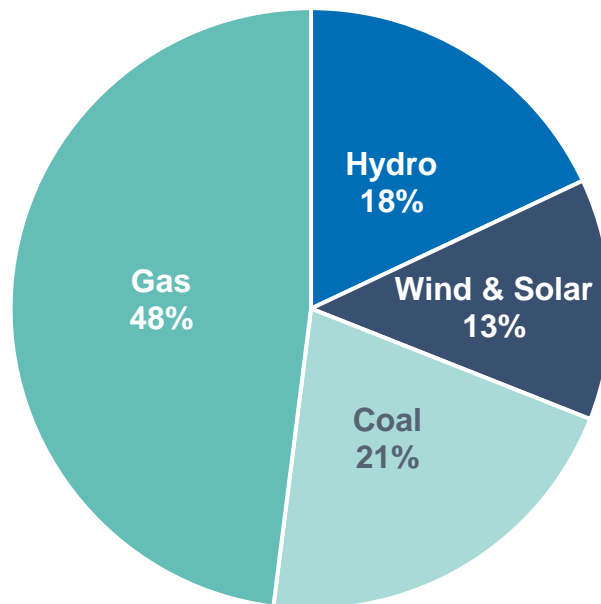
**No.1 renewable  
energy program  
in the nation by  
enrollment and  
MWh sold**

National Renewables  
Energy Laboratory

# Diverse generation and customer base

## Power sources as a percent of retail load

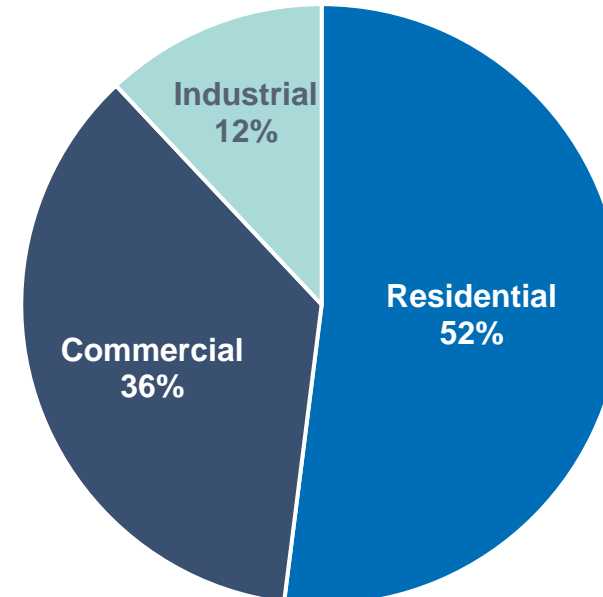
2018 general rate case<sup>(1)</sup>



Total = 2,105 MWa

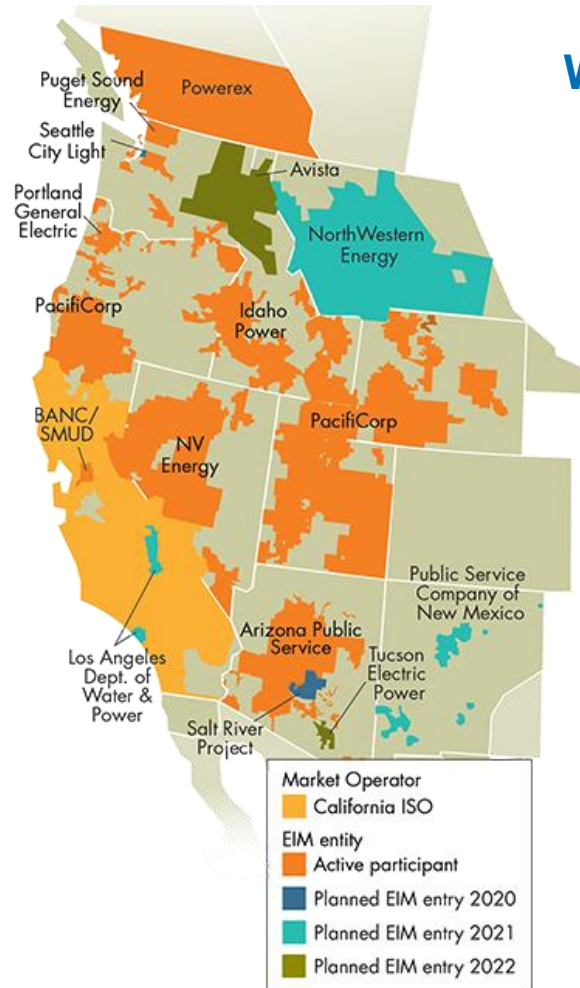
## Retail revenues by customer class

2018



Total retail revenues = \$1.8B

# High-quality utility operations

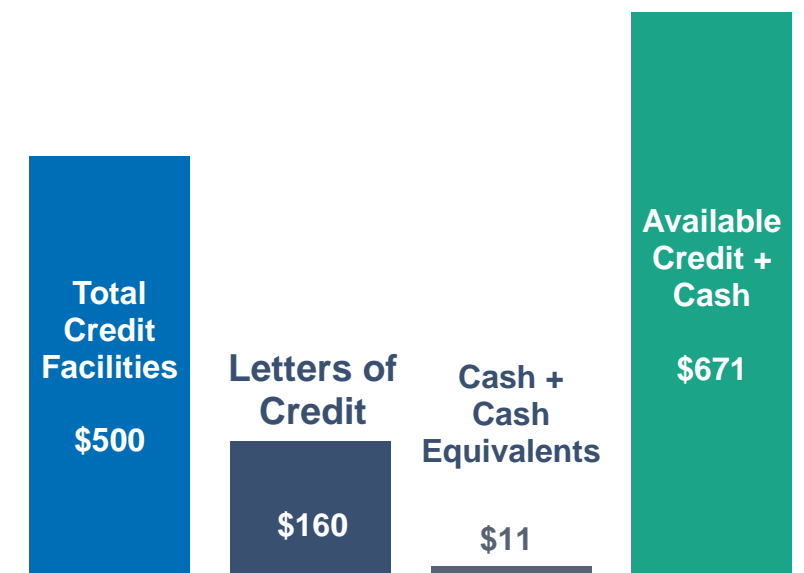


## Western Energy Imbalance Market

- Highly-dependable generation fleet with seven-year average availability of 92%<sup>(1)</sup>
- Strong power supply portfolio management and western EIM integration to enhance reliability and optimize resources
- Transitioning away from coal-fired generation
- Investment plans to provide safer and more reliable service to our customers
- Smart grid opportunities to incorporate more renewables, decarbonize, power the transportation network and integrate demand side resources

# Strong liquidity position for growth

## Revolving credit facilities<sup>(1)</sup> (\$ in millions)



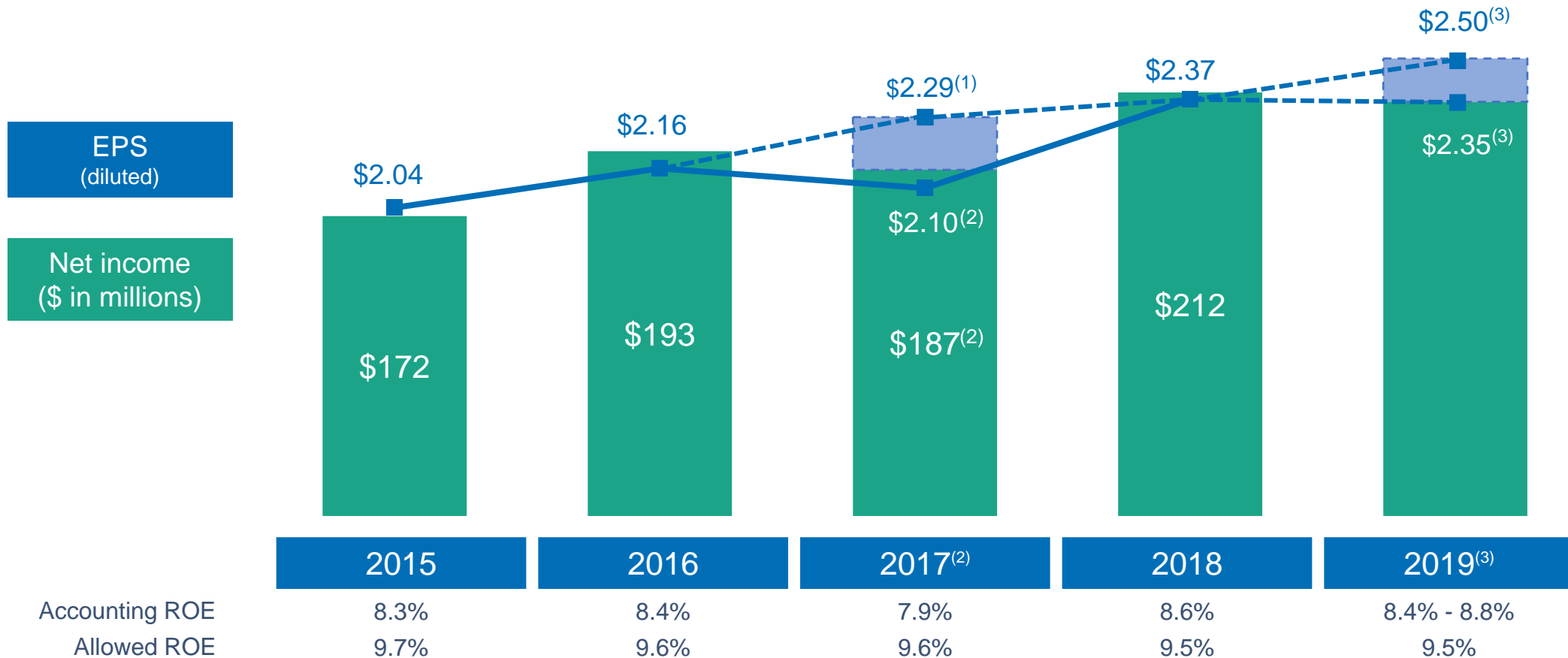
## Financial resources

- 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	Positive	Stable

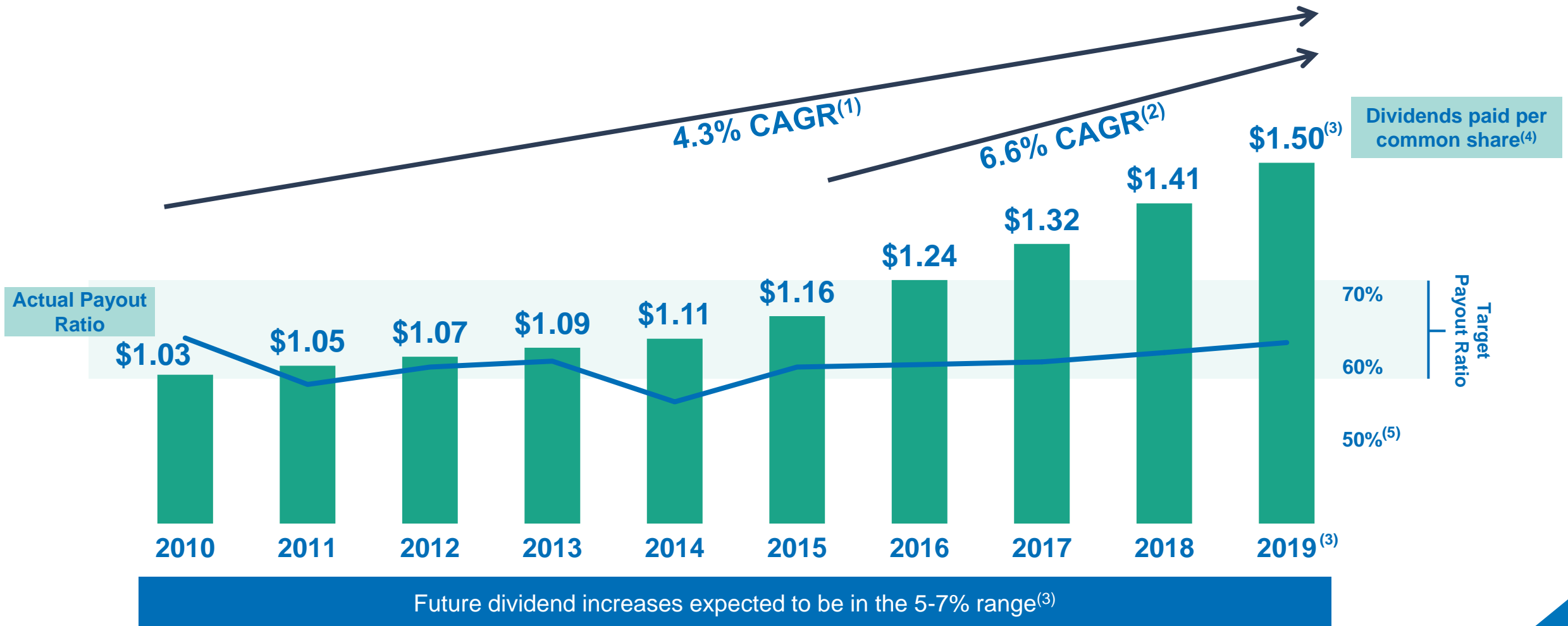
# Solid financial performance

## Net income, earnings per share, and ROE



1. 2017 contains adjusted earnings that are not determined in accordance with generally accepted accounting principles (GAAP). Management uses non-GAAP financials to communicate the company's expectations regarding its past and future earnings and assist with the analysis of the company's financial performance. 2017 displays full-year non-GAAP adjusted earnings, which excludes the negative impact of the Tax Cuts and Jobs Act expense (\$0.19 EPS)
2. GAAP earnings for year-end 2017 were \$187 million or \$2.10 per diluted share
3. Estimates and projections are based on assumptions and there can be no assurance regarding the amount of future earnings.

# Proven dividend growth



1. Compound Annual Growth Rate from 2010 through 2019
2. Compound Annual Growth Rate from 2015 through 2019
3. Estimates and projections are based on assumptions and there can be no assurance regarding the amount of future earnings, cash flows and other factors influencing dividends, which are subject to approval by the Board of Directors.
4. Represents annual dividends paid per common share
5. Dividend payout ratio prior to 2018 was 50%-70%

# Looking Forward





# Clean and reliable energy future

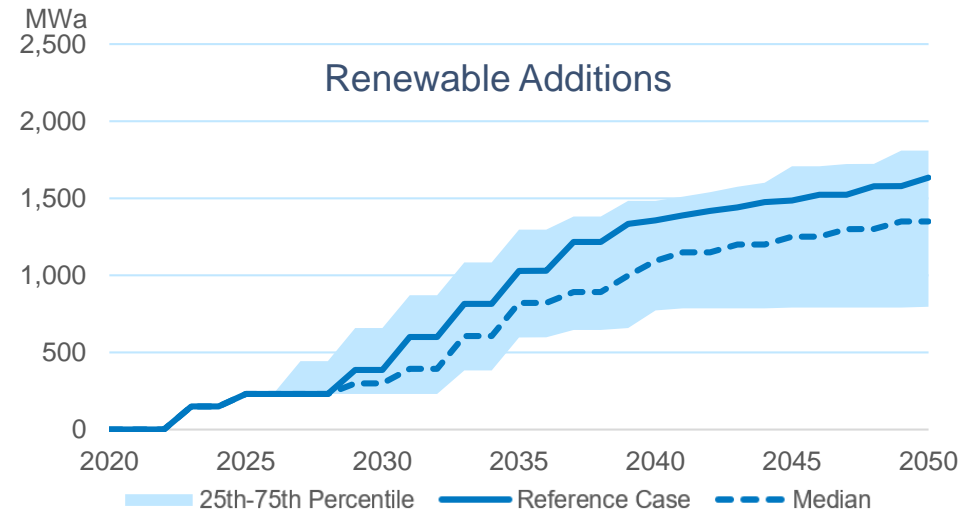
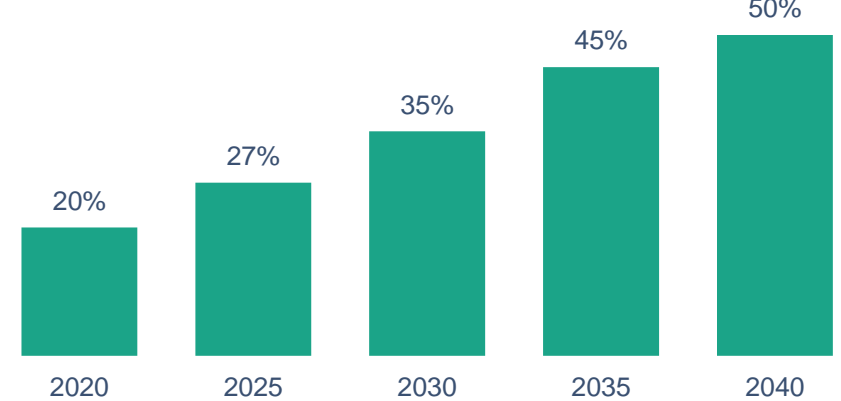
## Key elements

- Transition PGE customers off coal-fired generation by 2030
- Production tax credits included in annual power cost filings since 2017
- Pursue transportation electrification

## Long-term strategy

- Layered approach balances near-term and long-term risks and benefits for customers
- Incremental renewable actions reduce near-term carbon emissions and puts PGE on track to meet Oregon's carbon reduction goal

Renewable Portfolio Standard



# 2016 Integrated Resource Plan

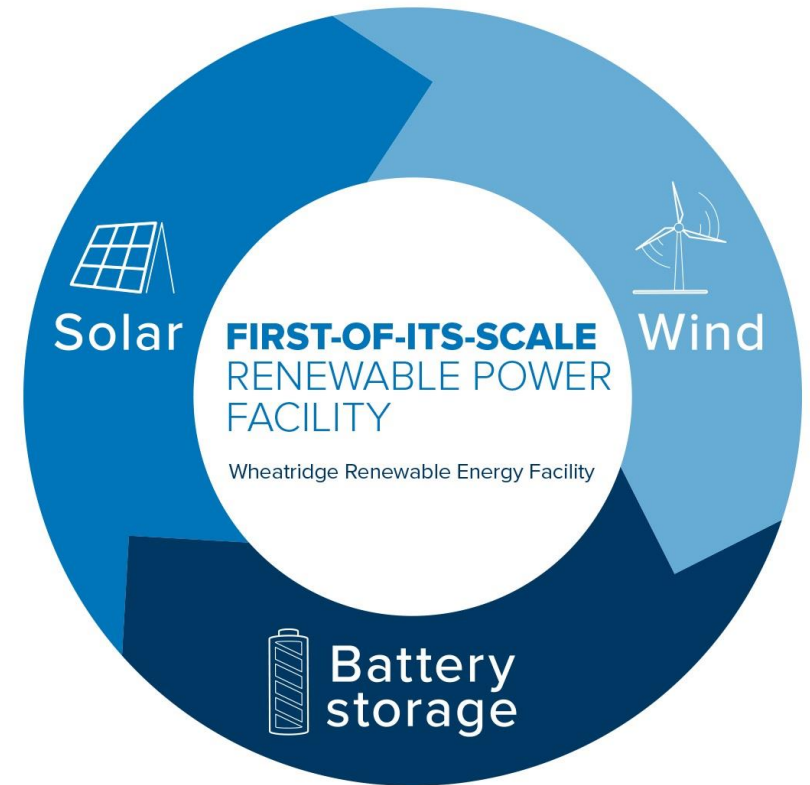
A flexible, balanced plan that reflects our commitment to a low-carbon future and pursuant to the Oregon Clean Electricity Plan

## Renewables

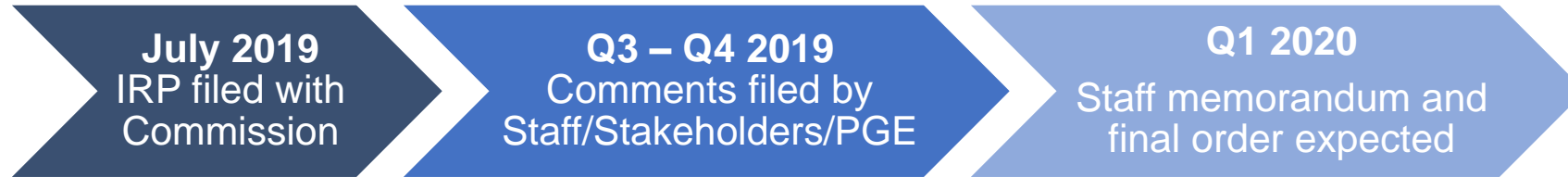
- Procured renewables (100 MWa) to help ensure Oregon Clean Electricity Plan
  - Wheatridge Renewable Energy Facility:
    - Split ownership and PPA<sup>(1)</sup>
    - Resource capacity:
      - Wind 300 MW online in 2020
      - Solar 50 MW online in 2021
      - Battery 30 MW online in 2021

## Capacity need

- Executed contracts for 300 MWs through RFP procurement process:
  - 200 MW of annual capacity with five-year terms beginning 2021
  - 100 MW of seasonal peak capacity during summer and winter periods with a five-year term beginning 2019



# 2019 Integrated Resource Plan



The plan reflects our focus on meeting customer needs and addressing stakeholder feedback.

## Action Plan

- **Customer resource actions** - increased energy efficiency, demand response, storage and dispatchable standby generation
- **Renewable resource actions** - a renewable RFP of 150 MWa, estimated online 2023
- **Capacity resource actions** - a multi-stage procurement process for up to 595 MW total of cost-competitive capacity
  - Pursue cost-competitive agreements for existing capacity in the region
  - Conduct an RFP for remaining capacity needs

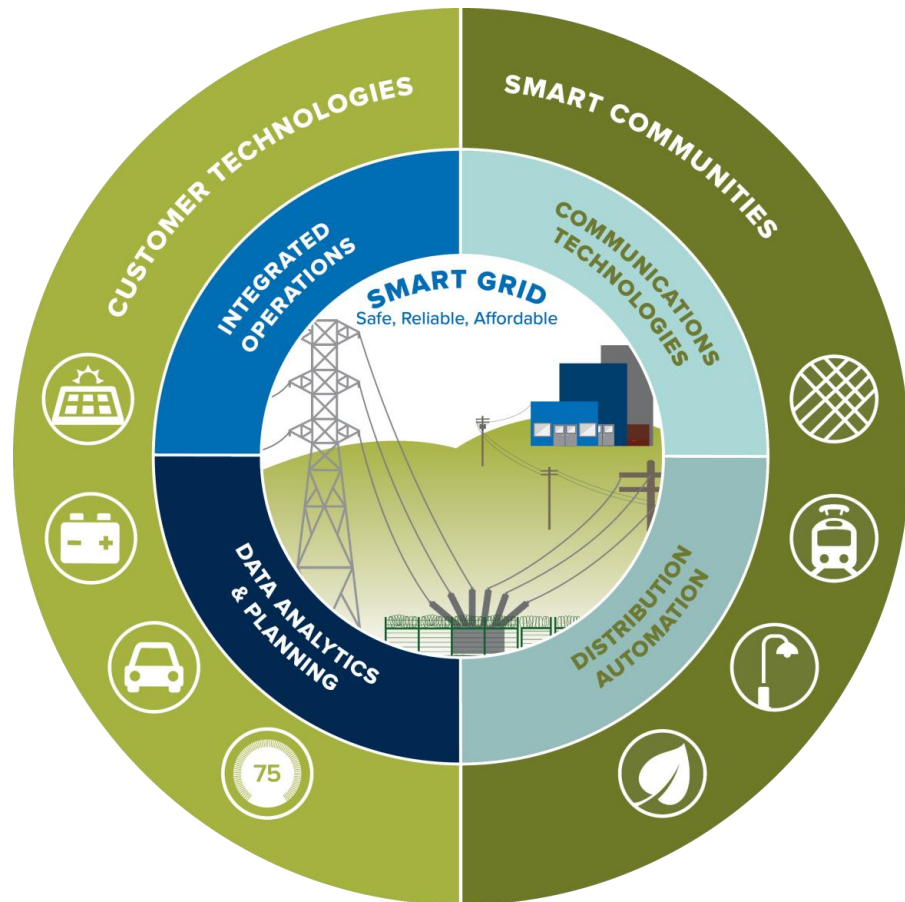
# Integrated Operations Center

**A new 24/7 center for key operations:**

- Advances our integrated grid strategy
- Significantly improves seismic resilience, cyber and physical security
- Improves monitoring, control and optimization of distributed assets and our distribution system



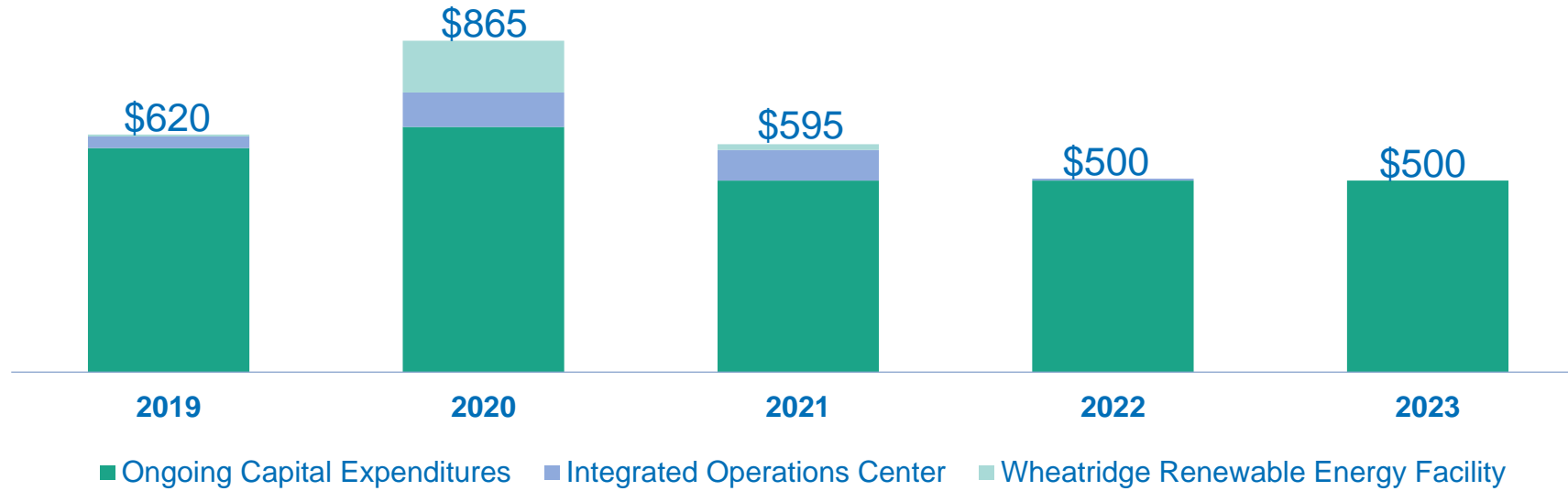
# Smart grid strategies



## Building a smarter more resilient grid:

- New communication systems
- Distributed automation systems
- Data analytics
- Integrate customers' energy resources
- Utility-scale battery storage

# Forecasted capital expenditures



## Outlook

- Updating and replacing aging generation, transmission and distribution equipment
- Building a smarter, more resilient grid
- Investments to construct the Integrated Operations Center
- Adding 100 MW of wind generation at Wheatridge Renewable Energy Facility

# Environmental, Social and Governance (ESG)

## Environmental

### Decarbonize

80% reduction in GHG emissions below 1990 levels, Green tariff

### Electrify

Smart grid test beds, accelerating transportation electrification, EV transit partnerships

### Reliability

System upgrades, demand response and access to capacity

## Social

### Customers

Ensuring universal access at affordable prices

### Community

45,000 hours of employee and retiree volunteer time, \$4.2m donated to local schools and nonprofits in 2018

### Employees

Pre-Apprentice training and Lineman rodeo, 83% employee engagement

## Governance

### Experienced

Wide range of skills, backgrounds and leadership positions

### Diverse

50% of Directors contributing gender/racial diversity, including female CEO

### Independent

CEO is the only non-independent board member, independent board committees

Additional information:

- [PGE Sustainability Report Key Metrics](#)
- [ESG webpage](#)
- [PGE ESG Presentation](#)

# PGE investor relations team

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# Portland General Electric Appendices

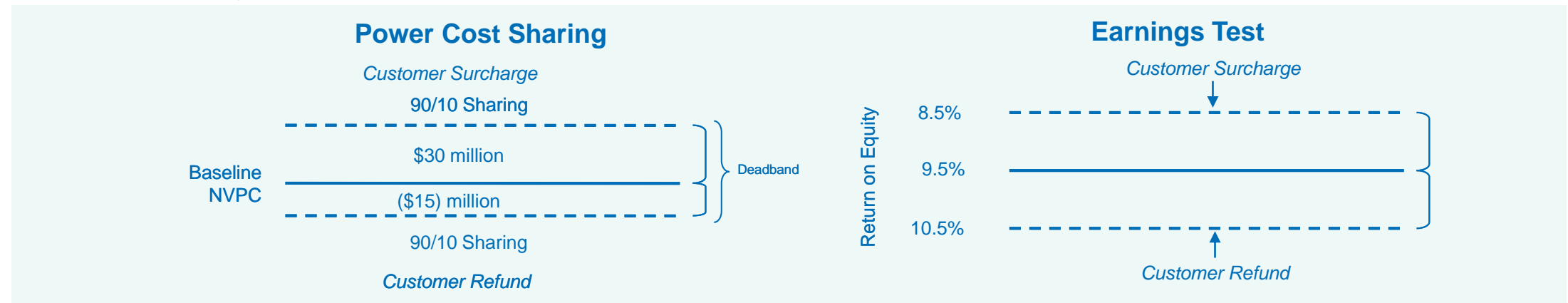


# Recovery of power costs

## 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 prudence 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 if PGE's actual regulated ROE is below 8.5%; ROE will not exceed 8.5% with surcharge
- Customer refund occurs if PGE's actual regulated return is above 10.5%; regulated return will not decrease below 10.5% with refund

# Renewable portfolio standard

## Additional renewable resources

- As of 2018, PGE had the following qualifying renewable resources:

Type of Resource	% of Retail Load
Wind	9.9%
Low-Impact Hydro	2.5%
Solar & Other	<1%

## Renewable Portfolio Standard:

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

- Renewable Portfolio Standard qualifying resources and Renewable Energy Certificates (RECs) supplied approximately 10% of PGE's retail load in 2012, 2013, and 2014, and approximately 15% of retail load in 2015, 2016 and 2017

## Renewable Adjustment Clause (RAC)

- Renewable resource can be tracked into prices, through an automatic adjustment clause, without a general rate case. Using Schedule 122, prices go into effect on the resource's in-service date and are updated annually. Upon Commission approval of the subsequent general rate case the renewable resource is included in base prices and Schedule 122 goes back to zero

# 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 (LRRRA), for large nonresidential customers (between 31 kW and 1 MWa). In PGE's 2019 general rate case, the Commission approved the inclusion of nonresidential customers with demands of up to 200 kW in the SNA mechanism beginning in 2019<sup>(1)</sup>

- The SNA is based on the difference between actual usage per customer and that projected in PGE's 2019 general rate case. The SNA mechanism applies to approximately 77% of 2019 customer revenues
- The LRRRA is based on the difference between actual energy-efficiency savings (as reported by the ETO) and those incorporated in the applicable load forecast. The LRRRA mechanism applies to approximately 13% of 2019 customer revenues

## Recent Decoupling Results

(\$ in millions)	2014	2015	2016	2017	2018
Sales Normalization Adjustment	\$(6.6)	\$(8.8)	\$1.9	\$11.6	\$(1.3)
Lost Revenue Recovery Adjustment	\$1.4	\$(0.5)	\$(0.8)	\$(0.4)	\$(1.1)
<b>Total adjustment</b>	<b>\$(5.2)</b>	<b>\$(9.3)</b>	<b>\$1.1</b>	<b>\$11.2</b>	<b>\$(2.4)</b>

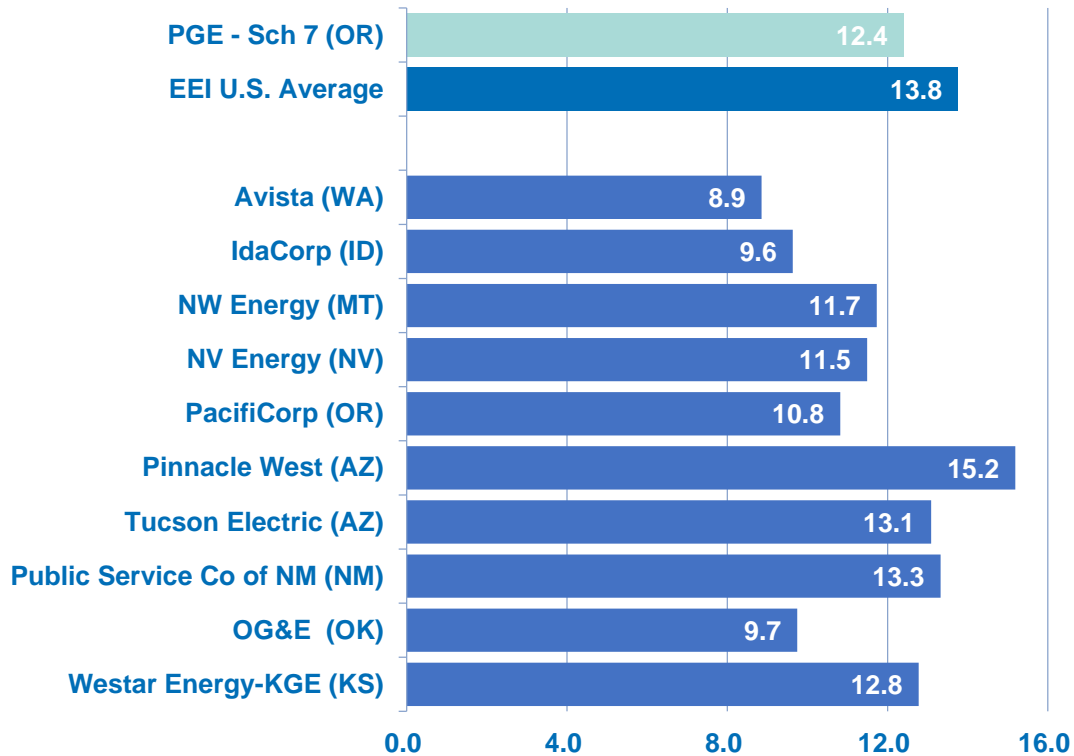
Note: refund = (negative) / collection = positive

# Average retail price comparison

## Residential and Commercial - Winter 2019

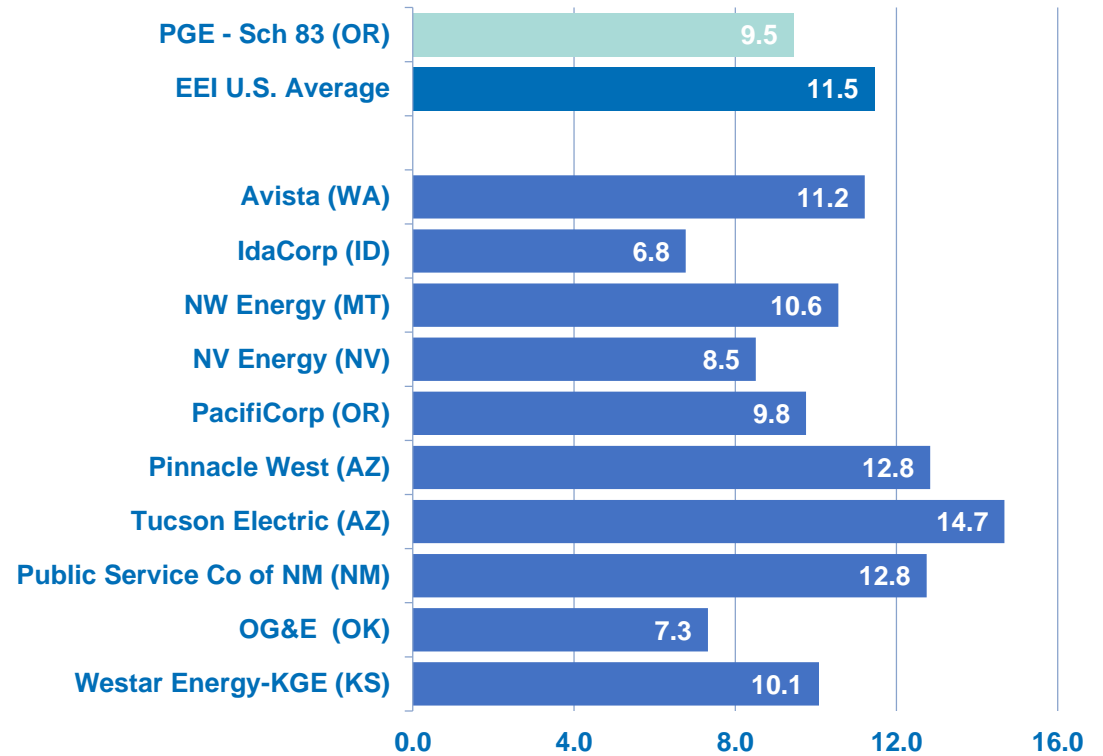
### Residential Electric Service Prices:

1,000 kWh monthly consumption  
(Prices in cents per kWh)



### Commercial Electric Service Prices:

40 kW demand and 14,000 kWh monthly consumption  
(Prices in cents per kWh)



Notes:

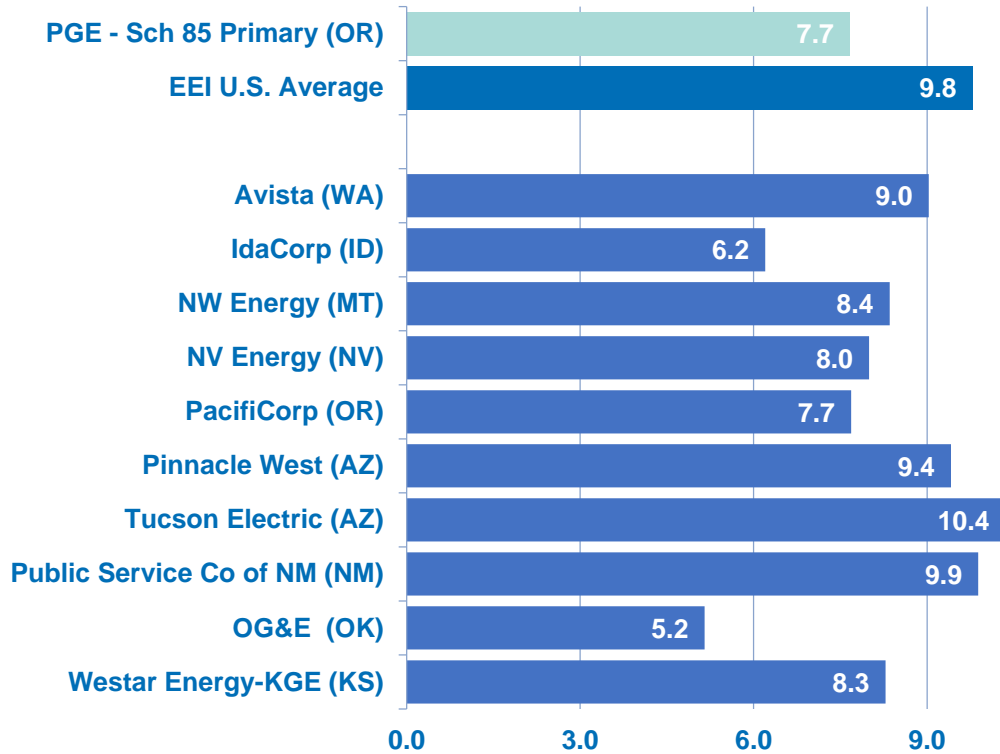
- This average is based on Investor-owned utilities only
- EEI U.S. Average is based on Investor-owned utilities only
- Source: EEI Typical Bills and Average Rates Report for Prices in effect Jan. 1, 2019

# Average retail price comparison

## Small and Large Industrial - Winter 2019

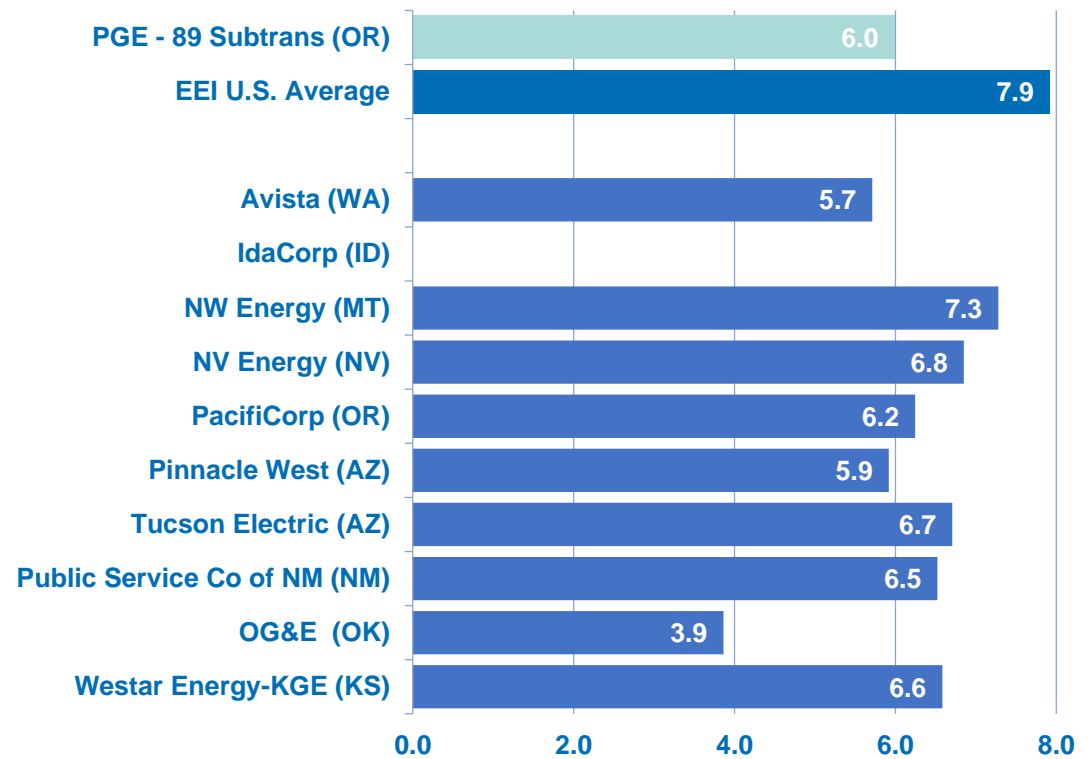
### Industrial Electric Service Prices

1,000 kW peak demand and 400,000 kWh monthly consumption  
(Prices in cents per kWh)



### Large Industrial Electric Service Prices

50,000 kW peak demand and 32,500,000 kWh monthly consumption  
(Prices in cents per kWh)



Notes:

- This average is based on Investor-owned utilities only
- EEI U.S. Average is based on Investor-owned utilities only
- Source: EEI Typical Bills and Average Rates Report for Prices in effect Jan. 1, 2019