## Investor Presentation

Portland General Electric February 2019



### **Cautionary statement**

#### **Information Current as of February 15, 2019**

Except as expressly noted, the information in this presentation is current as of February 15, 2019 — the date on which PGE filed its Annual Report on Form 10-K for the year ended December 31, 2018 — 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; 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 statement. 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 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<sup>(1)</sup>

- Vertically integrated electric company encompassing generation, transmission and distribution
- 885,000 customers in 51 Oregon incorporated cities<sup>(1)</sup>
- 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**

- Revenue: \$2.0 billion<sup>(2)</sup>
- Diluted earnings per share: \$2.37 for 2018
- Net utility plant assets: \$6.9 billion<sup>(1)</sup>

#### 3,800+ MWs of Generation



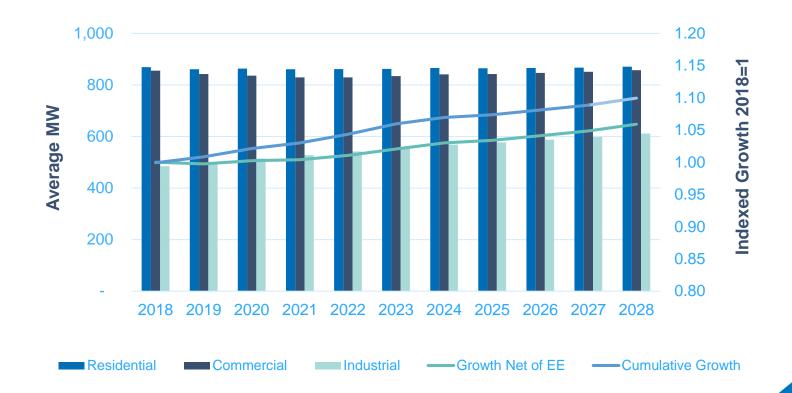


<sup>1.</sup> As of 12/31/2018

<sup>2.</sup> Period of 1/1/2018 – 12/31/2018

### Attractive, growing service area

- 1%+ average annual customer count growth
- Above-average population growth due to in-migration
- Oregon's annual GDP growth averaged 2.9% over the past two decades<sup>(1)</sup>
- Industrial segment growth driven by high tech and data centers<sup>(2)</sup>
- Unemployment in our service area remains low at 3.5%, lower than the Oregon rate of 4.0% and U.S. rate of 3.9%<sup>(3)</sup>



- 1. U.S. Bureau of Economic Analysis
- 2. Sector load growth shown is net of energy efficiency
- 3. Oregon Office of Economic Analysis





# Constructive regulatory environment

#### **Regulatory construct**

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

#### **Regulatory body**

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

#### **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)



### 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
- Decoupling using the Sales Normalization Adjustment Mechanism including Customers with demands of up to 200 kW. Decoupling 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

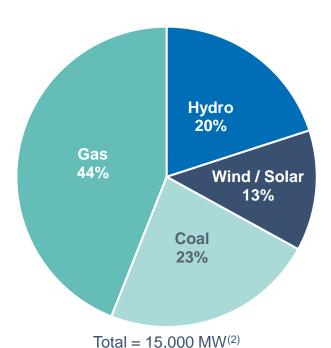
National Renewables Energy Laboratory



# Diverse generation and customer base

#### **Total system load**

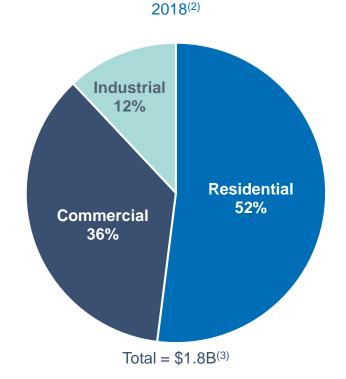
2018 Power Sources(1)



#### I. Hydro and wind/solar include PGE-owned and contracted resources

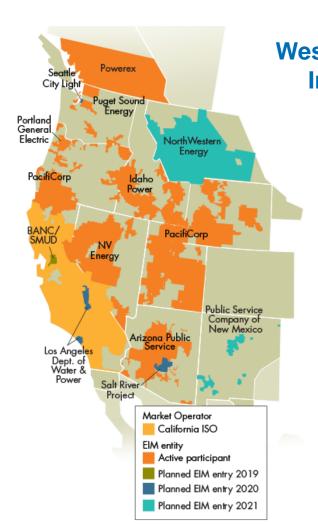
- 2. Not inclusive of wholesale sales
- 3. Inclusive of wholesale revenues

#### Retail revenues by customer class





### High-quality utility operations



Western Energy Imbalance Market

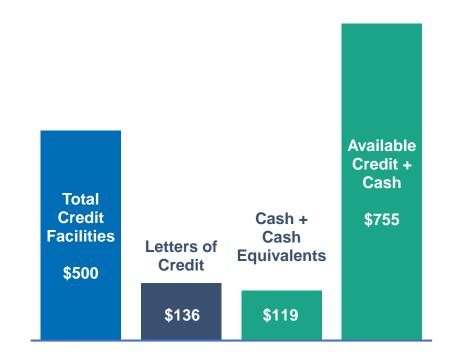
- Highly-dependable generation fleet with seven-year average availability of 92%<sup>(1)</sup>
- Strong power supply portfolio management and western EIM integration to enhance reliability and optimize resources
- Progressive approach to reduce coal generation
- Investment plans to provide a safer and more reliable service to our customers, as well as customer information system and technology
- 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)



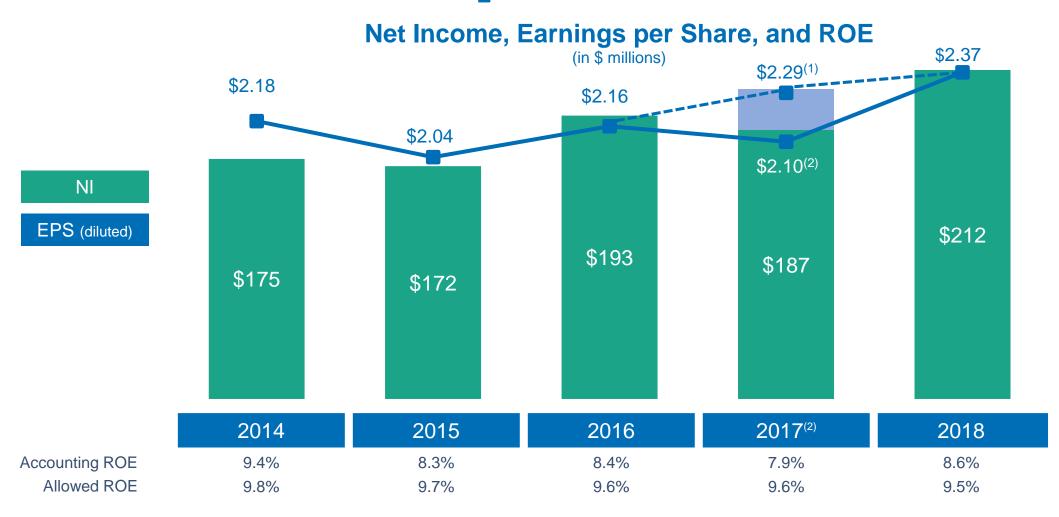
#### **Financial resources**

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

	S&P	Moody's
Senior Secured	Α	A1
Senior Unsecured	BBB+	А3
Outlook	Positive	Stable



### Solid financial performance



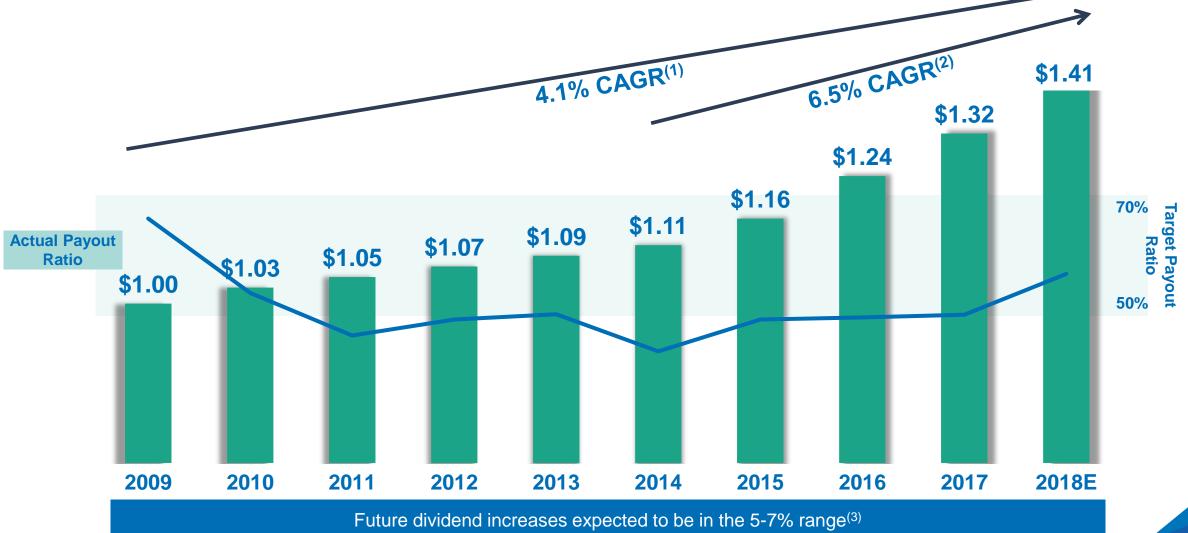
<sup>1. 2017</sup> displays full-year non-GAAP adjusted earnings, which excludes the negative impact of the Tax Cuts and Jobs Act expense (\$0.19 EPS)



<sup>2.</sup> GAAP earnings for year-end 2017 were \$187 million or \$2.10 per diluted share

Note: 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.

### Proven dividend growth



<sup>.</sup> Compound Annual Growth Rate from 2009 through 2018



<sup>2.</sup> Compound Annual Growth Rate from 2014 through 2018

<sup>3.</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 Note: Represents annual dividends paid

### **Looking Forward**



### Clean and reliable energy future

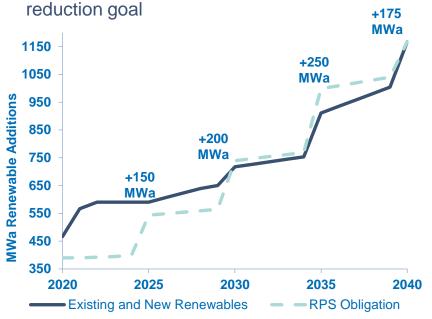
#### **Key elements**

- Transition Oregon 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 by 2021 reduce near-term carbon emissions and puts PGE on track to meet Oregon's carbon





### **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 meet Oregon Clean Electricity Plan
  - Wheatridge Renewable Energy Facility:
    - Split ownership and PPA<sup>(1)</sup>
    - Resource capacity:

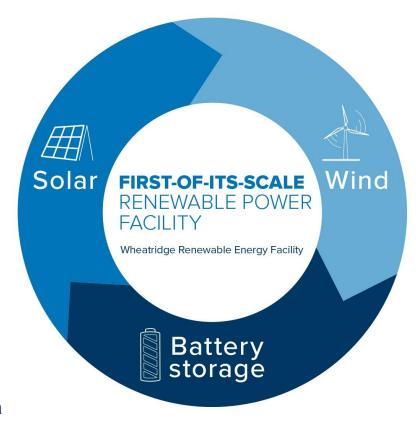
Wind 300 MW, online in 2020

Solar 50 MW, online in 2021

Battery 30 MW, online in 2021

#### **Capacity need**

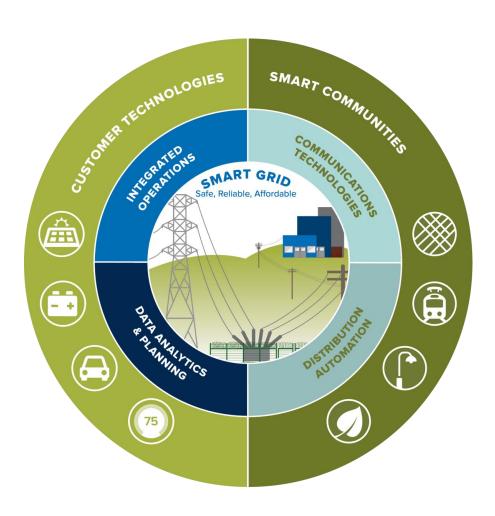
- Executed contracts for 300 MWs through bilateral procurement processes:
  - 200 MW of annual-capacity with five-year terms beginning 2021
  - 100 MW of seasonal peak capacity during summer and winter periods with a five-year term beginning 2019





<sup>1.</sup> PGE will own 100 megawatts of the wind project. Subsidiaries of NextEra Energy Resources will own the balance of the project and sell its output to PGE under 30-year power purchase agreements

### **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
- New customer information system



### Forecasted capital expenditures

#### **Outlook**

- Support for continued customer growth
- Upgrades and replacement of aging generation, transmission and distribution equipment
- Strengthening the grid for natural disasters, cyber and physical security
- Building a smarter, more flexible grid to enable seamless integration of new technologies



Ongoing Capital Expenditures

(in \$ millions)



### PGE investor relations team

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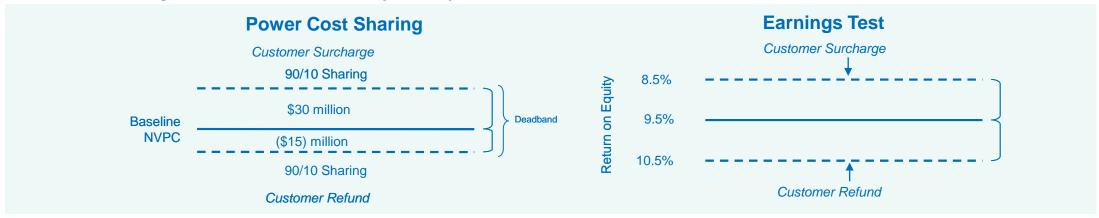
# Portland General Electric Appendices PGE

### **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 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 2017, PGE had the following qualifying renewable resources:

Type of Resource	% of Retail Load			
Wind	9.4%			
Low-Impact Hydro	2.5%			
Solar & Other	0.7%			

#### **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, & 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 include 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 (≤ 30 kW) and a Lost Revenue Recovery Adjustment (LRRA), for large nonresidential customers (between 31 kW and 1 MWa). In PGE's 2019 general rate case, the Commission approved<sup>(1)</sup> the inclusion of nonresidential customers with demands of up to 200 kW in the SNA mechanism beginning in 2019.

- 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 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 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)
Total adjustment	\$(5.2)	\$(9.3)	\$1.1	\$11.2	\$(2.4)

Note: refund = (negative) / collection = positive

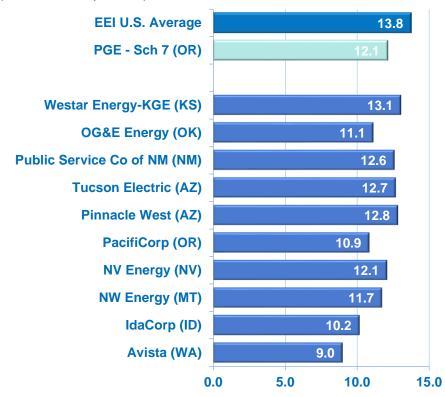


### Average retail price comparison

#### **Residential and Commercial - Winter 2018**

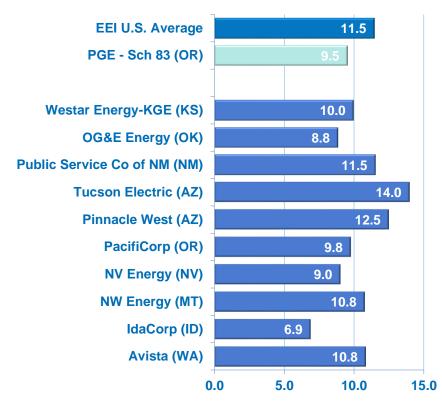
#### **Residential Electric Service Prices:**

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, 2018

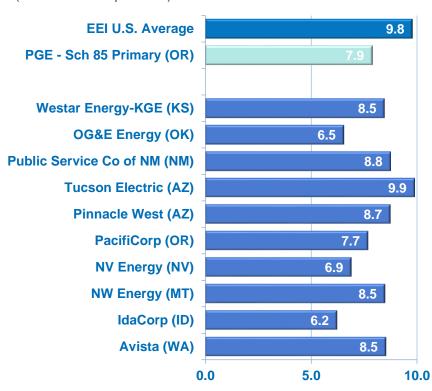


### Average retail price comparison

#### **Small and Large Industrial - Winter 2018**

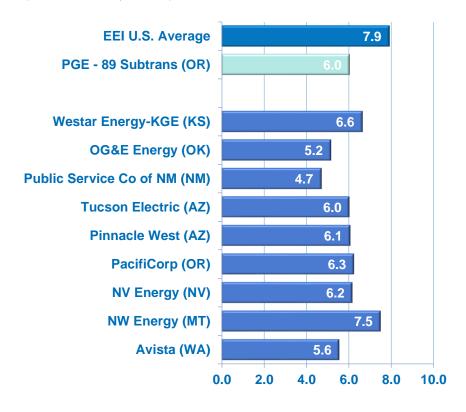
#### **Industrial Electric Service Prices**

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, 2018

