

Henry Lorenzen
Chair
Oregon

Bill Bradbury
Oregon

Guy Norman
Washington

Tom Karier
Washington



Northwest **Power** and **Conservation** Council

W. Bill Booth
Vice Chair
Idaho

James Yost
Idaho

Jennifer Anders
Montana

Tim Baker
Montana

June 6, 2017

MEMORANDUM

TO: Council members

FROM: Ben Kujala

SUBJECT: Presentation from Jim Piro, President and CEO, Portland General Electric

BACKGROUND:

Presenter: Jim Piro

Summary: Portland General Electric recently filed an Integrated Resource Plan with the Oregon Public Utility Commission. The plan is currently under review by the Commission. Part of the plan was an identified need for the utility to obtain new capacity. In early May, the utility [indicated](#) that it was looking to meet this need through power purchase agreements or the acquisition of an existing power plant.

Ratepayer advocates and environmentalists pushed back against an assumption that PGE would go down a path of constructing a new generating resource that was fired by natural gas. In the electric utility industry there are emerging political fault lines with respect to construction of new fossil-fuel-based generation.

Jim Piro was invited to discuss the significant challenges that the electric utility industry is facing and how PGE is positioning itself to navigate these challenges.

Relevance: Portland General Electric serves around 1.8 million customers within a 4,000 square mile service territory in Oregon. Its peak load is around 4000 MW.

Background: Jim Piro has 41 years' experience in the utility business. Prior to becoming the CEO in 2009, he served nine years as executive vice president of Finance, chief financial officer and treasurer. Jim graduated with a bachelor's degree in civil engineering from Oregon State University in Corvallis, Oregon.

Jim Piro, President and CEO, Portland General Electric



Jim Piro is president and chief executive officer of Portland General Electric (PGE), and has 41 years' experience in the utility business. Prior to becoming CEO in 2009, he served nine years as executive vice president of Finance, chief financial officer and treasurer.

A 1974 graduate of Oregon State University in Corvallis, Ore., Piro earned a bachelor's degree in civil engineering with an emphasis in structural engineering. He is a registered professional engineer in California and, before working at PGE, worked as a civil engineer for San Francisco-based Pacific Gas & Electric Co.

Piro serves on several boards and is chair of Greater Portland Inc. and the Science, Technology, Engineering and Math (STEM) Investment Council. He is a member of the Oregon Global Warming Commission and is active in the business and utility industries, both locally and nationally, serving on the boards of the Oregon Business Council and the Edison Electric Institute. He is also a member of the Electrification Coalition, a national group of business leaders advocating for policies that support electric vehicles. He serves also on the PGE Foundation.

Portland General Electric

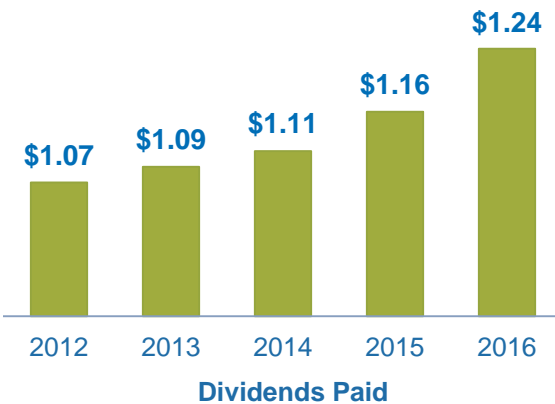
Investor Fact Sheet, as of 3.31.2017

Stock Info as of 3/31/17

Exchange: NYSE	Ticker: POR
Stock Price	\$44.42
Market Capitalization	~ \$3.9 billion

Financial Snapshot 2016

Revenue	\$1.9 billion
Earnings per Share (diluted)	\$2.16
Net Utility Plant Assets	\$6.4 million



Powering our Customers' Future

Portland General Electric Company is a vertically integrated energy company based in Portland, Oregon, serving approximately 865,000 customers in 51 cities and seven counties.

For more than 125 years, we've proudly championed a vibrant Oregon. We're focused on providing safe, reliable, affordable and cleaner energy solutions to our region. Together with our customers, we have the number one voluntary renewable energy program in the U.S. We are deeply committed to helping our communities prosper and connecting our customers to innovative solutions they can depend on to energize their changing lives.

PGE's Distinguishing Strengths

- ✓ Attractive service territory with long-term load growth of approximately 1%
- ✓ High-quality utility operations and high customer satisfaction
- ✓ Annual dividend increases since going public in 2006
- ✓ History of earnings growth and strong financial position
- ✓ Successful construction of large-scale, self-build generation plants

Dividend Quick Facts

Current Quarterly Dividend	\$0.34
Dividend Yield 03/31/2017	3.06%
Target Payout Ratio	50-70%

Debt Ratings

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



Recent Highlights

- FY 2016 Net Income of \$193 million and EPS of \$2.16. FY 2015 Net Income of \$172 million and EPS of \$2.04
- Carty, a 440 MW natural-gas generating resource, was placed into service on July 29, 2016
- PGE filed its 2016 Integrated Resource Plan in mid-November 2016 and is seeking acknowledgment from the Oregon Public Utility Commission by second half-2017
- PGE's board of directors recently approved initial spending on longer-term generation, transmission & distribution projects focused on maintaining and improving the reliability, resiliency and security of our infrastructure to meet our customers' needs and expectations

PGE Service Territory



Total Shareholder Return⁽¹⁾

5-Year	109%
3-Year	51%
1-Year	16%

(1) Source: SNL Financial; Total shareholder return data includes the reinvestment of dividends. The 1, 3 and 5 Year returns represent one, three and five years ended 03/31/17.

For more information about investing in Portland General Electric, please contact:

Chris Liddle	Manager, Investor Relations and Corporate Finance (503) 464-7458 Christopher.Liddle@pgn.com	American Stock Transfer & Trust Company www.amstock.com info@amstock.com 1-866-621-2788 As PGE's transfer agent, AST, offers investors the opportunity to purchase direct registered shares from Portland General Electric through the Direct Stock Purchase Plan.
Adrio Odobasic	Analyst, Investor Relations (503) 464-8586 Adrio.Odobasic@pgn.com	
Portland General Electric	121 S.W. Salmon Street Suite 1WTC0501 Portland, OR 97204-0506 Investors@pgn.com	

Safe Harbor Statement

Except for historical information, the information presented in this fact sheet may be considered forward-looking within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements include statements regarding the intent, belief or current expectations of the Company and its management. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties that could materially affect actual results. This fact sheet should be read along with the Company's Annual Report on Form 10-K for the year ended December 31, 2016 and subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. The Company disclaims any obligation to update any forward-looking statement as a result of developments occurring in the future, except as required by law.



Northwest Power and Conservation Council

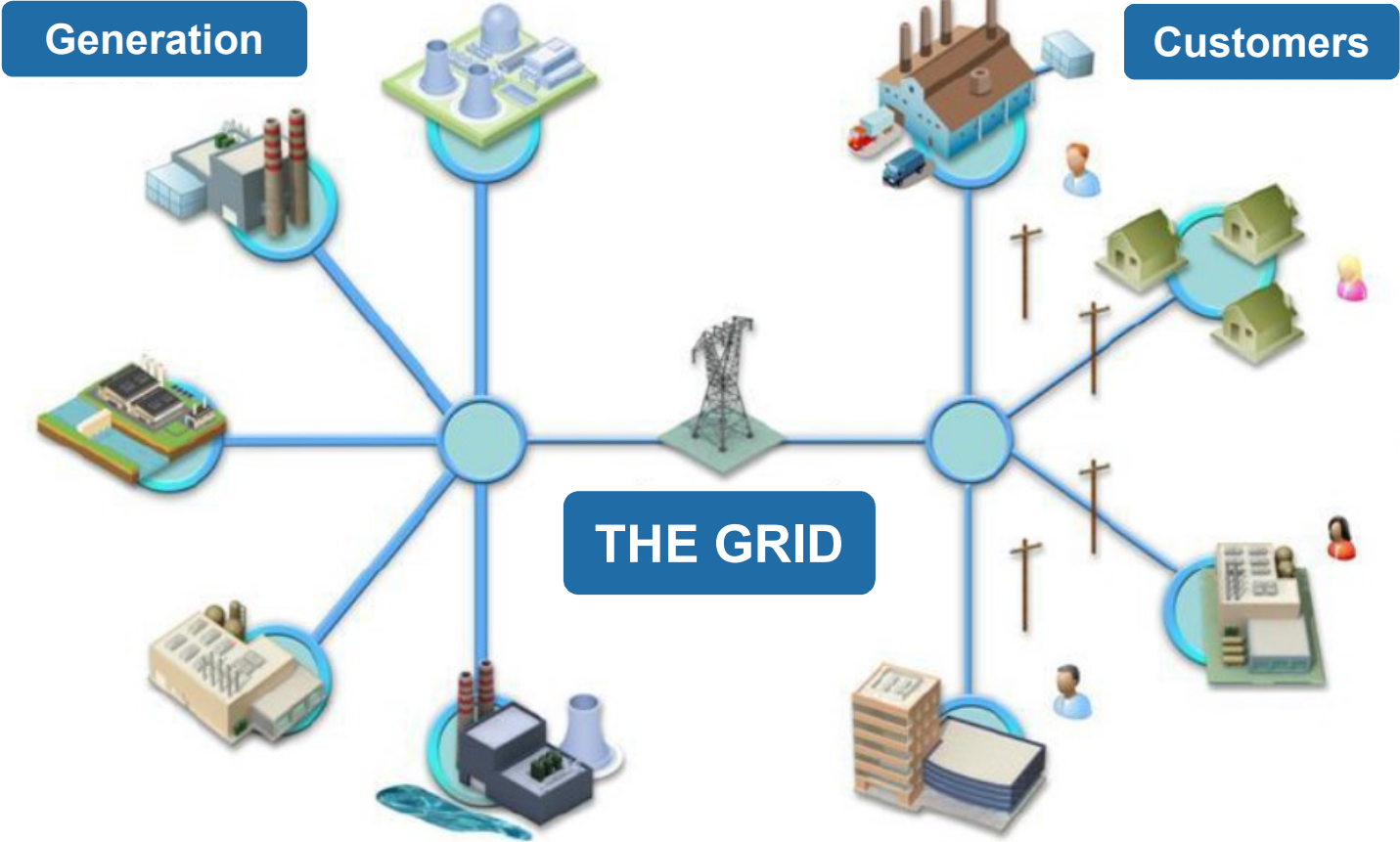
June 14, 2017

Jim Piro

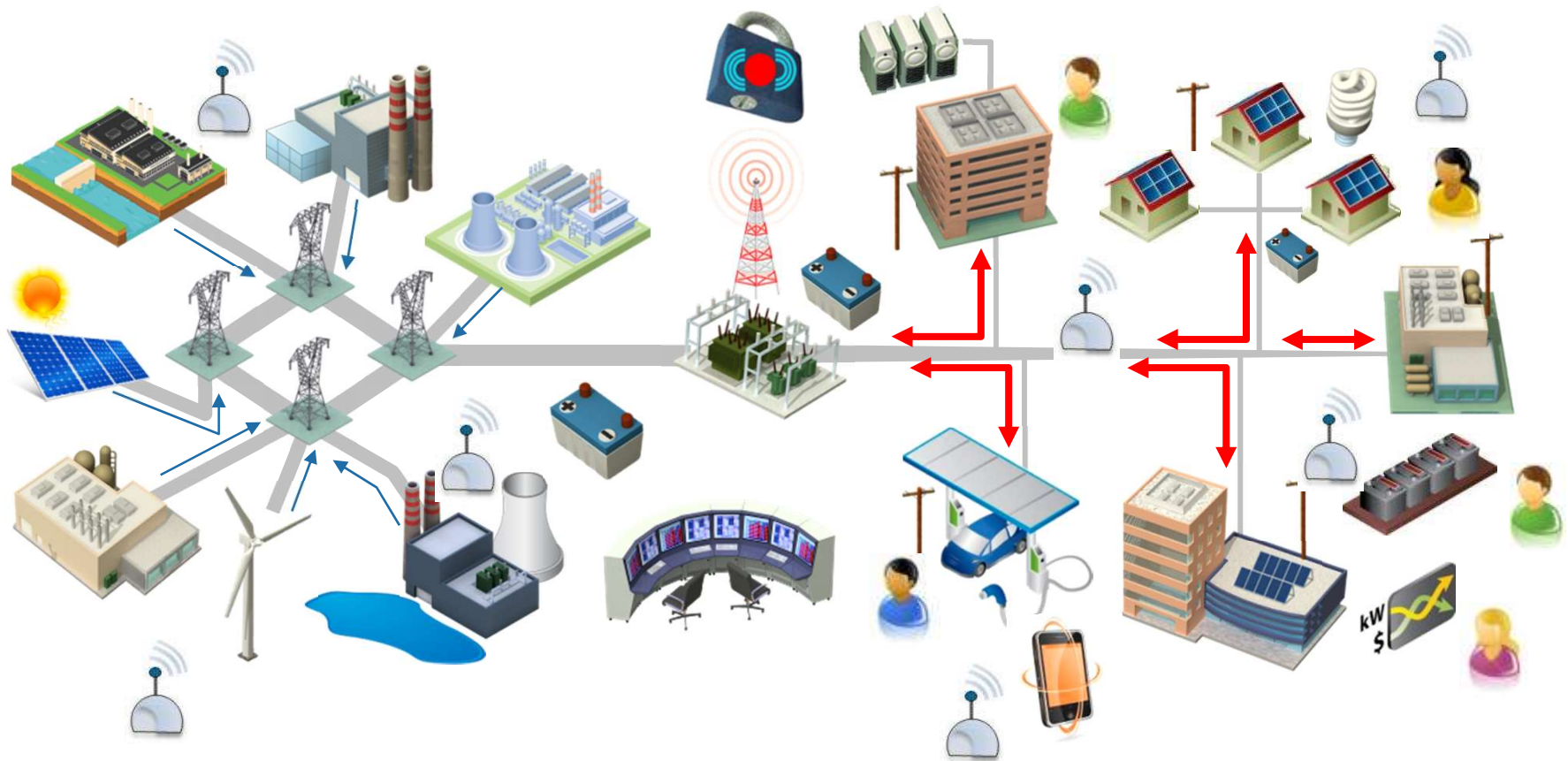
President and CEO
Portland General Electric



Our industry is rapidly changing from this ...



... to a highly integrated grid



Source: EPRI, "Energy Storage for the Electric Grid" presentation

The energy landscape is changing

Assumptions

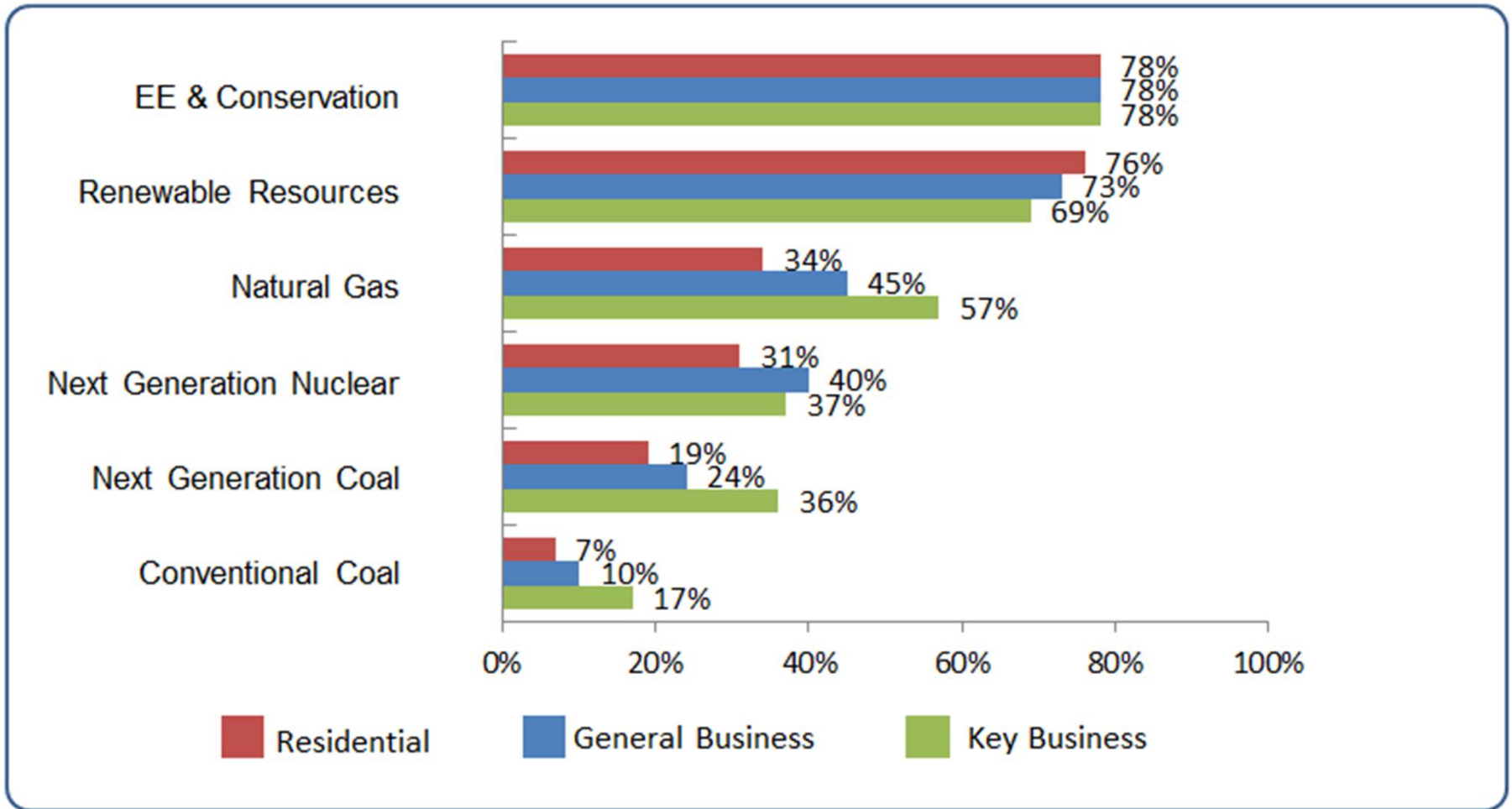
- Changing demographics, behaviors and interests will transform current energy industry paradigms
- Electricity and transportation sectors evolve to meet decarbonization goals
- Consumers continue to expect reliable, affordable, sustainable energy solutions

Implications

- Residential and business electric usage will decline due to increased energy efficiency and distributed generation
- However, as the economy is decarbonized, electrification and renewable generation will increase
- Energy providers must evolve to maintain relevance with consumers

Rooftop solar installation on James John Elementary School, funded through PGE's Renewable Development Fund

PGE customer preferred resources



Source: Definitive Insights; 2013

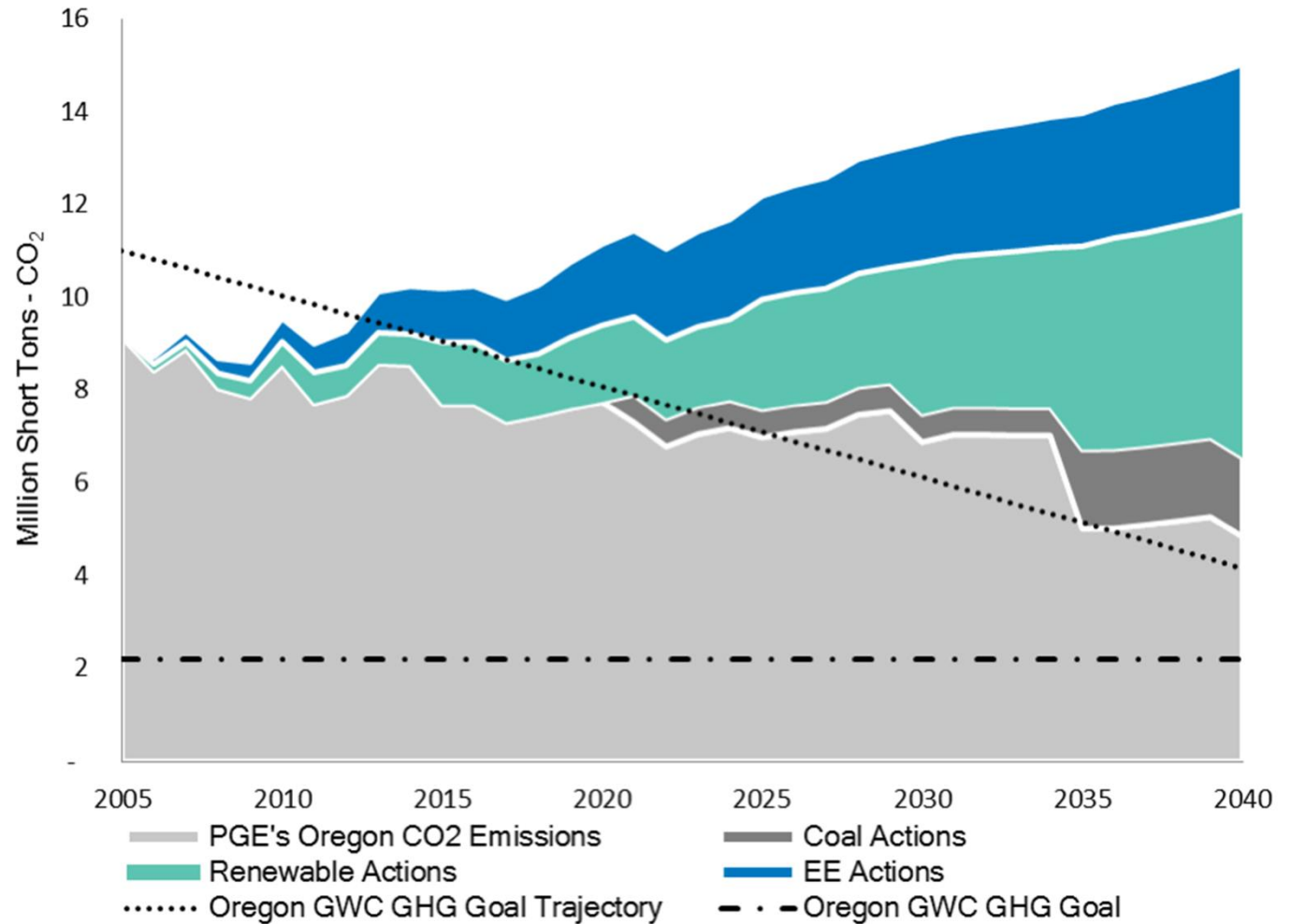
Implementing Oregon's Clean Electricity Plan

- 2016 Integrated Resource Plan
- Transportation Electrification
- Community Solar
- Energy Storage
- City/County 100% renewable goals



Meeting carbon reduction goals

PGE's 2016 IRP forecasts CO₂ reductions consistent with SB 1547 estimates



Power supply



Integrated Resource Plan (IRP)

2016 plan – three integrated components



Energy Management



Cost-effective
Energy Efficiency

Increasing
Demand Response

Wind, Solar, Hydro,
Biomass, Geothermal



Renewable Expansion



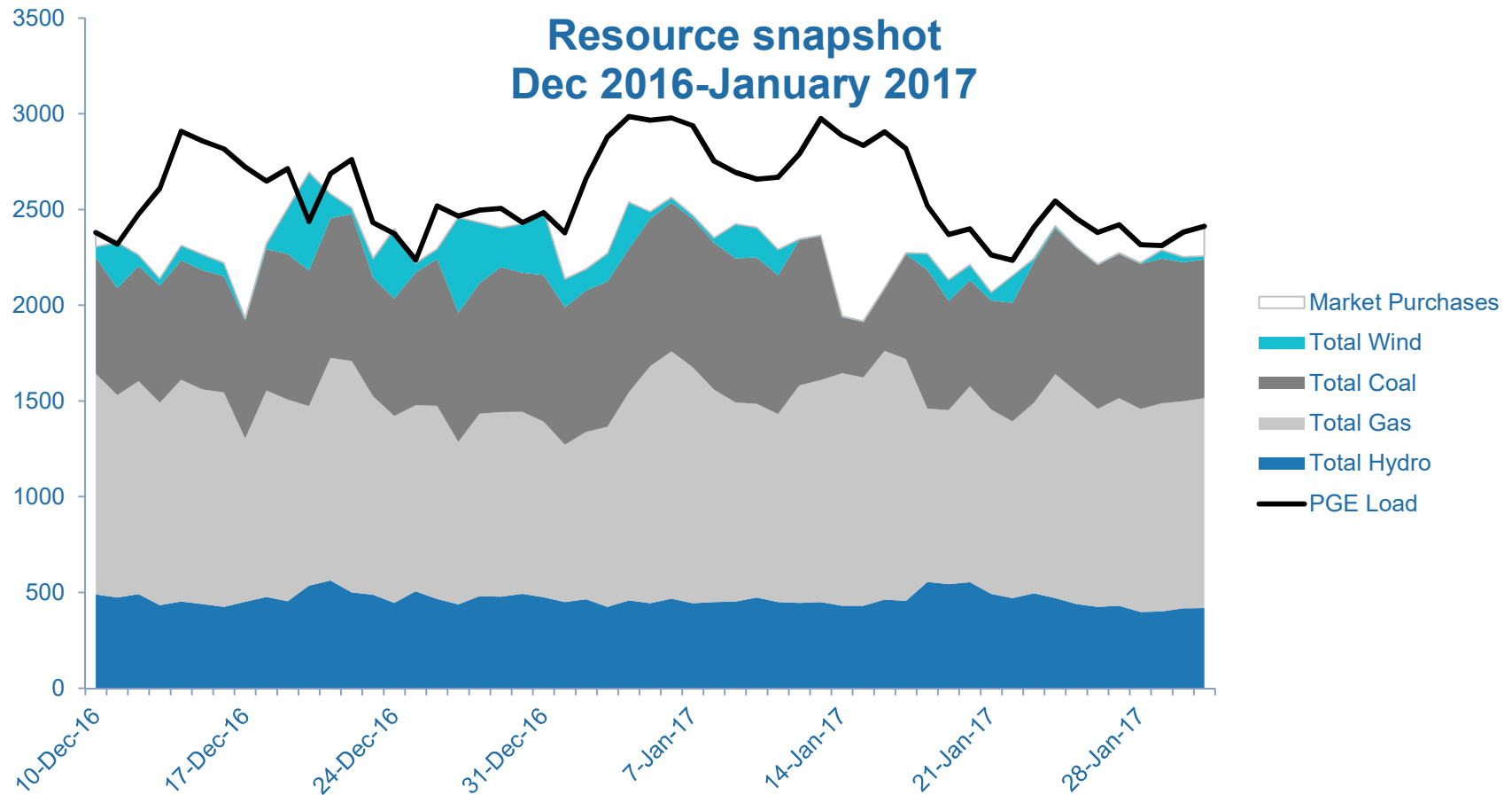
Optimizing Capacity



Technology Integration

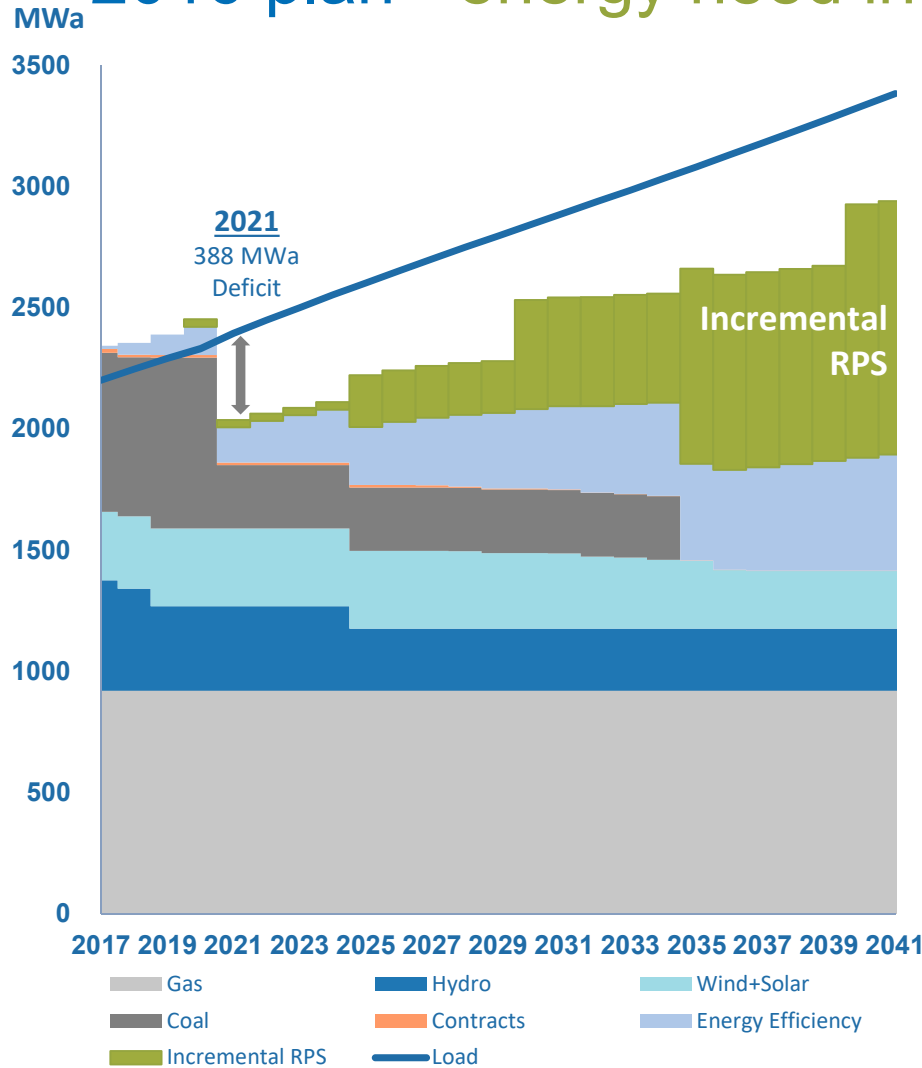


Diverse generation needed



Integrated Resource Plan (IRP)

2016 plan - energy need in 2021: 388 MWa



Long-term energy needs will be met mainly with renewables

On an average economic basis, PGE will be a net energy purchaser in the market

Chart Assumptions

Incremental RPS achieved through physical compliance at Senate Bill 1547 milestones

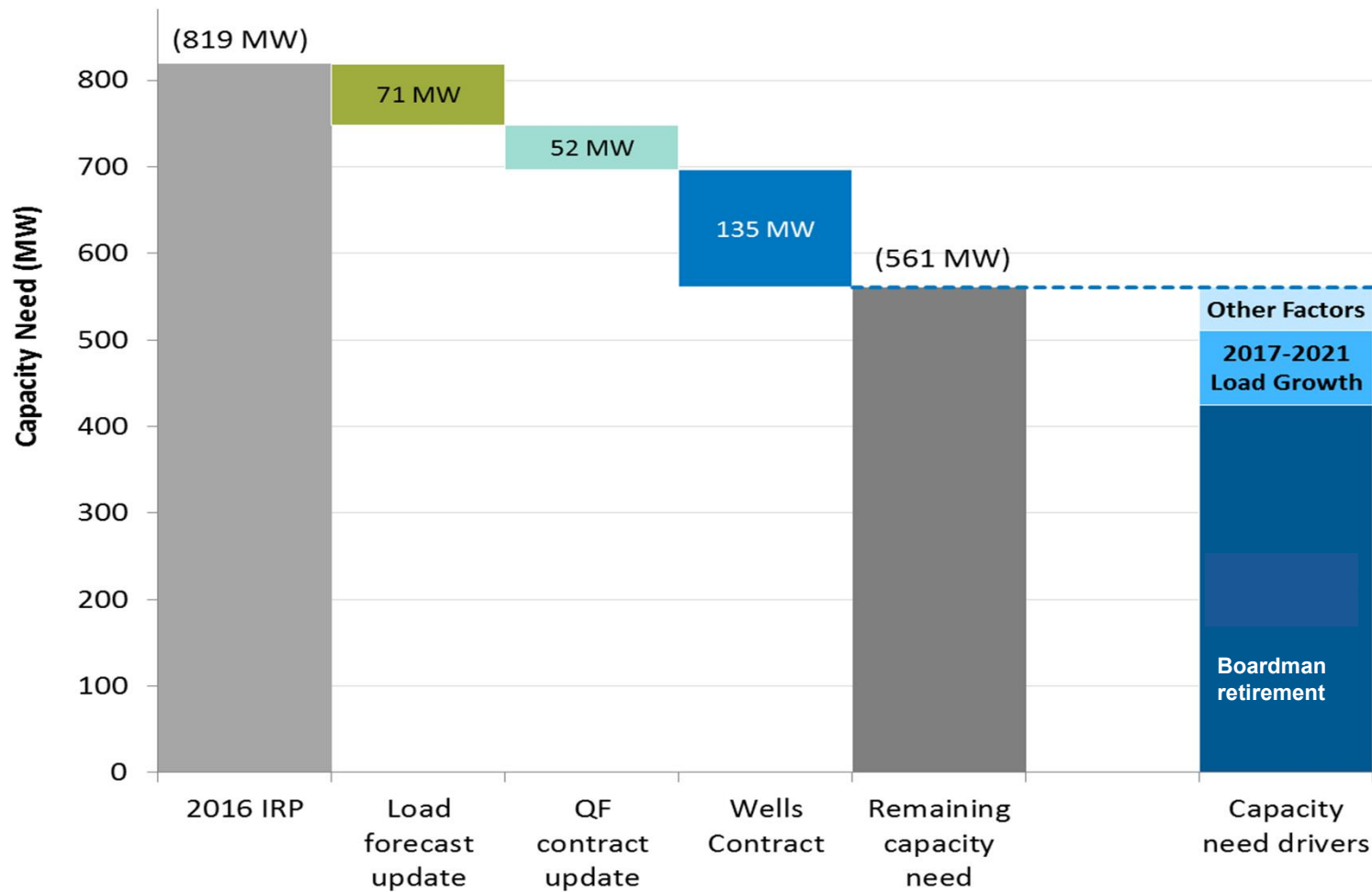
- 20% by 2020
- 27% by 2025
- 35% by 2030
- 45% by 2035
- 50% by 2040

No early RPS acquisitions

RPS: Renewable Portfolio Standard

Integrated Resource Plan (IRP)

2016 plan – capacity need in 2021



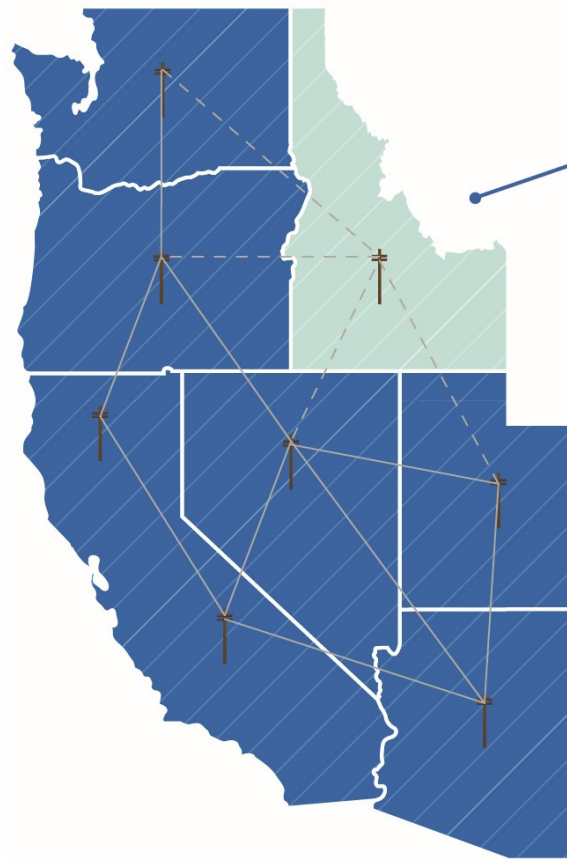
Joining the Energy Imbalance Market

EIM utility participation:

- PAC-2014
- NVE-2015
- PSE -2016
- APS-2016
- PGE-2017
- IPC-2018
- PowerEx- 2018
- LADWP- 2019
- SCL-2019
- SMUD-2019
- SRP-2020

Considering:

- TEP
- NWE



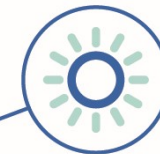
-  Joining EIM in 2018
-  Currently participating in EIM



Automatically dispatches lowest-cost electricity



Helps balance energy supply and demand



Makes it easier to add more renewables into our mix



Keeps our grid stable, secure and reliable

Building a smarter grid



Image Credit: L.C. Fulenwider, Inc.

Rendering of Pena Station NEXT, a transit-oriented development south of Denver International Airport and site of a new microgrid developed in partnership with Xcel Energy and Panasonic

Smart Grid efforts underway



Advanced Metering Infrastructure

> 850,000 customer meters installed



Communications Upgrades

Spectrum procurement & infrastructure modernization



Systems Deployment

Geographic Information & Outage Management Systems Deployed; Customer Information & Meter Data Management Systems in flight



Analytics Capabilities

Transmission & Distribution Analytics Pilot, Energy Tracker Customer Insight



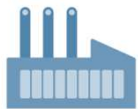
Grid Modernization

Asset management strategy



Transmission & Distribution Pilots Underway

Conservation Voltage Reduction, Distribution Automation, Synchrophasors



Customer Programs/Pilots

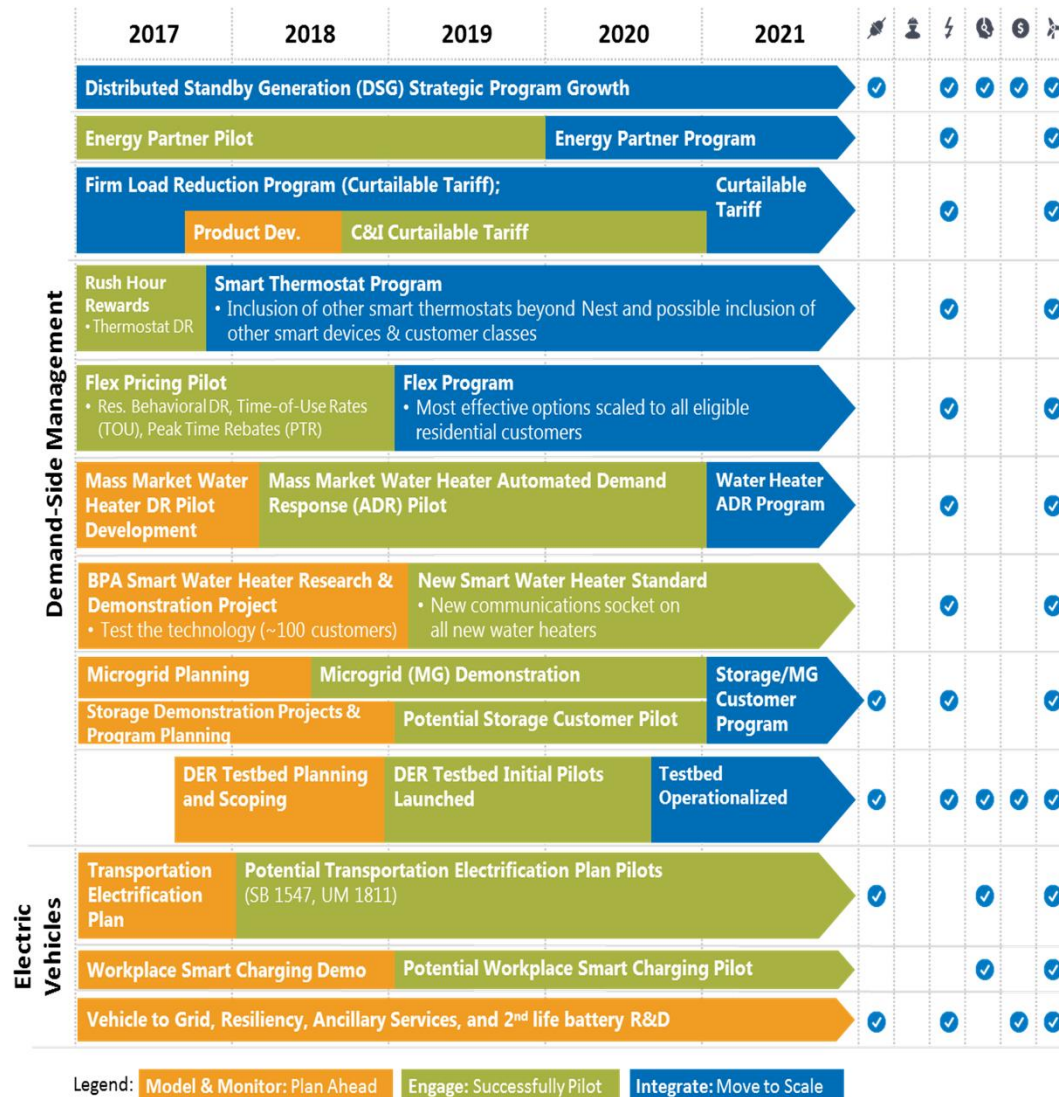
Dispatchable Standby Generation, Energy Partner, Smart Thermostat, Flex Pricing Pilot



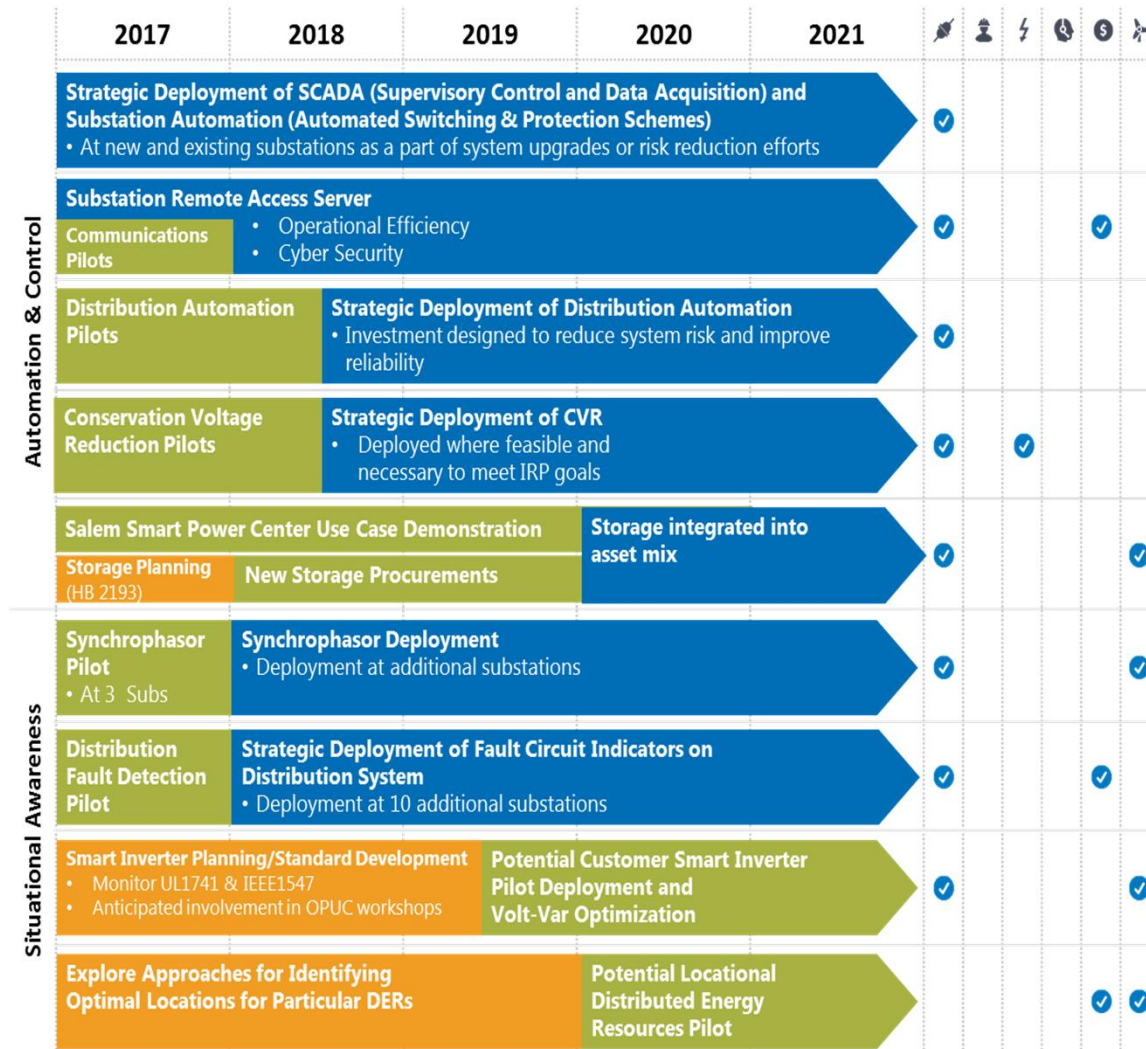
Salem Smart Power Center

5MW battery testing facility

Our roadmap to meet customer's needs



Our roadmap for a resilient and reliable grid



Legend: Model & Monitor: Plan Ahead Engage: Successfully Pilot Integrate: Move to Scale

Questions?



BMW ReachNow adds 30 electric vehicles to Portland carsharing fleet, December 2016