BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

LC 66

In the Matter of PORTLAND GENERAL ELECTRIC COMPANY'S, 2016 Integrated Resource Plan.	FINAL COMMENTS OF THE CITIZENS' UTILITY BOARD OF OREGON

I. INTRODUCTION

The Oregon Citizens' Utility Board ("CUB") submits these reply comments to Portland General Electric's ("PGE" or the "Company") November 2016 Integrated Resource Plan ("IRP" or "Plan"). CUB's Opening Comments highlighted a number of key concerns with PGE's IRP analysis and preferred portfolio. Namely, PGE seeks to acquire a substantial long-term thermal resource without exploring medium-term[1] and market resources, and based on assumptions constructed during a time of historically high levels of uncertainty in the utility industry.

PGE's Reply Comments failed to provide a course of action that addresses or otherwise rebuts CUB's concerns. CUB is encouraged to see that, since the Company's initial filing, it has determined that there is available capacity in the Pacific Northwest from owners of existing

[1] For purposes of these comments, CUB defines "medium-term" resources as 5-10 year capacity resource acquisitions.

dispatchable generation to meet PGE's capacity needs.[2] CUB looks forward to learning what progress the Company is able to achieve in its bilateral discussions and renewal of a hydro contract.[3] Yet, despite these developments, PGE continues to seek acknowledgment of a preferred portfolio that does not fully utilize these resources which would give the Company greater optionality. Accordingly, CUB continues to recommend the Commission not acknowledge the Company's preferred portfolio and require PGE to explore medium-term resources to meet their capacity needs.

II. FINAL COMMENTS

A. PGE Has Not Refuted CUB's Concerns.

The electric utility industry is in a state of rapid flux. Technological advancements in demand response ("DR"), energy efficiency ("EE"), and energy storage, combined with innovations in the utility business model (e.g. increased distributed generation ("DG")) have created an historic time of unpredictability in the electric utility industry. Accordingly, utility planning, now more than ever, must be nimble and maintain maximum optionality.

Yet, in the face of an increasing need for optionality, PGE continues to seek acknowledgment of a preferred portfolio that would lock its customers into a significant thermal facility investment for the next 30 to 40 years. It is undisputed that long-term resource acquisitions present risks particular to their lengthy time period including stranded assets, early plant retirement, cost overruns, and mechanical failure. CUB urged the Company to attempt to

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[2] LC 66 PGE Reply Comments, p. 12.

[3] *Id.*at 11-12 (updating the Company's IRP to reflect execution of the previously expiring contract for the Wells Hydro project, stating that further investigation indicates there is available capacity in the Pacific Northwest from owners of existing dispatchable generation to meet PGE's needs, and discussing the Company's pursuit of bilateral discussions with those resource owners).

avert these risks by testing the market for medium-term capacity contracts that could meet the Company's capacity needs.

PGE's dismissal of CUB's suggestion as "problematic from a process standpoint"[4] is unconvincing. The Company states that it does not intend to issue an RFP for medium-term resources because (1) it is not required to under the Commission's Competitive Bidding Guidelines; and (2) a term-limited RFP *may* increase costs for PGE's customers.[5] CUB finds the Company's response concerning for three reasons.

First, PGE's contention that medium-term resources *may* increase costs for customers is highly speculative and yet easy to ascertain. Indeed, determining the cost-effectiveness of medium-term resources is the very reason CUB suggested a medium-term RFP in its comments. Second, while the Commission's Competitive Bidding Guidelines do not *require* an RFP for resources that are less than 100 MW in size and for a duration of less than five years, there is nothing that prevents the Company from issuing an RFP for those resources. In fact, PGE has issued RFP's for resources that fall outside the Commission's Competitive Bidding Guidelines multiple times in the past[6], and the Company recently proposed doing so again in its Electric Vehicle docket.[7] Third, the Company's objection does not cover the full range of resources that fall within CUB's definition of "medium-term" resources. Even if the Commission's Guidelines forbid RFPs for resources outside its parameters, the Company has failed to explain why an RFP for resources that would be obtained for more than 5 years is not appropriate.

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[4] LC 66 PGE's Reply Comments, p. 10.
[5] *Id*.
[6] *See e.g.*, UM 1708, "PGE Application for Deferral of Expenses Associated with Two Residential Demand Response Pilots", available at http://www.puc.state.or.us/electric_restruc/indices/PPS%20Solar%20Business%20Case%20-%20POC%20v2014_0923_01.pdf.
[7] UM 1811, "PGE Exhibit 100", Spak – Goodspeed Testimony, p. 11 and 17.

B. PGE's RFP Should Consider Resources That Are Less Than Five Years.

CUB believes that a medium-term RFP should allow for a wide-range of resources, including acquisitions for less than five years. PGE disagrees and argues that such resources would not be long enough to get through the "planning and procurement cycle."[8] But PGE seems unwilling to otherwise consider these resources outside of an IRP or RFP process.

CUB wants to highlight that PacifiCorp includes resources of less than five years in its IRP and relies on them to meet capacity needs. PGE argues that comparing its unwillingness to rely on market purchases to PacifiCorp is unfair, because PacifiCorp includes "mid-term market physical purchases made one to three years ahead of need, in addition to spot market access."[9] Instead, PGE states that it considers resources of less than five years as capacity resources and refers to Section 5.3 of its Reply Testimony. Section 5.3 contains some discussion of 5 and 9 year contracts, and argues that it is "inappropriate to attempt a quantitative evaluation of generic resources with durations that are shorter than the full asset life."[10] There is no further discussion of the kind of contracts that PacifiCorp includes in its Front Office Transactions.

PGE has not presented any rational reason why it cannot test the market for a wide-range medium-term capacity contracts that would meet the Company's capacity needs and avoid the risks associated with long-term resources. Since the Company refused to pursue a RFP for medium-term resources, the Commission should condition acknowledgement of a long-term capacity RFP on PGE first issuing a RFP for resources that are between 2 and 15 years in length, with no minimum size requirement, and allow for seasonal products.

[8] LC 66, PGE's Reply Comments, p. 10
[9] LC 66, PGE Reply Comments, p. 56
[10] LC 66, PGE Reply Comments, p. 79.

C. PGE's Stock Downgrade Demonstrates the Company's Incentive to Build Long-Term Ratebased Investments.

Since PGE's initial IRP filing, new information demonstrates PGE's strong incentive to rate-base its generation resources. UBS, an investment bank, recently downgraded PGE's stock from 'buy' to 'neutral' based on its assessment that an additional unit at Carty was less likely than previously projected.[11] Indeed, UBS bases its downgrade on (1) the fact that the probability of an additional unit at Carty is estimated at 50% instead of the previous 100% assumption; and (2) its perception that "resource procurement could well include PPAs or asset purchases, rather than an outright build."[12] Although this information was not addressed in PGE's IRP analysis, and was only recently released, it is illustrative of the complex motivations that may prevent the Company from fully analyzing the possibility of resources that differ from their preferred portfolio.[13]

D. PGE's Renewable Acquisition Raises Numerous Unanswered Questions.

PGE's proposal to procure wind generated resources before the expiration of the Federal Production Tax Credits still poses a number of unanswered questions. The analysis provided in PGE's Reply Comments supports the position that investment in wind resources is consistent with least cost/least risk procurement. From a traditional Net Present Value Revenue Requirement ("NPVRR") standpoint, early action on renewables is cost effective. However, the Company's proposal also allows for acquisition of wind resources well in advance of the need

[11] Attachment 100, UBS's May 2, 2017 Report on PGE, available at: https://neo.ubs.com/shared/d1P3vUCneB/.

[12] Attachment 100, p. 1 (stating that PPAs, instead of an outright build will "likely diminish[] the EPS [earnings per share] upside that could stem from the Boardman plant replacement…").

[13] *See* PGE's Reply Comments, p. 5 (stating that "[t]he hear of [] [stakeholders'] concern seems to be that PGE has an undisclosed intent to develop a new natural gas combined-cycle plant and that PGE has constructed the Action Plan in a way that will allow it to do so.").

for new renewables to meet the RPS. While NPVRR is used to identify cost effective resources, normally the acquisition of those resources is driven by need. Accordingly, procurement of the proposed wind-generated resources raises several unaddressed issues.

The first issue is that of intergenerational equity. While the proposed wind resources may be a least cost resource over the life of the asset, current customers will see rates increase to pay for a resource that is not needed for several years. Regulatory principles instruct that customers should pay for the costs that are necessary to serve their load. Asking customers to pay for costs that will be incurred to generate RECs that will be utilized by future customers violates this principle.

Second, by securing resources well in advance of future needs, PGE is reducing potential investments in the future. The diminished probability that the Company will invest in rate based resources led UBS to downgrade PGE's stock rating, because those investments help increase earnings per share. What affect is there on PGE's stock price and "attractiveness" to investors when it has prebuilt a decade's worth of resources, and therefore will have limited room for additional investments? CUB is concerned that such a result could lead to a Company that is driven to create capital investment opportunities to support its earnings. This in turn could result in gas peakers rather than demand response, or utility scale battery storage rather than managed charging of electric vehicles.

Third, CUB is concerned with PGE's proposal to designate a self-built wind farm in Eastern Oregon as a benchmark resource. While PGE does not need new renewables to meet the RPS, it does have a real capacity need, and renewables could contribute to that capacity need. However, additional Oregon wind, that largely produces when PGE's existing wind is producing, does not provide the capacity benefit that other more diverse renewable projects could provide.

While PGE will likely point out that other renewables with higher contributions to its capacity needs will be considered in the RFP, history has shown that the benchmark resource is the most likely resource to be acquired.

PGE has addressed the economic concerns related to its renewable acquisition. But it has not addressed the concerns related to acquiring a resource well in advance of a need for that resource. CUB would like to see the Company directly address these three issues in its Final Comments next month.

III. CONCLUSION AND RECOMMENDATION

CUB appreciates the steps the Company has made exploring resources that afford greater optionality through hydro contract renewals and bilateral discussions. This strategy may prove to be successful enough that a long-term capacity resource is not needed. However, these bilateral negotiations take place outside of the IRP process. CUB continues to believe that the Company should first issue a RFP for shorter-term resources before issuing a RFP for a 30 year resource. CUB urges the Commission to condition any acknowledgement of a long-term RFP with the requirement that the Company first issue an RFP for resources that are between 2 and 15 years in length, with no minimum size, and with seasonal products allowed.

Signed this 12th of May, 2017.

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Portland General Electric Company

Downgrade to Neutral: PORing Cold Water on Our Expectations

Equities

Americas
Electric Utilities

12-month rating	**Neutral** *Prior: Buy*
12m price target	**US$45.00** *Prior: US$47.00*
Price	**US$45.03**

RIC: POR.N **BBG:** POR US

Trading data and key metrics

52-wk range	US$46.38-39.83
Market cap.	US$4.00bn
Shares o/s	88.9m (ORD)
Free float	99%
Avg. daily volume ('000)	146
Avg. daily value (m)	US$6.5
Common s/h equity (12/17E)	US$2.43bn
P/BV (12/17E)	1.6x
Net debt / EBITDA (12/17E)	3.5x

EPS (UBS, diluted) (US$)

	12/17E			
	From	To	% ch	Cons.
Q1	0.85	0.82	-3	0.82
Q2E	0.44	0.40	-8	0.45
Q3E	0.30	0.27	-11	0.30
Q4E	0.70	0.79	14	0.65
12/17E	2.29	2.29	NM	2.27
12/18E	2.53	2.51	-1	2.46
12/19E	2.60	2.56	-2	2.56

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Downgrading to Neutral; Risk reward more balanced ahead of 2H17 catalysts

Following the 1Q17 update we are downgrading shares to Neutral as we see a less profitable path forward in POR's efforts to fill capacity needs. We are cutting our expectations stemming from the Integrated Resource Plan (IRP) and subsequent RFP process following more cautious commentary from mgmt. Our probability weighted capex estimates for Carty 2 now stand at 50% vs prior 100% as we believe that resource procurement could well include PPAs or asset purchases, rather than an outright build. This likely diminishes the EPS upside that could stem from the Boardman plant replacement (~400MW's), a key assumption in our model.

Premium story already; Recent datapoints make us more cautious

We note shares have re-rated from a discount to a premium story over the last few years as mgmt. executed through a Carty 1 build and posted solid EPS growth. The path forward is less clear to us given execution woes through the 2016 IRP including a guide down on capacity needs, a challenging load forecast picture, as well as decreased prospects of outright ownership of new generation assets. We see the potential decision to pursue PPA's (expect announcement 2-4 months from now) as the next catalyst to move estimates lower. Overall, we see less risk to wind procurement given the RPS needs, though comments from mgmt. make it all the more clear an additional Unit at Carty could well be off the table. A PPA could always have been contemplated, though we emphasize Street expectations are more aligned with a ratebaseable asset.

Risk surrounds the 2018 GRC too; what will happen on tax elections?

We look for the first comments out from Staff by June 16th which could re-open the prospects for Bonus Depreciation. With POR among the sole companies that has does not elect Bonus (nominally due to existing state tax deductions), we wouldn't doubt this remaining a contentious topic given our latest stakeholder discussions.

Valuation: PT Lower to $45; Lowering estimates and premium ascribed

While we acknowledge the upside to shares does still exist, the path forward is less clear following the 1Q17 conference call. We are lowering our ests due to lower capex forecasts. We now ascribe a 0.5x premium valuation (vs 1.0x) to the 2019E peer set.

Highlights (US$m)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Revenues	1,900	1,898	1,923	1,980	2,051	2,096	2,171	2,216
EBIT (UBS)	332	331	355	381	417	440	466	483
Net earnings (UBS)	176	172	193	204	227	238	253	265
EPS (UBS, diluted) (US$)	2.18	2.04	2.17	2.29	2.51	2.56	2.69	2.81
DPS (US$)	1.12	1.18	1.26	1.35	1.44	1.54	1.64	1.74
Net (debt) / cash	(2,374)	(2,206)	(2,344)	(2,504)	(2,644)	(2,765)	(2,723)	(2,659)
Profitability/valuation	**12/14**	**12/15**	**12/16**	**12/17E**	**12/18E**	**12/19E**	**12/20E**	**12/21E**
EBIT margin %	17.4	17.4	18.5	19.2	20.3	21.0	21.5	21.8
ROIC (EBIT) %	-	7.2	7.3	7.5	7.7	7.6	7.8	8.1
EV/EBITDA (core) x	8.2	8.9	9.3	9.2	8.6	8.2	7.8	8.0
P/E (UBS, diluted) x	15.3	17.8	19.0	19.7	17.9	17.6	16.7	16.0
Equity FCF (UBS) yield %	(20.4)	(4.0)	(1.9)	(1.2)	(3.9)	(1.4)	5.6	5.9
Net dividend yield %	3.3	3.2	3.1	3.0	3.2	3.4	3.6	3.9

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US$45.03 on 01 May 2017 19:35 EDT

UBS Research THESIS MAP a guide to our thinking and what's where in this report

PIVOTAL QUESTIONS

Q: Will the Integrated Resource Plan Lead to Additional Capex Awards?

It is increasingly uncertain whether the opportunity to build and own ratebase qualified assets will come to fruition following a series datapoints that decrease the prospects for Carty Unit 2. Mgmt most recently commented that the all options are on the table to source the ~500MW capacity need (down from ~850MWs), still pending acknowledgement from the Oregon PUC.

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Q: Is there risk to the LT EPS prospects?

Yes. We believe the incremental upside stemming from capacity needs could well be offset by the eventual inclusion of Bonus Depreciation as well as the risk of negligible load spilling over to the 2018 time period. We note the decrease in load growth has already had an effect on base EPS over the last two years. Further, capacity builds are less certain following the 1Q17 conference call, putting pressure on our capex estimates that are already above mgmts. guidance.

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UBS VIEW

We see POR as more fairly valued following a number datapoints which challenge the longer dated growth prospects. With the expected benefits from gas peakers/CCGT infrastructure less clear following round of comments from both parties in the IRP docket, there are notably less shots on goal to achieve positive capex revisions. This is paired with a negative NT backdrop on the load growth side following mgmts. negative revisions over the last two years making it increasingly difficult for us to reconcile with LT forecasts embedded in the IRP. Admittedly, proceedings have proved more difficult than initially thought, and have caused some revisions for load needs. Further, we see risk to the 2018 GRC process, in which bonus depreciation could well come up as a sticking point among Staff. While further upside could stem from RPS needs via the procurement of an additional wind asset, the path for further incremental baseload generation is less clear. We acknowledge that the underlying coal deactivation and RPS requirements help differ POR from SMID peers, but we see the path to full execution as considerably more challenged following 1H17 datapoints.

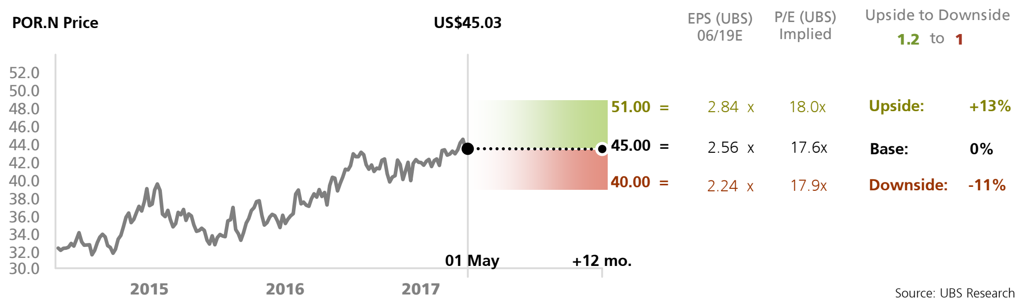
EVIDENCE

Recent commentary from mgmt. reset investor expectations for an additional gas unit to be built at the Carty Generation site. Further, the IRP has already seen pushback from OPUC Staff, causing mgmt. to decrease capacity needs ~300MWs.

WHAT'S PRICED IN?

We see consensus numbers ascribing some probability for future resource builds given our estimates stand only slightly above consensus and still include 50% probability for Carty Unit 2, and 50% probability for generic wind builds

UPSIDE / DOWNSIDE SPECTRUM



Source: UBS Research

Value drivers	P/E Multiple	Carty Unit 2 Capex Probability	Wind Capex Probability	Load Growth	2019 Avg Ratebase ($Mn)
$51 upside	20.1x	100%	100%	1.5%	5,897
$45 base	18.1x	50%	50%	1%	5,520
$40 downside	16.1x	0%	0%	0%	5,142

Source: UBS

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COMPANY DESCRIPTION

Portland General Electric Company (POR), was founded in 1888, and is a publicly-owned, vertically-integrated, regulated electric utility. POR is engaged in generation,...

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COMMENTARY

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PPA's come up as a viable option for capacity needs

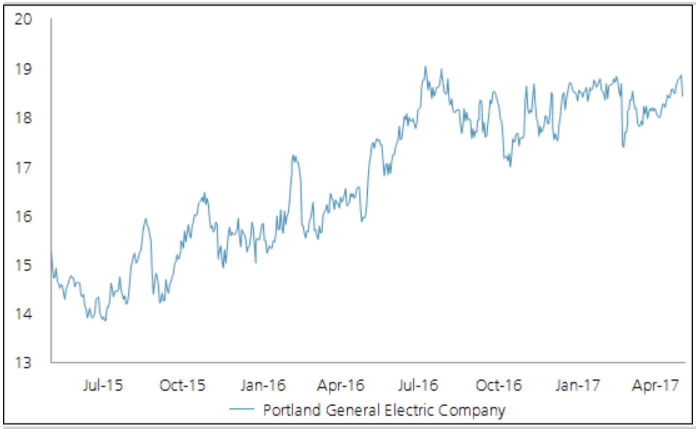
Mgmt recently commented that there are a number of industrial closures in the northwest resulting in lower loads but also idle plants that could allow for existing resources to meet POR's capacity needs at a *lower cost* than building a Carty Unit 2 or 3. Bilateral negotiations are being pursed between generators and POR over the next 2 to 4 months. We emphasize if mgmt. can indeed contract a PPA to fill capacity needs, incremental capex from a Carty Unit 2 would be foregone. We mgmt. could also acquire assets outright, still presenting a ratebase opportunity, though this would likely prove less profitable than an outright build at Carty.

Shares have traded well into potential catalysts

Trading at a premium – long term story is indeed there, but near-term is clouded

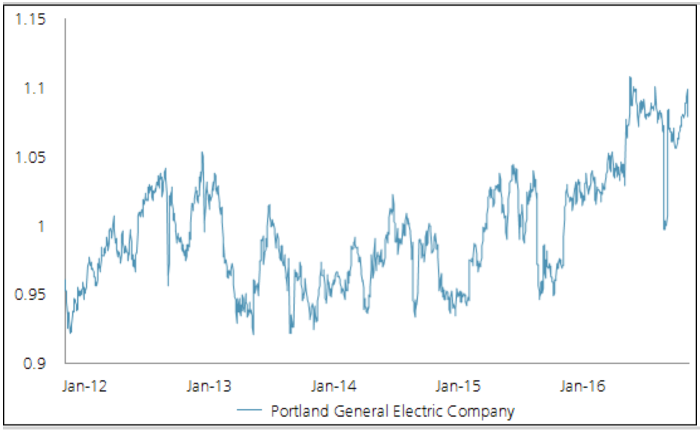
We emphasize shares have outperformed over the last two years as POR has re-rated from a discount story to a premium story, trading now at an 8% premium to the XLU. We acknowledge the multiple avenues ahead for capex awards which justifies the premium valuation (we continue to ascribe a slight premium to the group in our P/E based valuation) though execution risks remain. We see the regulatory environment in Oregon becoming increasingly challenged, with Staff most recently [responding] negatively to POR's asks set forward in the IRP causing further delays in the RFP process. This would ideally lead to additional capital spend down the road in which the probabilities are also decreasing. Execution remains the largest risk in our view and given the re-rating already experienced we are downgrading shares as we see valuation more balanced into 2H17 catalysts.

Figure 1: FY2 PE (Consensus) – 2YRS



Source: FactSet

Figure 2: POR FY2 vs XLU – 5YRS



Source: FactSet

Where can POR fill the capacity?

Outside of a competitive build for a Carty Unit 2, we note there are several opportunities for Portland to strike PPAs or purchase ratebase qualified assets across the Northwest. Specifically, we see CPN's Hermiston hydro asset located in Oregon positioned well to participate in either the RFP or contract a PPA. Further, we note AGR's 480MW Klamath gas plant could fit the bill given the proximity of service territory transmission lines as well as our expectation for two major PPA's to roll off in the 2021 period. We note thermal resources as well as hydro assets are on the table per our latest discussions with mgmt.

What are the difference scenarios forward?

We expect mgmt. to communicate how it plans to fill the ~400MW need in the next few months *before* the Commission acknowledges the 2016 IRP. We emphasize PGE's final reply comments are due by June 23, 2017 – we would expect some communication from mgmt. as to how they plan to fill the need on or around this date. Below we delineate the following paths forward to backfill the capacity need.

(1) **Execute PPA with counterparty:** While we acknowledge that determining the most cost effective path forward could well include PPA's, the story has always been positioned towards the likelihood of a 2nd gas unit at Carty. A PPA would be treated as a pass-through cost rather than an earning asset, and could well be a cheaper and more viable option for consumers. We note this could be deemed the most prudent path forward ahead of a 5.6% cost of service increase request recently filed at the Commission. If a PPA were to be executed, the Commission would need to grant a waiver.

(2) **Execute a baseload asset purchase:** We note mgmt. could well ratebase an asset, which would also need to be acknowledged by the Commission, though this is likely to be less than the value of a new build at Carty two given the effects of depreciation on net plant.

(3) **Build Carty 2:** We include a 50% probability of a Carty 2 build which could provide most incremental to our estimates. We see this among the largest expectation that was reset following the 1Q17 call given shares meaningfully underperformed the XLU (-1.76%) despite the large qtrly beat. While the existing IRP (pro-forma for the latest drop in load and signed PPAs for hydro) still contemplates sufficient capacity to justify the plant, the risk is either that the plant is delayed (due to demand growth pushed out) and/or it is ultimately contracted externally. We see an acquisition of an asset and ultimate transfer into ratebase (for instance of CPN's merchant plant Hermiston to which it remains open to divesting). A sale would likely be done at a discount to the new-build economics of Carty 2, but still provide a modest ratebase opportunity as well.

Updated Capex Estimates

Given recent commentary on the call we're dropping our probability weighted capex estimates for Carty Unit 2 to 50% from 100%, equating to slightly lower EPS estimates in 2018 and beyond. We note the change in tone from mgmt. despite recent commentary on the road discussing a competitive build at Carty 2 resets our expectations for incremental resource needs. We continue to ascribe a 50% change of Generic Wind given the need to satisfy RPS standards. We continue to look for positive updates to the capex schedule later this year with additional expansion of substations, likely with 3Q.

Figure 3: POR Probability Weighted Capex Estimates: Shifting Probabilities and Timing of Capex

Capital Expenditure $MM	UBSe	2016A	2017E	2018E	2019E	2020E	2021E
Base Spending	Probability	$407	$585	$446	$294	$303	$290
Port Westward	embedded						
Tucannon	within capex						
Carty		$197	$6				
UBSe: (Above Guidance)							
Carty - Unit 2	50%			$28	$113	$28	
Port Westward - Next Unit	0%				$0	$0	
Next Generic Wind - for 2020 RPS	50%			$213	$213		
Gas Reserves	0%		$0	$0			
RPS Renewable opps (if OR goes to 50% by 2030)	25%					39	$39
RPS CCGT opps (if OR goes to 50% by 2030)	25%						
Other T&D Projects incl Undergroudning				**$50**	**$50**	**$50**	$50
Total Capital Expenditure		**$604**	**$591**	**$737**	**$669**	**$421**	**$421**
Depreciation		$321	$341	$354	$375	$390	$392
Current mgmt guidance 1Q17 slides			***$585***	***$446***	***$294***	***$300***	***$290***

Source: UBSe, Company Filings

Capex estimates vs current guidance – already ahead mgmt

We emphasize we already stand considerably above mgmts. capex forecasts due to our probability embedded scenarios. We see the next capex update slated for the 3Q17 earnings call or EEI, typically following approval from the Board of Directors which could well include further T&D related spend. We note substations and cable undergrounding remain the primarily source of organic upside, though this likely is not enough to address the step down shown in guidance in 2019 and beyond.

EPS Estimates: Lower on probability weighted outcomes

We are shifting our EPS estimates $0.02/0.05/0.04 lower for 2018/2019/2020 to account for the ~$168Mn capex revision in our model. We emphasize the recent $0.28 weather impact on the qtr largely masked an ($0.08) weather adjusted load impact (net of 2 cents for energy efficiency) which further alludes to the impact load trends are having on core EPS in our view. We see latitude for estimates to be revised lower if the prospects for incremental builds continue to deteriorate.

Figure 4: Updated EPS estimates – slightly above Consensus

	2012A	2016A	2017E	2018E	2019E	2020E
UBS EPS estimates		**$2.17**	**$2.29**	**$2.51**	**$2.56**	**$2.69**
UBSe CAGR						**5.2%**
Prior UBS EPS estimates		**$2.17**	**$2.29**	**$2.53**	**$2.60**	**$2.73**
Street Consensus EPS (FactSet)		*$2.16*	*$2.27*	*$2.46*	*$2.55*	*$2.70*
Management Guidance - EPS		*2.05-2.20*	*2.20-2.35*			
DPS	$1.07	$1.26	$1.35	$1.44	$1.54	$1.64
DPS Growth (quarterly, usually in 2Q)		$0.020	$0.0225	$0.0225	$0.025	$0.025
Dividend Payout Ratio (UBSe)	57%	58%	59%	57%	60%	61%
Management Guidance - Payout		***50-70%***	***50-70%***			
DPS growth	**2%**	**7%**	**7%**	**7%**	**7%**	**7%**
Management Guidance - Dividend growth		***5-7%***	***5-7%***			

Source: FactSet, UBSe, Company Filings

Valuation: Downgrade to Neutral – PT $2 lower to $45

We include our latest P/E based valuation below. We are dropping our premium multiple by a half turn given the increasingly challenged regulatory environment we see in Oregon. Our valuation methodology is based on a 2019E peer group (see appendix for full peer set). Changes in our price target are due to lower 2019E estimates ($0.70/sh) and a lower premium multiple ($1.28/sh).

Figure 5: POR Valuation

Business Segment	Valuation Metric	2019 EPS	Low Case Valuation Multiple	Low Case ($ MM) Value	Base Case Peer Multiple	Base Case Prem/(Disc) to Peer	Base Case Base Multiple	Base Case ($ MM) Value	High Case Valuation Multiple	High Case ($ MM) Value
Portland General Electric Company	P/E	$2.56	15.8x	$40	17.3x	0.5x	17.8x	$45	19.8x	$51

Source: FactSet, UBSe, Company Filings

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PIVOTAL QUESTIONS

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Q: Will the Integrated Resource Plan Lead to Additional Capex Awards?

UBS VIEW

It is increasingly uncertain whether the opportunity to build and own ratebase qualified assets will come to fruition following a series datapoints that decrease the prospects for Carty Unit 2. Mgmt most recently commented that the all options are on the table to source the ~500MW capacity need (down from ~850MWs), still pending acknowledgement from the Oregon PUC.

EVIDENCE

Mgmt noted on the recent 1Q17 conference call they are assessing bilateral opportunities, including Power Purchase Agreements to source the ~400MW resource needed to replace the Boardman facility. With this latest datapoint clearly lowering the odds of an owned unit at Carty 2, we see the risk/reward in shares as more balanced.

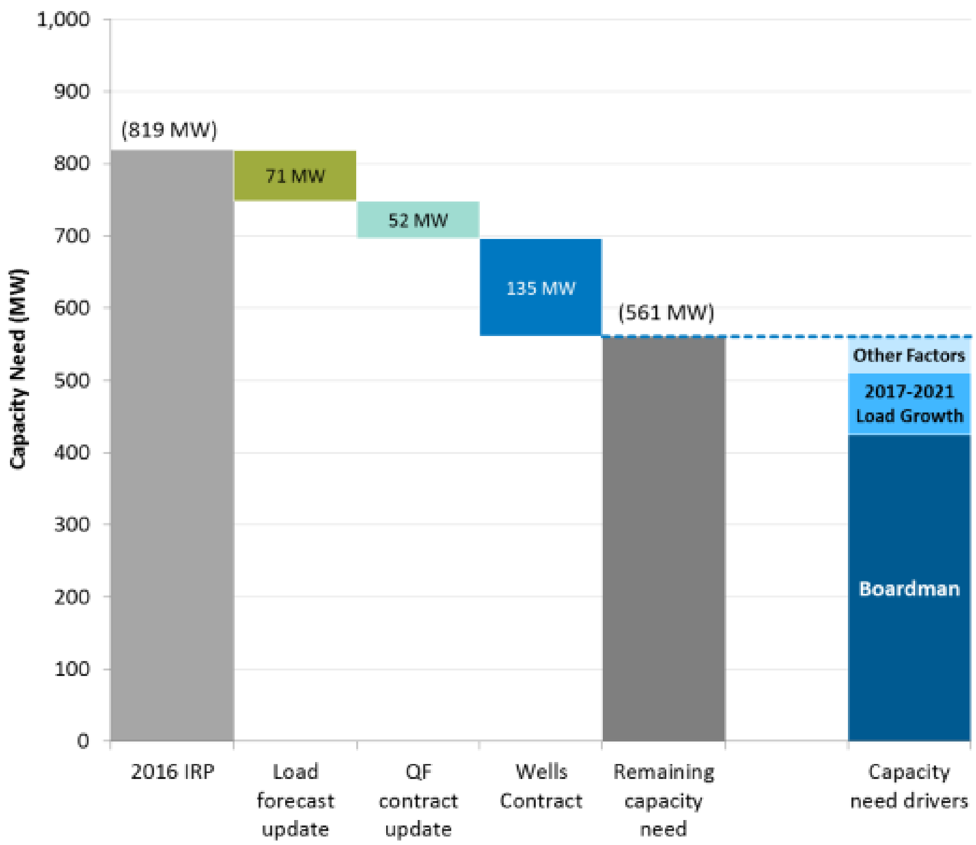
WHAT'S PRICED IN?

We believe the Street largely assumes an additional asset built to replace Boardman capacity (via Carty Unit 2) as well as a wind procurement to satisfy state RPS standards. If mgmt. choses to service baseload capacity needs via PPA's we see estimates slipping further.

POR IRP: Reply Comments Filed; Lower loads

POR recently filed its reply comments for its 2016 IRP including an update to capacity needs from 819MWs to ~561MWs primarily driven by lower load forecasts, updates to QF contracts, and the recontracting of the Wells Hydro facility (135MWs). We note the recontracting was largely expected following our latest meeting with mgmt., though the lower capacity needs now standing at ~570MWs is largely made up of loss of Boardman (~400MWs) with the new updated load growth forecasts accounting for ~100MWs. Further comments on this past quarters conference call decrease the likelihood for ownership opportunities for the Boardman capacity need. Based on the chart below, we believe 70-100MWs due to "other factors" could largely be explained by recontracting opportunities. We further include a full list of contracts below.

Figure 6: POR: Capacity Need Impact due to Load and Contracts - Updated



Source: 2016 POR IRP Reply Comments

Capacity needs down, but load forecast unchanged:

We note the company continues to expect ~1% LT load growth net of 1.5% impact of EE though investors will largely question the latest update, due to the lower capacity needs delineated. We believe PORs assumptions in the front end of their load growth curve generally call for flatter growth, in line with the negative load demand experienced in 2016 and also expected throughout 2017 per the company's latest guidance. While this may cause skepticism, we emphasize the Boardman plant continues to drive the largest percentage of the capacity need. Further, generic wind could also be additive given the need to meet state RPS standards. Recent headlines by the city of Portland to move to 100% clean energy and renewables by 2035 only strengthens the argument here. We note POR would currently be at 50% if the City of Portland includes hydro, though there are still many unknowns with how City RPS could play out.

Contracted Capacity

- **Portland Hydro Project**: POR has a contract with the City of Portland to purchase the output from the Hydro projected located on the Bull Run River. The contract runs through 2017 and provides 10MWa.
- **North Wasco PUD**: The agreement with Northern Wasco Country to purchase the entire output of the Dalles Fishway Northshore Project (5MW) will expire in September of 2017.

- We include a full list of additional contracted capacity for multiple fuel types below, noting other contracts are set to roll off starting in Sept 2017. Near term expiries are presumably included in the resource needs noted above.

Figure 7: Summary of Additional Contracted Capacity

Contract	Contract Type	In Service	Expiry Date	MW	MWa
Baldock Solar	Renewable Purchase Agreement	Jan-12	Jan-37	1.5	0.2
Bellevue Solar	Renewable Purchase Agreement	Jul-11	Jan-36	1.4	0.2
Yamhill Solar	Renewable Purchase Agreement	Jul-11	Oct-36	1	0.1
Outback Solar	Renewable Purchase Agreement	Oct-12	Jan-37	5	1.2
Portland Public Schools (Solar)	Renewable Purchase Agreement	Oct-12	Sep-40	1.2	0.2
EWEB Stone Creek	Capacity Contract	NA	NA	0.6	
Iberdrola Summer Peak	Capacity Contract	Jul-14	Sep-18	100	
Iberdrola Winter Peak	Capacity Contract	Dec-14	Feb-19	100	
Shell Option	Option	Mar-14	Dec-17	300	
Covanta Marion	PPA	Jul-14	Sep-17	8	9.6

Source: POR IRP

IRP continues to be the front and center debate

Following our latest conversations with stakeholders, we emphasize willingness to accelerate PTCs to enable their use today despite lack of tax capacity; and assets built today would enable PTC generation for a decade, presumably largely through the period in which there is indeed tax capacity, and meaningfully improve the tax prospects today. While timeline for the IRP is a nascent concern, **our focus remains on more the risks around demand in the thermal procurement** rather than the renewable procurement given consternation on demand projections. We think the risk appears here principally tied to timeline for replacement, as well as alternative resources.

Figure 8: IRP Timeline

Date / Time	Event	Description
8/31/2017	Final Order due	Final Order due
7/28/2017	Staff Memo due	Staff Memo due
6/23/2017	PGE Final Comments due	PGE Final Comments due
5/12/2017	Staff and Intervenors Final Comments due	Staff and Intervenors Final Comments due
3/31/2017	PGE Reply Comments due	PGE Reply Comments due

Source: Oregon PUC

Where else is there Capex upside?

- **Cable undergrounding:** Mgmt is looking to replace 25 miles of cable on an annual basis noting there's 250 miles of cable needed to be replaced over the next 20 years**.**
- **Substations:** As it stands there are 69 substations deemed "higher risk" with mgmts. next capex update in 3Q17, we look for further increases noting that 3Q16 included only 20 substations reviewed by the board and approved for rebuilds.

PIVOTAL QUESTIONS

return ↑

Q: Is there risk to the LT EPS prospects?

UBS VIEW

Yes. We believe the incremental upside stemming from capacity needs could well be offset by the eventual inclusion of Bonus Depreciation as well as the risk of negligible load spilling over to the 2018 time period. We note this has already have had an effect on base EPS over the last two years.

EVIDENCE

We note $0.08 cents of impact on this qtr due to lower load growth, equating to a 3.9% decrease, albeit this is lapping an extra day in Feb due to leap year. While customer growth has increased 1.3% YoY in 2016, the Commercial sector remains key to reviving load metrics. We note industrial customers and deliveries have ticked up of late, though this is lower margin business. Our recent stakeholder discussions have highlighted a lack of tax capacity and the decisions to not elect for bonus depreciation (an offset to ratebase) which could be among the most closely watched elements of the latest GRC.

WHAT'S PRICED IN?

We believe buy-side expectations are largely pivoted towards the IRP, rather than the 2018 GRC where we see risk skewed towards the downside. While the GRC itself represents risk in the form of picking back up the issue of electing bonus depreciation, we could see the ROE revisited again.

2018 GRC: What are the facts?

- **2018 GRC: awaiting Staff and Intervenor testimony:** We look forward to the first looks at Staff and Intervenor testimony expected by June 16th. We note the previous 4 rate cases were settled with Staff with Settlement conferences scheduled for the beginning of August.

- **What's included?** The filing including a forward '18 test year, an ROE of 9.75% and rate change request for ~$100Mn (5.6% increase for cost of service) with new rates being set in January 2018. Base rate increases largely stem from reliability upgrades, including substation upgrades, cyber security, emergency response and management, as well as further T&D system upgrades. Mgmt noted in our meetings intervenor pushback could come from the 5.6% rate increase, as they typically have offsets in the past (Trojan decommissioning, Yucca Mtn), though this time around T&D investments are for some of their largest customers. Further, stakeholder discussions highlighted a lack of tax capacity and decision not to elect for bonus depreciation, which is among the most closely watched elements in the latest 2017 rate case.

Pushback in the GRC could stem from the 5.6% cost of service increase

Figure 9: POR 2018 GRC Timeline

Date	Event
April 7th	Deadline to file petitions to Intervene
May 5th	Staff Workshop
June 16th	Staff and Intervenors Open Testimony
July 18th	PGE Reply Testimony
Aug 3rd - 4th	Settlement Conferences
Aug 17th	Staff/Intervenor Rebuttal Testimony
Seot 5th	PGE Surrebuttal Testimony
Sept 12th	Parties file Joint Issues List
Oct 24th	Oral Arguments (Tenative)
Dec 21st	Taget Date for Commision Order
Jan 1st	New Rates Effective

Source: Company Filings, Oregon PUC

Figure 10: Key 2018 GRC Metrics

Rate Case Summary OR: D-UE-319	
	Request
Rate Change Amount ($Mn)	99.90
Rate Change/ Revenue (%)	5.60
Rate Case Test Year End Date	12/31/2018
Rate Base ($Mn)	4,594.05
Return on Equity (%)	9.75
Common Equity to Total Capital (%)	50.00
Rate of Return (%)	7.46

Source: SNL

Load Growth

Mgmt continues to reiterate its expectations for +1% long term annual load growth noting the recent guide from 2016 (flat to down 1%) is not representative of the long term trend they're seeing. Mgmt. sees positive load growth trends driven by the high tech sector, noting customer count was up 1.2% over the past year. We see load growth remaining a contentious topic among investors with many pointing to the weather adjusted 2017 forecast in the prior two quarters having an impact. We look for further economic indicators across Oregon to support management's position, specifically on the industrial side and commercial side.

We note the longer-term demographic trends are quite supportive, with the long-term growth remains *principally driven by industrial trends including primarily tech-related companies.* Articulating a path back towards net +1% sales growth still remains unclear post the 1Q17. We wouldn't expect any meaningful reconciliation of these until after the pending rate case an RFP given how closely scrutinized demand profiles are in both processes; as such we see guidance next year with 4Q17 as the next real inflection on this point.

UPSIDE / DOWNSIDE SPECTRUM

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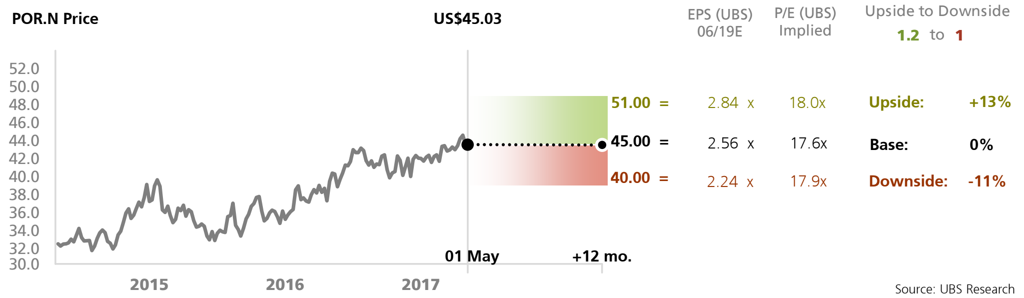

Source: UBS Research

Value drivers	P/E Multiple	Carty Unit 2 Capex Probability	Wind Capex Probability	Load Growth	2019 Avg Ratebase ($Mn)
$51 upside	20.1x	100%	100%	1.5%	5,897
$45 base	18.1x	50%	50%	1%	5,520
$40 downside	16.1x	0%	0%	0%	5,142

Source: UBS

Risk to the current share price is skewed (1.2:1) to the upside

Upside (US $51): Our upside scenario assumes 100% probability for $600M or more of incremental capex through 2020 to replace the Boardman plant with a combination of renewables and peakers. It also assumes POR multiple continues to re-rate higher, at a 2x premium to the regulated peer group. Our upside case further includes 100% probability for a Wind resource build as well as further T&D capex opportunities.

Base (US $45): Our base case scenario assumes a 0.5x premium to the 2019E peer group multiple. We further incorporate a 50% probability of a Carty 2 as well as a wind resource build equating to ~600Mn of capex through 2020 which is all incremental to mgmts. current plan. Our base case assumes an 8.2% EPS CAGR through 2020 based off the midpoint of mgmts. 2016 guidance.

Downside (US $40): Our downside case assumes zero probability for $600M of incremental capex through 2020 to replace the Boardman plant and that this is done with purchase power agreements (PPA) instead. It also assumes no future renewables are ratebased to drive earnings growth 4% or less through the 2020s. Our downside case assumes Portland returns to a discount story among its peers.

COMPANY DESCRIPTION

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Portland General Electric Company (POR), was founded in 1888, and is a publicly-owned, vertically-integrated, regulated electric utility. POR is engaged in generation, transmission, distribution, and retail sales of electricity in the state of Oregon, serving 840,000 retail customers. POR is also involved in purchasing and selling electricity and natural gas in the wholesale market to obtain power for its retail customers.

Industry outlook

The electric utility industry is projected to experience weak or negative electric demand growth in coming years as a tepid economy and energy efficiency dampen demand. In the unregulated merchant power space, we see limited potential for a meaningful recovery from currently low power prices due to limited projected demand growth, growth of subsidized renewables, and potential for only modest further retirements. At regulated utilities, we believe rising interest rates and robust valuations are a challenge to the sector, particularly as earnings growth stalls once EPA-mandated growth capex slow mid-decade. We expect cost-cutting and strategic planning to be a key theme across both regulated and competitive companies, with M&A at modest (at best) premiums designed to extract cost synergies. We believe utilities with high parent leverage will disproportionately suffer, as they are unable to recoup from rising interest rates.

Appendix

Other datapoints to watch

Changes coming at Commission

We highlight Commissioner John Savage (D) declined to seek another term on the Commission and will be ending his service at the end of this Month. Governor Brown (D) will be appointing Megan Walseth Decker to a term that commences on April 1 (4 year terms). Ms. Decker previously served as the chair of the NW Energy Coalition board. We highlight this is on the back of new commission Staff as well.

Oregon Legislation: Less of our Focus

We are less concerned on the 3 pending Senate Bills in Oregon (see a deep dive into each bill here) all which would have a negative outcome for Portland. The closest bill to watch in our view is SB 978 which is slated to be heard March 29th and would disallow IOU's from ratebasing assets greater than 50MW unless there's a unique fleeting opportunity (distressed situation). The associated working group has used Carty and the subsequent construction delays as an avenue for legislative efforts, though we note Coyote Springs, Port Westward, as well as the Tucannon Wind project have all been built on time and on budget.

Equity needs?

Mgmt noted they have always tried to have a 50/50 capital structure, and the RFP may drive them to want a heavier equity layer. This is in line with previous comments as we note mgmt. emphasized on the 3Q16 call that the capex plan can be funded *without equity* excluding any large resource needs. We emphasize POR currently stands at a 55% equity ratio, and board typically meets in April to discuss dividend policy and capital needs. We have already assumed $150Mn and $100Mn of equity proceeds in 2018E and 2019E, respectively.

Dividend is a Clear Continued Positive Trend

We emphasize the core discussion points are focused on **Dividend Payout** as well, illustrating clear latitude to continue to grow at a 5-7% pace despite any execution hurdles, with mgmt. pointing out it is at the bottom end of its 50-70% range.

Figure 11: Regulated Utilities Peer Comp Set – 17.3x 2019E Peer Multiple

	Ticker	Rating	Market Cap.	Price	Price	Dividend	Short	Days to	P/E Multiple					Earnings Per Share					EV / EBITDA Multiple			
			($ in millions)	4/30/2017	Target	Yield	Interest	Cover	2016E	2017E	2018E	2019E	2020E	2016E	2017E	2018E	2019E	2020E	2016	2017E	2018E	2019E
DIVERSIFIED UTILITIES																						
Avangrid Inc	AGR	Neutral	13,439	43.49	43.00	3.97%	2.7%	2.8	21.0	19.6	18.7	16.9	15.6	2.07	2.22	2.32	2.57	2.79	8.0	8.2	8.0	7.3
Dominion Resources	D	Neutral	48,336	76.94	75.00	3.93%	3.4%	10.0	20.2	21.2	19.4	17.7	17.1	3.80	3.63	3.97	4.35	4.49	14.3	13.2	11.5	10.9
Entergy Corp.	ETR	Sell	13,606	75.84	70.00	4.59%	2.6%	3.5	10.7	15.8	15.1	15.2	15.5	7.11	4.80	5.02	4.99	4.90	12.7	9.2	8.7	8.4
Exelon Corp.	EXC	Neutral	31,828	34.35	36.00	3.81%	1.8%	3.3	12.8	12.9	11.8	13.1	14.4	2.68	2.66	2.92	2.62	2.39	7.7	7.3	6.7	7.0
FirstEnergy Corp.	FE	Neutral	13,077	29.47	33.00	4.89%	2.1%	2.7	11.2	11.4	13.6	16.0	13.8	2.63	2.59	2.17	1.85	2.13	7.7	7.3	7.6	7.8
NextEra Energy	NEE	Buy	62,294	133.06	143.00	2.95%	2.3%	7.1	21.5	19.8	18.3	17.2	16.2	6.19	6.74	7.27	7.74	8.19	12.4	11.8	11.0	10.2
Public Service Enterprise Group	PEG	Buy	22,142	43.74	50.00	3.93%	1.8%	2.6	15.1	14.9	14.6	15.3	16.9	2.90	2.93	3.00	2.86	2.59	7.5	7.1	6.5	6.5
Sempra Energy	SRE	Buy	28,018	111.80	128.00	2.94%	2.1%	4.3	19.6	22.7	20.4	16.0	15.0	5.71	4.94	5.47	7.00	7.48	10.9	10.0	8.9	7.9
Southern Company	SO	Sell	49,363	49.60	47.00	4.68%	2.3%	3.7	17.1	16.6	15.8	15.2	14.6	2.89	3.00	3.13	3.27	3.40	12.5	9.5	9.0	8.5
Average						3.88%	2.4%	4.5	16.5	17.3	16.5	15.9	15.6	*12.0%*	*-7.8%*	*5.4%*	*5.7%*	*2.9%*	10.1	9.2	8.6	8.3
REGULATED INTEGRATED UTILITIES																						
Large Cap	**Ticker**	**Rating**	**Market Cap**	**Price**	**PT**	**Yield**	**Short**	**Days**	**2016**	**2017E**	**2018E**	**2019E**	**2020E**	**2016**	**2017E**	**2018E**	**2019E**	**2020E**	**2016**	**2017E**	**2018E**	**2019E**
American Electric Power, Inc.	AEP	Buy	33,176	67.47	74.00	3.50%	1.2%	2.8	17.1	18.7	17.3	16.2	15.2	3.94	3.60	3.90	4.17	4.43	9.8	11.9	11.8	11.2
Ameren Corp.	AEE	Neutral	13,170	54.28	55.00	3.24%	3.2%	4.6	20.2	19.4	18.6	17.1	16.3	2.68	2.79	2.92	3.17	3.32	9.1	8.8	8.7	8.4
Alliant Energy Corp	LNT	Neutral	8,909	39.11	41.00	3.22%	1.8%	4.0	21.0	19.2	17.9	16.8	16.7	1.87	2.04	2.19	2.32	2.34	12.1	11.2	10.2	9.4
CenterPoint Energy Inc	CNP	Neutral	12,200	28.31	28.00	3.78%	2.2%	3.3	24.4	22.1	20.6	19.0	17.8	1.16	1.28	1.37	1.49	1.59	8.6	7.5	7.3	7.0
CMS Energy Corporation	CMS	Buy	12,643	45.15	46.00	2.95%	1.2%	1.7	22.4	20.8	19.5	18.0	16.2	2.02	2.17	2.31	2.51	2.79	10.2	10.3	9.8	9.2
Consolidated Edison	ED	Sell	24,071	78.85	72.00	3.50%	3.6%	7.1	19.9	19.9	19.2	18.6	18.0	3.97	3.97	4.10	4.23	4.37	10.0	9.4	9.1	8.7
DTE Energy Co.	DTE	Neutral	18,645	103.94	107.00	3.17%	1.9%	3.7	19.7	19.3	18.0	16.7	16.4	5.28	5.39	5.77	6.21	6.35	12.3	10.2	10.1	9.6
Duke Energy	DUK	Buy	57,417	82.07	92.00	4.17%	1.6%	4.8	17.5	17.8	16.9	16.1	15.3	4.69	4.60	4.84	5.09	5.38	10.8	10.3	10.1	9.6
Edison International	EIX	Buy	25,817	79.24	82.00	2.74%	1.5%	3.0	19.9	19.4	18.4	16.4	15.1	3.97	4.09	4.30	4.82	5.26	9.2	8.0	7.7	7.1
Eversource Energy	ES	Neutral	18,744	59.15	60.00	3.21%	1.7%	3.7	20.0	19.0	18.2	17.3	16.5	2.96	3.11	3.24	3.41	3.57	11.0	11.4	11.4	11.0
PG&E Corporation	PCG	Neutral	33,940	66.47	68.00	2.95%	1.2%	3.4	17.7	18.0	17.5	16.7	16.2	3.76	3.69	3.80	3.98	4.11	8.8	8.3	8.0	7.6
Pinnacle West Capital Co.	PNW	Neutral	9,380	84.08	80.00	3.12%	2.7%	4.0	21.3	19.6	18.2	17.5	16.8	3.95	4.28	4.61	4.81	5.02	9.6	9.2	8.9	8.5
PPL Corporation	PPL	Neutral	25,863	37.99	39.00	4.16%	1.5%	3.2	15.5	17.3	16.3	15.2	14.8	2.45	2.20	2.33	2.50	2.57	10.6	12.0	11.2	10.2
SCANA Corp.	SCG	Buy	9,351	65.43	77.00	3.73%	4.8%	5.0	15.7	15.4	14.1	13.2	12.8	4.16	4.24	4.65	4.95	5.10	11.2	11.7	10.9	10.0
WEC Energy Group Inc.	WEC	Neutral	19,055	60.38	60.00	2.82%	3.0%	5.3	20.3	19.3	17.9	17.0	16.2	2.97	3.12	3.37	3.54	3.72	11.8	11.5	11.1	10.6
Xcel Energy Inc.	XEL	Neutral	22,748	44.80	45.00	3.21%	2.4%	5.2	20.3	19.3	18.3	17.3	16.6	2.21	2.32	2.45	2.58	2.70	10.1	10.4	10.0	9.3
Average						3.33%	2.3%	4.1	19.7	19.1	18.0	16.9	16.1	*5.6%*	*2.5%*	*6.0%*	*6.4%*	*4.6%*	10.3	10.0	9.6	9.1
Small and Mid-Caps	**Ticker**	**Rating**	**Market Cap**	**Price**	**PT**	**Yield**	**Short**	**Days**	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**	**2016.0**	**2017E**	**2018E**	**2019E**
ALLETE	ALE	Not Rated	3,518	69.18	NA	3.09%	1.9%	3.5	20.0	18.8	17.9	16.3	16.0	3.46	3.68	3.87	4.26	4.33	10.6	13.0	12.8	12.0
Avista Corp	AVA	Sell	2,578	40.04	37.00	3.57%	2.4%	4.7	18.7	21.2	19.3	17.8	17.2	2.15	1.89	2.07	2.24	2.33	9.5	10.4	9.9	9.2
Black Hills Corp	BKH	Not Rated	3,600	67.38	NA	2.64%	10.7%	16.2	19.0	17.7	17.4	16.8	na	3.55	3.80	3.87	4.00	na	16.1	10.4	7.2	6.9
El Paso Electric Co.	EE	Not Rated	2,077	51.20	NA	2.42%	1.1%	2.2	20.4	18.6	17.7	17.4	15.8	2.51	2.76	2.89	2.95	3.25	na	11.0	10.3	10.0
Great Plains Energy	GXP	Neutral	6,269	29.11	30.00	3.78%	3.3%	3.1	17.3	18.8	16.5	16.0	15.6	1.68	1.55	1.76	1.82	1.87	7.6	7.6	na	na
Hawaiian Electric Industries	HE	Not Rated	3,644	33.51	NA	3.70%	4.1%	7.3	20.4	18.7	17.7	17.2	16.3	1.65	1.79	1.89	1.95	2.05	8.1	9.9	10.0	9.5
Idacorp, Inc.	IDA	Not Rated	4,226	83.82	NA	2.62%	1.7%	4.3	21.0	20.3	19.5	18.7	17.8	4.00	4.14	4.29	4.49	4.70	13.9	12.7	12.2	11.6
MGE Energy	MGEE	Not Rated	2,222	64.10	NA	1.92%	1.2%	4.5	27.9	26.7	25.6	24.2	22.9	2.30	2.40	2.50	2.65	2.80	na	na	na	na
NorthWestern Corp	NWE	Not Rated	2,907	60.00	NA	3.50%	2.1%	2.1	17.6	17.1	16.7	na	na	3.42	3.52	3.58	na	na	na	11.3	11.2	10.5
Portland General Electric Company	POR	Buy	4,010	45.03	47.00	3.02%	2.0%	4.6	20.8	19.7	17.8	17.3	16.5	2.17	2.29	2.53	2.60	2.73	9.1	8.9	8.4	7.9
PNM Resources Inc.	PNM	Not Rated	2,951	37.05	NA	2.62%	3.1%	3.8	20.3	18.4	17.7	16.8	na	1.82	2.01	2.10	2.21	na	10.0	8.8	8.3	8.2
Spire Inc	SR	Not Rated	3,122	68.25	NA	3.08%	2.3%	4.3	19.4	18.6	18.1	16.8	na	3.52	3.67	3.76	4.07	na	12.4	10.4	9.9	8.6
OGE Energy Corp	OGE	Not Rated	6,896	34.53	NA	3.50%	2.1%	3.6	17.8	17.0	16.2	15.9	15.4	1.94	2.03	2.13	2.17	2.24	na	na	na	na
Otter Tail Corp	OTTR	Not Rated	1,549	39.30	NA	3.26%	1.0%	3.5	22.9	21.2	20.0	19.9	na	1.72	1.85	1.97	1.97	na	na	na	na	na
Vectren Corp	VVC	Not Rated	4,895	59.01	NA	2.85%	0.8%	1.7	22.4	21.0	19.3	18.2	na	2.63	2.81	3.07	3.24	na	na	na	na	na
Average						3.04%	2.7%	4.6	20.4	19.6	18.5	17.8	17.1	*1.5%*	*4.3%*	*5.2%*	*3.0%*	*0.7%*	10.8	10.4	10.0	9.4
Regulated Average						3.2%	2.4%	4.3	20.0	19.3	18.2	17.3	16.4	*3.8%*	*2.8%*	*5.8%*	*5.3%*	*5.6%*	10.5	10.3	9.9	9.3

Source: UBSe, FactSet estimates used for any uncovered companies

Portland General Electric Company (POR.N)

Income statement (US$m)	12/14	12/15	12/16	12/17E	% ch	12/18E	% ch	12/19E	12/20E	12/21E
Revenues	**1,900**	**1,898**	**1,923**	**1,980**	*3.0*	**2,051**	*3.6*	**2,096**	**2,171**	**2,216**
Gross profit	930	971	1,020	1,077	*5.6*	1,148	*6.6*	1,193	1,268	1,313
EBITDA (UBS)	**633**	**636**	**676**	**722**	*6.8*	**771**	*6.8*	**814**	**856**	**875**
Depreciation & amortisation	(301)	(305)	(321)	(341)	*6.2*	(354)	*3.9*	(375)	(390)	(392)
EBIT (UBS)	**332**	**331**	**355**	**381**	*7.3*	**417**	*9.3*	**440**	**466**	**483**
Associates & investment income	0	0	0	0	-	0	-	0	0	0
Other non-operating income	0	0	0	0	-	0	-	0	0	0
Net interest	(96)	(114)	(112)	(109)	*2.9*	(115)	*-5.7*	(121)	(122)	(119)
Exceptionals (incl goodwill)	0	0	0	0	-	0	-	0	0	0
Profit before tax	**236**	**217**	**243**	**272**	*12.0*	**302**	*10.8*	**319**	**344**	**364**
Tax	(61)	(45)	(50)	(69)	*-37.2*	(74)	*-8.3*	(81)	(91)	(98)
Profit after tax	**175**	**172**	**193**	**204**	*5.5*	**227**	*11.6*	**238**	**253**	**265**
Preference dividends	0	0	0	0	-	0	-	0	0	0
Minorities	1	0	0	0	-	0	-	0	0	0
Extraordinary items	0	0	0	0	-	0	-	0	0	0
Net earnings (local GAAP)	**176**	**172**	**193**	**204**	*5.5*	**227**	*11.6*	**238**	**253**	**265**
Net earnings (UBS)	**176**	**172**	**193**	**204**	*5.5*	**227**	*11.6*	**238**	**253**	**265**
Tax rate (%)	25.9	20.7	20.6	25.2	*22.5*	24.6	*-2.3*	25.4	26.4	27.1

Per share (US$)	12/14	12/15	12/16	12/17E	% ch	12/18E	% ch	12/19E	12/20E	12/21E
EPS (UBS, diluted)	2.18	2.04	2.17	2.29	*5.7*	2.51	*9.6*	2.56	2.69	2.81
EPS (local GAAP, diluted)	2.18	2.04	2.17	2.29	*5.7*	2.51	*9.6*	2.56	2.69	2.81
EPS (UBS, basic)	2.25	2.04	2.17	2.29	*5.7*	2.51	*9.6*	2.56	2.69	2.81
Net DPS (US$)	1.12	1.18	1.26	1.35	*6.9*	1.44	*6.7*	1.54	1.64	1.74
Cash EPS (UBS, diluted)[1]	5.92	5.66	5.77	6.13	*6.1*	6.42	*4.9*	6.57	6.83	6.97
Book value per share	24.48	25.44	26.36	27.30	*3.6*	29.54	*8.2*	30.80	31.52	32.60
Average shares (diluted)	80.49	84.34	89.05	88.92	*-0.2*	90.54	*1.8*	93.19	94.22	94.22

Balance sheet (US$m)	12/14	12/15	12/16	12/17E	% ch	12/18E	% ch	12/19E	12/20E	12/21E
Cash and equivalents	127	4	6	106	*NM*	108	*1.9*	109	111	113
Other current assets	572	553	457	477	*4.5*	487	*1.9*	492	502	508
Total current assets	**699**	**557**	**463**	**583**	*26.0*	**595**	*1.9*	**602**	**614**	**621**
Net tangible fixed assets	5,679	6,012	6,434	6,684	*3.9*	7,066	*5.7*	7,361	7,391	7,420
Net intangible fixed assets	664	652	630	633	*0.5*	634	*0.2*	654	677	683
Investments / other assets	0	0	0	0	-	0	-	0	0	0
Total assets	**7,042**	**7,221**	**7,527**	**7,900**	*5.0*	**8,295**	*5.0*	**8,616**	**8,682**	**8,724**
Trade payables & other ST liabilities	498	487	427	456	*6.9*	462	*1.2*	466	472	475
Short term debt	375	139	150	0	-	0	-	0	0	0
Total current liabilities	**873**	**626**	**577**	**456**	*-20.9*	**462**	*1.2*	**466**	**472**	**475**
Long term debt	2,126	2,071	2,200	2,610	*18.6*	2,752	*5.4*	2,875	2,835	2,772
Other long term liabilities	2,132	2,266	2,406	2,406	*0.0*	2,406	*0.0*	2,406	2,406	2,406
Preferred shares	0	0	0	0	-	0	-	0	0	0
Total liabilities (incl pref shares)	**5,131**	**4,963**	**5,183**	**5,473**	*5.6*	**5,620**	*2.7*	**5,746**	**5,713**	**5,653**
Common s/h equity	1,911	2,258	2,344	2,428	*3.6*	2,675	*10.2*	2,870	2,969	3,071
Minority interests	0	0	0	0	-	0	-	0	0	0
Total liabilities & equity	**7,042**	**7,221**	**7,527**	**7,900**	*5.0*	**8,295**	*5.0*	**8,616**	**8,682**	**8,724**

Cash flow (US$m)	12/14	12/15	12/16	12/17E	% ch	12/18E	% ch	12/19E	12/20E	12/21E
Net income (before pref divs)	176	172	193	204	*5.5*	227	*11.6*	238	253	265
Depreciation & amortisation	301	305	321	341	*6.2*	354	*3.9*	375	390	392
Net change in working capital	0	0	0	0	-	0	-	0	0	0
Other operating	0	0	0	0	-	0	-	0	0	0
Operating cash flow	**477**	**477**	**514**	**545**	*6.0*	**582**	*6.8*	**613**	**644**	**657**
Tangible capital expenditure	(1,007)	(598)	(584)	(591)	*-1.2*	(737)	*-24.6*	(669)	(420)	(420)
Intangible capital expenditure	0	0	0	0	-	0	-	0	0	0
Net (acquisitions) / disposals	0	0	0	0	-	0	-	0	0	0
Other investing	13	76	(1)	0	-	0	-	0	0	0
Investing cash flow	**(994)**	**(522)**	**(585)**	**(591)**	*-1.0*	**(737)**	*-24.6*	**(669)**	**(420)**	**(420)**
Equity dividends paid	(87)	(97)	(110)	(120)	*-8.9*	(130)	*-8.6*	(143)	(154)	(163)
Share issues / (buybacks)	0	0	0	0	-	0	-	0	0	0
Other financing	(2)	0	(13)	0	-	0	-	0	0	0
Change in debt & pref shares	585	145	290	260	*-10.30*	142	*-45.32*	122	(40)	(63)
Financing cash flow	**496**	**48**	**167**	**140**	*-16.0*	**12**	*-91.4*	**(21)**	**(194)**	**(227)**
Cash flow inc/(dec) in cash	**(21)**	**3**	**96**	**94**	*-2.1*	**(143)**	-	**(77)**	**29**	**10**
FX / non cash items	-	(126)	(94)	6	-	145	*NM*	78	(27)	(8)
Balance sheet inc/(dec) in cash	**-**	**(123)**	**2**	**100**	*NM*	**2**	*-97.9*	**1**	**2**	**1**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1]Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

Portland General Electric Company (POR.N)

Valuation (x)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
P/E (local GAAP, diluted)	15.3	17.8	19.0	19.7	17.9	17.6	16.7	16.0
P/E (UBS, diluted)	15.3	17.8	19.0	19.7	17.9	17.6	16.7	16.0
P/CEPS	5.5	6.4	7.1	7.4	7.0	6.8	6.6	6.5
Equity FCF (UBS) yield %	(20.4)	(4.0)	(1.9)	(1.2)	(3.9)	(1.4)	5.6	5.9
Net dividend yield (%)	3.3	3.2	3.1	3.0	3.2	3.4	3.6	3.9
P/BV x	1.4	1.4	1.6	1.6	1.5	1.5	1.4	1.4
EV/revenues (core)	2.7	3.0	3.3	3.4	3.2	3.2	3.1	3.1
EV/EBITDA (core)	8.2	8.9	9.3	9.2	8.6	8.2	7.8	8.0
EV/EBIT (core)	15.7	17.0	17.8	17.5	16.0	15.1	14.3	14.4
EV/OpFCF (core)	8.3	8.9	9.4	9.2	8.7	8.2	7.8	8.0
EV/op. invested capital	-	1.2	1.3	1.3	1.2	1.2	1.1	1.2

Enterprise value (US$m)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Market cap.	2,601	3,002	3,657	4,004	4,004	4,004	4,004	4,004
Net debt (cash)	2,374	2,374	2,374	2,374	2,374	2,374	2,374	2,691
Buy out of minorities	0	0	0	0	0	0	0	0
Pension provisions/other	237	259	281	281	281	281	281	281
Total enterprise value	**5,212**	**5,635**	**6,312**	**6,659**	**6,659**	**6,659**	**6,659**	**6,976**
Non core assets	0	0	0	0	0	0	0	0
Core enterprise value	**5,212**	**5,635**	**6,312**	**6,659**	**6,659**	**6,659**	**6,659**	**6,976**

Growth (%)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Revenue	5.0	-0.1	1.3	3.0	3.6	2.2	3.6	2.1
EBITDA (UBS)	33.4	0.6	6.3	6.8	6.8	5.6	5.2	2.1
EBIT (UBS)	46.7	-0.2	7.3	7.3	9.3	5.6	6.0	3.6
EPS (UBS, diluted)	62.6	-6.5	6.3	5.7	9.6	1.8	5.3	4.6
Net DPS	1.8	5.4	7.2	6.9	6.7	6.8	6.5	6.1

Margins & Profitability (%)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Gross profit margin	48.9	51.2	53.0	54.4	56.0	56.9	58.4	59.2
EBITDA margin	33.3	33.5	35.2	36.5	37.6	38.9	39.5	39.5
EBIT margin	17.4	17.4	18.5	19.2	20.3	21.0	21.5	21.8
Net earnings (UBS) margin	9.2	9.1	10.0	10.3	11.1	11.4	11.7	12.0
ROIC (EBIT)	-	7.2	7.3	7.5	7.7	7.6	7.8	8.1
ROIC post tax	5.4	5.7	5.8	5.6	5.8	5.7	5.8	5.9
ROE (UBS)	9.2	8.3	8.4	8.5	8.9	8.6	8.7	8.8

Capital structure & Coverage (x)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Net debt / EBITDA	3.8	3.5	3.5	3.5	3.4	3.4	3.2	3.0
Net debt / total equity %	124.2	97.7	100.0	103.1	98.9	96.3	91.7	86.6
Net debt / (net debt + total equity) %	55.4	49.4	50.0	50.8	49.7	49.1	47.8	46.4
Net debt/EV %	45.6	39.1	37.1	37.6	39.7	41.5	40.9	38.1
Capex / depreciation %	NM	196.1	181.9	173.3	NM	178.6	107.8	107.3
Capex / revenue %	NM	NM	NM	29.9	NM	NM	19.4	19.0
EBIT / net interest	3.5	2.9	3.2	3.5	3.6	3.6	3.8	4.0
Dividend cover (UBS)	2.0	1.7	1.7	1.7	1.7	1.7	1.6	1.6
Div. payout ratio (UBS) %	49.6	57.6	58.1	58.8	57.3	60.1	60.8	61.6

Revenues by division (US$m)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Others	1,900	1,898	1,923	1,980	2,051	2,096	2,171	2,216
Total	**1,900**	**1,898**	**1,923**	**1,980**	**2,051**	**2,096**	**2,171**	**2,216**

EBIT (UBS) by division (US$m)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Others	332	331	355	381	417	440	466	483
Total	**332**	**331**	**355**	**381**	**417**	**440**	**466**	**483**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

Forecast returns

Forecast price appreciation	-0.1%
Forecast dividend yield	3.1%
Forecast stock return	+3.0%
Market return assumption	6.3%
Forecast excess return	-3.3%

Valuation Method and Risk Statement

As a regulated utility, POR is exposed to potentially adverse state and federal regulatory decisions and environmental compliance mandates. Additionally, operations may be impacted by unfavorable weather which could depress retail electric and natural gas sales, increase the cost of power supply (hydro), and in extreme cases damage facilities and property. Macroeconomic risks such as lower than expected GDP growth and rising interest rates can also negatively affect results. Additional risks include: financing risk, counterparty credit risk, commodity prices, and cyber security.
Our price target remains based on a 0.5x premium to 2019E average peer P/E.

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12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	46%	30%
Neutral	FSR is between -6% and 6% of the MRA.	38%	28%
Sell	FSR is > 6% below the MRA.	16%	18%
Short-Term Rating	**Definition**	**Coverage[3]**	**IB Services[4]**
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%

Source: UBS. Rating allocations are as of 31 March 2017.
1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
3:Percentage of companies under coverage globally within the Short-Term rating category.
4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

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UBS Securities LLC: Julien Dumoulin-Smith; Jerimiah Booream, CFA.

Company Disclosures

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
Portland General Electric Company[16]	POR.N	Buy	N/A	US$45.03	01 May 2017

Source: UBS. All prices as of local market close.
Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date
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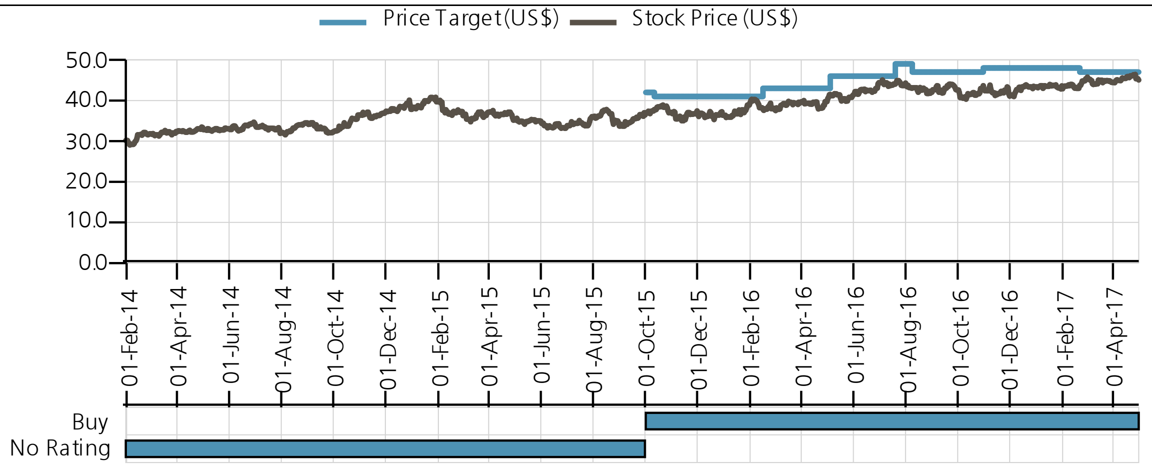
Portland General Electric Company (US$)



Date	Stock Price (US$)	Price Target (US$)	Rating
2014-01-31	30.18	-	No Rating
2015-10-02	36.95	42.0	Buy
2015-10-12	37.75	41.0	Buy
2016-02-16	37.84	43.0	Buy
2016-05-05	41.48	46.0	Buy
2016-07-20	44.02	49.0	Buy
2016-08-09	43.04	47.0	Buy
2016-10-31	43.64	48.0	Buy
2017-02-21	43.72	47.0	Buy

Source: UBS; as of 01 May 2017

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