BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1916

In the Matter of Portland General Electric, 2019-2023 Renewable Portfolio Standard Implementation Plan	Staff's Initial Comments

Staff of the Public Utility Commission of Oregon (Staff) presents its Initial Comments on Portland General Electric's (PGE or Company) 2019 – 2023 Renewable Portfolio Standard Implementation Plan (RPIP). Staff's comments address the Company's responsiveness to the requirements found in OAR 860-083-0400 and ORS 468A.075, the conditions found in Order 17-166, and provide context for issues to be addressed in the upcoming Renewable Portfolio Standard (RPS) rulemaking.

<u>Renewable Implementation Plan</u>

OAR 860-083-0400 requires electric companies subject to ORS 469A.052 to file an RPS implementation plan every even-numbered year that conveys its compliance strategy over the subsequent 5 years. Order No. 11-441 adopted a standardized form for the RPIP which includes three narrative questions about the Company's compliance strategy and a response to each element of OAR 860-083-0400.

PGE submitted its 2019 – 2023 RPIP on December 29, 2017. Staff found this RPIP's limited narrative did not necessarily articulate a robust compliance strategy as envisioned in the Commission's administrative rule. After receiving information request responses and additional attachments, Staff was able to assemble a more holistic understanding of the Company's compliance strategy and provide substantive comments. Staff's review indicates that PGE has complied with the basic requirements outlined in OAR 860-083-0400 and is unlikely to exceed the 4% incremental cost threshold during the compliance period. Staff further finds that PGE's RPIP is consistent with the conditions from its most recently acknowledged RPIP.

<u>Compliance strategy</u>

In its RPIP, PGE plans to use bundled "5-year RECs" from the facilities in the table below to meet compliance needs over next five years.

Compliance Year			2019	2020	2021	2022	2023
Facility	Re-source	REC type	MWh	MWh	MWh	MWh	MWh
Low Impact Hydro	Hydro	5 yr	438,000	439,200	438,000	438,000	438,000
Hydro Upgrades	Hydro	5 yr	100,785	101,061	-	100,785	100,785
Biogas	Biogas	5 yr	5,143	17,748	-	17,734	17,734
Biglow Canyon I	Wind	5 yr	82,911	341,094	342,028	341,094	341,094
Biglow Canyon II	Wind	5 yr	445,109	41,895	404,434	445,109	445,109
Biglow Canyon III	Wind	5 yr	198,505	196,437	396,023	394,941	394,941
Tucannon River	Wind	5 yr	892,764	892,764	895,210	892,764	892,764
Vansycle Ridge	Wind	5 yr	71,163	71,358	-	71,163	71,163
PPM Klondike II	Wind	5 yr	217,434	218,030	-	217,434	217,434
100 aMW Wind per 2016 IRP	Wind	-	-	-	-	-	-
enXco Solar	Solar	5 yr	6,379	6,396	-	6,379	6,379
SPO Solar	Solar	5 yr	17,840	17,888	-	17,840	17,840
Outback Solar	Solar	5 yr	20,244	20,299	-	20,244	20,244
ETO and Other Solar	Solar	5 yr	12,467	1,044,385	1,037,394	585,552	621,954
Purchased Bundled (from bank)	Various	5 yr	84,059	84,059	-	-	-
Unbundled RECs	-	-	-	-	-	-	-
Total RECs Retired	**-**	**5 yr**	**2,592,800**	**3,492,613**	**3,513,090**	**3,549,037**	**3,585,439**
Reference Retail Load (MWh)	**-**	**-**	**17,285,335**	**17,463,065**	**17,565,450**	**17,745,186**	**17,927,196**
RPS Obligation (%)	**-**	**-**	**15%**	**20%**	**20%**	**20%**	**20%**
RPS Obligation (MWh)	**-**	**-**	**2,592,800**	**3,492,613**	**3,513,090**	**3,549,037**	**3,585,439**

As part of the Company's 2016 IRP Action Plan, PGE plans to procure 100 aMW of wind with a commercial operation date in 2021.[1] The RECs generated in the first five years of the wind facility's or facilities' operation can be banked indefinitely and, consequently, PGE does not plan to use this resource(s) for compliance during the 2019 – 2023 compliance period. Further explanation of this proposed strategy is noted below:

> *PGE's REC retirement plan between 2018 and 2023 reflects the following guidelines:*
>
> 1. *PGE plans to retire 50 MWa of Low Impact Hydro RECs that are generated contemporaneously in each year. Because PGE's supply of Low Impact Hydro RECs exceeds the maximum amount that can be retired in each year, there is no value for banking these RECs for later years. This strategy is consistent with the Revised 2016 RPIP filing.*
> 2. *PGE prioritizes retiring 5-yr RECs before retiring infinite-life RECs and prioritizes retiring older 5-yr RECs before retiring more recently-generated 5-yr RECs. This strategy is consistent with the Revised 2016 RPIP filing.*

[1] *See In re Portland General Electric*, OPUC Docket No. LC 66, Order No. 18-044 (Feb. 2, 2018).

3. *Within a given REC vintage bucket, PGE first retires purchased unbundled and purchased bundled RECs, and RECs generated from PGE's large wind resources. Large wind resource RECs are retired in order of decreasing incremental cost to reduce the incremental cost associated with RECs remaining in the bank for future compliance. The two primary changes in this approach relative to the Revised 2016 RPIP filing are:*
    a. *Retirement of purchased unbundled and purchased bundled RECs prior to, rather than after, generated RECs of the same vintage. This decision reflects the greater regulatory certainty around generated RECs as compliance instruments in the future, relative to purchased RECs.*
    b. *Retirement of RECs from new RPS resource additions (i.e., the potential addition of a 2021 resource) after RECs from existing RPS resources. This change was made to reflect the condition to PGE's Revised Renewable Action that requires PGE to return the value of RECs generated by the 2021 addition prior to 2025 to customers. Because the precise mechanism for meeting this condition will be taken up in a separate docket, PGE assumed that these RECs would accrue to the REC bank during the period covered by the 2018 RPIP (2019 – 2023).*[2]

Staff finds this strategy consistent with the requirements of OAR 860-083-0400 and notes that questions remain around a long-term cost and risk optimized compliance strategy, rather than a year-by-year cost and risk optimized strategy.

Staff further notes that PGE does not include the use of unbundled RECs in its 2019 – 2023 compliance strategy. Rather, the Company states that it "intends to continue monitoring REC markets and may purchase or sell bundled or unbundled RECs in the market when price is perceived to be a good value in relation to other means of achieving RPS compliance."[3]

The Company has used the maximum allotted amount of unbundled RECs for compliance in every previous year, as demonstrated below. While Staff acknowledges PGE's sensitivity to the risk of price volatility in the unbundled REC market, Staff finds it relevant to restate its concern in its comments.

Staff notes that this type of overarching RPS compliance issue will be best addressed comprehensively with PGE and other stakeholders in the ongoing RPS rulemaking docket.

[2] PGE's response to OPUC Information Request No. 001, Attachment A.
[3] PGE's 2019 – 2023 RPIP filing, p. 6.

Historic RPS Compliance[4]	2011	2012	2013	2014	2015	2016
Unbundled RECs	183,063	179,758	176,157	177,358	521,950	508,822
RPS Obligation	915,317	898,791	880,785	887,470	2,657,309	2,544,112
Total (MWa)	**20%**	**20%**	**20%**	**20%**	**19.6%**	**20%**

Incremental Cost

The Company's RPIP includes a calculation of the incremental cost of its compliance plan.[5] PGE included Attachment A and Attachment B in its 2019 - 2023 RPIP filing, which provide a range of incremental costs of RPS compliance across various gas pricing and carbon regulation scenarios. In addition, PGE calculates the incremental cost of RPS compliance consistent with its historical pattern of utilizing 20 percent unbundled RECs each compliance year. In all scenarios, PGE's compliance strategy is estimated well under the 4 percent incremental cost threshold.[6] Staff notes that this conclusion is limited to the incremental cost of compliance under the current calculation methodology. Staff addresses the current calculation methodology further in its comments.

A comparison of the costs of RPS compliance with and without the 20 percent unbundled RECs during the 2019-2023 period is shown below.[7] While all scenarios are within the required 4 percent threshold, Staff notes a cost reduction is expected through the use of unbundled RECs.

[4] PGE's 2019 – 2023 RPIP filing, Attachment 2018RPIP_REC_Accounting_12_26_2017, Tab "REC Accounting".
[5] Per OAR 860-088-0100 (1)(c) the incremental cost is calculated at the difference between levelized annual cost of qualifying electricity and the levelized cost of electricity from a corresponding proxy plant.
[6] See PGE's 2019 - 2023 RPIP filing, Attachment A.
[7] See PGE's 2019 – 2023 RPIP filing, Attachment A, Tab "Incremental Cost Summary" and Confidential Attachment B, Tab "Incremental Cost Summary."

[BEGIN CONFIDENTIAL]

Total Incremental Cost to Comply						
Base Case (RefGas-RefCO2)	**2019**	**2020**	**2021**	**2022**	**2023**	**TOTAL**
Total Incremental Cost - PROPOSED	$31,465,082	$28,556,630	$48,639,938	$49,691,318	$49,691,318	$208,044,286
Revenue Requirement ($000)	$1,853,330	$1,904,616	$1,959,452	$2,019,092	$2,080,598	$9,817,088
Percentage of Revenue Requirement	1.7%	1.5%	2.5%	2.5%	2.4%	2.1%
Total Incremental Cost - UNBUNDLED	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Revenue Requirement ($000)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Percentage of Rev Requirement	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Incremental cost differential with 20% unbundled RECs	[redacted]	[redacted][8]	[redacted]	[redacted]	[redacted]	[redacted]

[END CONFIDENTIAL]

Staff requests that PGE discuss any potential changes to its incremental compliance costs resulting from changes in federal corporate tax rates in its reply comments.

<u>Order No. 17-166 Requirements</u>

The Commission's acknowledgement of PGE's revised 2017-2021 RPIP (UM 1788) included three conditions, addressed below.[9]

1. *PGE must provide the analysis required by Order No. 16-157 in a manner; and timeframe suitable to both PGE and Staff.*

Staff believes that this requirement was satisfied in Docket No. UM 1788.

2. *Staff will convene workshops to address, on a generic basis with PGE, PacifiCorp, and interested persons, the goal of, and possible revisions to, the RPIP process.*

Staff believes PGE satisfied this condition by its participation in the AR 610 kick-off workshop on January 10, 2018 and its expected participation in the forthcoming RPS rulemaking dockets. PGE has been an active participant to date during the informal phase of these proceedings.

[8] Staff has scheduled a technical workshop with Portland General Electric on March 6, 2018 to review the notable difference in the 2020 incremental cost when maximizing unbundled REC use when compared to other years.
[9] *In re Portland General Electric*, OPUC Docket No. UM 1788, Order No. 17-166 at 1-2 (May 15, 2017).

3. *PGE must comply with the following steps when it commences a resource procurement action, for the purpose of complying with the Renewable Portfolio Standards (RPS) law, that materially deviates from its most recently filed Integrated Resource Plan or RPIP;*
    a. *Calculate new incremental costs with the new resource or resources included over a time period acceptable to PGE and Staffs and*
    b. *Respond to requests by the Commission regarding its new analysis arising out of the calculation set forth above.*

In its 2019 – 2023 RPIP, PGE did not indicate resource procurement outside of its most recently filed and acknowledged IRP. Therefore, this condition was not implicated.

<u>Ongoing Concerns</u>
As stated above, PGE has complied with the requirements found in OAR 860-083-0400. Based on the current incremental cost methodology, the Company is unlikely to exceed the 4 percent incremental cost threshold during the compliance period. However, a number of outstanding RPS compliance questions remain.

First, as mentioned above, Staff is concerned about utilities' reluctance to incorporate the use of unbundled RECs in RPS implementation planning, when the data clearly demonstrates that PGE *consistently uses unbundled RECs as a significant part of its compliance strategy*. Staff questions the value of an RPS implementation planning process that is unlikely to reflect utilities' actual compliance behavior. Further, the incremental cost estimates generated by this strategy likely overestimate PGE's incremental costs of compliance, which prevents the Commission from adequately monitoring the 4 percent threshold. This will be of increasing concern as RPS targets escalate.

This unbundled REC issue is one component of a larger concern about utilities' REC banking and utilization strategy. Based in part on RPIP format issues described below, the current RPIP does not allow the Commission to properly evaluate the long-term cost and risk strategy of utilities' use of banked and unbundled RECs for compliance. Utilities may present REC retirement and banking strategies that comply with the current RPIP requirements and guidelines, but do not reflect a long-term least-cost, least-risk strategy.

Second, the calculation of the incremental cost of bundled RECs as prescribed by OAR 860-083-0100 occurs at the time of the retirement, rather than the year that megawatt-hour was generated. For example, the incremental cost of the 100 aMW resource PGE expects to bring online in 2021 is $0 in the Company's RPIP because the RECs generated are infinite-life RECs and the PGE banking strategy prioritizes infinite life RECs last for retirement. However, PGE reports that the incremental cost of compliance for the same resource would be $87,761,490 for the reference case over the compliance period if the calculation were based on the MWh generated during the compliance period.[10] While this methodology is compliant with the current rules, the disconnect between the time ratepayers incur costs and the time the costs are calculated for compliance makes it difficult to accurately assess whether a utility has exceeded the 4 percent threshold. This difficulty will increase as utilities develop facilities that generate infinite life or "Golden RECs" and as RPS compliance targets escalate. Staff notes that PGE has identified several options to return the value of these RECs to ratepayers, but this issue still represents an overall gap in the RPIP format.

Third, Staff is concerned that the format of the RPIP is limited in its ability to convey a robust compliance strategy over time. For example, both the timing and the five-year compliance period of the RPIP limit its usefulness. Each utility's IRP must be filed two years after the previous IRP's acknowledgement, but the every other year RPIP requirement limits the amount of relevant information presented in the filing. Additionally, the RPIP's five-year outlook does not address longer-term compliance strategy. This concern is exacerbated by the removal of the first-in-first-out requirement and the introduction of Golden RECs, for which utilities have a disincentive retire within a five year horizon. If the purpose of the RPIP is to evaluate the costs of RPS compliance, its value is further limited with no longer-term strategy included.

Staff believes that addressing these concerns is critical to providing accurate and meaningful RPS compliance cost estimates. However, these issues are not specific to PGE's 2019 – 2023 RPIP and are best addressed with all utilities and stakeholders in the ongoing rulemaking.

<u>Conclusion</u>
Staff concludes that PGE has sufficiently met the minimum requirements of the current RPIP, including compliance with Order 17-166 requirements.

This concludes Staff's Initial Comments.

Dated at Salem, Oregon, this 5th day of March, 2018.

Caroline Moore
Senior Renewable Energy Analyst
Energy Resources and Planning Division

[10] See PGE's 2019 – 2023 RPIP filing, Attachment A, Tab "Incr Cost if RECS Generated."

February 5, 2018

TO: Kay Barnes
Public Utility Commission of Oregon

FROM: Patrick Hager
Manager, Regulatory Affairs

PORTLAND GENERAL ELECTRIC
UM 1916
PGE Response to OPUC Data Request No. 001
Dated January 22, 2018

Request:

Please provide a narrative summary of the rationale behind the Company's REC retirement strategy during the compliance period. Specifically, please indicate the short and long term incremental cost and risk considerations of relying on 5 year RECs versus banked and infinite RECs. Please reference any changes in strategy since the revised 2017 – 2021 implementation plan was acknowledged.

Response:

PGE's REC retirement plan between 2018 and 2023 reflects the following guidelines:

1. PGE plans to retire 50 MWa of Low Impact Hydro RECs that are generated contemporaneously in each year. Because PGE's supply of Low Impact Hydro RECs exceeds the maximum amount that can be retired in each year, there is no value for banking these RECs for later years. This strategy is consistent with the Revised 2016 RPIP filing.
2. PGE prioritizes retiring 5-yr RECs before retiring infinite-life RECs and prioritizes retiring older 5-yr RECs before retiring more recently-generated 5-yr RECs. This strategy is consistent with the Revised 2016 RPIP filing.
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    a. Retirement of purchased unbundled and purchased bundled RECs prior to, rather than after, generated RECs of the same vintage. This decision reflects

the greater regulatory certainty around generated RECs as compliance instruments in the future, relative to purchased RECs.

b. Retirement of RECs from new RPS resource additions (i.e., the potential addition of a 2021 resource) after RECs from existing RPS resources. This change was made to reflect the condition to PGE's Revised Renewable Action that requires PGE to return the value of RECs generated by the 2021 addition prior to 2025 to customers. Because the precise mechanism for meeting this condition will be taken up in a separate docket, PGE assumed that these RECs would accrue to the REC bank during the period covered by the 2018 RPIP (2019 – 2023).