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V. Denise Saunders
Associate General Counsel

August 21, 2014

Via Electronic Filing and U.S. Mail

Oregon Public Utility Commission
Attention: Filing Center
PO Box 1088
Salem OR 97308-1088

Re: LC 56 – Portland General Electric Company’s 2013 Integrated Resource Plan

Attention Filing Center:

Enclosed for filing in the above-referenced docket are an original and five (5) copies of **Portland General Electric Company’s (“PGE”) Final Comments**. Attachment A to PGE’s Final Comments is confidential and subject to General Protective Order No. 13-053, and will be provided under separate cover to the OPUC and to all qualified parties under the Protective Order.

This filing is also being made by electronic mail with the Filing Center and simultaneously served upon the Service List for LC 56.

Thank you in advance for your assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "Denise Saunders", is written over a light blue horizontal line.

V. DENISE SAUNDERS
Associate General Counsel

VDS:qal
Enclosures
cc: LC 56 Service List

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

DOCKET NO. LC 56

In the Matter of

PORTLAND GENERAL ELECTRIC
COMPANY's

2013 Integrated Resource Plan.

FINAL COMMENTS

I. Introduction

As we near the conclusion of this IRP cycle, we wish to thank OPUC Staff and our resource planning stakeholders for their constructive participation and thoughtful comments throughout the process. Their feedback and suggestions have helped strengthen the analysis performed in this IRP and have laid the stage for further improvements in forthcoming resource plans. In particular, we are gratified that, while Staff and parties found areas that they felt we could improve on, they felt that we had addressed OPUC least cost planning guidelines and support acknowledgement of this IRP.¹

Final comments were submitted by the OPUC Staff (Staff); the Citizens Utility Board (CUB); Renewable Northwest (RNW); the Oregon Department of Energy (ODOE) and the NW Energy Coalition (NWEC). We respond to suggested areas for improvement from Staff and/or other parties, along with our final thoughts regarding each issue. On most matters, we find we are in general agreement with Staff and stakeholder parties. For convenience, we have arranged the discussion in the same topical order presented in Staff's Final Comments.

II. Discussion of Staff and Intervenor Comments

A. General Compliance with Guideline 1 (Resource Evaluation)

1. Parties' Positions

Staff's Final Comments state that PGE has complied, although minimally in its view, with Guideline 1 regarding the types of resource technologies assessed in the IRP. In addition to the resources PGE addressed in this IRP, Staff would like to see distributed solar PV and combined heat/power (CHP), utility-scale solar, biomass,

¹ One party suggests one exception to acknowledgement, which is addressed in section II.B.

battery storage, and conservation voltage reduction (CVR) receive greater attention.² Given the likelihood of these resources playing increasingly prominent roles in future portfolios, Staff suggests that PGE continue monitoring emergent technologies and include more in-depth evaluation of these resource options in the next IRP. Staff encourages the Company to include these resources in future portfolio analysis to better understand the potential economic impact of these resources on the Company's generation portfolio.³

ODOE's Reply Comments support the inclusion of energy storage technologies in PGE's IRP portfolio analysis.⁴

2. PGE's Position

PGE agrees that the resources identified by Staff should be evaluated in more detail in PGE's next IRP. Of the resources cited by Staff, we wish to point out that PGE included utility-scale solar and biomass resources in several "diversified" portfolios that we tested.⁵

As we explained in our Reply Comments, PGE is taking substantial and ongoing steps to evaluate potential energy and demand savings for CVR.⁶ We are analyzing the results of our recently concluded pilot project and will use those results to evaluate the potential for system-wide CVR application. If pilot results indicate technical and economic feasibility for PGE's system, we also intend to include CVR as a resource option in the next IRP.

We evaluated distributed solar PV as a resource alternative in this IRP. Central station solar PV and biomass were included in several trial portfolios. We will continue to monitor developments with these technologies to inform our next IRP and we will add distributed solar PV deployment as a resource option in our next IRP. In addition, PGE's proposed Action Plan includes a recommendation to pursue studies and research initiatives with the goal of assessing the potential costs, benefits and scale for future solar PV in our service territory, as well as possible business models and policy approaches that would enable the installation of additional, cost-effective distributed solar PV. If acknowledged as an IRP action, we expect that this evaluation will inform our next IRP, as well as our interim planning efforts.

² Staff's Final Comments at 2.

³ *Id.*

⁴ ODOE's Reply Comments at 3.

⁵ See PGE's 2013 IRP at 177—180. While not cited in Staff's comments, several portfolios also included a geothermal resource.

⁶ PGE's Reply Comments at 13.

We continue to believe that certain resources such as CHP, which vary significantly in scale, cost, and operational constraints—due to location differences and integrated operations with the host site-- are inherently unique and therefore challenging to evaluate quantitatively in utility resource plans. Despite these challenges, we plan to re-assess the potential for CHP resources in our next IRP. As stated in PGE’s Reply Comments, we also expect to include energy storage technologies, such as batteries, in the portfolio analysis performed during our next IRP.⁷

In future IRPs we encourage Staff and stakeholders to identify concerns as early as possible in the public process and work with the Company to reach joint agreement as to which resources should be included in IRP candidate portfolio analysis.

B. Energy Efficiency

1. Parties’ Position

The sole item that any party suggests should not be acknowledged is the EE portion of PGE’s Action plan. CUB is the only party to suggest that it not be acknowledged. PGE’s industrial funding for EE is expected to reach a spending cap in 2015, thereby limiting the amount of industrial EE that can be acquired. CUB is concerned that caps on industrial EE funding could mean more expensive resource acquisition to meet load growth in the future and believes that the Commission should not acknowledge PGE’s EE portion of the Action Plan until PGE develops a plan to meet its IRP EE goals.⁸ Staff recognizes the anticipated funding challenge, but believes that it is better addressed by means other than the IRP.⁹ NWEC does not recommend non-acknowledgment, but urges the Commission to weigh in on the issue and urges the Company to work with stakeholders to find a solution to this issue before the end of 2014.¹⁰ The other parties do not address the issue in their final comments.

2. PGE’s Position

PGE recognizes this upcoming funding constraint and shares CUB’s concern with leaving cost-effective EE undone for want of funding. CUB would like us to propose a solution, perhaps via legislation.¹¹ While PGE continues to work with stakeholders to favorably resolve this issue, we agree with Staff that the IRP is not the appropriate forum to resolve this policy question. Nor do we believe that this issue warrants non-

⁷ PGE’s Reply Comments at 4.

⁸ CUB’s Final Comments at 3.

⁹ Staff’s Final Comments at 3.

¹⁰ NWEC’s Final Comments at 2.

¹¹ CUB’s Final Comments at 2.

acknowledgement of the EE Action Plan item, which provides for cost effective deployment of EE by 2017, along with a commitment to work with the ETO to assure sufficient funding for acquisition of all cost-effective EE. These actions appear to be consistent with the broad objectives articulated by the parties in our IRP public process.

C. Demand Response: Compliance with Order No 10-457 and Guideline 7

1. Parties' Positions

After reviewing PGE's responses to data requests, Staff is satisfied that PGE's IRP analysis complies with Guideline 7.¹² However, Staff identifies several issues related to demand response that it believes should be further scrutinized and improved.

Critical Peak Pricing

Review of the Critical Peak Pricing (CPP) pilot suggests to Staff that CPP is not cost effective. Staff recommends that PGE continue to move toward exploring a full scale CPP program once upgraded computer systems are in place.¹³ Staff is also interested in PGE exploring how participation and retention in the programs can be increased by providing specific and timely feedback to customers, and by providing on-going education and support to help program participants navigate the complexities of their new rate.

Demand Response Potential Study

Staff disagrees with certain assumptions embedded within a Brattle Group study evaluating demand response potential. In particular, Staff disagrees with PGE's assumed achievable enrollment levels provided to Brattle Group. Staff believes that enrollment levels could be improved with additional outreach to customers. Furthermore, Staff suggests that PGE reassess the availability de-rate factors used in the cost effectiveness screen for the demand response study.¹⁴

Two-Way Communication

Staff's comments are generally supportive of PGE's proposed use of two-way communication standards for issuing and receiving signals from demand response resources. However, Staff believes that there may be situations where two-way communication is unnecessary and encourages PGE to consider both one and two-

¹² Staff's Final Comments at 3.

¹³ *Id.* at 4.

¹⁴ *Id.*

way communication standards when evaluating the cost effectiveness of demand response.¹⁵

Plug-In Adaptors

Staff's comments also note the important role direct load control demand response programs may play in PGE's future resource portfolio. Staff acknowledges PGE's view that interoperability limitations of current device communication systems limit the availability and scale of this resource type. Staff recommends that PGE expand its outreach to improve customer understanding of PGE offerings regarding smart appliances and direct load control programs. Staff encourages PGE to continue emphasizing to the Northwest Energy Efficiency Alliance ("NEEA") that market transformation is a key element to expanding the market share of demand response capable products.¹⁶

Advance Metering Infrastructure

Staff recommends that PGE enhance its outreach to educate customers about reviewing their energy usage measured by smart meters and made available online.¹⁷

EnerNOC Contract

Having reviewed PGE's contract with demand response aggregator EnerNOC, Staff is worried that PGE may be tethered to this single vendor. Staff recommends that open demand response protocols be used so alternative aggregators can make use of demand response investments. An important aspect of the EnerNOC contract is the calculation of a baseline used to measure demand response performance and settlements. Staff notes that the contract allows for adjustments to be made to the baseline, and requests a notification should PGE and EnerNOC change the baseline calculation method. Lastly, Staff is concerned that the contract does not provide adequate assurances that capacity made available by the aggregator, but not called upon, can be properly validated. Staff requests comment on this aspect of the contract.¹⁸

Conservation Voltage Reduction

Staff characterizes PGE's CVR analysis as meeting the minimum requirements of Order 10-457. In the next IRP, Staff encourages PGE to enhance this analysis and

¹⁵ *Id.* at 5.

¹⁶ *Id.*

¹⁷ *Id.* at 6.

¹⁸ *Id.*

utilize the results of the CVR pilot in a portfolio analysis evaluating the cost effectiveness of the resource.¹⁹

2. PGE's position

Critical Peak Pricing

PGE shares Staff's desire for a robust CPP program. PGE will move toward exploring a full scale CPP program once upgraded computer systems are in place. In the meantime, PGE will be taking a strategic look at which voluntary pricing options and models offer the most value to our customers. PGE's goal is to take the best aspects from these programs that fit Oregon's climate and culture. PGE is working to research and design a pricing pilot project.²⁰ The project would test customer response to several different pricing protocols and determine what PGE wants to consider as program offerings once the computer systems are in place. PGE will further explore how participation and retention in the programs can be increased by providing specific and timely feedback to customers.

Demand Response Potential Study

PGE recognizes Staff's interest in demand response (DR), and generally agrees that it can be an effective resource for meeting peak capacity requirements. The Brattle Group study was designed to quantify the potential for demand response in PGE's territory. The assumptions used to inform the study were based on historical performance results and intentionally avoid overstating system potential. PGE's use of the historical performance of the CPP pilot in establishing achievable enrollment levels does not imply that PGE does not intend to try to exceed these performance levels or maximize the acquisition of cost effective DR. One of the key justifications for an additional CPP pilot phase is to determine whether new program designs can increase enrollment levels. In establishing the availability de-rate factors, PGE relied upon its experience with demand response programs to develop the applied factors. When the demand response potential study is updated, PGE will also review and update the de-rate factors along with other relevant assumptions.

Two-Way Communication

Whenever investing in new DR resources, PGE will evaluate and select the most effective implementation approach, considering both cost and value. As Staff notes,

¹⁹ Staff's Final Comments at 7.

²⁰ See PGE's 2014 Annual Smart Grid Report, Docket UM 1657 (May 30, 2014).

two-way communication is not always necessary when designing demand response programs. PGE will continue to consider appropriate utilization of both one and two-way communication systems for each demand response program.

Plug-In Adaptors

PGE shares Staff's optimism regarding the increased potential for DR through the deployment of smart appliances. As mentioned in our Reply Comments, PGE believes the best strategy to build the Company's potential for smart appliance DR is to continue pushing for market transformation to adopt sockets and plug-in adaptors that would allow future devices to interact with the PGE system. To that end, PGE is continuing to work with NEEA to leverage Northwest market power to develop consumer products with this capability.

Should an altogether different communication protocol solution be adopted by the consumer product market, PGE will work to understand whether those devices can be used by PGE's system and will reach out to customers, if such customer identification and outreach can be done on a cost effective basis.

Advance Metering Infrastructure

PGE will continue to educate its customers about the capability to review energy usage online, and will attempt to build off this successful program.

EnerNOC Contract

Staff's foremost concern about 'vendor lock' is largely addressed by the requirements of Section 28.1 of EnerNOC's contract with PGE which has been provided to Staff under the Protective Order issued in this docket.

PGE notes Staff's concern about the baseline calculation. PGE would like to reassure Staff that the baseline calculation is incorporated into the contract itself. While the methodology may be reviewed and changed, it can only be altered on a voluntary basis, with both parties' consent. If the Commission requests, PGE will inform the Commission should PGE and EnerNOC agree to change the baseline calculation.

With respect to Staff's concerns about validating capacity nominations, the risk of persistently inaccurate capacity nominations is unlikely and should not pose a material risk. There are few months in which PGE does not call on EnerNOC's nominated capacity. If EnerNOC delivers less capacity than what was previously nominated, then PGE is partially refunded for the monthly capacity payment. Furthermore, the contract stipulates that the capacity must be called upon at least once per season. This should largely eliminate the possibility that an inaccurate capacity

nomination could persist for several months. Lastly, PGE has hired the 3rd party evaluator, Itron, to evaluate EnerNOC's performance in the early years of the contract. If any concerns about the accuracy of capacity nominations are identified, PGE will revisit the issue with EnerNOC.

Conservation Voltage Reduction

As addressed above in section B, we disagree with Staff's characterization of our efforts and progress thus far regarding CVR. However, we do agree with its recommendation to assess the potential for a system-wide CVR deployment plan in our next IRP.

D. Compliance with Guideline 8 (CO₂ Emissions)

1. Parties' Positions

Staff and ODOE appear to be satisfied that PGE complied with Guideline 8.²¹ Staff, CUB, and NWEC all look forward to the Company providing an evaluation of the potential impacts of the federal EPA 111(d) CO₂ reduction targets in its next IRP.²² CUB further suggests that we hold workshops with interested stakeholders focusing on 111(d) implementation.²³

2. PGE's Position

PGE agrees that we will need to consider the potential impacts and possible compliance options for implementing 111(d) in the next IRP. However, as parties are aware, there remains much uncertainty about the final rules, compliance alternatives and implementation timeline.

PGE has been actively evaluating EPA's proposed 111(d) rule and has participated in meetings with various stakeholders to help better understand EPA's proposal and its potential impact on our customers and the State. PGE plans to submit public comments to EPA by the October 16 deadline. We note that concerns identified by Staff at a special OPUC meeting held August 12, 2014, in which the stakeholder parties participated, largely mirror our own questions and concerns.

EPA proposed that 111(d) regulations be implemented at the State (or regional) level. As a result, State-sponsored workshops and discussions on potential compliance plans are likely to provide the best forum for key stakeholders, in conjunction with state

²¹ Staff's Final Comments at 8; ODOE's Reply Comments at 1.

²² Staff's Final Comments at 7-8; CUB's Final Comments at 4; NWEC's Final Comments at 2.

²³ CUB's Final Comments at 4.

agencies, utilities and other owners of affected in-state generation to jointly develop a recommendation for 111(d) implementation for Oregon.

E. Environmental Issues

1. Parties' Positions

Staff's Final Comments recommend developing a new IRP Guideline that would require evaluation of potential operational risks associated with climate change, as well as development of adaptation plans and mitigation measures to meet such risks and impacts. This new Guideline proposed by Staff would also include assessing carbon lifecycle costs associated with power plant fuel sources.²⁴

RNW agrees with Staff's proposal that PGE's next IRP address life-cycle carbon emissions of natural gas-fired resources and incorporate climate change risks.²⁵

NWEC supports Staff's proposed new guideline requiring utilities to identify and plan for risks associated with climate change.²⁶

Staff would like to know more about the life-cycle emissions associated with drilling, transporting, and burning shale gas. Staff notes that EPA is exploring regulation that would limit fugitive emissions at natural gas wells. Staff asks PGE how such regulations may affect PGE's future portfolio choices.²⁷

2. PGE's Position

PGE does not support a new Guideline and believes that the current IRP guidelines provide an appropriate framework for assessing potential costs and risks associated with the environmental impacts of electric generation. In addition, because any new IRP guideline or material change or addition to an existing guideline affects several gas and electric utilities in Oregon, it is appropriate for any such proposal to be considered in conjunction with those parties as part of a broader discussion of resource planning requirements, rather than as a single issue deliberated between PGE, Staff and our current IRP stakeholder group.

At the same time, PGE agrees that addressing the potential risks and cost impacts to power generation and the provision of electricity due to climate change should be an IRP consideration. We also recognize that any such assessment is inherently difficult

²⁴ Staff's Final Comments at 9–10.

²⁵ RNW's Final Comments at 2.

²⁶ NWEC's Final Comments at 3.

²⁷ Staff's Final Comments at 10.

due to the uncertainty and wide range of estimates regarding the timing and extent of potential climate change impacts. We further believe that to maintain consistency with the core principles of IRP, any assessment of climate change impacts must focus on the potential cost and risk effects on the utility's portfolio and the resulting costs and risks to utility customers. We note that in our 2007 IRP we conducted the kind of assessment that Staff suggests. Specifically, we asked the University of Washington Climate Impacts Group to conduct a study gauging future impacts to PGE operations in relation to annual and seasonal loads, water runoff volume and timing, and wind velocity. The study is included as Appendix C to that IRP. Because of low interest at the time, and a study assessment of low and potentially largely neutral impacts for PGE operations, we have not since revisited that work. Finally, we suggest that any material impacts to utility customers resulting from climate change can be reasonably assessed through robust scenario analysis that considers potential changes in the key cost drivers to PGE's portfolio (fuel and electric prices, changes in aggregate electricity demand and shape, high and low water, etc.).

PGE does not agree that life-cycle emissions should be included for natural gas-fired resources. Given that all resources must be treated on a consistent basis, such an approach would require the same for all other resource options. Moreover, we believe that the IRP should address customer costs, risks, and benefits associated with utility's electric service. To the extent such costs are levied on any electric generation fuel or technology type, they would become a direct cost and therefore would be best evaluated as a scenario or sensitivity on the prices for fuel, electricity, or the capital costs for generation and emissions control technologies. Finally, we are not confident about the availability and reliability of sources for such information, particularly on a region-specific basis.

With respect to the life-cycle emissions of shale gas, PGE has followed up with the Company's primary natural gas forecast consultant, Wood Mackenzie. Wood Mackenzie authored a report on this topic in May 2011, which is attached hereto as Confidential Attachment A. The consultant found that, while fugitive emissions were present at a share of developed natural gas wells, a number of low-cost measures were available to natural gas developers to limit or eliminate these emissions. As such, Wood Mackenzie does not expect that regulations similar to those highlighted by Staff would affect natural gas prices. However, PGE welcomes additional discussion of fugitive emissions and their effect on PGE's portfolio early in the development of the next IRP.

F. Distributed Generation and Compliance with Guideline 12

1. Parties' Positions

Staff states that PGE's analysis for distributed solar PV and CHP is minimally acceptable.²⁸

2. PGE's Position

We also discuss these two distributed technologies briefly in section A above. We have committed to research and analysis, with a view toward inclusion of distributed solar PV as a resource option in the next IRP. We will also perform a new survey of potential CHP candidates within our service area.

G. Load Forecast Issues

1. Parties' Positions

Staff's final comments reiterate the critique related to the long term growth of PGE load. Staff states that the methodology used to develop the load forecast needs to be reassessed and notes that PGE's proposed Action Plan includes a third-party review of our methods in light of industry best practices. Staff believes that a continued commitment from PGE to work cooperatively with Staff and other intervenors would be more effective at establishing and sustaining long term improvements in PGE's forecast than the proposed third-party review.²⁹

2. PGE's Position

PGE will continue to work with stakeholders and communicate changes in forecast methodologies. However the Company sees merit in pursuing a third-party study engaging a topic matter expert to ensure our methodologies and approaches are consistent with industry best-practices and to incorporate potential advances made at other utilities. The Company believes a third-party review is an efficient manner to identify the most beneficial areas for changes in the forecast methodology. In particular, based on Staff's initial IRP comments and the company review of methodologies, the peak demand forecast approach is one area where knowledge of industry best practices and other utility approaches can benefit PGE's forecast methodology. We remain committed to work toward improving our energy and peak demand forecast methods and capability to support continued, well-informed IRP analysis and related Company decision-making.

H. Natural Gas Forecast Issues

²⁸ Staff's Final Comments at 10.

²⁹ Staff's Final Comments at 11.

1. Parties' Positions

Staff's Final Comments reiterate the positions expressed in Staff's Opening Comments – the gas price forecast should include high and low sensitivities for the “forward curve” portion of the forecast period, and the gas price forecast should be evaluated for updates between the issuance of the Draft IRP and filing of the Final IRP in future proceedings.³⁰

2. PGE's Position

PGE's Reply Comments explain why the inclusion of high and low price sensitivities, in the front-end of our long-term natural gas price forecast, would not be relevant for evaluating portfolios or exposure to near term price risk.³¹ Nonetheless, we are willing to explore the potential for adding high and low price sensitivities to the long-term natural gas price forecast for PGE's next IRP.

As stated in PGE's Reply Comments, for purposes of conducting portfolio analysis, we use the most recent gas price forecast available with the intent of locking down the analysis in the draft IRP.³² To the extent that an updated long-term gas price forecast becomes available between the issuance of a draft IRP and the filing of the corresponding final IRP, PGE will assess whether the price changes between the two forecasts are sufficient enough to have material effects on the analytical results (as we did in this IRP).

I. RPS Compliance Alternatives

1. Parties' Positions

Although PGE added its 2011 IRP Update to the record, Staff believes that we have not adequately evaluated the use of unbundled RECs in this IRP.³³

2. PGE's Position

While none of the fundamentals regarding our 2011 analysis have changed, PGE is not opposed to updating that analysis to determine whether the earlier analytical results and conclusions stand. PGE will refresh its analysis in the next IRP, where a decision on 2020 RPS compliance will be required. We reiterate that, while taking a position on the role for future procurement and use of unbundled RECs is fraught with great uncertainty, due to the fragmented and illiquid nature of both the supply and demand side of the market, this has not precluded us in the past from buying

³⁰ Staff's Final Comments at 11-12.

³¹ PGE's Reply Comments at 26–27.

³² *Id.*

³³ Staff's Final Comments at 13.

unbundled RECs. Nor will it in the future, if we determine that such purchases are a cost effective option for meeting our RPS compliance requirement.

J. Supply-side Resource Estimates

1. Parties' Positions

RNW's Final Comments recommend that PGE engage two consultants to provide cost and performance estimates for supply-side and storage resources. One of the consultants should bring a "deeper understanding" of renewable resource parameters. RNW also recommends that project developers and equipment suppliers review the consultants' draft reports.³⁴

RNW and ODOE recommend that PGE's next IRP include declining cost curve sensitivities and/or trigger-point analyses for resource cost competitiveness.³⁵ ODOE's Reply Comments note that the cost sensitivities should specifically apply to solar PV and flow batteries.³⁶

RNW and ODOE further recommend a process for resolving questions surrounding certain input assumptions, namely the capacity contribution of variable energy resources. Renewable NW seeks clarification from the Commission regarding the appropriate forum for these questions to be addressed, while ODOE proposes that a separate docket be established to investigate the issues.³⁷

RNW also recommends an assessment of solar capacity contribution in summer peaks as well as a wind capacity contribution analysis that includes different resource shapes and spanning more hours.³⁸

2. PGE's Position

As stated in PGE's Reply Comments, we agree that future IRPs could benefit from additional resource cost and performance research. If the Commission is supportive of RNW's proposal, PGE is willing, prior to the next IRP, to seek one consultant to provide cost and performance estimates for all supply-side and energy storage resources and another consultant to provide the same scope of information on a more narrowly-focused scale of renewable and energy storage resources only. While we agree that increased consulting engagements could provide additional cost and

³⁴ RNW's Final Comments at 1.

³⁵ *Id.* at 1 -2; ODOE's Reply Comments at 3.

³⁶ ODOE's Final Comments at 4.

³⁷ RNW's Final Comments at 2; ODOE's Reply Comments at 2.

³⁸ RNW's Final Comments at 2.

performance insights for certain resources, we must also recognize that time and funding resources are finite. We therefore request affirmation that Staff and other parties will support PGE's recovery of this increased expenditure in future rate proceedings.

PGE interprets RNW's suggestion regarding project developers and suppliers reviewing the consultant reports as applying to potential developers of all resource types addressed in the reports. As discussed in our Reply Comments, we believe it would be inappropriate and unwise to solicit reviews of our independent consultant's study findings of generic resource costs from third-party developers and suppliers, which have commercial interests in specific projects that may later bid into an RFP to fulfill an IRP Action Plan.³⁹

As stated in PGE's Reply Comments, we recognize the important role that the capacity contribution of variable energy resources ("VERs") can play in IRP analysis and other proceedings.⁴⁰ Because both PacifiCorp and Idaho Power are also facing the same issue, it is appropriate for the utilities, Staff, and stakeholder parties to work together to develop and recommend a common methodology. We suggest that the Commission open a stand-alone docket to investigate the relevant issues and develop a common framework for calculating the capacity contributions of VERs.

Additional Biglow Canyon hourly wind data will be available for our next wind capacity contribution analysis. Because the Tucannon River wind project does not fully come online until mid-2015, a full year of actual data will not be available from that plant until mid-2016. We can consider the potential use of synthetic data but this could be risky with regard to establishing a reliable correlation between Biglow Canyon and Tucannon.⁴¹

III. Conclusion

Over the last two years, PGE, Staff, and our IRP stakeholders worked together collaboratively to develop this IRP. We particularly appreciate the input and constructive participation from Staff and stakeholders throughout the process. Their feedback has helped us prepare a well-considered and comprehensive IRP and Action Plan recommendation that is consistent with the Commission's IRP Guidelines, and in the best interest of the Company and our customers. While it is evident in the final comments of the Company and parties that some differences of position and opinion remain, we believe that there are many more areas

³⁹ PGE's Reply Comments at 16-17.

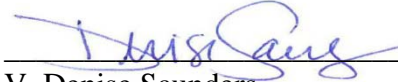
⁴⁰ *Id.* at 28-29.

⁴¹ *Id.*

of agreement than disagreement. We also note that Staff and stakeholders have offered several useful suggestions for improvement, which we have largely agreed to adopt or further evaluate for future IRPs. Moreover, our plan appears to be broadly supported by Staff and our constituents. We therefore encourage the Commission to acknowledge our 2013 IRP and associated Action Plan.

DATED this 21st day of August, 2014.

Respectfully submitted,

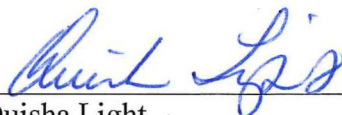


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CERTIFICATE OF SERVICE

I hereby certify that I have this day caused an **Portland General Electric Company's Final Comments and Attachments** to be served by electronic mail to those parties whose email addresses appear on the attached service list from OPUC Docket No. LC 56.

Dated at Portland, Oregon, this 21st day of August, 2014.



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**SERVICE LIST –
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