

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 43

In the Matter of PORTLAND GENERAL ELECTRIC 2007 Integrated Resource Plan	Reply of Portland General Electric Company to Staff Comments
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Portland General Electric (PGE) would like to thank all participants in the public process related to our 2007 Integrated Resource Plan (IRP). Our dialogue with various stakeholders has been informative and productive and led to an Action Plan that enjoys broad acceptance. In particular, we are pleased that Staff has recommended approval of the Action Plan without modification or conditions. Nevertheless, some areas of disagreement about analytical approach and content remain, as documented in Staff's January 4, 2008, Comments and proposed future IRP requirements.

As we note in our Reply Comments below, PGE believes that Staff's proposals are best handled in the public process phase of PGE's next IRP, where all parties can discuss and explore the benefits and costs of Staff's suggested requirements for additional analysis within the intended scope of the new IRP Guidelines.

Our Reply Comments are organized into three sections. The first discusses areas in which we concur with Staff's Comments. The second discusses areas in which further discussions with Staff and other parties are needed in the next IRP cycle, so as to both meet the requirements of Commission Order No. 07-002 and develop an action plan that incorporates the input of stakeholders. The third is a short summary of our review and response to Staff's comments. We have also attached a proposed Commission order, using Staff's recommended order as the base.

Areas of Concurrence with Staff Recommendations:

- In the next planning cycle, include in the analysis, a timely wind integration study that has been vetted by key regional stakeholders.*

PGE agrees with this recommendation and looks forward to working with stakeholders to implement it.

- For the 2007 IRP update and next planning cycle, develop and fully evaluate a portfolio that reduces the company's CO₂ emissions consistent with the goals expressed in Oregon HB 3543.*

PGE will, to the extent possible, comply with this recommendation in the Update to its 2007 IRP and in its next IRP planning cycle. PGE expects this issue to be further addressed in Docket UM-1302 and will comply with any resulting change in CO₂ guidelines for IRPs.

- 6. In the next IRP Update, include an analysis of when transmission construction projects must begin in order to meet the 2012 need.*

Based on the findings from our 2008 Energy RFP, PGE will provide an updated discussion of transmission requirements for new energy resources in its 2007 IRP Update. However, it is unlikely that PGE's future capacity RFP will be sufficiently complete to provide insights regarding specific capacity resources to meet the requirements of our IRP Action Plan. As a result, the ability to further assess any related transmission requirements for future capacity resources will likely be limited.

Areas for Further Discussion:

- 1. In the next planning cycle, include resources other than market purchases to meet energy needs for at least the first 10 years of the 20-year planning horizon. All resources expected to become available during the resource acquisition period should be considered.*

PGE believes that resource plans should be actionable and minimize uncertainty by focusing on portfolio decisions that require implementation in the next few years, rather than decisions that do not require near-term action and are likely to be increasingly uncertain and distant in the future. However, we do not suggest that only resources that can reach commercial operation in a relatively short time frame be included in an action plan. Rather, the plan should identify resource requirements far enough into the future so that resource development and construction lead-times are carefully considered. In our 2007 IRP, we focused on near-term acquisition decisions, and modeled their implications through 2031, which extends beyond the 20-year horizon required by Order No. 07-002. We also froze loads in 2012, in order to avoid making our analysis less exact by either assuming a large future resource deficit or significant market purchases to meet load growth beyond our target implementation period. There is considerable uncertainty regarding resource acquisitions ten years and beyond in the future, but less uncertainty for decisions that need to be made over shorter horizons. Combining ten-year out decisions with those that need to be made in the next few years would unnecessarily introduce additional complexity and uncertainty into decisions that need to be made sooner.

If there were developing technologies that are not currently commercially viable, but may be within ten years, and could also potentially make obsolete resources currently available, we would include them in our analysis. Additionally, if our IRP research and analysis suggests that longer lead time resources that may require near term implementation decisions (e.g. – IGCC, nuclear, or wave) provide the best combination of risk and value for our customers, we would include them in our evaluation and modify our portfolio analysis and Action Plan accordingly. In this cycle, we did not believe that there were any resources meeting these criteria.

However, if there are such resources in the next IRP cycle, we will want to work with stakeholders to include them in the analysis. We understand Staff's concern that relevant future resources might not be considered in our IRP process, and would suggest that this topic be considered at an IRP workshop, either before or during the public process phase of our next IRP cycle.

We thank Staff for including our earlier response to a Staff data request on this topic, which provides additional detail, as an Attachment to their January 4, 2008, Comments.

3. *In the next planning cycle, complete the portfolio analysis by presenting a rank ordering of the portfolios that considers all of the factors (costs, risks and uncertainties) used to choose the preferred portfolio.*

PGE believes that for two reasons resource planning is not simply a mathematical optimization exercise. First, there are many uncertain input assumptions, costs, timing, and policies, as well as various qualitative risk and value considerations, which do not lend themselves to a precise rank ordering analysis. Second, the level of analytic and modeling complexity that would be needed to calculate exact scores for all possible resource combinations, and thereby have a rank ordering, is beyond reasonable expectations. PGE believes that doing so would result in few additional insights and usable information.

We made decisions regarding our modeling approach after soliciting input from stakeholders at several public workshops. Most of the analysis and material that is in our IRP was previously presented and discussed in those workshops. Stakeholders did not express disagreement with our modeling approach. In the next IRP cycle, PGE looks forward to further working with Staff and other stakeholders to best make use of available resources to meet the objectives of IRP.

4. *For the next IRP: a) establish a set of CO₂ adder levels that covers the gamut of expected environmental regulatory benchmarks; b) match projected loads and gas and electric prices that are economically consistent with those CO₂ adder levels; c) perform the stochastic runs for each of those adder levels/matches; and d) define "risk" for each portfolio at each CO₂ adder level as the TailVaR90 corresponding to the stochastic runs associated with that level.*

PGE believes that our CO₂ analysis complies with the guidelines in effect when our 2007 Draft IRP was published. In addition, our approach to assessing CO₂ risk was presented and discussed during our public process, and no serious objections were raised. Docket UM 1302, which will modify Guideline 8 (on CO₂ and other environmental costs) of Order No. 07-002 (IRP Guidelines), should be in effect prior to PGE's next IRP. PGE will work with stakeholders to ensure that the next IRP complies with any resulting new guidelines for CO₂ risk analysis.

7. *In the next IRP, assess conservation potential for at least the first 10 years of the planning horizon. Include conservation resources in portfolio modeling throughout this resource*

acquisition period, and include best cost/risk conservation resources in the preferred portfolio.

PGE views this issue as part of Issue 1. As stated in our discussion of that issue, we suggest that the issue of appropriate time horizons for resource action recommendations be considered at an IRP workshop, either before or during the public process of our next IRP cycle.

8. *In the next planning cycle, analyze loss of load probability, expected unserved energy, and worst-case unserved energy by year for top-performing portfolios. Analyze the tradeoff between resource adequacy and cost.*

For the current IRP, PGE believes that the analysis provided supplies sufficient insights regarding the potential risks of resource adequacy. To ensure that all parties reach consensus regarding the appropriate type and level of analysis to meet the guidelines in this area, PGE recommends that this issue be considered at a workshop with Staff and other stakeholders that could be held either before or during the public process phase of PGE's next IRP cycle.

General

PGE disagrees with Staff's assertion that we have not met the requirements of OPUC Order No. 07-002. (See Staff's Comments, Pages 2, 3, 10, 20, and various discussions of risk and stochastic and scenario analyses.) PGE had already conducted its public process and was well into its analysis when the Commission issued Order No. 07-002. Nevertheless, PGE incorporated the Order in our IRP and related Action Plan. Instances where our analysis and assessments did not meet expectations may, in part, be due to a difference in interpretation between Staff and PGE and likely would not change our conclusions or resulting Action Plan.

Summary:

PGE appreciates Staff's detailed discussion of the 2007 IRP. We also appreciate Staff's recommended acknowledgement of our proposed Action Plan and suggestions for improving our analysis in the next IRP planning cycle.

Attachment A to these Reply Comments is an alternative to Staff's proposed Order, which reflects PGE's views of how best to work with stakeholders in the next IRP public process cycle to perform the analysis needed to meet the requirements of Order No. 07-002 and make resource acquisitions that have the best combination of price and associated risk and uncertainty.

**PGE's Reply to Staff Comments
Attachment A**

PGE's Proposed Amended Recommendations

PGE's Proposed Amended Recommendations

It is not surprising that as we tried to comply with the new Order No. 07-002 Guidelines for the first time, differences in understanding would emerge. Our intent, where we have proposed amendments to the conditions, is to allow all interested stakeholders an active voice via the public process in how details of the Guidelines are to be interpreted. Another objective of our proposed amended recommendations is to ensure that the IRP process continues to be adaptive and flexible enough to respond to changing circumstances and environments.

1. In the next PGE IRP planning cycle, via a workshop in the public process, PGE will seek agreement from all parties as to the appropriate planning horizon for inclusion of new generating resources. (Such resources will subsequently be modeled for a minimum of 20 years after the proposed in-service date of the last resource addition being considered.) PGE and parties will also agree as to what resources will be considered.
2. In the next PGE IRP planning cycle, PGE will include in the analysis a timely wind integration study that has been vetted by key regional stakeholders.
3. In the next PGE IRP planning cycle, via a workshop in the public process, PGE will seek agreement on an appropriate portfolio analysis which presents results on the best combination of price and associated risk and uncertainty, considering all factors that are quantifiable. Combine this quantitative analysis with an assessment of qualitative risks to present a rank ordering of portfolios.
4. For the next IRP, PGE will perform analysis to conform to the requirements of the new guidelines (from Order No. 07-002) regarding CO₂ emissions, currently being considered in Docket UM 1302.

[Staff's 5 subsumed in #4]

5. In the next PGE IRP Update, PGE will include an analysis of when transmission requirements for new energy resources in its 2007 IRP Update.

[Staff's 7 subsumed in #1]

6. In the next planning cycle, via a workshop in the public process, PGE will seek agreement on what time frame is required and upon which portfolios a loss of load probability analysis is required, including how to evaluate the risk tradeoff between resource adequacy and cost.



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January 22, 2008

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Re: LC-43 – PORTLAND GENERAL ELECTRIC COMPANY 2007 Integrated Resource Plan

Attention Filing Center:

Enclosed for filing in docket LC 43, please find one original and one copy of:

- **REPLY OF PORTLAND GENERAL ELECTRIC COMPANY TO STAFF COMMENTS**

This document is being filed by electronic mail with the Filing Center.

An extra copy of this cover letter is enclosed. Please date stamp the extra copy and return to me in the envelope provided.

Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Richard George", written in a cursive style.

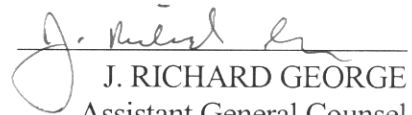
J. RICHARD GEORGE
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CERTIFICATE OF SERVICE

I hereby certify that on January 22, 2008, I caused **PORTLAND GENERAL ELECTRIC'S REPLY TO STAFF COMMENTS** to be served by electronic mail to those whose email addresses appear on the attached Service List, and by First Class US Mail, postage prepaid and properly addressed, to those parties who have not waived paper service in OPUC Docket LC 43.

Dated at Portland, Oregon, this 22nd day of January, 2008


J. RICHARD GEORGE
Assistant General Counsel

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Subject Company: PORTLAND GENERAL ELECTRIC

In the Matter of PORTLAND GENERAL ELECTRIC COMPANY 2007 Integrated Resource Plan. Filed by Randy Dahlgren.

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