

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 43

In the Matter of)	
)	
PUBLIC UTILITY COMMISSION)	OPENING COMMENTS ON
OF OREGON,)	PORTLAND GENERAL
)	ELECTRIC 2007 INTEGRATED
)	RESOURCE PLAN BY
In the Matter of PORTLAND)	RENEWABLE NORTHWEST
GENERAL ELECTRIC Application)	PROJECT
for Acknowledgement of its 2007)	
<u>Integrated Resource Plan.</u>)	

Introduction

The Renewable Northwest Project (RNP) provides these opening comments on Portland General Electric's 2007 Integrated Resource Plan (IRP). RNP recognizes the effort represented by this 2007 IRP. The plan largely follows the intent of Oregon Public Utility Commission's IRP Guidelines in Order 07-002. Overall, Portland General Electric (PGE) provides a reasonably balanced plan at a time of relative uncertainty, especially regarding regulatory responses to the global climate crisis.

While the IRP proposed Energy Action Plan strikes a reasonable balance, it falls short of being a proactive blueprint for resource development consistent with state targets for greenhouse gas emissions reductions.¹ We also note that the wind integration costs included in this IRP are much higher than other analyses conducted throughout the region. Additionally, we have concerns about the IRP's treatment of CO2 regulation risk and are concerned that the IRP does not give sufficient attention to solar energy resources as potential supply-side or demand-side resource options.

¹ House Bill 3543, passed by the 2007 Oregon Legislative Assembly sets statutory statewide greenhouse gas reduction targets of 10% below 1990 historic emissions levels by 2020 and 75% below historic 1990 emissions levels by 2050.

Outlined below are specific comments regarding where additional focus, consistent with the Commission IRP Guidelines, needs to be placed in this or future PGE IRPs:

Guideline 1: Substantive Requirements

IRP Guideline 1(a) direct utilities to consider “all known resources for meeting a utility’s load” and states that “all resources must be evaluated on a consistent and comparable basis.” This guideline is also consistent with the previous IRP guidelines adopted in Order 89-507.²

We applaud PGE’s 2007 IRP for including not only wind, but also geothermal, and biomass resource options in their portfolio analysis.³ While wind is clearly the preeminent renewable resource in the region at this time, other resources such as biomass, geothermal, and solar power are beginning to show renewed promise and deserve greater focus in utility IRPs. Wind, solar, geothermal, biomass, and other renewables all have different characteristics, including cost structures, dispatchability, technology risks, and CO₂ risks, and the potential benefits and costs to utility portfolios should all be fully considered for each of these different renewable energy resources.

We are still concerned that the IRP does not give sufficient attention to solar energy resources, particularly solar hot water systems that can displace electric heating in residential and commercial buildings. The IRP document refers to a distributed solar generation potential of 120 MW in Oregon.⁴ However, the documentation cited in the study referred solely to photovoltaic solar generation and not solar hot water systems. The potential for residential hot water systems alone in the PGE system is on the order of 12-25 MWa⁵. Data for commercial solar hot water potential was not available.

PGE’s IRP recognizes the significant potential for distributed solar photovoltaic (PV) resources within PGE’s service territory.⁶ While we applaud PGE for their active role in the development of a market for solar PV in Oregon, we encourage PGE to include PV resources among the resource options available to the Company in IRP analysis.

Although costs for PV remain relatively high on a per kilowatt basis, these costs are projected to decrease significantly over the time period modeled by the IRP. Additionally, these costs are currently shared between the utility, state, and federal incentive programs (which are considerable at this juncture), and customers, who are often willing to pay a large percentage of the cost of a rooftop solar array themselves. The same is true of solar hot water systems. Therefore, a utility does not bear the full costs of solar PV or hot water resources, making both solar technologies potentially economic resource options *today* for PGE. The Company should alter its analysis of solar resources to include only the resource costs born by the utility.

² See OPUC Order 07-002, page 3.

³ See PGE, *2007 Integrated Resource Plan*, page 171, Table 10-3

⁴ *ibid.* page 127.

⁵ Assuming: 675,475 PGE households, 70% electric hot water systems and 30% gas hot water systems, 2,400 kWh/yr savings per system, and 10-20% penetration rate.

⁶ PGE estimates that the potential for distributed solar is up to 120 MW across the state. A considerable portion of this potential likely lies within PGE’s service territory. *ibid.* page 127.

Additionally, as an on-site generation resource whose cost structure is shared by several entities (i.e. utility, customer, government incentives), distributed solar resources should probably be evaluated as a demand-side resource whose costs are compared to an appropriate avoided cost, rather than as a supply-side resource option.⁷ Distributed solar PV and hot water systems generate the most energy during peak load hours and this should be taken into account when developing an appropriate avoided cost.

Guideline 4: Plan Components (e), Identification and estimated costs of all resource options

Although PGE identifies wind as a major component of its resource plan, the cost of wind integration was not adequately addressed. PGE used assumed integration costs of \$6/MWh for Tier 1 wind, and \$10/MWh for Tier 2 wind citing the Northwest Power and Conservation Council “Biennial Monitoring Report on the 5th Power Plan.” However, \$10/MWh is higher than the high end of the Council’s reported range and is inconsistent with other analyses done around the region. PGE provides no justification for why their integration costs will be higher than others experienced in the region.⁸ It therefore appears that wind integration costs have been overstated and the resulting total costs of wind resource portfolios overestimated. This may have driven PGE’s Energy Action Plan to unnecessarily limit the amount of wind resources to that required for compliance with the Oregon Renewable Energy Standard.

Guideline 8: Environmental Costs.

While PGE’s IRP does technically comply with Commission directions under Guideline 8 (on environmental costs), the base case assumptions made by the Company for CO₂ adder values do not accurately reflect the current policy environment, nor does the range of CO₂ adder values included in the IRP’s risk analysis.

In opening comments in OPUC Docket UM 1302, RNP (as part of the Joint Parties) presented a survey of current federal climate change policy proposals and the estimated carbon prices under these regulations. This survey shows that a range of carbon adders from \$25-\$110/ton (2007\$) in levelized terms would correspond to the current range of federal climate change policy proposals.⁹ In contrast, the upper range of PGE’s CO₂ adder value sensitivity analysis – \$40/ton (1990\$) or \$57.6/ton (2006\$) – still falls well below the upper range of possible federal CO₂

⁷ As PGE notes, “Benefits of solar power include no fuel cost, pollution or CO₂ emissions and coincidental summer peak period production benefits. ...Distributed solar may also provide relief of transmission and distribution congestion, if located in areas of high localized demand.” See *ibid.* page 128.

⁸ See for example, Table 1 of the Northwest Wind Integration Action Plan. Only Idaho Power reported wind integration costs higher than \$10/MWh, and they have since revised their estimates lower in a filing with the Idaho Power Commission.

⁹ See Opening Comments of the Joint Parties in OPUC Docket UM 1302, page 19, Table 4. The compliance costs of potential state or regional climate regulations (e.g. a cap and trade program implemented in Oregon or across the Western Climate Initiative states) would also likely within this range.

regulations - \$110/ton (2007\$) – as discussed in our comments in UM 1302.¹⁰ As we argued in that docket, utilities should examine the full range of potential climate policy proposals in order to adequately plan for carbon risk.

In addition, PGE's IRP assumes a base case CO2 adder value of only \$7.72 (2010\$). PGE acknowledges that this value is based on an out-of-date cap-and-trade policy proposed by the National Commission on Energy Policy and introduced in the 109th Congress by Senator Jeff Bingaman.¹¹ As PGE notes, NCEP has updated this policy proposal and now includes a significantly higher CO2 adder value of \$11.03 (2012\$) escalating at 5% per year in real terms. As our comments in UM 1302 show, this corresponds to a levelized adder value of \$25/ton (2007\$), which is much higher than the base case assumed in PGE's IRP. PGE notes that the new CO2 adder value corresponding to the current NCEP proposal still falls below the \$10/ton (1990\$) sensitivity analysis case prescribed by Guideline 8.¹² However, the base case adder value is given special consideration and selecting a base case adder value that falls far below the *minimum* range of current policy proposals is inappropriate given the current policy environment.

Given each of these issues, we are therefore concerned that while PGE's IRP complies with the letter of Guideline 8, it fails to adequately plan for the current policy environment and likely underestimates the carbon risk exposure of various candidate portfolios. This in turn underestimates the risk mitigation value of portfolios with lower overall emissions, including those containing more zero- or low-carbon resources, including renewables.

We recognize that many of these issues were discussed in the proceedings and comments of Docket UM 1302 and will hopefully be addressed in a revised Guideline 8 to be adopted later this year. We hope that future IRPs address and resolve these issues but we would also encourage the Company and the Commission to consider whether this current IRP adequately addresses CO2 regulation risk.

¹⁰ See Opening Comments of the Joint Parties in OPUC Docket UM 1302, page 19, Table 4.

¹¹ See PGE, *2007 Integrated Resource Plan*, page 91.

¹² *ibid.* page 91.

CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing **OPENING COMMENTS ON PORTLAND GENERAL ELECTRIC 2007 INTEGRATED RESOURCE PLAN BY RENEWABLE NORTHWEST PROJECT** on the following persons on October 19, 2007, by hand-delivering, faxing, e-mailing, or mailing (as indicated below) to each a copy thereof, and if mailed, contained in a sealed envelope, with postage paid, addressed to said attorneys at the last known address of each shown below and deposited in the post office on said day at Portland, Oregon:

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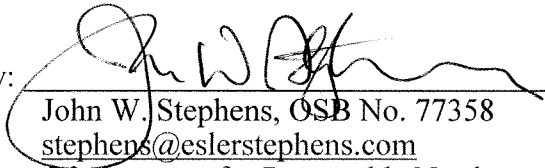
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DATED this 19th day of October, 2007.

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