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July 26, 2007

Email / US Mail

Commission Filing Center
Public Utility Commission of Oregon
550 Capital Street, N.E.
Salem, OR 97310-1380

**Re: UM 1302 – INVESTIGATION INTO THE TREATMENT OF CO2 RISK IN
THE INTEGRATED RESOURCE PLANNING PROCESS**

Attention Filing Center:

Enclosed please find one original and one copy of:

- **OPENING COMMENTS OF PORTLAND GENERAL ELECTRIC COMPANY**

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 "Patrick G. Hager", written in a cursive style.

Patrick G. Hager
Manager, Regulatory Affairs

cc: UM-1302 Service List

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON
UM 1302**

In the Matter of

PUBLIC UTILITY COMMISSION OF
OREGON

Staff Investigation into the Treatment of CO₂
Risk in the Integrated Resource Planning
Process.

**OPENING COMMENTS OF PORTLAND
GENERAL ELECTRIC COMPANY**

On January 8, 2007, the Public Utility Commission of Oregon ("Commission") issued an order in UM 1056, its investigation into integrated resource planning (Order No. 07-002). In this Order, the Commission stated it would open a proceeding to examine the treatment of carbon dioxide ("CO₂") risk in integrated resource plans ("IRPs") that would (1) address the CO₂ value that a utility should use for its base case; (2) determine what CO₂ costs should be used for sensitivity analysis, and (3) identify what analysis of "trigger point" values should be required. At an April 12, 2007, workshop, parties agreed upon an issues list that reflected the Commission's directives.

Portland General Electric Company ("PGE") has expressed its position on climate change to legislators, customers and our interest groups – we support the national climate legislation originally proposed by Senator Bingaman, which is modeled on the approach recommended by the bipartisan National Commission on Energy Policy ("NCEP"). The proposed legislation has changed significantly since the original draft earned our support last fall (and we are still evaluating such changes); however, our principles for supporting the original NCEP proposal are still valid and we continue to support the legislation. The proposed legislation includes the following features:

- The NCEP approach creates a predictable framework that will result in meaningful greenhouse gas reductions.
- It is economy-wide and logically places the regulation of natural gas and petroleum as far upstream as possible, spreading compliance costs to all users of those fuels. Coal is regulated farther downstream at the power plant level.
- The “safety-valve price” for emissions allowances is designed to protect the economy. It also provides cost certainty that will allow us to make better long-term planning decisions.
- The allocation of carbon allowances to the electric utility industry provides an important mechanism for offsetting increased fuel costs associated with carbon regulation and will help us reduce cost impacts to our customers.
- The credit for early, voluntary mitigation actions rewards entities like PGE that have taken mitigation actions over the past decade. PGE has reported CO₂ to the Depart of Energy 1605(b) registry since 1991.
- It provides for investment in effective climate change solutions and adaptation strategies. This is critical if we are to develop and commercialize lower-carbon alternatives.
- It provides funding for mitigation of impacts on low-income customers.
- It provides a mechanism for mitigating impacts on energy-intensive industries.

PGE recognizes the limited scope of this docket (and that the Commission intends to open a later docket to explore a CO₂ emissions standard, *see* Order No. 07-002, footnote-5). Thus, the discussion that follows does not specifically address these principles or PGE’s policy choices regarding climate change. Rather, PGE’s opening comments specifically address the issues list adopted in this docket regarding the treatment of CO₂ risk in the IRP process.

I. What CO₂ regulatory cost stream should utilities use in their IRP base case and what assumed CO₂ regulatory future should serve as the basis for the base case cost stream?

PGE does not believe that a fixed set of carbon cost adders should be codified into an OPUC order or rule; rather, the order or rule should set forth general policies

regarding treatment of CO₂ risk in the resource planning process. The future path and timing of policy and legislation cannot be predicted, thus, we believe the best approach to modeling “base case” CO₂ costs in the IRP is to maintain flexibility. In the absence of an enacted legislative carbon cost adder, we believe that one way to maintain flexibility is to use as a “base” the proposed federal legislation that has broad support at the time of IRP preparation. Clearly, proposed legislative CO₂ costs will most likely not be adopted without future modification, even with significant national support. Nevertheless, utilizing proposed federal legislation that appears more likely to become effective provides a practical base framework to assess potential costs and forms the best basis upon which to model base case CO₂ costs. Once the base case is established, the utility, in consultation with other parties during the resource planning process, can model other potential scenarios for CO₂ costs.

PGE followed this framework in its recent (June 29, 2007) IRP filing, after first also assessing the range of potential impacts to PGE customers. PGE assumed CO₂ costs and allowances in accordance with the initial proposed federal legislation sponsored by Senator Bingaman. The proposed legislation called for a safety valve carbon tax of \$7 per short ton beginning in 2010, and escalating at 5% per year thereafter. As discussed above, the Bingaman proposal appeared to have broad national support; in particular, it was supported by the NCEP.¹ However, as we noted above, any proposed legislation will likely be different from the final bill. As discussed above, the Bingaman proposal recently has been revised. PGE has evaluated the new proposal and will continue to

¹ In addition to the Bingaman proposed legislation, we also modeled in our IRP the requirement for carbon-offset payments to the Climate Trust of Oregon for all fossil-fueled plants. We would recommend that upon enactment of broader CO₂ legislation, payments to the Climate Trust of Oregon to support emissions offsets should be reconsidered to avoid redundant costs at federal, regional, and/or state levels.

support it. The revised proposal has more aggressive CO₂ reduction targets but retains a safety valve price, albeit at a substantially higher level. Other current legislative proposals also feature gradual transitions; thus it appears unlikely that any federal legislation would become effective until 2012 or later. Hence, not only are CO₂ costs unknown, but the timing is uncertain and costs are likely to involve a gradual but substantial transition.

Regulatory futures used in the base case, whether a fixed carbon adder or a CO₂ modeling constraint, will be determined by the specific legislation being considered and the economics for CO₂-free and CO₂-reduced generation alternatives. The current Bingaman proposal contains features of each.

II. What alternative CO₂ regulatory cost streams should utilities use in the IRP scenario analyses, and what assumed CO₂ regulatory futures should serve as the bases for these alternative cost streams?

PGE believes that current Commission precedent provides sufficient alternative cost streams for use in examining CO₂ in the IRP process. In Order No. 93-695, the Commission set forth a requirement that IRPs examine CO₂ tax adder scenarios of \$10/ton, \$25/ton and, \$40/ton (1990 dollars). By studying several sensitivities, the Commission believed the range of recommended control costs could be covered, and that insightful information on plant dispatch and resource acquisition at different CO₂ cost levels could be obtained.

As discussed above, in our current IRP, the base case assumes federal legislation with a tax adder of \$7 per short ton (in 2010 dollars). PGE performed additional

modeling using the different required tax adder scenarios (i.e. \$10/ton, \$25/ton, and \$40/ton in 1990 dollars). However, the utility should also consider other sources of information such as competitive markets or legislative proposals because they may help determine likely CO₂ regulatory future scenarios. For example, PGE considered CO₂ costs based on market prices in an existing compliance environment. Existing markets such as the Chicago Climate Exchange (CCX) and the European Climate Exchange could provide CO₂ price ranges in the future. However, these markets are fairly new and may have different approaches and objectives from future national legislation. Based on this, in PGE's current IRP, we concluded that these markets were not sufficiently mature or comparable for use in our CO₂ modeling. PGE continues to believe that the CO₂ adder scenarios should be used in future IRPs and that proposed national legislation and market indicators are considered as possible sensitivities.

III. How should the existing, and potential future, carbon or other greenhouse gas emission goals of the State of Oregon be included in utility IRPs?

PGE believes that consideration of a state-level emissions performance standard ("EPS") should be tempered by the consideration of the potential interaction with existing federal, regional, and state laws regarding carbon taxes, renewable portfolio standards, renewables tax credits, etc. An EPS should only be considered in a much larger context of policy and macroeconomic impacts at regional, federal, or even international levels, because of the real possibility of conflicting initiatives. For example, it could be unwise to over-regulate or overly restrict the marketplace by simultaneously taxing one sector,

providing incentives to another sector via federal and state tax credits, and then requiring both a floor on renewables use and a ceiling on fossil fuel use.

PGE's current IRP already reflects the emissions goals of the State of Oregon through the Climate Trust of Oregon ("CTO") requirements. The CTO implements rules of the Oregon Energy Facility Siting Council ("Council"), which sets CO₂ emissions standards for new energy facilities. The standards apply to baseload gas plants, non-baseload power plants, and non-generating energy facilities that emit CO₂. The Council adopted these rules (*see* Oregon Administrative Rules, Chapter 345, Division 24) pursuant to HB 3283. For baseload gas plants and non-baseload plants, the standard sets the net emissions rate at 0.675 lb. CO₂ per kilowatt-hour. To comply with this standard, PGE has made offset payments for its Coyote Springs and Port Westward natural-gas fueled plants. PGE's IRP modeling includes such CTO payments for any new fossil-fuel plant proposals.

Because the form, amount, and timing of any future state EPS, as well as its possible interaction with a carbon tax is unknown, no cost stream from a hypothetical EPS should be included in "base case" modeling for IRP, although an alternative scenario could be constructed during the public process based on new information at that time. In addition, the Commission noted in Order No. 07-002 (footnote 5) that it expects to open another investigation into CO₂ emissions standards to follow this proceeding. Thus, other comments on emissions goals in this docket may be premature.

We note that the Oregon State Legislature recently passed Greenhouse Gas ("GHG") reduction goals that would reduce GHGs to 25% of 1990 levels by the year 2050. This information came too late for PGE to incorporate into its current IRP but it

would most likely not affect PGE's proposed action plan. PGE will consider this legislation in its next IRP process.

IV. What probability weighting, if any, should utilities assign to the CO₂ base case and scenario analyses?

PGE recommends that a probability weighting not be employed at this time because no objective or quantifiable basis exists to assign the weightings. Rather, the scenarios utilized in the process provide a reasonable range, or bookends, of potential impacts. Indeed, the scenarios also provide a measure of the robustness of the CO₂ base case. The IRP process can then determine whether additional scenarios are warranted based on professional judgment and stakeholder input.

Because no probability weighting can or should be assigned, it follows that stochastic analysis of CO₂ risk is also not appropriate. CO₂ risk is appropriately assessed using sensitivity analysis at this time. Probability weighting may later be appropriate after more information is available regarding the relative likelihood of various scenarios.

V. How should utilities vary the CO₂ regulatory cost streams to identify the “trigger point” that changes the preferred resource portfolio and should utilities vary other model inputs to achieve logical consistency and to test the sensitivity of the trigger point to the changes in other variables?

The current IRP process already identifies trigger points through the use of scenario analysis. PGE varies the CO₂ cost streams in its analyses using the required \$10/ton, \$25/ton, and \$40/ton inputs in the model and from this we can determine at what

point thermal (i.e. coal and natural gas) dispatch is “out of the money.” Naturally, this trigger point will differ for each utility and is based on the utility’s individual cost curves and resource portfolios. As we noted above, during the IRP public process, parties have the opportunity to suggest additional scenarios if they believe the ones proposed are not sufficient.

PGE agrees that impacts to other modeling assumptions and inputs due to CO₂ legislation should be considered. For instance, if electric utilities curtail their use of coal in the future, there will be a substantial impact on coal, natural gas, and other energy prices. These impacts should be considered. However, *how* utilities should go about varying these inputs requires guidance as regional, national, or international macroeconomic modeling would be required. It may be most prudent to study and develop appropriate changes in useful modeling inputs and relationships; therefore, PGE recommends a joint study on how to approach this complex topic in order to provide such guidance for Oregon utilities.

VI. Are the alternative futures used in the scenario analyses an adequate measure of the cost risk associated with choosing one portfolio over another? Should utilities use a different approach when considering the risk of future CO₂ regulation?

PGE does not recommend considering *only* CO₂ aspects in scenario analyses – it is too narrow of a focus. A utility must potentially consider *all* foreseeable financial and operating risks and costs of resource choices. This can be done using both modeling

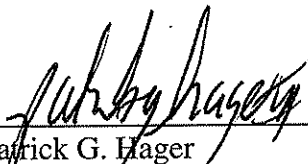
approaches and risk measures such as PGE recommends in its 2007 IRP. Portfolio analyses should consider other uncertain assumptions beyond solely CO₂ costs.

VII. Conclusion

PGE appreciates the Commission's consideration of these comments. PGE models CO₂ costs in its IRP by following existing Commission guidance and following proposed federal legislation. This approach provides for reasonable certainty and flexibility in the modeling scenarios and is sufficient for the inclusion of CO₂ costs in IRP analyses until: (1) federal legislation is passed; (2) when specific methodological concerns noted above are addressed; and (3) the utility is given further guidance for future IRPs. PGE believes these opening comments specifically address the issues list adopted in this docket regarding the treatment of CO₂ risk in the IRP process.

DATED this 26th day of July, 2007.

Respectfully submitted,



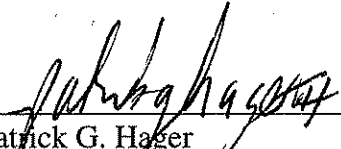
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CERTIFICATE OF SERVICE

I hereby certify that I have this day cause the following **OPENING COMMENTS OF PORTLAND GENERAL ELECTRIC COMPANY** to be served by electronic mail to those parties whose email addresses appear on the attached service list, and by First Class US mail, postage prepaid and properly addressed, to those parties on the attached service list who have not waived paper service.

Dated at Portland, Oregon, this 26th day of July 2007.



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