Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204
PortlandGeneral.com

May 12, 2009

US Mail / E-mail

Oregon Public Utility Commission
Attention: Filing Center
550 Capitol Street, N.E., Ste 215
Salem, OR 97301-2551

RE: **UM 1345**

Attention Filing Center:

Enclosed for filing in the captioned docket are an original and one copy of:

- **COMMENTS OF PORTLAND GENERAL ELECTRIC COMPANY REGARDING THE FINAL REPORT OF THE INDEPENDENT EVALUATIOR, ACCION GROUP, INC. DATED JANUARY 9, 2009.**

If you have any questions or require further information, please call me at (503) 464-7580. Please direct all formal correspondence and requests to the following email address pge.opuc.filings@pgn.com.

Sincerely,

Patrick G. Hager
Manager, Regulatory Affairs

cc: Michael Weirich, ODOJ
UM 1345 Service List

Encl.

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BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON
UM 1345

In the Matter Of	)	**COMMENTS OF PORTLAND**
PORTLAND GENERAL ELECTRIC	)	**GENERAL ELECTRIC COMPANY**
Request for Proposal for	)	**ON THE FINAL REPORT OF**
Renewable Energy Resources	)	**INDEPENDENT EVALUATOR**

Portland General Electric Company ("PGE") appreciates the professionalism and diligence of the Independent Evaluator ("IE"), Accion Group, in overseeing PGE's 2008 Request for Proposals ("RFP"). While we generally agree with the findings and conclusions in the Final Report submitted by the IE in this docket, PGE submits these comments to address one aspect of the Final Report where our view differs. While addressing the specific issue of the quality of the wind data for a particular bid, the IE comments that the risk of variation between actual energy versus predicted energy from wind farms could lower the value of an ownership option[1]. PGE believes that the risks associated with variations between actual and predicted wind generation are different for ownership and purchase options and do not necessarily lower the relative value of an ownership option. In addition, there are many ways to mitigate capacity factor and energy production risks. Moreover, assessing the relative risk with regard to wind project ownership should include an evaluation of other factors in addition to wind capacity and energy production risks.

A utility developing its own wind project can insulate its customers from the risk of "over-forecasting" wind capacity factors and thereby underestimating the cost of energy through appropriate levels of due-diligence and wind resource evaluation. Potential wind project energy and estimated capacity factors are typically assessed through a thorough analysis of site-specific meteorological data in conjunction with a review of one or more power curves associated with specific wind turbines. The duration, breadth, and quality of site-specific data collected impacts the confidence in the resulting expected capacity factor. When site-specific meteorological data is robust (collected at various locations around the project site and over a time-frame of not less than one year and preferably at least three years)[2]; does not contain material periods of time when equipment malfunctions have caused data to be lost or not captured; and evaluated by individuals experienced in wind data and capacity factor analysis, the likelihood of over-estimating the long-term energy content of the project is reduced. Accordingly, the capacity factor risk to a utility and its customers for a wind resource can be substantially reduced through the performance of proper due-diligence prior to construction.

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[1] *Portland General Electric* Company, Docket UM 1345, Final Report of Accion Group, Inc. at 3, (12/11/08).

[2] PGE attributes the difference in the two wind studies cited by the IE in part to the varying time frames of the studies. *See,* IE Final Report at 3.

PGE believes that there are many other factors that may impact the electric output of a wind project over time beyond forecasted project site wind speed and energy density. Project performance risk can also be further mitigated through turbine selection, a well-developed and managed engineering, procurement and construction plan prior to commercial operation, plant operator experience and knowledge, maintenance plans and through management of the relationship with local distribution and transmission system operators. In addition, turbine micro-siting (the placement of wind turbines at specific sites) is fundamental in capturing energy from a site. Maintaining appropriate turbine spacing parallel and perpendicular to strong directional wind flows or in consideration of forecast wind rose (the expected direction and magnitude of winds on project lands) is also critical. Spacing turbines too close together will cause down-wind turbulence and loss of energy while excessive spacing will result in forgone generation opportunity due to less than an optimal number of turbines on a project site. Finally, a utility can also insulate its customers from capacity factor risks by negotiating effective performance guarantee, warranty and maintenance provisions in, or associated with, the turbine supply agreement. An ownership option enables a utility to better control all of the factors described above except for the actual wind speeds and density occurring at the project.

In addition to energy production and wind capacity factor considerations, an examination of utility ownership and PPA options should consider that with owned resources, a utility is also in a better position to control costs, make life extension improvements, use the site for additional resources in the future, efficiently address plant modifications that may be required as a result of changes in environmental or other laws and regulations, and pass on to customers the benefit of cost based, rather than market priced power as long as the project remains economic. In addition, by owning a project, the utility can hedge itself from the uncertainty of purchasing power in continuously changing market conditions. Since much of the value of many types of renewable generation such as wind is uniquely tied to the project site, long-term access at cost-based rates can provide important risk mitigation for utility customers. While such long-term access could potentially be obtained through negotiated extension rights in a contract, the benefit is clearly attained in a utility owned project. On the negative side, owning a plant subjects the utility and customers to the risk that the cost of ownership and operation exceeds market priced alternatives, the cost of poor performance or early termination, and any unknown liability associated with reclamation at the end of the projects' life.

PGE notes that while a PPA can offer the utility and its customers some insulation from risks associated with investment and operations, the extent of such insulation depends on many factors, such as the terms and conditions of the PPA (including the risk management provisions) the financial profile and organizational structure of the seller, the seller's operations experience and abilities, and the seller's ability to raise capital for repairs, replacements or upgrades.[3] Under a PPA structure the utility and its customers

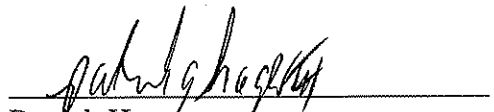
[3] It is not uncommon for the seller under a wind PPA to be organized as a Limited Liability Company (LLC) and it is not uncommon for the LLC to be capitalized through a leveraged structure that is funded disproportionately from a combination of bank debt and tax equity, with a relatively small initial cash

bear some level of price risk for securing replacement energy even when energy delivery deficiencies are not substantial. In more severe cases where actual wind energy production is significantly below expected output over longer periods of time, seller credit and project ownership structure become important factors in determining whether a PPA structure materially mitigates performance risk for utility customers. Finally, under a PPA, the utility and its customers do not receive any of the savings that result from management of the project, nor do they receive any of the value that arise from the project after the contract has expired.

Based on the above factors, PGE believes that it is not reasonable or accurate to assume that capacity factor and energy output performance risk are materially higher for customers in the case of a utility owned resource or that such uncertainty can not be substantially reduced. Nor do we believe that utility customers are insulated from wind capacity factor and energy production risks in the case of a PPA structure. Rather, the selection of a PPA resource or a utility owned resource remains situational, depending upon a number of factors including the particular characteristics of the wind project, as well as the profile and circumstances of the seller and utility at the time of selection. Accordingly, a comprehensive and case by case approach should be used to assess the differential risk of utility owned wind resources vs. contracted wind energy supply.

DATED this 12TH day of MAY, 2009.

Respectfully Submitted,



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equity contribution. In addition, many larger developers operating through project LLCs are tending to execute shorter term service and maintenance agreements with turbine suppliers and therefore take on more of the risk of funding turbine repairs and replacements. In the event that wind project revenues and liquidity are substantially impaired due to reduced output, or if the project LLC fails to retain sufficient funds to pay for turbine repairs or replacements or becomes insolvent, there is no guarantee that the seller would continue to meet its energy delivery obligations to the utility buyer or that the PPA would survive a bankruptcy proceeding. Under such adverse outcomes the incremental cost to the utility and its customers of securing a replacement source of long-term renewable energy supply due to a PPA seller default or unexpected contract termination could be significant, and at minimum the uncertainty of such an outcome is undesirable.

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CERTIFICATE OF SERVICE

I hereby certify that I have this day caused **COMMENTS OF PORTLAND GENERAL ELECTRIC COMPANY ON THE FINAL REPORT OF INDEPENDENT EVALUATOR** to be served by electronic mail to those parties whose email addresses appear on the attached service list, by First Class US Mail, postage prepaid and properly addressed, to those parties on the attached service list who have not waived paper service from OPUC Docket No. UM 1345.

Dated at Portland, Oregon, this 12th day of May, 2009

Patrick Hager
Manager, Regulatory Affairs

Summary Report

UM 1345 PORTLAND GENERAL ELECTRIC REQUEST FOR PROPOSALS FOR ENERGY RESOURCES

Category: Miscellaneous

Filed By: PORTLAND GENERAL ELECTRIC

In the Matter of
PORTLAND GENERAL ELECTRIC COMPANY
Application for Request for Proposals for Energy Resources.
Filed by Patrick Hager.
(No electronic version available. This "draft" filing was replaced by filing on 10/2/07.)

Filing Date: 9/18/2007

Final Order: 08-234 **Signed:** 9/18/2007

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Summary Report

UM 1345 PORTLAND GENERAL ELECTRIC REQUEST FOR PROPOSALS FOR ENERGY RESOURCES

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