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Mr. David W. Danner
Executive Director and Secretary
Washington Utilities
and Transportation Commission
PO Box 47250
Olympia, WA 98504-7250

Re: Docket No. UE-100849
Regulatory Treatment for Renewable Energy Resources

Dear Mr. Danner:

In response to the Washington Utilities and Transportation Commission's ("Commission") May 19, 2010 Notice of Opportunity to File Statements of Issues and Written Comments, Energy Northwest hereby submits the following issue for the Commission's Statement of Issues about proposed rules relating to the acquisition of renewable resources by investor-owned electric utilities.

Summary

Energy Northwest is proposing that the Commission's Statement of Issues include an item clarifying the definition of "distributed generation" under RCW § 19.285.030(9) as it relates to solar photovoltaic ("PV") electricity generation facilities.

Statement of Issue

a) Description of Problem: Washington utilities are able to count renewable energy generated from "distributed generation" at two times the facility's electrical output under RCW § 19.285.040(2)(b). "Distributed generation" is defined under RCW § 19.285.030(9) as "an eligible renewable resource where the generation facility or any integrated cluster of such facilities has a generating capacity of not more than five megawatts."

Because "generating capacity" is not clearly defined in the current definition of "distributed generation," there is some uncertainty about how the State Auditor will determine the maximum size that would qualify as "distributed generation" for a solar PV electric generating project. Solar PV modules have a direct current ("DC") nameplate capacity rating. However, the DC electric output of a solar PV facility must be converted to alternating current ("AC") electricity through an inverter. This conversion creates lost efficiency. This makes the AC output of a solar PV facility less than the DC nameplate capacity. Energy from solar PV projects is metered after conversion through the inverter (i.e., the AC side) for purposes of determining revenue and renewable energy credits. Therefore, the project's generating capacity is the AC nameplate rating.

Uncertainty about the interpretation of the definition of "distributed generation" as applied to solar PV projects has raised questions about the proper sizing of such projects to qualify for RCW § 19.285.040(2)(b). Clarifying how "generating capacity" is measured would help utility compliance and encourage development of distributed solar PV projects. Without clarification of this definition, concerns about exceeding the five-megawatt limit may cause solar PV projects to be built at less than optimal sizes, thereby making the output from this eligible renewable more expensive because of an inability to take advantage of operational efficiencies and economies of scale.

b) Description of Possible Solution: The solution is to clarify how "generating capacity" is measured for solar PV projects. The preferred approach is to measure the capacity of solar PV systems on the AC side based on the solar facility's inverter. This clarification better defines the usable electrical output from a solar facility. This approach is consistent with Oregon's recently adopted rule:

> OAR 860-084-0040
> **Measurement of Capacity under the Solar Photovoltaic Capacity Standard**
> (1) The capacity of solar photovoltaic energy systems used to satisfy the requirements of OAR 860-084-0020 must be measured on the alternating current side of the system's inverter.
>
> (2) Each electric company must convert nameplate capacity rating reported by manufacturers in terms of direct current watts under standard test conditions to an alternating current rating in watts to account for inverter and other system component losses and to account for the effect of normal operating temperature on solar module

output. This conversion is calculated as 85 percent of the manufacturer's nameplate rating.

Energy Northwest would propose the following or similar language be added to RCW § 19.285.030(9).

> "As used in this definition, the 'generating capacity' of solar photovoltaic energy systems must be measured on the alternating current side of the system's inverter and may be based upon either (1) the manufacturer's actual output limits for such inverter or (2) a conversion factor of 85 percent applied to the manufacturer's nameplate rating in direct current watts under standard test conditions."

c) Summary of Associated Issues: By clarifying the definition of "distributed generation" and "generating capacity" as outlined above, utilities will be better able to ensure compliance with statutory requirements and solar PV facilities can be built to maximize project economics under RCW § 19.285.040(2)(b), leading to lower renewable energy costs to consumers.

Energy Northwest appreciates the opportunity to participate in this proceeding.

Very truly yours,

Stephen C. Hall

SCH:jlf/pds