

From: [Willard Westre](#)
To: [UTC DL Records Center](#)
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Attachments: [Wind Testimony on PSE 2017 IRP.docx](#)

Attached are my comments to be made at the February 21, 2018 Hearing in Renton WA.

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DRAFT -Testimony on PSE 2017 IRP

In this IRP PSE has made notable progress in reducing future GHG emissions and increasing future use of renewable energy resources. A notable exception to this has been its analysis of the Montana wind resource. After the 2015 IRP the UTC required PSE to revisit the potential of Montana wind to . PSE has attempted this, but has failed to use accurate data and reasonable assumptions in its analysis leading to an erroneous conclusion that MT wind is not a significant factor.

The most prominent error is in the capital cost data reported in Appendix D Figure D-20 Generic Renewable Resource Cost Assumptions and used in the analysis. Capital cost for Washington wind is listed at 1936 \$/kw and MT wind at 3950 \$/kw. Footnote 6 explains that MT wind cost includes \$52 million of transportation line improvements required for access. Accounting for this reduces the MT capital cost without transmission to 3777 \$/kw. This cost is inconsistent with data found in the National Renewable Energy Laboratory (NREL) report titled 2015 Cost of Wind Energy Review which summarizes actual cost for US wind projects. It reports wind capital cost for installation in the plains region including Montana is 5-10% less than west coast installations. Secondly, it shows that PSE's MT capital cost estimate is higher than the actual cost of any other land-based wind project in the US. Thirdly, it shows that high capacity sites, such as Montana sites, have significantly lower capital costs on a \$/kw basis than sites with lower capacity sites such as PSE's existing WA sites.

NREL Report on future wind costs