AMERICAN WIND ENERGY ASSOCIATION
INTERWEST ENERGY ALLIANCE
WEST WIND WIRES

April 13, 2007

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The American Wind Energy Association (www.awea.org), the Interwest Energy Alliance (www.interwestenergy.org), and West Wind Wires (a regional wind transmission advocacy group), (the "clean energy parties") file these comments at the request of Westconnect on the April 2, 2007 Request for Information titled "Analysis of Feasibility, Costs, and Benefits of Contingency Reserve and Regulation Sharing Enhancements Among the Westconnect Parties."[1]

The clean energy parties believe that the RFI presents a useful effort. We support the project but suggest some modifications in these comments, specifically to gain access to generators' intra-hour maneuverability.

Wind energy brings many benefits including providing a readily available resource to comply with Renewable Portfolio Standards and upcoming carbon regulations. Consumers can benefit from more wind on regional utility systems, as wind replaces price volatile and higher cost generating fuel. We believe that any reserve sharing or balancing area coordination scheme should be designed so consumers benefit and reliability is maintained or increased. It is the policy of states in the Westconnect footprint to develop additional renewable energy resources for their benefits to the public and the environment. With reliability, public policy, and consumer benefits in mind, could the study be framed to investigate "maximizing benefits" of wind generation instead of "mitigating impacts?"

Contingency Reserve Sharing

The study focus on contingency reserve sharing is a good idea, but that is not of primary interest to wind and should not be framed as the primary interest of utilities who are interested in adding wind into their systems. Wind does not typically have a significant impact on contingency reserve requirements unless utilities might be considering a very large wind plant connected through a single radial line or a double circuit line on a single tower.

The existing reserve sharing pools will already provide a lot of the potential for contingency reserve benefits. In addition to study of periods when increased

[1] Notice of the RFI is at:
http://www.westconnect.com/filestorage/VirtualControlAreaStudyRFIStudyScope040207.pdf

operating reserve allocations impact generation scheduling[2] the study should also look carefully at periods of decreased operating reserve allocation because, if these can be forecast sufficiently far in advance (no more than 24 hours), decreased requirements may impact unit commitment decisions and save significant money.

Sharing Regulation

Regulation is moderately important to wind. ACE diversity and sharing ACE across diverse utility systems should provide substantial benefits from reducing regulation requirements. The study approach, to address current standards requirements and to only address new standards requirements if and when they are established, is reasonable. All the potential standards changes we are aware of may reduce regulation requirements but will not otherwise change underlying relationships. ACE diversity will still exist and regulation sharing will still benefit balancing areas by further reducing regulation requirements.

The study should also focus on intra-hour impacts. These are economically more important for wind. The study should determine potential economic benefits of having access to voluntary intra-hour controllability of all generators (utility owned and IPP) and determine coordinated ability to share intra-hour diversity among balancing authorities. This will likely be a larger economic benefit than regulation sharing (with or without wind). Both the balancing authorities and generators can benefit economically by adjusting generator output within the hour.

Gas Nominations and Forecasting

The study should include a specific task examining impacts of gas nominations and potentials to reduce gas nomination costs through aggregation and inter-balancing authority coordination. Benefits of improved wind forecasting and wind forecasting of regional output (as opposed to exclusively project output) should be included in this assessment.

Once potential economic benefits are estimated, mechanisms to achieve benefits can be proposed. It is possible that a limited number of dynamic schedules could capture much of the potential benefit. These tasks should be added to the list of deliverables (RFI page 9) as new items between items 2 and 3.

Transmission requirements may be difficult with the diverse locations of some participants such as SMUD. The project structure, to look at avoiding use of firm

[2] The RFI states: "For example, a reduction in a party's allocation of Contingency Reserves in real-time will be simple to accommodate operationally, but changes that would increase a party's allocation must be incorporated into generation operational plans, including potential unit commitment decisions. This study will evaluate the periods during which increased allocations would be issued."

24/7 transmission and instead sharing reserves when transmission is available, is very good.

The study should also look at impacts of forecasting accuracy on ability to schedule transmission use. It should be made clear that the objective "First, that each party achieves a reduction in costs or other acceptable commercial benefit due to allocation changes" includes the possibility that a balancing authority with an abundance of responsive resources is able to take on a greater share of response obligations and be paid for those efforts.

Data requirements

Studying regulation will require obtaining 1 minute data for balancing authority load and generation, interchange schedules, actual interchanges, frequency, and area control error. We would like assurance from Westconnect that partner utilities will make their wind and system operating data available for the study. Past experience with such data indicates that automatic data recording systems can sometimes store data in ways that compromise accuracy on these short time scales. Care should be taken to ensure data quality and comprehensive screening should be done to obtain accurate results.

Exhibit C, Study Guidelines

The study guidelines should also include instructions to look at combining CPS performance. This should be relatively easy to do within the scope of the study as presented and these results will help quantify potential economic benefits for all balancing authorities.

In addition, the study should include determination of what types of generation are needed for the future. It is likely that systems with a lot of wind would benefit from conventional generation that can start and stop cheaply and that has ramping capability that is economically efficient. Even if this generation costs more to install, and maybe even if it has a less favorable heat rate, it may still be a better choice. The study should determine what characteristics are of value and should quantify that value.

Finally, we would like to have all the names and contact information for work group members.

We intend to participate in the April 18 Westconnect meeting to be held in Denver, starting at 8:30 AM at PSCo, 550 15th Street. We hope that the meeting agenda will include more detailed discussion of the “VCA” project and these comments.

Sincerely,

Ronald L. Lehr
AWEA Western Representative
For the clean energy parties