



N A R U C
National Association of Regulatory Utility Commissioners

NARUC Comments

at

**Interconnection for Wind Energy and Other Alternative Technologies
Technical Conference**

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NARUC appreciates the opportunity to provide comments at this conference. We have had a long –time interest in all of the direct and indirect issues discussed here.

NARUC and the States have three main areas of concern: that the reliability of the transmission system be preserved, that a large selection of renewable resources be available to interconnect to the electric system at a reasonable cost, and that the interconnection agreements for small projects be consistent with the best practices already established and in use in several states: Texas, California, Idaho, Ohio, and New York.

On the local and sub-transmission systems, the level of reliability provided to customers is directly related to the cost to provide that level of reliability. If the probability of an outage or disturbance is low enough under normal operations and the cost to avoid the problem is significant, often States have found this to be an acceptable risk to customers. This is the portion of the system where most wind generation is interconnected today. However, the AWEA proposal is targeting interconnection rules for wind farms 50 MW and above. We are increasingly seeing wind farm interconnection requests for 200 to 300 MW and more. This moves the interconnection point of these large facilities up to the bulk transmission system.

The bulk transmission system operates – out of necessity – on a much more strict set of reliability rules. A major outage on the bulk system cannot be allowed to trigger the outage of any additional members of the system. Consequently, reliability of the bulk transmission system is an absolute in the sense that we can only tolerate one element

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going down, but the system's redundancy will allow the remainder of the system to continue to function. To do otherwise, is to tempt blackout situations. NARUC has demonstrated their support for bulk system reliability by joining NERC and FERC in the call for legislation that mandates adherence to NERC reliability criteria, which applies to the bulk system.

That said, NARUC has repeatedly endorsed the development and interconnection of renewable resources such as wind. Renewables are good for the environment. Renewables are good for fuel diversity. Fourteen States have established some level of renewable portfolio requirements. New York has set a target of having 25% of their load served by renewable resources. California is calling for a 30% target. These requirements are ambitious, a challenge for system integrity and an opportunity for developers of renewable resources. Ambitious in that these portfolio requirements call for development of new technologies, techniques and rules to accommodate these facilities. A challenge in that there may be system limits as to how much wind energy (for example) can penetrate at any one time given current system control technology. An opportunity for developers...well, that is obvious.

We must start from the premise that new additions to the transmission system must not compromise the existing level of reliability. Developers should understand that reliability rules apply equally to all generation resources regardless of the impact on the economic feasibility of the generation project. On the other hand, system planners and operators need to acknowledge that most existing reliability criteria have been drafted from the perspective of a system containing similarly designed machines. When the new wind and other technology projects propose to interconnect on the transmission system, the appropriate criteria should be whether at the point of interconnection the same level of reliability is being provided as would be required from a traditional plant, regardless of what is taking place inside the developers fence. Having said that, we believe that if a wind resource generation developer can demonstrate the ability to satisfy equivalent reliability criteria, we should give them that opportunity.

Even though the AWEA's filing proposes standards to be applied to 50 MW plants and above, FERC has set this conference to examine the interconnection requirements for all wind and new technologies. Note that interconnection of smaller projects are handled routinely and require some customization depending on the design of the local sub-transmission and distribution systems. The NARUC Model Interconnection Procedures and Agreement for Small Distributed Generation Resources was designed to encompass these types of installations based on the best practices currently in use in several States.

This concludes our remarks. Thank you.