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FERC Proposes to Require Wind Generators to Supply Reactive Power, Seeks Comment on Compensation Methods

Nov 23, 2015

Reading Time : **3 min**

In Order No. 661 (issued in 2005), FERC exempted wind plants from this obligation,[1] finding that unlike traditional generators, wind generators must install additional costly equipment to provide reactive power capability. FERC concluded that this additional cost would unduly burden wind generation and present an obstacle to its growth.

Earlier this year, however, FERC allowed PJM Interconnection, L.L.C., to revise its tariff (under the "independent entity variation" standard) to require wind generators interconnecting to its system to have the capability to provide reactive power. FERC found that PJM's proposal would not present a barrier to the development of wind generation, given improvements in wind power technology and the declining cost of providing reactive power capability.

FERC relies on similar reasoning in its November 19, 2015, proposal, preliminarily concluding that advances in wind turbine technology have lowered the costs to wind plants to provide reactive power capability, and that as a result, requiring such capability is not the obstacle to wind power development that it was when Order No. 661 was adopted. Given such cost declines, FERC posits that continuing to exempt wind generators from the requirement to provide reactive power unduly discriminates against other types of generation that must shoulder the burden of supplying reactive power. In addition, FERC expresses concern that as wind power becomes a larger part of the generation mix and other types of generation supplying reactive power retire, exempting wind plants from the obligation to provide reactive power capability could cause reliability issues, especially in local areas with high wind penetrations.

Under the proposal, all newly constructed wind generators interconnecting to the transmission grid under the jurisdiction of FERC (including any wind plants that have an unexecuted interconnection agreement pending at FERC at the time the requirement takes effect) would be required to have the capability to provide reactive power service when their real power output exceeds 10 percent of nameplate capacity. FERC also proposes to require existing wind generators to possess such capability if they undertake upgrades that require a new interconnection agreement.

How wind generators are compensated for providing reactive power could be a significant issue in this proceeding. FERC notes that under its proposal wind generators would be eligible to be paid for providing reactive power capability just like other generators, based on the cost of providing such capability. FERC acknowledges, however, that "the cost to a wind generator of providing reactive power may not be easily estimated using existing methods that are applied to [other] generators." While compensation is not explicitly part of FERC's proposal here, the agency is seeking comment on whether existing methods for determining reactive power compensation are appropriate for wind plants, and if not, whether alternative methods should be used.

Compensation for reactive power service has been on FERC's radar for some time. Last year, FERC staff released a report reviewing existing and alternative approaches to reactive power compensation, and held a workshop exploring these and related issues. The record developed there may be relied on by FERC if it ultimately decides to address compensation in this rulemaking proceeding.

Other issues that may garner significant comment include FERC's proposal to apply reactive power requirements to existing wind generators undertaking upgrades that require a new interconnection agreement, and its proposal to require wind plants to provide reactive power when operating above 10 percent of their nameplate capacity. These proposals differ in some respects from the PJM tariff revisions approved earlier this year. Specifically, PJM's reactive power requirements do not apply to any wind plant uprates, and only require wind plants to provide reactive power when operating above 25 percent of their nameplate capacity.

Comments on FERC's proposal are due 60 days after publication in the *Federal Register*.

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[1] Order No. 661 allows a transmission provider to require a wind plant to provide reactive power capability only if it shows, in a system impact study, that such capability is necessary to

ensure safety or reliability.

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