

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Assessing the State of Wind Energy
In Wholesale Electricity Markets

Docket No. AD04-13-000

COMMENTS OF BASIN ELECTRIC POWER COOPERATIVE

SUMMARY:

- 1. New transmission services must not degrade reliability, must be non-discriminatory, and must be compatible with existing services without creating subsidies for new users.**
- 2. The current accuracy of "Next Hour" forecasting needs dramatic improvement before major amounts of wind generation can be integrated into the system.**
- 3. Adequate transmission infrastructure is the common denominator that enables integration of new resources, transportation for electric energy supply, and interconnection-wide reliability. The new open-access world demands a change in transmission pricing policy. A single system-wide average rate for all usage of the high-voltage transmission grid should be implemented throughout the common interconnection. Such pricing policy would encourage development of needed transmission infrastructure consistent with low-risk cost recovery.**

COMMENTS:

Over the past several years, Basin Electric Power Cooperative has taken a very active role in development of renewable energy in our region. We currently have approximately 87 MW of wind generation resources, or about three percent of our supply obligation. Many of our rural electric consumer-owners see wind generation as a source of rural economic development, jobs and increased tax base. We agree.

Basin Electric is a supplemental wholesale power supplier to rural electric cooperatives in nine states stretching north/south from Canada to Mexico and east/west from Idaho to Iowa. The vast wind resources in this region present tremendous opportunities, as well as significant challenges.

At the direction of our rural electric cooperative members, we have already committed well over \$150 Million of our member's money to wind projects and wind power purchase agreements extending over the next 25 years.

We face challenges in our efforts to develop our excellent wind resource. We need to do it in a prudent and economical manner and be able to integrate those resources without negatively affecting reliability. We do not take lightly, our mission to provide reliable power supply to our members at the lowest reasonable cost.

It is with those challenges in mind that we offer the following comments regarding the subject of transmission:

It needs to be recognized that the existing transmission tariffs were developed in response to FERC directives, emphasizing reliability and non-discriminatory access to the transmission system. As a non-jurisdictional RUS borrower, Basin Electric has voluntarily complied with those directives.

We understand that some potential transmission customers desire a new category of transmission service. A service that would provide an interruption priority below that of Firm service, but above that currently available for Non-firm service. We do not have the specific details of this proposal, but would be willing to give serious consideration to supporting such a modification to the tariff, providing those changes follow basic principles:

- The new service would need to be non-discriminatory.
- The reliability of the transmission grid must not be placed at risk.
- The price for a superior service should correlate to the value of that service.
- Network and Point-to-point Firm service must not be degraded. Interruption risk must not be involuntarily transferred to other firm customers. And,
- Beneficiaries of the new service must not be subsidized by existing transmission customers.

Another challenge that lies ahead is hourly imbalance and intra-hour regulation. Generation must be in balance with load at all times. Based on the last nine months of data from two 40 MW wind projects in the Dakotas, we have found that forecasting generation from wind projects still needs much development. The accuracy of "Next Hour" forecasting is poor and significant improvement must occur before wind generation can provide a large portion of power supply. Even with the expected diversity of a 140 mile separation between these two projects, our experience is that about one-third of the time the "next hour" generation forecast error is greater than 50%. As wind energy production share grows, scheduling errors of this magnitude can begin to impact grid reliability. Also a number of studies indicate that the cost impact of intermittent generation is expected to increase as production share increases. Perhaps just as important to tariff development is the fact that each system is unique in its ability to absorb intermittent generation and the associated costs of regulation and imbalance vary dramatically.

These technical issues can be resolved. However, it is important that any tariff changes should not penalize existing customers to advantage intermittent resources.

That said, we believe the extensive debate on tariffs and ongoing numerous and voluminous studies constitute little more than "rearranging the deck chairs on the Titanic".

Quite simply, what is needed is more wire in the air. The nation is critically short of transmission infrastructure. The blunt reality of recent history is that the system is being operated at ever increasing stress levels and more than band-aids will be needed to maintain reliability and to allow the potential of wind energy to be harvested. Our continuing march to greater loading of the transmission system without improving the nation's electricity transportation infrastructure is a recipe for disaster. We will literally sow the wind and reap the whirlwind.

Estimates relating to the economic impact of last year's Northeast blackout suggest the cost of that outage exceeded \$10 Billion. To provide perspective on that number, \$10 Billion could construct 20,000 miles of high voltage transmission lines – enough to crisscross the nation more than six times. Such an investment in our nation's critical transmission infrastructure would provide tremendous benefits in increased energy security and economic dispatch. At the same time, such an investment would allow development of the best wind energy resources where those resources are most economical and beneficial to our nation.

I would like to conclude by re-stating the long time position of Basin Electric that the best way to ensure the needed transmission infrastructure is to establish system-wide average pricing for the high-voltage transmission network that enables the interstate transportation of

economic electric power. No other pricing mechanism has yet provided the kind of investments needed to bring our transmission system into the future. Such a pricing mechanism would:

- Aid wind energy and all forms of generation,
- Provide a mechanism for moving forward more quickly on the needed upgrades, and;
- Eliminate “pancaking” of wheeling charges to allow now-remote wind generation to reach the distant markets.

Adequate transmission infrastructure is the common denominator that enables integration of new resources, transportation for electric energy supply, and interconnection-wide reliability. The new open-access world demands a change in transmission pricing policy. A single system-wide average rate for all usage of the high-voltage transmission grid should be implemented throughout the common interconnection. This pricing policy would encourage development of needed transmission infrastructure consistent with low-risk cost recovery and allow this nation to move forward efficiently in electric energy supply development.