Plainsandeastern

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Sent: Tuesday, July 07, 2015 5:51 PM
To: Plainsandeastern
Subject: Plains and Eastern Clean Line Comment
Attachments: Plains and Eastern Clean Line Comment.docx

Comment attached.

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July 7, 2015

Office of Electricity Delivery and Energy Reliability
1222 Program
U.S. Department of Energy
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I. General Comments

Lack of transmission infrastructure remains as one of the largest impediments to continued wind energy development, especially in Midwestern and Great Plains states. The nation's electric grid was not designed to penetrate sparsely populated areas in these states, locations that now present some of the best opportunities for future wind development.

Many of these states still lack sufficient transmission capabilities to deliver energy to larger population centers where demand is much higher. Investing in a robust, updated electric transmission grid is an essential component of pursuing increased renewable energy development and increasing its place in the market, providing the necessary connections between generators and consumers that is currently lacking.

II. Renewable Energy and Transmission

Potential new wind energy development fails to occur when the necessary transmission is unavailable. According to the Department of Energy's *Wind Vision* report, effectively integrating wind energy into the resource mix of utilities will require that sufficient transmission is built out to meet the needs of new or potential renewable energy generation. In fact, lack of transmission has already led to development delays as several proposals have been trapped in the transmission access queue. [1] [2]

In the American Wind Energy Association's *Wind Industry Fourth Quarter 2014 Market Report*, it is noted that there is currently 65,879 megawatts (MW) of installed wind energy capacity across 39 states and Puerto Rico. Additionally, there is currently over 12,700 MW of new wind energy generation under construction, with wind energy accounting for 31 percent of all new electricity generation installed over the last five years. [3]

With wind energy continuing to play a vital role in the United States energy mix, it is essential that electric transmission infrastructure keep pace with renewable development. Because

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[1] U.S. Department of Energy (April 2015). *Wind Vision: A New Era for Wind Power in the United States*. Retrieved from http://www.energy.gov/sites/prod/files/WindVision_Report_final.pdf

[2] Kemp, J. (2013, January 7). COLUMN-Great Plains wind farms limited by grid links: Kemp. *Reuters*. Retrieved from http://www.reuters.com/article/2013/01/07/column-kemp-us-windpower-idUSL5E9C76J220130107

[3] American Wind Energy Association, Solar Energy Industries Association (February 2015). *A Handbook for States: Incorporating Renewable Energy into State Compliance Plans for EPA's Clean Power Plan*. Retrieved from http://www.seia.org/sites/default/files/Handbook%20for%20States%20final_0.pdf

transmission often takes longer to site and construct—between 5 and 15 years in many cases—than renewable energy generation facilities, planning of new transmission must try to forecast the future needs of the electric grid.

Another factor that must be considered is the implementation of the Environmental Protection Agency's Clean Power Plan (CPP). That plan would require that utilities and power providers seek out new energy generation to replace carbon-intensive sources, with the overall goal of reducing carbon emissions.

CPP compliance will require that renewable energy resources are not only available, but that renewable energy resources have access to reliable grid connections, allowing states to make use of these resources as they transition away from fossil fuel generation. If states and utilities are to meet the goal of reducing carbon emissions and moving to cleaner renewable energy, there must be an electric transmission grid in place that makes renewable energy readily available to meet our energy needs.

III. Recommendations

The Department of Energy should consider that the future may require even greater flexibility in energy choices, which will necessitate an electric grid that can meet the needs of new renewable energy development. As outlined in the Department's *Wind Vision* report, the inclusion of more wind energy over a wide geographic area will require that grid operators have access to a robust and flexible electric grid to limit the need for curtailment and integrate new renewable energy in a cost-effective manner.

Agencies must weigh the costs and benefits of new transmission projects like the Plains and Eastern line, and consider how such projects could be used to meet future energy needs and meet policy goals like state Renewable Portfolio Standards and the EPA Clean Power Plan. Unlocking the vast wind resources of the Great Plains will require innovative approaches that can help to connect renewable energy to the larger grid where it can be put to use.

The Department has the opportunity to identify ways to improve transmission siting and development while working to connect those wind resources to the grid. As DOE considers applying Section 1222 for the first time, it should seek out alternatives to the traditional ways of assembling transmission corridors and the use of eminent domain. Improving the interaction between communities and developers, providing better compensation, and giving more power to stakeholders and expanding their role in the development process are essential pieces that should be considered going forward.

New technologies and improved transmission, combined with improved forecasting and regional energy marketplaces, make it possible for additional wind energy to be placed on the electric grid and used to achieve the desired policy outcomes and provide affordable electricity to consumers across the nation.

Respectfully submitted,

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