

# *Transmission Update*

April / May 2006

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## Summary

- ✓ Welcome to the Eighth NWCC Transmission Update! Kevin Porter of Exeter Associates, Inc., led the April 24, 2006, Transmission Update conference call. As always, this written brief is being distributed after the call to conference call participants, other NWCC members and participants, and to interested NWCC observers.
- ✓ This update is on the U.S. Department of Energy work to identify transmission corridors under Section 1221 of the Energy Policy Act of 2005 (EPAct), to coordinate federal permits for applications for transmission on federal lands and to identify energy corridors for pipelines and transmission lines on federal lands under Section 368 of EPAct.
- ✓ Specific topics covered in this brief include:
  - Assessment of transmission congestion
  - Designation of national interest electric transmission corridors
  - Designation of energy corridors on federal lands
  - Coordination of federal agency processing of permits for proposed transmission lines that cross federal lands
- ✓ Larry Mansueti from the DOE Office of Electricity Delivery and Energy Reliability explained DOE's activities under Sections 1221 and 368 of EPAct, when and how the activities will be completed, and where DOE currently is in these processes.
- ✓ The next Transmission Update call will be Tuesday, June 13, 2006, at 1 pm Eastern Time. Please mark your calendars!

## **EPAct Section 1221: Transmission Congestion Study & Designation of National Interest Electric Transmission Corridors**

**Congestion Study** DOE is required under Section 1221(a) to complete a study on transmission congestion in the United States by August 8, 2006, and again every three years thereafter. The congestion study is already well underway and is being done in consultation with the states and other interested parties. The Eastern and Western Interconnections are being studied, as well as the interconnection ties with Canada. ERCOT is exempt and Mexico is not included because there are few interconnections.

For the East, existing studies from PJM, MISO, ISO New England and various utilities are being used, supplemented by modeling from Charles River Associates. Scenarios for 2008 and 2011 were compiled and were further segmented by low, base and high natural gas and oil prices. Projected wind capacity from the Midwest, as identified by NREL and Wind on the Wires, was inputted into the scenarios. Load data was not available to project beyond 2011.

For the West, DOE funded the Western Interstate Energy Board (WIEB), who in turn worked with the Committee on Regional Electric Power Cooperation (CREPC), the Seams Steering Group–Western Interconnection (SSG-WI), and the Western Electricity Coordinating Council (WECC), with input from the Western Governors’ Clean and Diversified Energy Advisory Committee (CDEAC). Charles River Associates also provided technical and modeling assistance. Input for the analysis was drawn from over 50 transmission studies and reports that have been performed in the West. Scenarios for 2008 and 2015 were drawn up, with five cases: reference, high energy efficiency, high renewable energy, high clean coal, and low hydro. The Western Congestion Assessment Task Force study was completed in spring 2006 and is available on the Western Electricity Coordinating Committee’s website.

### **National Interest Electric Transmission Corridors**

The modeling results for both the East and West are being analyzed and the project is on track to meet the August 8<sup>th</sup> deadline. Metrics will be used to quantitatively define and rank transmission-constrained areas. DOE will nominate and seek public comment on the areas it designates as transmission-constrained before formally nominating areas as transmission corridors. DOE has no preference for how transmission constraints are solved; solutions may be non-wire strategies such as energy efficiency or distributed generation. If a transmission project is proposed in a designated corridor and the state siting authority does not act within one year, then the project applicant may petition FERC to review the proposed transmission project. Overall, DOE hopes this process will enable efficient state siting processes and highlight problem areas that need to be addressed.

There is no required timetable for designating the transmission corridors. EPAct Section 1221 gives some general criteria for consideration in identifying corridors including:

- Diversification of energy supplies
- U.S. energy independence

- National defense and homeland security
- Support of national energy policy
- Regional economic vitality
- Economic growth limitations induced by energy restrictions

These broad needs were used to create eight draft criteria, each with a quantitative measure, to outline corridors. A corridor does not have to satisfy all eight criteria, and DOE indicated it would not rush on designating the corridors, as it wants its decisions to be supported by significant analysis. The draft criteria are:

- 1) Action is needed to maintain high reliability.
- 2) Action is needed to achieve economic benefits for consumers.
- 3) Actions are needed to ease electricity supply limitations in end markets served by a corridor, and to diversify resources.
- 4) Targeted actions in the area would enhance the energy independence of the United States.
- 5) Targeted actions in the area would support national energy policy.
- 6) Targeted actions in the area are needed to enhance the reliability of electricity supplies to critical loads and facilities and reduce vulnerability of such critical loads or the electricity infrastructure to natural disasters or malicious acts.
- 7) The area's projected need (or needs) is not unduly contingent on uncertainties associated with analytic assumptions, e.g. assumptions about future prices for generation fuels, demand growth in load centers, the location of new generation facilities, or the cost of new generation technologies.
- 8) The alternative means of mitigating the need in question have been addressed sufficiently.

How large the corridors will be also has yet to be established, and DOE said this could be the toughest issue, as the law provides no guidance. Mr. Mansueti mentioned that PJM wants two proposed transmission lines proposed by American Electric Power and Allegheny Power as transmission corridors. Collectively, every Mid-Atlantic state would be in a transmission corridor if DOE followed PJM's request. The American Wind and Energy Association (AWEA) submitted testimony and a map to DOE that included AWEA's recommendations for transmission corridors.

Call participants suggested that subsequent congestion studies use a top down approach, where goals are established and then analyze how transmission could be built to meet those goals. Mr. Mansueti said the August deadline prevented a top down approach, but future studies could incorporate such an approach.

DOE noted that the congestion study is a data-intensive activity, and data is not available in some parts of the country. DOE plans to organize a technical conference on regional planning sometime this summer or fall. Mr. Mansueti particularly wants regional state committees (RSCs) to become more involved, and he noted that RSCs are active in PJM, MISO and the Southwest Power Pool (SPP). A RSC has not yet been formed in New England. DOE was asked how many RSCs are actively involved in determining transmission corridors, and Mr. Mansueti said some are and some are not. Mr. Mansueti hoped that the involvement of RSCs could help with transmission cost allocation questions, as EPAct offers no guidance on that issue. Some call

participants noted the unhappiness the wind industry has with MISO's proposal to use participant funding for some of the costs of proposed transmission projects and concluded that barriers to wind may not be removed just because a RSC is involved. Mr. Mansueti suggested that RSCs are experiments, but he hoped that RSCs would help with regional siting protocols. He pointed to the Organization of MISO States' regional siting protocols as an example.

Section 1221(h) of EPAct requires DOE to coordinate federal permitting of transmission projects on federal lands with other federal agencies, such as the Bureau of Land Management, the Forestry Service, the Fish and Wildlife Service, and others. DOE is working on a memorandum of understanding with federal agencies, and published procedures will be available in the next few months. Mr. Mansueti said this is also an experiment that has not been tested yet. Whatever activity takes place will most likely occur in the West, since a significant amount of federal lands is located in that region.

## **EPAct Section 368: Energy Corridors on Federal Lands**

### **Identification of Corridors & Streamlining of Processes**

Section 368 requires the Secretaries of Energy, Agriculture, Interior, Commerce, and Defense to designate energy corridors for pipelines (gas, oil, and hydrogen) and transmission lines on federal lands. Such energy corridors must be designated by August 2007 in the West and August 2009 for the East, Alaska and Hawaii. The federal agencies are exchanging maps, and the agencies are working together to come up with a single map. The maps developed so far are in line with modeling from the Western Congestion Task Force. A draft programmatic environmental impact statement (EIS), modeled after the BLM EIS for wind, was conducted and released on June 9<sup>th</sup> for public comment.

For both this activity and the 1221 activities, who pays for transmission lines remains a question. Cost allocation is outside the scope of the tasks, although commenting on cost allocation is not prohibited. A broader discussion on transmission cost allocation ensued. Some callers pointed out that FERC does not organize joint boards of state and federal regulators, but the FCC does use joint boards to allocate costs. One caller responded that in the case of the FCC, the costs were already incurred, whereas with transmission, electric utilities have not incurred the costs yet or decided how to allocate them. Mr. Mansueti noted that EPAct requires a joint board of FERC and state regulators to conduct an economic dispatch study.

Sections 1221(a) and (h) and Section 368 of EPAct reflect the desire of Congress to remove some of the obstacles towards new transmission infrastructure and gives DOE new, if somewhat limited, regulatory authority in electricity. Section 1221(a) reflects a compromise between those that wanted to transfer transmission siting authority to FERC and those that wanted to maintain it at the state level. DOE will need to balance several factors in implementing Section 1221(a), most particularly how broad geographically a transmission corridor can be. In addition, EPAct

provides no guidance on the nettlesome issue of cost recovery for transmission expansion, and this will continue to be an issue for state regulators and FERC to wrestle with.

**For more  
Information**

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DOE Office of Electricity Delivery and Energy Reliability website,  
<http://www.oe.energy.gov/index.htm>

Western Congestion Assessment Task Force Study,  
<http://www.wecc.biz/modules.php?op=modload&name=Downloads&file=index&req=viewsdownload&sid=178>.

American Wind Energy Association's Filing to the U.S. Department of Energy on National Interest Electric Transmission Corridors, March 2006,  
[http://www.awea.org/policy/regulatory\\_policy/transmissionexpansion.html](http://www.awea.org/policy/regulatory_policy/transmissionexpansion.html).

PowerPoint Presentations and archived webcast of DOE's March 29, 2006, Technical Conference on National Interest Electric Transmission Corridors can be found at <http://www.energetics.com/1221technicalconference/>.

Energy Corridors in the Western Federal Lands  
<http://corridoreis.anl.gov/>

**Next Update: June 13, 2006**

**The next NWCC Transmission Update will be held on Tuesday, June 13, at 1 pm Eastern Time.**

*Please email Kevin Porter ([porter@exeterassociates.com](mailto:porter@exeterassociates.com)) with any suggestions for topics on how to improve the call.*