

TRANSMISSION MEMO

AUTHOR: JOSÉ A. ROTGER

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INTERCONNECTION-WIDE PLANNING IN THE EAST Broad Collaborative Takes Shape and Requests Federal Funding

A hot topic under discussion in Congress is whether to further increase the Federal government's role over transmission planning by instituting "interconnection-wide" planning processes under FERC jurisdiction. Several energy bills before Congress include provisions to establish FERC as overseer of a coordinated multi-state / multi-regional planning effort primarily to advance a national renewable-enabling transmission "interstate highway" network. ESAI's May 2009 *Transmission Watch* examined growing efforts to further Federalize transmission planning, siting and cost allocation.

At the center of the Federal planning debate is whether FERC's multi-regional planning authority should require a "top-down" or "bottom-up" approach. A top-down approach refers to FERC overseeing the creation of a new transmission plan for multiple regions (or for entire interconnections); while a bottom-up approach refers to the integration of existing regional transmission plans into a single coordinated multi-regional (or interconnection-wide) plan. This choice in planning approaches might seem innocuous, but the existing regionalized (some might say "balkanized") nature of the power system suggests otherwise.

Several deep-pocketed interests (including utilities such as AEP and many wind developers) are strongly advocating Congress to adopt a top-down approach, with FERC mandating some type of west to east national interstate transmission highway. On the other side are most eastern RTOs and utilities, which are skeptical of Midwestern-led planning efforts that may lead to funding by the Eastern Seaboard of cross-country renewable transmission highways. Eastern interests also seek to develop their local renewable energy resources, both on land and offshore, and believe that a bottom-up approach to multi-regional planning will better incorporate these economic development objectives.

Earlier this year it was clear that the massive west-to-east transmission buildout envisioned in the recent Midwest-led (and DOE-funded) Joint Coordinated System Plan (JCSP) was gaining traction in the debate over renewable-enabling transmission in Washington. (ESAI summarized and discussed the JCSP in our February 2009 *Transmission Watch*.) The JCSP and draft legislation before Congress served as a call to action for Eastern RTOs and utilities, and discussions regarding an Eastern Interconnection-wide planning effort began in April 2009. These discussions were accelerated and reshaped after DOE's June 15, 2009 Funding Opportunity Announcement (FOA) of up to \$80 million in Federal stimulus funds to prepare analyses of transmission requirements under a broad range of alternative futures and develop long-term interconnection-wide transmission expansion plans for each of the three interconnections serving the lower 48 U.S. states.

A Framework for Wide-Area Planning for the Eastern Interconnection

On September 14, 2009 a consortium of Eastern Interconnection grid operators and utilities submitted a response to the DOE FOA with a proposal for the preparation of an interconnection-wide blueprint for transmission expansion to enable renewable energy resources and smart-grid deployment in the next decade. Comprising of 23 planning authorities serving roughly 95% peak load in the Eastern Interconnection (see Table 1), the Eastern Interconnection Planning Collaborative (EIPC) seeks to respond to

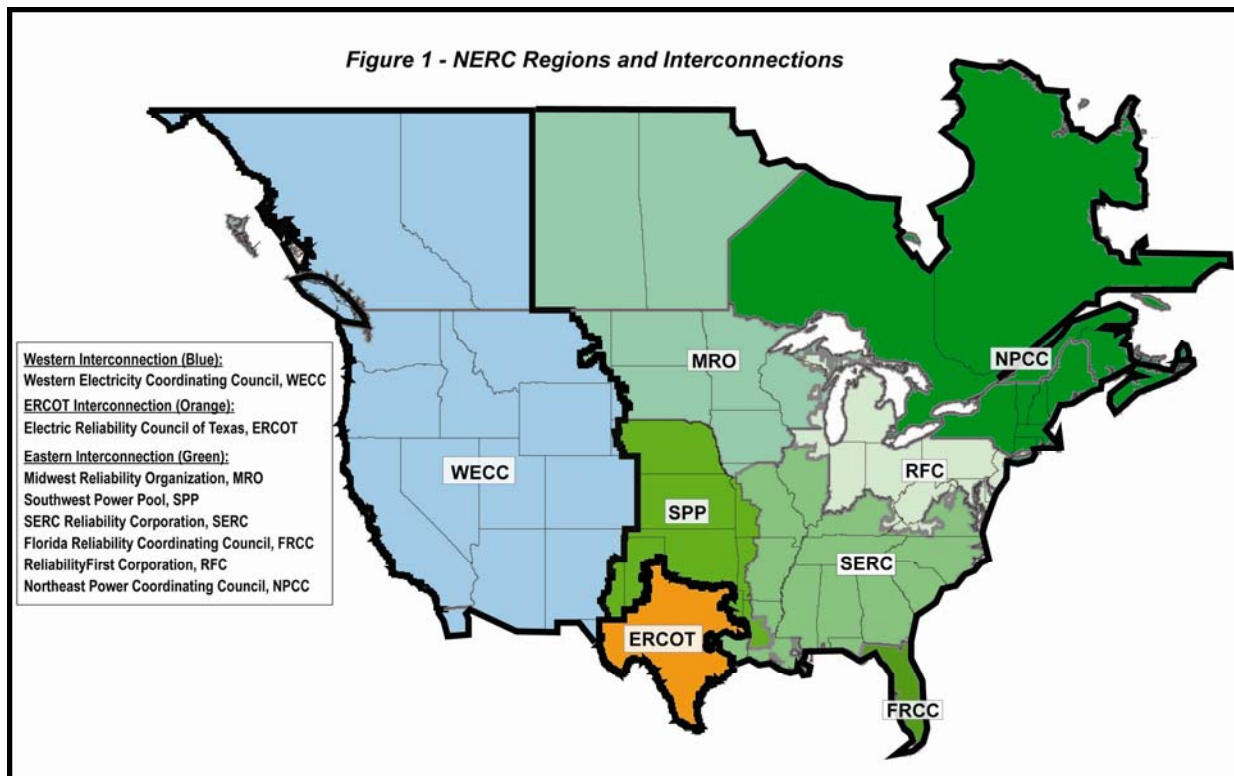
calls for a top-down planning approach led by FERC for interconnection-wide planning for the Eastern Interconnection by instead coordinating a “roll-up” of existing regional plans in order to analyze and identify system impacts of integrating regional plans and policy directives. Ultimately, the EIPC seeks to identify potential interconnection-wide alternatives for addressing transmission needs that meet State and Federal policy directives. Notably, the EIPC will deliberately not try to resolve any cost allocation issues, nor deal with siting or permitting issues or seek to set energy and transmission policy.

The EIPC proposal to the DOE seeks funding to support study work to roll up existing regional transmission plans into an interconnection-wide framework, as well as to establish a multi-constituency stakeholder process for review and input into the interconnection-wide plan. Specific objectives of the EIPC proposal are as follows:

- Roll Up and Analysis of Approved Regional Plans – The regional planning authorities and consultants would aggregate existing plans and perform transmission reliability and production cost analyses and sensitivity runs on an interconnection-wide basis. Stakeholder input would also be incorporated into these analyses.
- Inter-Regional Expansion Scenarios – After consultation with stakeholders, develop and select macroeconomic assumptions and scenarios for the development of inter-regional transmission expansion options.
- Development of Inter-Regional Transmission Expansion Options – Develop high level expansion (230 kV and above) options for specified scenarios and perform reliability and production cost analyses of inter-regional expansion options. The intent is to provide high level transmission option(s) and cost estimates to inform policy development, and not to identify specific transmission plans, projects or routes.

Under the EIPC bid, the Collaborative’s first report to DOE would be due on June 30, 2011 and would include the results of the reliability and economic analyses performed on the aggregated regional expansion plans for the Eastern Interconnection through 2020, including potential transmission expansion options identified through the inter-regional analysis. The report also will provide the results of the reliability and economic analyses performed for the resource expansion scenario(s) selected for further study, including the inter-regional transmission expansion options identified and the associated cost esti-

Table 1 - Participants in Eastern Interconnection Planning Collaborative
Principal Investigators
PJM Interconnection (Lead) ISO New England New York ISO Midwest ISO Tennessee Valley Authority Southern Company Mid-Continent Area Power Pool (MAPPCOR) Entergy
Other Participating Planning Entities
Alcoa Power Generating American Transmission Company LLC Duke Energy Carolinas, LLC E.ON U.S. LLC (LG&E and KU) Florida Power & Light Company Georgia Transmission Corporation Ontario Independent Electricity System Operator Jacksonville Electricity Authority Municipal Electric Authority of Georgia PowerSouth Energy Cooperative Progress Energy Carolinas, Inc. Progress Energy Florida, Inc. South Carolina Electric & Gas Company South Carolina Public Service Authority Southwest Power Pool



mates. The EIPC bid also proposes a second report with updated information to be provided by June 30, 2013 which would provide a review of expansion options incorporated into 2013 regional expansion plans based upon the findings of the 2011 EIPC report.

The DOE is expected to announce its selection under the FOA by November 2, 2009 and to have a final contract in place with the winning bidder by December 31, 2009.

Analysis and Implications

The EIPC is a first-of-its-kind effort to demonstrate the concept of an interconnection-wide planning process in the Eastern Interconnection. Such broad-scale planning has long been a feature in the Western Interconnection, as most recently evidenced by the interconnection-wide Western Renewable Energy Zone (WREZ) planning effort underway in the West (see ESAI's May 2009 *Transmission Watch* for a discussion of the WREZ effort). However, the West may provide a more conducive environment for interconnection-wide planning given its long history under a single power system reliability coordinator (WECC). In contrast, reliability duties in the Eastern Interconnection have historically been disaggregated over several reliability organizations (see Figure 1).

There is no precedent for the EIPC's wide-ranging, comprehensive and voluntary effort in the Eastern Interconnection, underscoring its importance and relevance to policymakers. As a result, the EIPC bid to DOE has a high likelihood of success, as there is no other interconnection-wide planning proposal quite as comprehensive in both substance and geographic scope.

The comprehensive and wide-ranging nature of the EIPC effort will also succeed in heading off extensive Congressional action on Federal transmission planning. The Obama Administration and Congress have a high interest in renewable resources; however, the details of transmission planning, siting and cost allocation remain very arcane. Moreover, transmission policy cuts across party lines like few other policy topics – positions on issues tend to be influenced more by geography and local characteristics and less by party politics.

Notably, the Waxman-Markey American Clean Energy and Security Act of 2009 (ACES) bill passed by the House incorporates a bottom-up approach to the interconnection-wide renewable transmission plans. In the Senate, Senator Bingaman's bill directs FERC to encourage the submission of a single interconnection-wide plan, but does not address whether this plan should follow a top-down or bottom-up approach.

Once it receives funding to proceed, the challenge before the EIPC will be in developing consensus on renewable energy resource development scenarios and transmission buildout options. The EIPC will need to reconcile diverse interests across the Eastern Interconnection, ranging from Midwest supporters of significant wind exports to the eastern load centers to the New England Governors' just-released "New England 2030" blueprint and its focus on local renewable resource development. Although ostensibly a planning exercise, the ever-present issues of cost allocation and transmission siting will be high on the minds of participants in this process. For example, the New York and New England ISOs were early and enthusiastic participants in the JCSP process; however, when it became clear that Midwest interests were using the JCSP as a springboard to establish a national interstate transmission buildout plan primarily funded by eastern consumers, the NYISO and ISO-NE balked and formally withdrew from the JCSP effort.

A possible outcome of the EIPC would be the designation of Eastern Interconnection renewable energy zones (REZs) and conceptual transmission overlays for delivering resources in the REZs to load centers. In doing so, the Eastern Interconnection would follow the lead of the other North American interconnections, as with the WREZ effort in the Western Interconnection and the Competitive Renewable Energy Zone (CREZ) in Texas (ERCOT).

The EIPC's decisions on scenarios and conceptual transmission buildouts will certainly be influenced by these issues. Nevertheless, if successful, the EIPC may signal a paradigm shift for transmission planning in the Eastern Interconnection, particularly with respect to the development of renewable resources.