

SPP comments on 2009 DOE Congestion Study

Southwest Power Pool (SPP) appreciates the opportunity to provide comments on the 2009 study. Much has changed in recent months and relevant developments need to be considered by DOE and others with regards to next steps concerning any actions to address existing, but more importantly, expected congestion on the bulk power system. It needs to be noted that some of the biggest constraints to efficient and effective power system operations are not existing flowgates, but are in essence infinite impedences between adjacent systems that have limited, if any, interface capability.

Although some may argue that much has changed since the May 2009 data cut-off that is captured in the 2009 Study, additional data will not likely change major conclusions or observations. The economic downturn with some notable exceptions where local load service constraints may have been mitigated, temporarily or even permanently, need not be the focus on next steps. In fact, the economic downturn has accelerated the relative penetrations of renewable resources and aggravated some of the operational challenges associated with wind integration in certain areas. Regardless, any new transmission capacity that was created as a result of the economic downturn will quickly be utilized and redeployed in future grid operations, potentially in new ways that were not even considered prior to the economic downturn. The DOE and others may want to look at the economic downturn as an opportunity to reassess existing plans, with greater emphasis on coordinated and collaborative solutions, within and between systems.

SPP is fortunate to have several projects, and many approved plans, in place to address historical and expected future constraints. SPP would caution against the inappropriate use of historical flowgate data in drawing conclusions about the future given the dynamic nature of the bulk power system with respect to future resources, evolving markets and transmission expansion plans including those of merchants/private developers that can have significant impacts on regional plans and operations. Smart grid applications should allow future bulk power system plans and operations to mitigate and manage constraints as a result of increasing asset capabilities using programs like EPRI's Dynamic Circuit Thermal Rating (DCTR) software, or optimal power flows and system operation tools to facilitate grid reconfiguration in both proactive and reactive while maintaining adequate reliability margins in operations.

SPP looks forward to working with the DOE, FERC and others on efforts such as FERC's recent rulemaking RM10-13 to improve inter-regional planning and cost allocation, as well as sharing, and potential refinement, of regional plans as a result of the Eastern Interconnection Planning Collaborative (EIPC). SPP is excited to see that several entities have suggested that the TEPPC evaluate transmission expansion projects to increase the connectivity of the Eastern and Western Interconnects in its next set of economic assessments.

SPP supports the Congested Coordination Flowgate Study effort underway with MISO, PJM et al and expects significant improvements to result in terms of joint collaborative model

development and benchmarking to obtain affected stakeholders buy in to any assessments. SPP is hopeful that the ERAG efforts will continue to evolve and be leveraged to the extent practical in inter-regional model development and planning studies.

Future plans must be flexible and robust to provide efficient and economic delivery of resources to address consumer needs, while maintaining service reliability needs in a carbon constrained, secure energy future.

SPP would offer the following specific comments in response to the specific questions in this solicitation:

1. Did this study accurately identify appropriate areas as Critical Congestion Areas, Congestion Areas of Concern, and Conditional Constraint Areas? Are there additional areas that should have been so identified?

SPP recognizes that Congestion Areas ultimately need to be based on future assessments and not historical data. Existing models and approaches to create long range plans are not as effective in predicting the future as they are in looking at the past. SPP is hopeful that the EIPC and other inter-regional planning initiatives can provide useful information in terms of future congestion. Any study results will be limited by the tools, techniques, models, and assumptions, so extreme care needs to be taken to identify flowgates to measure future opportunities in terms of corridor identifications. Production costing techniques can only measure congestion across identified corridors or interfaces. The lack of data and price transparency is problematic in some regions and must be addressed somehow to perform a comprehensive assessment. There is a movement underway to look beyond the production costs quantitative benefits to identifying, and in a number of cases quantifying, qualitative benefits arising from transmission. Looking at future scenarios, rather than a fixed future is also proving to be helpful in many situations. Serious consideration needs to be given to proceeding with necessary, but time consuming steps like routing studies and ROW acquisition, for EHV projects that are effective solutions to multiple futures. Lead times need not be a barrier that precludes effective planning and project implementation steps for transmission projects to be viable solutions to future bulk power needs.

Congestion Areas need to also consider land use needs and recognize the opportunities to leverage existing ROWs and the replacement of aging infrastructure with higher capacity facilities, especially in urban and environmentally sensitive areas. Long range regional plans need to inform any future corridor designations by the DOE. So, SPP doesn't know that the answers to DOE's questions about the identification of congestion areas can be addressed with a complete affirmative response, but one qualified by the limits of the effort; i.e. while providing the results, SPP would suggest that we also at least inform the reader about what the studies do not indicate or what the limitations and opportunities may be beyond those identified.

2. How should the methods and approach for analyzing historical and future congestion on the grid be improved?

Historical data needs to be filtered to remove anomalies due to extreme weather events. Historical data has limited value given approved plans in several regions; i.e transmission

projects that are clearly envisioned in future plans. Future assessments need to consider reasonable scenarios and be an appropriate horizon (10-20 years) to enable effective planning and provide time for implementation of solutions. Future studies must be based on firm commitments and consider delays of major EHV projects which may have a material impact on congestion. Transmission enables markets and provides resource optionality and flexibility in operations that is very difficult to quantify, but is understood and appreciated as tangible and meaningful benefits. It's imperative that the industry find a way to value EHV transmission appropriately to demonstrate strategic and other benefits which are difficult to quantify. This is particularly true for robust and flexible networks which are paramount for market expansions and consumers realizing the benefits of connectivity with enabling infrastructure.

3. Are there better ways to define, identify, and measure congestion, the impacts of congestion, and transmission constraints?

Yes. DOE needs to continue its leadership and support of EIPC in the Eastern Interconnection and ensure that these efforts continue to mature and provide valuable results to inform regional plans beyond 2012. FERC's RM10-13 is a good step forward which should complement and enhance inter-regional planning studies and provide certainty on cost allocation/recovery. The lack of seams agreements is a critical gap that is a barrier to effective and efficient collaborative planning between systems. Major EHV projects will not be implemented without appropriate incentives and mechanisms in place to effectuate coordinated planning and operations, especially those across existing interconnections. SPP believes that FERC's recent NOPR announcement on transmission planning and cost allocation is a positive step.

Finally, SPP would offer the following suggested edits to the 2009 DOE Congestion Study report:

In the EXECUTIVE SUMMARY, the definition of “transmission constraint” is too narrow. Transmission constraints should not be limited to existing or planned topology of bulk power systems. Many of the most binding constraints have little, if any capability, across interfaces.

P33-42 Section 3.2 Sources of Renewables. Shouldn't alternatives for consideration include storage, e.g., CAES?

P79. Correct footnote 153 spelling.

P79. 4th paragraph “in terms” is repeated in a sentence.

P 80. Footnote 159 seems a bit misplaced without some more context.

P81. Is it accurate to state that “Because the southeastern utilities build aggressively in advance of load, there is little economic or reliability congestion within the region.”? How does one know the level of congestion in and among southern utilities?

P82. Given the statements regarding studies that indicate “available capacity is fully subscribed”, illustration that congestion and constraints may exist despite the lack of flowgates or indicative LMPs.

P.84 “thus, building one or two new large transmission projects will not help bring many thousands of new nuclear capacity on-line.” is missing “of MW” between “thousands” and “of”.

P.93 Why is referenced Table 5-2 on page 95? What is the significance of these 51 projects? Many of these projects are speculative with little, if any, technical or economic analyses shared with affected parties.