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**UNITED STATES OF AMERICA
BEFORE THE UNITED STATES DEPARTMENT OF ENERGY
Office of Electricity Delivery and Energy Reliability
RE: Considerations for
Transmission Congestion Study
and Designation of National
Interest Electric Transmission
Corridors
COMMENTS OF THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

In response to the U.S. Department of Energy's ("Department" or "DOE") August 8, 2006 request for comments on its National Electric Transmission Congestion Study ("NETC Study") and the designation of National Interest Electric Transmission Corridors ("NIETC"s), the Pennsylvania Public Utility Commission ("PaPUC") submits the following comments¹. The PaPUC reserves the right to supplement these comments at a later time.

Introduction

The Pennsylvania Public Utility Commission is an administrative agency created by the General Assembly of Pennsylvania, with jurisdiction over the rates, terms and conditions of retail electric utilities and the licensing and regulation of retail electric generation suppliers. 66 Pa.C.S. § 101, et seq. It is also a charter member of the Organization of PJM States, Inc. ("OPSI"), along with the

1 While the PaPUC regularly interfaces with PJM, its management and stakeholder committees, PJM has taken certain positions before your Department with regard to EPACT Section 1221 NIETC designations that have not been previously discussed with or agreed to by the PaPUC or any other State Commission. PJM has neither consulted with or solicited the views of the state commissions or its own stakeholders prior to making its recommendations to your Department.

regulatory commissions of all states in which PJM Interconnection, L.L.C. ("PJM") operates. Additionally, a portion of northwest Pennsylvania is within the operational control of the Midwest Independent System Operator, Inc. and the Commission is therefore also a charter member of the Organization of MISO States, Inc. ("MISO"), which is an organization of all the states within the MISO footprint.

EPAct 2005 Section 1221 is strong medicine which represents novel involvement of your Department and the Federal Energy Regulatory Commission in transmission siting review. Like any strong medicine, it should be used only when necessary and only as directed by regional planning authorities, pursuant to region-specific grid analyses. Congress did not intend to supplant state transmission siting jurisdiction. Instead, it established a narrowly focused federal siting backstop process for a limited class of transmission facilities.

As we noted in our March 6, 2006 comments to your Department's Notice of Inquiry, the PaPUC has siting and regulatory responsibilities commensurate with those of utility regulatory commissions of other states. As your Department is aware, transmission siting review and authorization has traditionally been subject to the primary jurisdiction of state regulatory agencies.

As we also noted in our March 6 Comments:

NIETC designation is a marked departure from previous law and substantially changes the relationship between the Federal Government and the States regarding transmission siting. As the principal responsibility for approval and siting of transmission continues to rest with the States, your Department should exercise great care in setting the conditions and parameters under which it will designate NIETCs and should not entertain any requests for "early designations" until DOE has had an opportunity to clearly define the procedures, terms and conditions under which it will make such designations. Further, NIETCs should only be designated where it is demonstrated that there is chronic physical congestion on the grid that has the potential for substantially impairing existing or future grid reliability.

Your Department should not consider any application for or make any designation of NIETCs that does not clearly identify the national interests sought to be protected and make findings of fact regarding how those interests are best served by a NIETC designation, rather than by approaches that are less intrusive into

state laws and policies.

States have historically been the source of eminent domain power exercised by public utilities and have therefore exercised primary jurisdiction to review utility use of eminent domain powers in consideration of system need, private property rights, and preservation of environmental and historical values that might be impacted by the siting of transmission facilities on existing and new rights of way. Designations of NIETCs must be undertaken in conformance with Congressional intent that such designations not intrude into traditional state siting processes unless necessary to meet a demonstrable need to protect clearly defined national interests. In addition, designation of NIETCS must be undertaken in a way that minimizes Federal involvement in the siting process to a review of only those geographic corridors that are actually required to protect such interests.

A. NIETC Assessment and Designation is a Collaborative Process

The PaPUC understands the Department desires a formal dialogue with state commissions as it seeks consensus on an approach to NIETC policy that complies with the provisions of Section 1221 while respecting existing State and regional processes. Creation of a formal DOE / State forum to review NIETC issues would be consistent with the new provisions of FPA Section 216 to engage in "consultation with the states." While the Study is a good initial assessment of transmission congestion at a national level, designation of specific corridors cannot be based upon the kind of preliminary analysis based upon the DC grid model employed by the Department's contractor. More specific and focused regional studies, subject to public review and comment, must be conducted prior to designation of specific geographic NIETCs.

Moreover, conduct of future congestion studies should be based upon a true consultative review involving all affected States, basing final determinations upon well vetted data and consensus views. Such a Federal/State forum would benefit from the inclusion of expert staff drawn from the the Federal Energy Regulatory Commission (FERC), Regional Transmission Organizations (RTOs), Regional Reliability Organizations (RROs) and affected State Commissions.

Pennsylvania is certain to have a vital role in the designation process since a strong possibility exists that any designation that addresses the congestion issues of the Mid-Atlantic region would probably result in the bulk of transmission facility construction or upgrades crossing Pennsylvania.

The PaPUC has reviewed the August 2006 study and agrees that the preliminary data shows that there is chronic congestion in some portions of the Mid-Atlantic region that deserves close attention by Federal and State regulators. We also agree with the observations of the study that designations of NIETCs should not be made in a way that involves your Department in siting of specific transmission proposals or of designating specific routes for future transmission projects.

As discussed below, while Section 1221 uses the term "geographic area" in defining the NIETC designation process, that term is not equivalent to a designation of an area defined by political subdivisions. To a transmission

planning engineer, political subdivisions have no impact on the physical flow of electricity, or on the physical limitations of the conductors, transformers, substations and other infrastructure of the interstate grid.

Instead, the NIETC designation process should recognize the electric flows involved in assessing congestion problems and designate the geographic metes and bounds of NIETCs in a way that encourages a variety of different engineering solutions, while minimizing NIETC corridors to the extent least intrusive to state siting jurisdiction and guaranteeing that any transmission projects that claim the benefit of Section 1221 NIETC procedures will actually address the problems that Congress sought to address.

B. The Study Properly Recognizes the NETC Study Is an Initial Review

Your Department's modeling techniques, based upon 2011 data and a DC network model, while useful for a "quick look" at transmission issues on a national level, cannot be relied upon for regional planning of specific grids and upgrades nor can the initial studies be the basis of NIETC designations. NIETC designation must await more focused region-specific studies that model the regional grid on a dynamic AC model, with econometric inputs that more closely identify likely sources and sinks over a future period relevant to the final NIETC designation.

The NETC Study's proposal to designate specific physical corridors with "centerlines" would unlawfully turn Section 1221 from a federal backstop process to an actual federal siting process – certainly not what Congress intended.² Your Department has neither the jurisdiction, the resources, nor the experience necessary to site individual transmission projects or to choose the most worthy transmission projects from a list of competing possibilities.

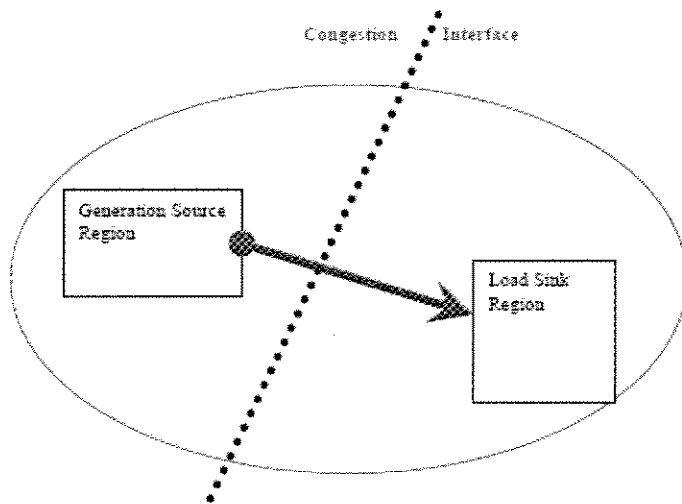
Instead, NIETC designations must initially focus not on specific corridor geography, but on the geographic location of sources and sinks and the congestion boundaries between such sources and sinks that are constrained by congestion that rises to a level affecting the National interest.

² The Department expects that the proponent will be able, in electrical terms, to identify a project path that would begin at some specific substation or other facility, pass through appropriate and specified intermediate facilities, and terminate at another specific location. These analyses will enable the proponent of the Corridor to identify an approximate centerline for the proposed Corridor, and to propose and explain the rationale for territorial bands of some specified width on each side of the centerline. (In some situations it could be appropriate to make the bands asymmetric— i.e., wider on one side of the centerline than on the other). Comments of this type may be particularly helpful to DOE in deciding whether and where to designate a Corridor.

In the illustration below, a NIETC designation would encompass the geographic extent of the source, interface and load sink regions as well as the geographic area in which transmission upgrades could be built to relieve the specific congestion between source and sink.

In order to claim to be within the geographic limits of a NIETC region, a

project should be required to demonstrate that it would substantially alleviate the specific directional congestion defining the NIETC region *and* that it would not conflict with any other transmission solutions that were being planned in a regional process – conducted either by a regional transmission operator or other neutral regional entity with grid planning responsibilities – subject to openness, transparency and review requirements.



Only those transmission projects that are approved in a regional planning process *and* which cross a designated congestion boundary could claim to be “within” the designated NIETC region. Designation of NIETCs in this manner would align such designations with the electrical characteristics of the interstate transmission grid, while excluding proposed projects that either did not address “national interest” congestion or that actually conflicted with other regional solutions being implemented.

Further, as your Department suggests, NIETC designations should be based upon current grid conditions. This requires that NIETC designations be regularly restudied, and that designations that are no longer justified by actual conditions should be withdrawn in NIETC regions in which congestion has been or will be relieved by the commitment of transmission upgrades or by additions that will resolve the specified congestion.

C. Congestion Study and Corridor Designation

The Department notes that while important, cost allocation issues are not directly related to the designation of a National Corridor. We would emphasize that while interregional cost allocation not directly referenced in Section 1221, there is a relationship between cost allocation and transmission planning that should not be ignored.

The PaPUC has made the point in its earlier comments to DOE that interregional cost allocation issues must be resolved at the risk of significant loss of public support for the Section 1221 siting process. While cost allocation does

not play a direct role in NIETC designation, it is part of the critical path to implementation of Section 1221 and should be given serious attention by FERC and DOE. It is easier to resolve such cost allocation issues at the outset, based upon generally accepted allocation principles than afterwards. A failure by Federal and State authorities to provide leadership on devising fair and equitable interregional cost allocation of major backbone facilities would be a grave error. As the PaPUC told the Federal Energy Regulatory Commission in its September 20, 2006 comments in *Preventing Undue Discrimination and Preference in Transmission Services*; Docket No. RM05-17-000; RM05-25, existing transmission cost allocation principles used for siting small to medium sized transmission projects are probably inadequate for allocating the costs of major interregional backbone transmission projects.

Whether "reliability based" and "economic" upgrades are at issue, existing planning processes treat the allocation of upgrades as primarily an engineering allocation problem to be resolved largely on the basis of a distribution factors (DFAX) analysis.

This approach is a mistake in allocating the costs of big backbone upgrades, which are of an entirely different character. Big backbones and long transmission lines are likely to provide benefits to both source and sink regions, as well as providing benefits to sub regions in the middle through reduction of parallel flow and an increased reliability cushion. Engineering analyses based solely or mainly on DFAX analysis should not be used for allocating the costs of backbone facilities that will be completed in a long term planning process. Allocating the costs of backbone facilities is a matter of judgment and equity, not solely an engineering analysis.

Large backbone facilities provide benefits to the source region by making more efficient use of unused or underused generation capacity, provide revenues to generators in the source region that would otherwise not exist, rendering the existing fleet more viable and ultimately contribute to encourage generation investment in the source region.

Sink regions obviously benefit from having their generation adequacy problems addressed, particularly where part of the reason for generation shortages have to do with environmental or other restrictions on new facility development. In addition, sink regions see a real reduction of congestion costs because backbone transmission permits supplanting high cost local generation with lower cost competitive generation (and promotes competition).

Regions in the middle, not directly or primarily served by the line may enjoy some direct benefits. Those benefits could include reduction in parallel flow, permitting the middle regions to more efficiently schedule generation in the region, and protecting the middle regions from the detrimental effects of added congestion affecting their neighbor (sink). However backbone facilities are generally planned to address a unique and major long term interregional flow problem, and no generalizations can be made that all regions share equally in the benefits and burdens of such projects.

While backbone facilities studies are based upon a 10 - 15 year in service date, such facilities are likely to serve for a half century or more and during

periods when generation and load response technology and today's sources and sinks will likely change materially. Engineering assessments can be made, and estimates can be made of the economic benefits of congestion relief, but such estimates are necessarily based upon projections of load and generation 10 or more years in the future which are, like long term weather forecasts, not highly reliable. Therefore, there can be no fixed formula that can be devised to allocate backbone costs, and some exercise of sound non-engineering judgment is inescapable. While judgment should be based upon the best estimate of benefits and burdens to the source, middle, and sink regions, there can be no fixed formula which will reliably apply to generically determine and allocate benefits and burdens among ratepayers in the source and sink regions. Ultimately, that judgment must be exercised a fully litigated proceeding, and cannot be translated to a formula to be mechanically applied.

Proportional allocations may well differ based upon the relative costs/benefits of the line. At one extreme, a line that greatly benefits a sink, but mainly burdens everyone else should be largely cost allocated to the sink. On the other hand, a line that provides approximately equal benefits to source, sink and middle might be a candidate for being ratably recovered from all users of the grid on a ratable basis. Again, that is a non-engineering judgment that should be made by a governmental entity, not a transmission operator.

Conclusion

The PaPUC asks your Department to implement a Federal / State collaborative NIETC designation process based upon more complete and focused data and upon more thorough analytical methods that more closely approximate present and future transmission flows and requirements.

Such designations must be defined and closely tailored in a way that addresses serious and unresolved congestion of national interest in a way that is respectful of State siting jurisdiction.

We also ask that your Department provide leadership in establishing equitable principles for interregional transmission facility cost allocations.

Respectfully Submitted,

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