

UNITED STATES DEPARTMENT OF ENERGY

2009 CONGESTION STUDY

**COMMENTS OF THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

A. Introduction.

The Pennsylvania Public Utility Commission (“PAPUC” or “Commission”) herein files comments in response to the U.S. Department of Energy (“DOE”) 2009 National Electric Transmission Congestion Study (“2009 Study”). This Congestion Study is the second study issued under the requirements of the Energy Policy Act of 2005 (“EPAct of 2005”). The EPAct of 2005 directed that DOE perform a triennial study, in consultation with the states, of electric transmission congestion on the national grid. After receipt and consideration of comments, the Secretary of DOE has the discretion to issue a report based on the study which may designate any geographic area experiencing electric energy transmission congestion and constraints as a national interest electric transmission corridor. The 2006 Congestion Study resulted in the issuance of a Report that designated the Mid-Atlantic National Interest Electric Transmission Corridor (“Mid-Atlantic NIETC”) that encompasses the entirety of Pennsylvania as well as most of the states from northern New York to southern Virginia. The PAPUC has been an active participant in the DOE administrative process that resulted in the designation of the Mid-Atlantic NIETC. The Commission has participated in opportunities for comment and at technical

conferences sponsored by DOE. The Commission has previously filed comments in response to the initial notice of this matter in the Federal Register.

The PAPUC is the agency charged with the responsibility for regulating electric distribution companies within the Commonwealth of Pennsylvania pursuant to the Public Utility Code, 66 Pa. C. S. §101 et seq. The PAPUC has specific authority under Section 1501 of the Public Utility Code for approving the siting of electric transmission facilities within the state and appreciates the opportunity to provide comments on the 2009 Congestion Study. As the state agency responsible for siting transmission facilities within the Mid-Atlantic NIETC, the PAPUC is most concerned with the impact of the 2009 Study to the extent DOE implemented any changes to the Mid-Atlantic corridor or modified the methodology employed for evaluating congestion/constraints in the Mid-Atlantic corridor.

B. Conclusions of the 2009 Study with Reference to the Mid-Atlantic NIETC.

The 2006 Study identified the Mid-Atlantic region from northern New York to southern Virginia as part of the Mid-Atlantic NIETC. With regard to Pennsylvania, the 2006 Study noted that there were high congestion costs caused by congestion that limit east-bound flows of electricity across the Allegheny Mountains. Specific constraints were identified on lines from Allegheny Power to Potomac Electric Power (“PEPCO”) and Dominion Power (“Dominion”); on the interfaces between western, central and eastern PJM and at various transformer sites in Pennsylvania. The most significant congestion occurred in the following metropolitan regions: New York City, northern New Jersey, the Delmarva Peninsula and the Baltimore-Washington, D.C. area. DOE noted

that it would not be economical to eliminate all transmission congestion within the Mid-Atlantic NIETC but that its intent would be to focus on congestion that creates significant reliability risks or increases economic costs to consumers. (2009 Congestion Study, pp. 50-51).

In its 2009 Study, DOE notes that some improvements within the Mid-Atlantic region have occurred, primarily regional progress in reducing loads and improving reliability through aggressive demand response and energy efficiency programs and PJM-approved backbone transmission projects such as the TRAIL Project and the Susquehanna-Roseland Project, both of which have received state regulatory approval. (2009 Congestion Study, p. 51). DOE also noted that other backbone transmission lines are in various stages of regulatory approval and are under development including the PATH line sponsored by AEP and Allegheny Power and the Mid-Atlantic Power Pathway (“MAPP”) sponsored by Dominion. PJM estimates that, once these latter projects are completed, 90% of the region’s total congestion cost will be eliminated. (2009 Congestion Study, p. 50). DOE also concludes that load centers continue to experience the impacts of significant levels of transmission congestion and that transmission system upgrades and expansion sufficient to impact current transmission congestion levels are several years into the future. Also, new generation is slow to come on-line and is often offset by retirement of older generation capacity. (2009 Study, pp. 38-40). Based on the foregoing, DOE concluded that no changes should be made in the Mid-Atlantic NIETC designation at this time.

C. The 2009 Congestion Study Demonstrates Improvement Over the 2006 Study.

The 2009 Study is an improvement over the 2006 Study in that it relied on historical data for evaluating congestion modeling and avoided the use of flawed congestion modeling simulations based on proprietary data. The 2006 Study relied on an analysis by CRA International (“CRAI”) that examined both historical information on congestion coupled with simulation modeling to estimate future congestion for the years 2008 and 2011. The data for the congestion modeling simulation was taken from CRAI’s proprietary data base of Eastern Interconnection generator production cost characteristics, transmission ratings and electricity demands. CRAI relied upon other NERC-conducted flow studies as well.

A shortcoming of the 2006 Study was its undue reliance on projection modeling of future congestion based on a few narrow factors. (2006 Study, pp. 9-17). The 2006 Study utilized simulations of congestion on the eastern interconnection grid for the years 2008 and 2011. One of the major components of the projection modeling for the eastern interconnection was an excessive reliance on fuel price forecasts to determine the extent to which fuel costs affect electricity congestion. These fuel price forecasts focused on oil, gas and coal. (2006 Study, pp. 10-11). However, DOE’s modeling projections, by their own admission, did not take into account other critical factors such as load growth, energy efficiency, demand response and the impact of renewable resources such as wind or new nuclear generation in the eastern interconnection. (2006 Study, p. 11). Also, there was inadequate information on line losses available to adequately factor in that

component. (2006 Study, p. 13). Another deficiency in DOE's reliance on projection modeling in the 2006 Study was its undue reliance on data that was proprietary and not available for review by any other party. (2006 Study, p. 15). It should be noted that one of the original principles established by DOE, as expressed in its Request for Comments on the 2006 Study, was to receive "sound and verifiable information" based on "use of state of the art, verifiable, quantitative methods and publicly accessible data...developed through a publicly accessible process with ongoing stakeholder input and involvement." (2006 Study, p. 61). However, the 2006 Study departed from this principle in its conduct of congestion modeling simulations based on data that was not public or verifiable.

The 2009 Study relied on historical data utilizing publicly available 2007 data and metrics on transmission utilization in the Eastern Interconnection. DOE's decision to engage the services of Open Access Technology International ("OATI"), which was able to access and compile historical data and metrics from ISO-New England ("ISO-NE"), the New York ISO (NYISO), PJM Interconnection (PJM) and other RTO/ISO/power pools in the east (as reflected on Table 4-1 of the 2009 Study), is a better analytical approach than the methods employed in the 2006 Study conducted by CRAI. The PAPUC recommends DOE consider placing more reliance in future studies on publicly available, historical, verifiable data and properly derived projections where appropriate. As the states increase their involvement in regional planning activities, it is critical that there be total transparency in the information relied on by DOE so that states and other parties can make decisions on the basis of complete and accurate information. DOE should also avoid unreliable congestion modeling methodologies that focus on certain

factors such as fuel prices while failing to consider other factors such as current state-specific data on the impacts of energy efficiency, demand side management and renewable resources. The PAPUC and other state agencies (such as PA Department of Environmental Protection) routinely compile information on these factors and can provide assistance to DOE in accessing and utilizing such data.

The PAPUC notes that efforts to implement renewable portfolio standards in PA and other states may play a role in reducing congestion in the Mid-Atlantic region. DOE should incorporate, in future congestion studies, more data, both historical and projected on renewable resources, demand side management and energy efficiency in PA and the Mid-Atlantic region.

In its first set of comments on the 2009 Study, the PAPUC discussed extensively Pennsylvania's legislative initiatives, including Act 129 of 2008 and the Alternative Energy Portfolio Standards Act ("AEPS"), which promote energy efficiency and conservation programs and require PA electric distribution utilities to increase their use of electricity derived from alternative energy sources respectively. The programs implemented under this legislation have been in place for enough time so there is a body of data available that can be utilized in estimating the impacts of these initiatives on future congestion and constraints. The AEPS, codified at 73 P.S. § 1648.1 et seq., requires that PA jurisdictional electric utilities obtain a gradually increasing percentage of electricity from alternative energy resources rising to a maximum of 18% by 2021. The AEPS imposes a substantial Alternative Compliance Payment penalty on utilities that fail to meet their annual benchmarks.

PA has also implemented Act 129 in 2008. Act 129 required the Commission to oversee and direct the development of Energy Efficiency and Conservation (EE&C) Programs by jurisdictional electric utilities and the Act sets out specific areas to be addressed within those programs. Act 129 requires electric utilities with at least 100,000 customers to adopt a plan, approved by the Commission, to reduce weather-normalized electric consumption by at least 1% by May 31, 2011. This requirement increases to a reduction in weather normalized consumption to 3% by May 31, 2013. Also, by May 31, 2013, peak demand is to be reduced by a minimum of 4.5% of the utility's peak demand during a defined historical period. All jurisdictional electric utilities have filed their plans. The Commission has a continuing obligation to review and monitor the success of these programs.

Other states in the Mid-Atlantic region have achieved similar results through initiatives such as New Jersey's Energy Master Plan and Clean Energy Program, Maryland's Climate Action Plan and New York's State Energy Plan. All of these programs have been in existence and have presumably compiled a data base of information that could be utilized by DOE in evaluating the impacts of renewable resources, demand response and energy efficiency on congestion in the Mid-Atlantic region. The 2009 Study recognizes these efforts where it states that "...several PJM/Mid-Atlantic states have developed ambitious EE programs." (2009 Study at p. 42). At p. 51 of the 2009 Study, DOE recognizes "that the Mid-Atlantic region is making significant progress in reducing loads and improving reliability through the use of aggressive energy response programs." In light of this readily available data, the PAPUC

would urge DOE to incorporate reasonable projections of the impacts of renewables, demand response and energy efficiency in reducing load and ultimately transmission congestion. The Mid-Atlantic states can all provide the necessary data for these analyses.

It should also be noted that PJM, beginning with its 2012/2013 Base Reserve Auction (“BRA”), has begun to factor in the impacts of energy efficiency. PJM currently incorporates demand response participation into its BRA. For the most recent BRA, PJM projects participation of over 8000 MW of demand response and 570 MW of energy efficiency for 2012-2013.

Based on the foregoing, the PAPUC concludes that ample data exists for DOE to develop reasonable projections of the impacts of renewable resources, demand response and energy efficiency on future congestion based on valid historical data.

D. The 2009 Study Should Have Utilized More Effective Outreach to Impacted States.

Appendix B of the 2009 Study lists parties participating in six DOE-sponsored Regional Congestion Study Workshops and one Technical Conference held in 2008 and 2009. These conferences consisted of pre-set agendas and speakers, including brief presentations by the DOE regarding the proposed Congestion Study. The bulk of these presentations consisted of panelists from state commissions, public and private utilities and various regional transmission organizations addressing issues that had been agreed upon in advance. In form and substance, these workshops are not much different than the types of energy conferences routinely conducted by state commission organizations such as the National Association of Regulatory Utility Commissioners (“NARUC”) or

industry-sponsored events featuring panels of speakers. While informative, the technical workshops and conferences provide limited opportunity for any candid dialog between the state commissions and DOE on a confidential basis regarding individual state concerns over the congestion study process.

The PAPUC, as the state agency responsible for oversight of rates and service for the state's 12 million residents, recommends that DOE, in preparing future congestion studies, directly engage the impacted states located in designated NIETC corridors in a more formal fashion. The PAPUC contends that the consultation requirement of Section 216 of the Energy Policy Act of 2005 requires a more robust effort by DOE to interface directly with state utility commissions, energy planning agencies and governor's offices than has been the case for both the 2006 and 2009 Congestion Studies. DOE has approximately three years between Congestion Studies so there is ample time available for DOE to consult individually with those states that fall within the Mid-Atlantic Corridor. The purpose of those meetings would be twofold: (1) permit state commission staff and other interested state agencies to provide suggestions regarding the type of data and methodologies to be utilized in the forthcoming study and (2) permit DOE to preview with the states what it anticipates will be critical issues in the forthcoming study. The individual states, especially those in designated NIETC corridors, have substantial technical expertise and historical knowledge regarding transmission issues within their respective borders. The PAPUC believes more direct dialog between DOE and the states outside of public forums is an appropriate and necessary component for DOE to obtain all relevant information necessary to the conduct of the triennial studies. DOE could easily

coordinate meetings, either in Washington D.C. or at another location, with individual state commissions or groups of commissions working through NARUC or regional state commission organizations such as the Mid-Atlantic Conference of Regulatory Utility Commissioners (“MACRUC”). The PAPUC would request a face-to face meeting with DOE officials prior to the issuance of the next Congestion Study.

The 2006 Congestion Study also noted the intent to issue progress reports on improvements made by regional planning entities and utilities in Critical Congestion Areas. (2006 Study at p. 61). The PAPUC believes that interim reports on progress achieved in the Mid-Atlantic NIETC should be an important component of ongoing DOE dialog with the states between the issuance of studies. The PAPUC contends that preparation and distribution of a draft Congestion Study for review prior to finalization would also be a pro-active step in permitting impacted states to provide necessary input prior to final publication.

E. The 2009 Congestion Study Properly Promotes the Concept of Regional Transmission Analysis and Planning.

Section 6.2 of the 2009 Study indicates DOE’s commitment to provide funds for activities and analysis which includes: (1) promotion of stronger and more inclusive regional level transmission analysis and planning; (2) designation by states of geographic zones with concentrated, high quality renewable resource potential and (3) conduct of regional and sub-regional renewable integration studies. DOE’s reference in this section is to the collaborative process between the states in the Eastern and Western Interconnection and the respective RTO/ISO/planning authorities. The PAPUC is very

supportive of the collaborative process which is being promoted by DOE as an alternative to the process utilized in the first NIETC designation.

The PAPUC is a participant in the Eastern Interconnection State Planning Collaborative (“EISPC”) whose efforts are referenced in the 2009 Study. One of the objectives in this initiative will be the conduct of a wide variety of studies examining the impacts of energy efficiency, renewable resources, demand side management, distributed generation, smart grid technologies and other developing technologies on transmission planning and development on a regional and interconnection-wide basis. As DOE indicates at p. 102 of the 2009 Study, the end result of this collaborative effort will be the designation by states of geographic zones with concentrated high quality renewable resource potential or other physical attributes relevant to reducing overall carbon emissions at a reasonable cost. The output of these studies could also prove useful to DOE in the preparation of its 2012 Congestion Study. The PAPUC recommends that DOE utilize the output of these regional transmission planning efforts in the preparation of the next Study.

F. DOE Should Move in the Direction of Reducing or Eliminating the Mid-Atlantic NIETC Designation.

DOE concluded that no changes in the Mid-Atlantic NIETC designation are appropriate at this time. DOE notes that while improvements in reduction of congestion are ongoing, there exists a significant congestion area in the Eastern Interconnection that affects a large portion of the nation’s population extending from the New York metropolitan area to the Baltimore-Washington DC area. This conclusion is predicated on the findings

regarding changes in generation and transmission in the PJM region detailed at pp. 43-50 of the 2009 Study. DOE also notes that the recent economic recession may artificially reduce congestion in that region for the interim but it will likely increase as the economy improves. (2009 Study, p. 52). The PAPUC anticipates that continued development of backbone transmission lines in the PJM region, expansion of initiatives in energy efficiency, DSM and renewable technology and other targeted efforts to mitigate congestion at key interfaces may reduce overall congestion costs to the point where DOE should consider reducing the geographic size of the Mid-Atlantic NIETC so as to more reasonably tailor the corridor designation to areas of “true congestion.” Alternatively, the PAPUC recommends the elimination of the Mid-Atlantic NIETC if significant reduction of harmful congestion is achieved recognizing DOE’s admonition that not all congestion is necessarily harmful. The PAPUC notes that DOE is not hesitant to reclassify a previously identified Congestion Area of Concern as it did with New England based on that region’s aggressive efforts at promoting energy efficiency, DSM and renewable resources while also adding major new transmission lines since 2005. (2009 Congestion Study, pp. 56-58). DOE should maintain similar flexibility in its continuing evaluation of the Mid-Atlantic NIETC.

G. Conclusion.

The PAPUC appreciates the opportunity to comment on the 2009 Congestion Study and respectfully requests DOE consider and adopt the recommendations herein.

Respectfully submitted,

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