Statement of Stephen Bennett on
Behalf of PJM Interconnection, L.L.C.

PENNSYLVANIA STATE SENATE

ENVIRONMENTAL RESOURCES & ENERGY COMMITTEE

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The Pennsylvania Senate Environmental Resources & Energy Committee

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I.   Introduction

Good morning Chairman Yaw, Minority Chairman Santarsiero and distinguished members of the Senate Environmental Resources and Energy Committee. Thank you for the opportunity to appear before you today. My name is Stephen Bennett, and I am the Manager of Regulatory and Legislative Affairs for PJM.

As a regional transmission organization (RTO), PJM's primary role is to provide wholesale electric generation and transmission reliability at the lowest reasonable cost. In this role, PJM, which is regulated by the Federal Energy Regulatory Commission (FERC), is responsible for the reliable operation of the power grid for all or parts of 13 states and the District of Columbia. PJM serves the entire Commonwealth of Pennsylvania. Across the PJM territory, our member utility companies serve 65 million people. PJM ensures safe and reliable regional grid operations – keeping the lights on – for those we serve. PJM operates competitive, wholesale markets that efficiently reinforce grid reliability and do so at the lowest reasonable cost. Altogether, PJM's operations and markets provide an annualized value of approximately $3 billion to $4 billion in cost savings to its members.

I believe that it is important to note that, as an RTO and market operator, PJM does not take advocacy positions on state legislation. PJM recognizes and respects Pennsylvania's prerogative to determine its policies regarding environmental protection and emissions management. PJM also recognizes that state policy plays a significant role in determining the assets and fuel mix used to meet the state's resource adequacy needs. Rather than advocate, PJM seeks to be a neutral party and provider of factual information on the planning and operation of the bulk electric power system, the operation and evolution of the wholesale power markets that help ensure reliability at the lowest reasonable cost, and the value PJM provides as an RTO.

My comments today will seek to provide clarity on the role PJM plays regarding carbon pricing, provide information on a PJM stakeholder initiative to investigate market-based carbon price leakage mitigation, and provide a high-level overview of some of the illustrative modeling results that have come from that initiative.

II.   PJM's Role in Carbon Pricing

PJM does not have the authority to implement a carbon price on its own. While PJM recognizes the economic efficiency of addressing emission concerns by pricing carbon, PJM is not an environmental or air quality policymaking entity. PJM believes that if a state wants a price on carbon, that price must come from the federal government, a state government, or through state agreements such as the Regional Greenhouse Gas Initiative (RGGI).

Notably, a price on carbon emissions generally integrates well with PJM's current markets. This is true in Delaware, Maryland and New Jersey – the states in PJM that participate in RGGI. Generators in these states have the option to include RGGI prices for carbon when they bid into the PJM Energy Market. This is an example of how PJM's markets can be leveraged to bring the benefits and discipline of competition to a state's carbon mitigation policy goals, as long as that state authorizes a cost to be assigned to those carbon emissions.

While PJM has no role in either authorizing or setting a price for carbon emissions, PJM can play a role in developing market-based mechanisms to help mitigate impacts between states within the PJM region that do, and do not, choose to implement carbon pricing. PJM stakeholders voted to commence a process to examine that very issue through the

formation of the Carbon Pricing Senior Task Force. The outcome of that process will not result in PJM creating a carbon price or mandating that any state be required to do so. Rather, the process will determine whether and what market rule enhancements may be available to ensure that states implementing a price on carbon emissions enjoy the full benefits of doing so while minimizing cost shifts to states that do not elect to implement a carbon price.

III. PJM Carbon Pricing Senior Task Force

PJM has a sizable membership community that spans the breadth of the wholesale electric industry. PJM has more than 1,100 members that includes utilities, transmission owners, generators, consumer advocates, demand response providers, customer groups and numerous other entities integral to the efficient provision of wholesale electricity. PJM partners with these members to address the dynamic and evolving nature of wholesale electricity markets through a number of committees that are managed through the PJM stakeholder process. Through the stakeholder process, these members can bring ideas, issues and concerns to the broader community for analysis and deliberation that may ultimately result in modifications and enhancements to the rules that govern PJM and its markets.

The PJM Carbon Pricing Senior Task Force (CPSTF) was created through the stakeholder process. In June of last year, a group of PJM members came forward with an opportunity statement[1] pointing to complications that can result from emissions "leakage" that occurs when certain PJM states choose to apply a carbon price and others do not. Leakage is the concept that emissions costs in one jurisdiction may increase the utilization of carbon-emitting resources in a neighboring jurisdiction that does not have a carbon price. The PJM membership approved the creation of the CPSTF to investigate emissions leakage in PJM and potentially develop market rules that could address and mitigate leakage from one jurisdiction to the next.

The CPSTF was created with the potential to operate through two phases. The first and current phase is educational and analytical in nature. The objective of phase one is for PJM to model and analyze a number of carbon price scenarios that use different methods to address emissions leakage. To provide a spectrum of illustrative results, the modeling cases use high and low RGGI price scenarios, as well as higher carbon prices. The models provide results with no leakage mitigation, one-way leakage mitigation (mitigating imports into the carbon pricing region) and two-way leakage mitigation (mitigating imports into, and exports out of, the carbon pricing region). The results are presented to the task force for analysis, discussion and feedback on additional modeling cases.

Phase two of the CPSTF would involve the actual development of rules intended to mitigate leakage within PJM's Energy Market. The CPSTF has yet to enter phase two. To date, the PJM members participating in the CPSTF have generally, but not unanimously, communicated a preference for a continuation of the modeling and analytics phase. As such, PJM is working with our members to refine and expand our modeling scenarios as well as gather additional feedback on the results. The CPSTF is not required to move into phase-two market design and will likely only do so at the behest of its participating members.

Over the past year, the CPSTF ran numerous scenarios with modeling cases that added PJM states to RGGI; applied RGGI and higher carbon price sensitivities; and applied zero, one- and two-way border adjustment. The results are

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[1] Available at: https://www.pjm.com/-/media/committees-groups/task-forces/cpstf/postings/problem-statement.ashx

complex and highly nuanced. The time necessary to accurately convey the myriad outcomes and resulting conclusions easily eclipses the time allotted for PJM's comments today. At a very high level, PJM's modeling shows that implementing a carbon price without leakage mitigation generally displaces generation from the carbon price region to the rest of PJM (i.e., the region without a carbon price). Notably, while a border adjustment can mean that generation displacement no longer occurs from one state to another, it is possible that the resource mix within the carbon price region itself can be altered by the additional carbon costs.

One of the strongest conclusions that can be drawn from PJM's modeling to date is that the states included or excluded from the carbon pricing region are a driving factor in determining the overall impact that carbon pricing has on net PJM carbon emissions and electricity prices. Carbon pricing creates some amount of generation displacement. Without leakage mitigation, that displacement is often from one state to another. With leakage mitigation, that displacement may occur largely within the carbon pricing region itself. As such, it follows that the fuel mix and emission intensity of the generation portfolio in each state that is impacted by interstate or intrastate generation displacement is significant to the overall emission and price impact of carbon pricing across the PJM footprint.

IV.   Conclusion

Please allow me to reiterate that PJM recognizes and respects Pennsylvania's prerogative to determine its policies regarding environmental protection and emissions management. PJM does not have the authority to implement a carbon price on its own, and we are not an environmental or air quality policymaking entity. At the behest of our members, PJM is currently modeling various carbon pricing and leakage mitigation scenarios for educational and information purposes at our Carbon Pricing Senior Task Force. While the time allotted for my comments today is insufficient for me to provide a complete analysis of our modeling outcomes, PJM would be happy to meet with any committee member interested in a detailed review of our methods, analysis and preliminary conclusions.

Chairman Yaw, Minority Chairman Santarsiero and distinguished members of the Committee, I thank you for the opportunity to present my comments today. I look forward to any questions you may have.