

PENNSYLVANIA HOUSE OF REPRESENTATIVES

CONSUMER AFFAIRS COMMITTEE

Statement of F. Stuart Bresler, III on Behalf of PJM Interconnection

May 6, 2019

I. Introduction

Good morning, Committee Chairs – Representative Roae and Representative Matzie – and members of the Consumer Affairs Committee. Thank you for the opportunity to appear before you today. My name is Stu Bresler, and I am Senior Vice President of Operations and Markets for PJM.

I last appeared before this Committee not long ago, in March of this year. My testimony then focused on providing information and education on PJM, our role as a system and market operator, and the value we bring to ratepayers in the Commonwealth. I spoke about our ongoing, successful mission to ensure bulk electricity system reliability at the lowest reasonable cost for Pennsylvania and all the states in the region we serve. I also spoke about how the energy industry is evolving with changes in fuel mix, technology, and the way consumers use electricity. I spoke about PJM's efforts to evolve alongside the industry, and how we are looking to leverage the discipline and efficiency of our markets to find solutions that will continue to ensure reliability at lowest cost while embracing many of the drivers behind that evolution. I am pleased to report that in the short time since I last appeared before you, reliability in PJM remains robust, now and into the foreseeable future, and our initiatives to enhance and evolve our markets continue to move forward.

I will also repeat another data point that my PJM colleagues have espoused in testimony before members of the General Assembly surrounding cost savings: Pennsylvanians, over the last five years, have seen more than \$2 billion in savings through our competitive markets.

Absent from my testimony in March was a discussion of state legislation, or policy, related to Alternative Energy Portfolio Standard (AEPS) expansion or the concept of providing additional, out-of-

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market revenue streams for nuclear, renewable or any other forms of electricity generation. At that time, House Bill 11 (HB11) had not yet been noticed or assigned to the Consumer Affairs Committee. Clearly, as I now appear before you in a hearing for HB11, this Committee has specific legislation under consideration. The purpose of this hearing notwithstanding, it is important to note that PJM is neither a proponent nor an opponent of this bill or the version currently before the Senate Consumer Protection & Professional Licensure Committee. PJM recognizes and respects Pennsylvania's prerogative to set forth policies regarding environmental protection, workforce retention and local tax base. PJM also recognizes that state policy plays a role in determining the assets and fuel mix used to meet the Commonwealth's resource adequacy needs.

That PJM is neither advocate nor opponent of HB11 should not, however, be taken as an indication that the bill lacks potential impact or consequence to our markets under their current format and structure. As I indicated in my prior testimony, the benefits resulting from the PJM markets and enjoyed by Pennsylvania consumers stem from the wisdom and foresight of Pennsylvania's prior policy decisions to leverage the power of competitive markets in meeting its resource adequacy needs. However, those markets need to work efficiently if they are to continue to achieve their goal of reliability at lowest cost. Our regulator, the Federal Energy Regulatory Commission (FERC), recently ruled that the PJM capacity market for resource adequacy has become unjust, unreasonable and unduly discriminatory, because it fails to adequately address price distortions created by out-of-market support for generation resources similar to the kind contemplated in HB11. That finding required PJM to file a proposal at FERC that contained significant changes to the existing capacity market in an attempt to address the deficiencies cited in the FERC order. The fact that PJM must alter its capacity market to address the impact of out-of-market payments to generation is not itself a

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validation or an indictment of the policy behind the out-of-market payments. It is simply an indication that policies like the ones contemplated in HB11 can impact the PJM markets. Given Pennsylvania's decision to rely on PJM's markets to provide cost-effective resource adequacy, this Committee may find it useful to understand those impacts, and how the market changes implemented as a result may in turn impact Pennsylvania. This Committee should also be aware that there are alternatives to out-of-market payments for retaining or incentivizing a resource mix that would achieve carbon reduction goals that more effectively integrate with the market structures on which Pennsylvania has chosen to rely. Implementing a price on carbon emissions is the primary and most readily available such alternative.

The remainder of my testimony will provide additional detail pertaining to the FERC Order, PJM's responsive proposal and how the potential changes to the PJM capacity market will interact with HB11 if it were to become law. It will also provide clarity on PJM's role in the implementation of carbon pricing and how carbon pricing can be integrated into PJM's existing energy market. Finally, it will address some possible misconceptions about the timeframes under which PJM's markets and planning processes seek to ensure reliability.

II. FERC Order on Capacity

In June 2018, FERC issued an order in response to a complaint from a PJM member that sought relief from capacity market price suppression, caused by what the member characterized as below-cost offers from existing resources whose continued operation is being subsidized by state-approved, out-of-market payments. FERC found in favor of the complainant. In the introductory paragraph of FERC's order on the complaint, FERC outlined its perspective on the impact of out-of-market payments on the PJM capacity market:

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Over the last few years, the integrity and effectiveness of the capacity market administered by PJM Interconnection, L.L.C. (PJM) have become untenably threatened by out-of-market payments provided or required by certain states for the purpose of supporting the entry or continued operation of preferred generation resources that may not otherwise be able to succeed in a competitive wholesale capacity market.¹

The order goes on to discuss how it is likely that out-of-market payments to generation suppress prices within the capacity market, thereby distorting the price signals set through the yearly auction.² This is significant because the capacity market relies on these price signals to incentivize efficient market entry and exit. That is to say, the price signals are an indicator as to when an uneconomic asset should exit the market and when an economic asset should enter or remain in the market. Over time, accurate price signals and efficient market entry and exit ensure that resource adequacy is maintained across the PJM region in the most economically efficient manner – a key component of reliability at lowest reasonable cost. The concern over the impacts created by these potential price distortions led FERC to declare that PJM’s capacity market is unjust, unreasonable and unduly discriminatory.

The finding that PJM’s capacity market is unjust and unreasonable requires PJM to address and remedy the deficiencies cited by FERC as the underlying causes for the finding. In response, PJM submitted a proposal to FERC that included an expansion of the current rules that prevent these kinds of price

¹ <https://www.ferc.gov/CalendarFiles/20180629212349-EL16-49-000.pdf>

² FERC Order in EL16-49: These subsidies enable subsidized resources to have a suppressive effect on the price of capacity procured by PJM through its capacity market, called the Reliability Pricing Model (RPM). Out-of-market payments, whether made or directed by a state, allow the supported resources to reduce the price of their offers into capacity auctions below the price at which they otherwise would offer absent the payments, causing lower auction clearing prices. As the auction price is suppressed in this market, more generation resources lose needed revenues, increasing pressure on states to provide out-of-market support to yet more generation resources that states prefer, for policy reasons, to enter the market or remain in operation. With each such subsidy, the market becomes less grounded in fundamental principles of supply and demand.

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distortions in the capacity market to all types of resources instead of just the new, natural gas combined cycle units to which it currently applies. The PJM proposal also offers an alternative option for capacity resources that receive material subsidies from a state, through which they could avoid application of these expanded rules. If approved by FERC, this option would be available to capacity resources in Pennsylvania that receive a material subsidy through the AEPS or other state-directed mechanisms. The base rules would be an expansion of the Minimum Offer Price Rule (MOPR). Under the MOPR, a capacity resource would be assigned a minimum price to be used as its bid into the capacity auction. If the MOPR price is too high, the resource will not likely clear in the auction, and thus will not receive capacity revenue. Failure to clear the capacity market would most likely exacerbate revenue challenges that led to the need for a material subsidy in the first place.

The alternative option under PJM's proposal would, in the event a resource was concerned its MOPR price was too high to clear an auction, allow the resource to remove itself (i.e., "carve out") and a commensurate amount of load (demand) from the capacity auction altogether. PJM would then procure only the quantity of capacity necessary to meet the remaining demand on the system, and the carved-out resource would receive a PJM capacity commitment identical to those cleared through the auction. While this option would not remove the price-suppressive effect of a resource with a material subsidy, it would preserve the opportunity for a state to directly compensate the resource for its capacity value, as opposed to having that revenue stream come from the capacity market itself. This option also ensures that such a resource would be counted among the set of capacity resources on which PJM would rely. This option would ostensibly require Pennsylvania to pass both legislation authorizing a resource owner to choose the carve-out option and a

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mechanism for the state to compensate resources required to meet the demand, or load, that has been carved out of the auction. My understanding is that HB11 Section 8.2 was included in anticipation of this need. In addition to these provisions accommodating state policy decisions with respect to capacity resources, and to address the price suppression that would otherwise remain, PJM also proposed a method to establish a competitive clearing price through the auction, so that Pennsylvania, and other states continuing to rely on the price signals sent by the markets to ensure long-term resource adequacy for the remainder of its resource mix, could rest assured that the markets will continue to perform that function effectively.

Again, that FERC requires PJM to alter its capacity market in some fashion to protect against the price-suppressive effects of proliferating subsidies does not result in PJM taking a position in support of, or in opposition to, HB11. The fact is simply that FERC has determined that the kind of out-of-market payments contemplated in HB11 impact the capacity market, and that PJM must respond to that finding. Given Pennsylvania's reliance on the efficient operation of these markets for the continued provision of resource adequacy at least cost, I would expect Pennsylvania would be supportive of these efforts on the part of PJM and FERC. If approved, PJM's capacity proposal pending before FERC would likely result in Pennsylvania capacity resources eligible for a Tier 3 AEPS credit, receiving capacity revenue directly from a state-implemented mechanism, as opposed to the competitive markets.

III. PJM and Carbon Emission Pricing

Much of the discussion around the need for the Tier 3 credit contemplated in HB11, as well as the granting of Zero Emission Credits (ZECs) in states like Illinois and New Jersey, center on state policy aspirations to reduce carbon emissions from electricity generation. In all of the states that have contemplated,

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or are contemplating out-of-market payments to nuclear generators based on carbon emission aspirations, the question of carbon pricing arises as an alternative. A price on carbon emissions generally integrates well with PJM's current markets. This is true in Maryland and Delaware; two states in PJM that participate in the Regional Greenhouse Gas Initiative (RGGI). Generators in both states are able to include RGGI prices for carbon when they bid into the PJM energy market.

While PJM recognizes the economic efficiency of addressing emissions concerns by pricing carbon, please let me be clear that PJM does not have the authority to actually implement a carbon price. 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 RGGI. Again, to be clear, PJM has no role in authorizing a price for carbon emissions, nor would it play a role in setting administrative prices for carbon emissions. Where PJM can play a role is in developing market-based mechanisms to help mitigate interstate impacts between states within the PJM region that do, and do not, choose to implement carbon pricing. PJM stakeholders recently voted to commence a process to examine that very issue. 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 necessary 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.

While I am on the subject of carbon emission pricing, I would like to address statements made in Pennsylvania and elsewhere insinuating that PJM's markets are flawed because they do not place a value on

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carbon-free generation or provide compensation to generators that have low-carbon-emission attributes. It is true that PJM's markets do not inherently value carbon-free generation. As it is being discussed here, though, carbon emissions are an externality. By definition, externalities are not valued in a market unless, generally, a policymaking entity has made the decision to assign a cost to that externality. The omission of such an externality is by no means unique to PJM's markets. PJM's markets can, however, be leveraged to bring the benefits and discipline of competition to a state's carbon mitigation policy goals, but it requires that state to authorize a cost to be assigned to those carbon emissions.

IV. PJM Markets Value Reliability Over a Range of Timeframes

In the discussions on HB11 and in discussions on similar bills in other states, PJM and its markets have been occasionally maligned for allegedly valuing resources exclusively when they are the lowest-cost electricity provider over the next five minutes. This is a mischaracterization. It is true that as the system operator for the PJM region, we must match generation and load on an instantaneous basis. It is also true that we settle our energy market on a five minute basis so that we can use price signals at a level of granularity and at a frequency that incentivizes behaviors conducive to maintaining reliability and system stability. It is incorrect, however, to say that our markets, prices or processes go no further than low cost for five minutes. First, our energy and ancillary services markets are designed to incentivize multiple attributes necessary to maintain reliability over the next five minutes, the next hour, the next day, and so on. Additionally, PJM's capacity market procures resources to ensure supply adequacy looking ahead three years. Finally, PJM's transmission planning process looks out over the next 15 years to ensure that our total system can maintain reliable electricity service into the foreseeable future. Together, PJM's markets, information platforms and

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planning processes value assets necessary for reliability over the immediate, short, medium, and long-term timeframes.

V. *Conclusion*

I hope that my appearances before this Committee and the conversations you have had both formally and informally with other PJM employees provide a comfort level that PJM is vigilantly ensuring that electricity production and transmission are reliable today and into the foreseeable future. I also hope that you feel that PJM and our markets are bringing demonstrable value to Pennsylvania, its residents, and its businesses. PJM sincerely respects Pennsylvania's prerogatives regarding state policy but also takes very seriously our responsibility to ensure that, as long as our markets are relied upon to provide cost-effective reliability for the region we serve, those markets need to be able to function efficiently.

No matter the outcome of HB11, the debate over carbon emissions and the potential to assign a price to them will continue. While PJM will not be the one to implement a carbon price, we stand ready to help you understand how carbon pricing can integrate with the wholesale markets to the benefit of Pennsylvania.

Chairs Roae and Matzie and distinguished members of the Committee, I thank you for the opportunity to present my testimony today. I look forward to any questions you may have.