VIA ELECTRONIC MAIL

The PJM Board of Managers c/o Ake Almgren - Chairman PJM Interconnection, L.L.C. 2750 Monroe Blvd. Audubon, Pennsylvania 19408

Re: The Future of PJM Markets

Dear Mr. Almgren and the PJM Board of Managers:

The undersigned Chief Executive Officers are writing to express their shared concern for the future of the wholesale markets administered by PJM Interconnection, L.L.C. ("PJM"). PJM energy and capacity markets need to keep pace with developments in the energy industry and evolving changes in policy. PJM's current wholesale power market design fails to reflect the full value of resources providing services, resulting in inaccurate price signals that undermine efficient investment by our companies and other market participants. While we commend the leadership that you and other members of the PJM Board of Managers ("Board") have shown in promoting improvements in reserve procurement and pricing in the energy market, these needed reforms provide modest incremental change, but fall short of the fundamental changes that are needed to support baseload electric generator units over the long-term.

We strongly support the steps the Board has taken to direct a reserve market solution. The PJM Board demonstrated leadership by providing stakeholders with a clear objective and then authorizing PJM management to submit a filing with FERC if stakeholder consensus was not achieved in a reasonable time. This sense of urgency was needed to ensure that reserve market issues are addressed expeditiously rather than continuing to flounder in the stakeholder process. We have seen this scenario play out with too many price formation issues and support decisive leadership to address existing flaws in the reserve market. PJM's current Operating Reserve Demand Curve is woefully out of date, failing to accurately reflect system conditions during scarcity — a problem other eastern RTOs/ISOs addressed long ago.

We remain concerned with PJM's ability to expeditiously address these types of market design flaws. Specifically, PJM has not been able to adequately navigate the current stakeholder process that was initiated to address key energy market price formation issues. As a result, critical reforms have been mired in regulatory proceedings for years. PJM's implementation of five-minute settlements, for example, was not achieved until 22 months after FERC's Order No. 825. As early as March 2009, Andrew Ott, the current President and CEO of PJM, acknowledged "that [to correctly price scarcity events] an operating reserve demand curve is necessary in concept." Yet almost ten years later PJM's

<sup>&</sup>lt;sup>1</sup> "Evolution of Scarcity Pricing In the PJM Market," presentation to the Harvard Energy Policy Group, March 13, 2009 at p. 8, available at: <a href="https://hepg.hks.harvard.edu/files/hepg/files/andy-ott\_march09.pdf">https://hepg.hks.harvard.edu/files/hepg/files/andy-ott\_march09.pdf</a>.

Operating Reserve Demand Curve proposal remains in the stakeholder process while other regions successfully implemented changes years ago.

Additionally, PJM has not taken the proactive steps needed to value resiliency attributes, such as fuel security and fuel diversity, of its generating fleet. In contrast, other regions, which have successfully implemented critical price formation reforms, have been able to move on to new initiatives intended to enhance their energy markets. Instead of driving changes for appropriate market price signals, PJM remains a facilitator to implement changes that achieve stakeholder consensus. This is simply not enough. For example, PJM recently issued a white paper analyzing fuel security in the PJM system. PJM needs to be more out front and expedient in resolving urgent fuel security issues, especially in light of the December 18, 2018 NERC report highlighting potential risks from accelerated retirements.

It is imperative that the Board and PJM act swiftly and decisively on important price formation reforms so that these fundamental issues can be addressed within the PJM markets. The markets are at a critical juncture and clear leadership is necessary to ensure the markets evolve to work as efficiently as intended and meet the needs of customers and investors. We appreciate your consideration and attention to these issues and look forward to working collaboratively to help move them forward.

Respectfully submitted,

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By:

Ralph Izzo

Chairman of the Board, President and CEO

DUKE ENERGY CORPORATION

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