

Tock, Jennifer

From: adevitis1@gmail.com
Sent: Sunday, September 17, 2017 6:43 AM
To: Tock, Jennifer
Subject: Fwd: Re: PJM Letter

----Forwarded using [Multi-Forward Chrome Extension](#)---

From: Frank LaRose
Date: Tue Jun 13 2017 02:43:03 GMT+1000 (AEST)
Subject: Re: PJM Letter
To: "Pine, Ty"
Cc: "Seitz, William" , "John Eklund - Calfee, Halter & Griswold LLP (JEklund@Calfee.com)" , Anthony DeVitis , "Zucal, Ethan" , Chris Oliveti

I'm ok with this version of it. Let's get it out. Thanks.

Frank LaRose
330.461.OHIO (6446)
Frank@FrankLaRose.com

On Jun 12, 2017, at 11:30, Pine, Ty <tpine@firstenergycorp.com> wrote:

Good morning, gentlemen.

The attached letter to PJM incorporates the suggestions I received last week. With your permission, I want to work with your staff to get your signature on the letter today.

Please confirm that your support sending the letter and that I may work with your staff to get signatures.

Thanks.

Ty Pine
614-257-8926

The information contained in this message is intended only for the personal and confidential use of the recipient(s) named above. If the reader of this message is not the intended recipient or an agent responsible for delivering it to the intended recipient, you are hereby notified that you have received this document in error and that any review, dissemination, distribution, or copying of this message is strictly prohibited. If you have received this communication in error, please notify us immediately, and delete the original message.

<Legislative response to PJM letter 061217_v2.docx>

Tock, Jennifer

From: adevitis1@gmail.com
Sent: Sunday, September 17, 2017 6:44 AM
To: Tock, Jennifer
Subject: Fwd: ZEN and PJM
Attachments: 5-31-2017 PJM Letter.pdf

----Forwarded using [Multi-Forward Chrome Extension](#)----

From: "Pine, Ty"
Date: Tue Jun 06 2017 00:41:07 GMT+1000 (AEST)
Subject: ZEN and PJM
To: "John Eklund - Calfee, Halter & Griswold LLP (JEklund@Calfee.com)", "frank@franklarose.com", Anthony DeVitis

Gentlemen,

I thought you should be familiar with the attached letter from PJM. Their comments recognize that PJM only considers reliability at the least cost without consideration of any other important factors such as resiliency, environmental, economic development, and fuel security. They also comment that they are at the "starting point" for considering ways to properly value other factors and invite state policy-makers to participate. We want to work with you as sponsors of the Zero Emitting Nuclear Resource Program to further understand what PJM is considering in terms of policy objectives, timing and other procedural items.

I will be in contact with you soon on this issue. As always, thanks for your consideration and please let me know if I can assist you in any way.

Ty Pine

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2750 Monroe Blvd.
Audubon, PA 19403

Kerry Stroup
Manager, Regulatory & Legislative Affairs
484-919-5554

May 31, 2017

Hon. Bill Beagle
The Ohio Senate Public Utilities Committee
Senate Building
1 Capitol Square, 2nd Floor
Columbus, OH 43215

Hon. William Seitz
The Ohio House of Representatives Public Utilities Committee
77 S. High St
13th Floor
Columbus, OH 43215

RE: Harmonizing State Public Policy Objectives with Wholesale Electricity Markets

Dear Chairmen Beagle and Seitz,

Your Committees are engaged in discussion focusing on electric grid reliability and Ohio's energy policy. PJM would like to offer a few thoughts relevant to the discussion for your consideration. The attached comments focus on: (1), the role of the wholesale electricity market operated by PJM in Ohio and neighboring states; and (2), opportunities for cooperation to achieve our respective objectives.

In 1999, the state adopted a policy embracing competitive electricity markets to benefit Ohio consumers and businesses. As the administrator of the wholesale markets that support the retail market in Ohio, PJM commits to working with Ohio policymakers on accommodating the state's public policy goals related to electric generation. The competitive wholesale electricity markets provide an effective platform to address such goals in the most efficient and least cost manner for consumers. In addition, PJM's approach would ensure protection for Ohio from the impacts of public policy initiatives undertaken by neighboring states that have not been endorsed and adopted by Ohio policymakers.

I thank the Committees for their consideration of these comments, welcome the opportunity for continued engagement, and look forward to meeting with members who wish to discuss the approaches outlined in our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Kerry Stroup", written over a faint, larger version of the signature.

Kerry Stroup

cc: Ohio Senate President Larry Obhof
Ohio House of Representatives Speaker Cliff Rosenberger
Ohio Senate and House Public Utility Committee members

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I. Role of the wholesale market operated by PJM

As a regional power grid operator, PJM manages the reliability of the electric transmission system for 13 states, including all of Ohio, and the District of Columbia. PJM ensures electric reliability across the region we serve through coordinated real-time operations, regional transmission planning, and competitive electricity markets.

The central operation of the high-voltage electric grid and wholesale electricity market provides significant value to Ohio and the region. PJM's services produce annual savings of \$2.8 billion to \$3.1 billion, largely realized through economies of scale and supply and demand diversity.

In restructuring Ohio's retail electricity market in 1999, state policymakers embraced a competitive market system that assures efficient decisions on entry and exit of power supply resources. Doing so transferred from captive ratepayers to generation owners those risks associated with decisions to retain or invest in resources. Ohio directed the state's investor-owned electric utilities to join Regional Transmission Organizations such as PJM, which, among other things, facilitate entry and exit.

PJM is responsible for ensuring in real time, the operational reliability of the high voltage, interstate transmission system and the interconnected generation and load across the region. Also, over a longer planning horizon, PJM is responsible for ensuring that infrastructure – both transmission and generation – is sufficient to meet, reliably and cost-effectively, the needs of consumers in our region.

The PJM regional transmission planning process identifies transmission infrastructure, given ever-evolving system conditions, necessary to ensure reliable delivery of generation today and into the future. Spanning state boundaries allows regional solutions to come together in a single, cohesive, optimized plan. Since 1999, the PJM Board has approved transmission system enhancements totaling \$29.3 billion to ensure compliance with the North American Electric Reliability Corporation, regional or local transmission owner planning criteria, thereby maintaining PJM transmission system performance at or above established reliability standards.

PJM's markets work together to ensure real time operational reliability and long term resource adequacy at the most efficient cost. A forward capacity auction, combined with energy and ancillary service markets, provide price signals generation owners and developers rely on to determine entry and exit decisions necessary to ensure reliability. PJM's markets are agnostic on resource and fuel types, so do not discriminate or favor one technology, or one specific resource, over another. A recent PJM analysis has confirmed that the markets are providing resource entry and exit decisions and encouraging technology innovation¹.

To ensure enough power supply resources exist to meet future demand, each May PJM holds an auction to procure resources for a one-year term, three years into the future. These forward auctions serve as one of several electric market signals generation owners use to determine entry and exit decisions. The forward auction has procured enough capacity to meet future demand, plus a reserve margin, through May 31, 2021.

And to address questions regarding fuel diversity given the growing dependency on gas resources, PJM evaluated the reliability of potential future resource mix portfolios². The analysis concluded significantly more natural gas-fired generation could be added to the system before impacting reliability; however, the study also highlighted new risks ("resilience risks") growing with the potential increased dependency on natural gas delivery infrastructure.

PJM's markets produce high levels of reliability and investment. In Ohio alone, wholesale market signals have spurred the active development of over 11,000 megawatts of new, highly efficient natural gas-fired generation. Powered by Utica

¹ *Resource Investment in Competitive Markets*; PJM Interconnection; May 5, 2016; <http://www.pjm.com/~media/766E4AC9442A428AA83776AFD9F48929.ashx>

² *PJM's Evolving Resource Mix and System Reliability*; PJM Interconnection; March 30, 2017; <http://www.pjm.com/~media/library/reports-notice/special-reports/20170330-pjms-evolving-resource-mix-and-system-reliability.ashx>

shale gas, according to project developers, these plants represent over \$9.5 billion of investment, in Butler, Carroll, Columbiana, Guernsey, Harrison, Lucas, Pickaway, and Trumbull counties.

II. Opportunities for cooperation to achieve respective objectives

Wholesale electricity markets strive to deliver 'reliability at least cost'. The performance of the market has met this objective, delivering high levels of power supply resources at competitive prices. Admittedly, however, the market does not consider other interests, such as advancing zero emission generator characteristics.

Establishing a zero emission policy for Ohio, HB 178 and SB 128 would provide payments to certain emission free generation resources, enabling them to offer bids into the wholesale market at prices that do not reflect their actual costs. PJM's mandate is not to opine on the merits of the State's zero emission goals or other State goals met by supporting legacy generation. PJM is concerned, however, about how such policies – implemented through payments to select generators – will impact the wholesale electricity markets and their design objectives. Generation resources that no longer need to rely on the wholesale market to recover all of their costs are enabled and incented to submit lower than cost offers. Offering bids at lower than cost depresses wholesale market prices for other competitive generation owners in Ohio, potentially crowding out merchant competition that relies on the market revenues alone to support investment, and providing other incumbent generation lower than competitive returns. These consequences would oblige PJM to take steps to address this harm to market price signals in order that the wholesale markets can continue to assure reliability in Ohio and the rest of the PJM region.

The most efficient way to accomplish state policy objectives while retaining the reliability and market benefits PJM provides to Ohio is to incorporate such policies directly into the wholesale market. It is PJM's desire to find pragmatic, workable solutions with policymakers and market stakeholders. For this reason PJM has developed an approach to harmonize market rules with public policy objectives for Ohio.

To begin a dialogue with PJM states exploring public policy objectives that recognize the value of zero emission resources such as nuclear generation, PJM put forward a white paper for consideration³. PJM's concept allows states within PJM to voluntarily come together to implement their policy objectives through the wholesale electricity market. In doing so, states gain efficiencies by pooling together resources and demand to meet mutual objectives. Likewise, the wholesale market continues to incent efficient entry and exit of generation supply resources, and sustains economic real time dispatch of the generation resources to provide reliable system operations.

Such efforts would not necessarily require thirteen states all to agree. PJM is proposing solutions that do not force consumers to subsidize resources that benefit neighboring states or, in the converse, force Ohio consumers to bear the consequences of subsidizing generating units in other states that negatively affect the need for infrastructure investment in Ohio.

While the white paper is a starting point to work toward a cooperative approach, much work would be required to bring something of this nature to fruition. Engagement and consideration by the states within PJM, or a subset of such states, would serve as the initial starting point. We invite Ohio policymakers, utilities and other interested parties to engage with us in such a discussion.

With respect to policies supporting legacy generation which may not be economic in the wholesale markets, PJM is working with stakeholders to consider changes to its capacity market rules that would accept state actions to promote individual generators, but limit the impact that such actions would have on the competitiveness of PJM's wholesale markets and the integrity of the investment signals that issue from these markets. PJM initiated discussion with

³ *Advancing Zero Emissions Objectives through PJM's Energy Markets*; PJM Interconnection; May 2, 2017; <http://www.pjm.com/~media/library/reports-notices/special-reports/20170502-advancing-zero-emission-objectives-through-pjms-energy-markets.aspx>. This document will be updated as PJM receives feedback on the proposal.

stakeholders last August on how to harmonize the market rules with such policy objectives. We also invite discussion on this proposal.⁴

Additionally, while not being considered in response to state policy developments, PJM is undertaking another initiative that may have bearing on the resources in question under the proposed bills pending before the House and Senate committees. We are seeking to examine the rules that govern how marginal prices are formed in our wholesale energy market to confirm whether this market is appropriately reflecting a resource's full contribution to operational reliability in light of the dramatically changed resource mix since 2010. As stated above, the markets are providing appropriate resource entry and exit signals overall; this effort is focused on ensuring that all resource types are compensated fairly for the services they provide for grid reliability.

Finally, PJM is reviewing recently introduced bills HB 239 and SB 155 addressing OVEC generation. Our initial impression is that these bills raise similar wholesale market impact concerns as HB 178 and SB 128. In the near term, we will seek to gain a more detailed understanding of them through engagement with the bill sponsors.

⁴ PJM's Capacity Market Repricing proposal may be found at <http://www.pjm.com/~media/library/reports-notice/special-reports/20170502-capacity-market-repricing-proposal.ashx>. This document will be updated as PJM receives feedback on the proposal.

Tock, Jennifer

From: ANTHONY DEVITIS <adevitis1@sbcglobal.net>
Sent: Sunday, September 17, 2017 6:56 AM
To: Tock, Jennifer
Subject: Fw: Legislative response to PJM letter 06072017 v1 LaRose edits.pages
Attachments: Legislative response to PJM letter 06072017 v1 LaRose edits.pages.pdf

On Thursday, June 8, 2017 5:31 PM, Anthony DeVitis <adevitis1@sbcglobal.net> wrote:

Sent from my iPhone

June XX, 2017

Kerry Stroup
PJM Interconnection, LLC
2750 Monroe Blvd.
Audubon, PA 19403

Dear Mr. Stroup,

Thank you for your comments regarding the Zero Emissions Nuclear Resource Program currently under consideration in the Ohio legislature. We value your input as we work to enact legislation that would support Ohio's two nuclear power plants and the vital environmental, economic, fuel diversity and security, grid resiliency and other benefits they deliver to the people of our state.

As we work to ensure the needs of Ohio citizens are met, it is our belief that nuclear energy is critical to our statewide energy goals. Davis-Besse and Perry provide 90 percent of our carbon-free electricity, employ thousands of Ohio residents and deliver hundreds of millions in tax revenues and other economic impacts. We are deeply concerned about the potential impacts of nuclear plant closures to our state and its people.

I know PJM shares our commitment to ensuring safe, reliable and affordable electricity service to Ohio residents and businesses. The challenge is no doubt a complex one, and we appreciate the effort your organization has put towards identifying solutions that preserve our region's valuable baseload assets. While those efforts have yielded some small gains, the legislation we are considering is necessary since the root of the issue remains.

As you are aware, our legislative process is well underway at this point, and time is of the essence for taking action to preserve the state's nuclear assets. In order to better understand how PJM's approach might complement policy solutions currently under consideration in Ohio, we have outlined our questions in the attached document. We look forward to your response by June XX, 2017 so that we may consider your perspective as we continue this important work.

Sincerely,

Harmonizing State Public Policy Objectives with PJM Wholesale Electricity Markets

1. Does PJM agree that not all PJM-states have to be in agreement for a regional approach?
 - a. Does PJM have a threshold number of states that should agree to a regional approach? Is 2 ok? Is 8 the right number?
 - b. Could two or more regional solutions co-exist?
 - c. What are the chances for getting a regional agreement?
 - d. Have any other ISOs/RTOs attempted to craft a regional solution? Were they successful?
 - e. Is PJM aware of any states that have even agreed to work on a regional solution?
2. What is the process for getting to a regional solution and how much time does PJM estimate that it would take to get a regional solution implemented?
3. Has PJM identified any specific state laws that would need enacted or amended to effectuate a regional solution?
 - a. If so, can PJM provide those laws, and explain the process to make that happen?
 - b. How long does PJM estimate that it will take to enact or amend these state laws?
 - c. Is the same process needed in Ohio as in other states?
4. How would a regional approach impact Ohio?
5. Can PJM provide guarantees that any regional solution would be a net benefit to Ohio?
6. Can PJM provide guarantees that a regional solution would preserve Ohio jobs, taxes and economic development?
7. Does PJM plan to develop a regional approach in an equitable way?
 - a. For example, would states with a larger percentage of nuclear benefit more than Ohio? Would Ohio be forced to pay a disproportional amount for other states carbon free power?
 - b. Would there be any reconciliation/reallocation process for states that benefit more from a solution?
8. Can PJM explain how the border adjustment would work? We've heard from an economist that this can be very challenging.
9. Do you have any illustrative examples on how this would work?

10. Is this a practical theory? There are still numerous details that are unknown which creates a cloud of uncertainty. Can we assure Ohioans that this is a viable solution?
 - a. We were told that Capacity Performance was the answer to properly compensating resources, and that hasn't worked. Why should we expect that this new theory will?
11. How will PJM "ensure protection for Ohio from the impacts of public policy initiatives undertaken by neighboring states that have not been endorsed and adopted by Ohio policymakers."
 - a. What form will these protective measures take?"
 - b. Is PJM promising every state this same protection even though they may all have or will have adopted diverse policies?
 - c. Since you note endorsements by state policy makers, do you expect that those policymakers will have a voice in stating whether any PJM solution does in fact protect its interests? What is the recourse if states do not agree?
12. Are there other market design issues that PJM has not addressed or resolved? When were these issues first noticed? When will they be fixed?
 - a. Does PJM have plans to address the arbitrage issue in incremental auctions that FERC has found may not be just and reasonable?
 - b. Does PJM have any plans to address price certainty in capacity auctions?
 - c. Does PJM have any plans to address resilience in the capacity market?
 - d. Does PJM have any plans to address fuel security in the capacity market?
 - e. Does PJM have any plans to address price formation in the energy/capacity market?
 - f. Does PJM have any plans to address external capacity rules/requirements in the capacity market?
13. What approvals need to occur for a PJM-regional solution to be implemented (e.g., PJM stakeholders, quorum of states, PJM Board, FERC, federal courts, etc.)?
14. If FERC approval is required, does PJM have a proposed process and estimated timeline for approval?
 - a. Does PJM believe that FERC is amenable to a proposed regional solution?
 - b. Does PJM have any insight on what the new FERC Commissioners think about a regional solution?
15. Does PJM have a plan for when a regional solution is challenged in federal court?
16. PJM notes that it manages the reliability of the transmission system for all of Ohio. Isn't it true that PJM's jurisdiction does not cover municipal-owned systems and rural cooperatives, of which there are over 20 in Ohio?

- a. Is PJM aware of any other state by state exclusions or interests that should be considered?
17. PJM notes its study that highlighted new risks (resilience risks) growing with the increased dependency on natural gas delivery infrastructure. In PJM's estimation, how and when will these resilience risks be resolved and ensure that Ohio has the long-term reliability and ability to respond in an emergency?
 - a. What assurance can PJM provide that guarantees that Ohio will benefit from the integration of an unknown regional solution and an unknown resiliency solution?
18. PJM states that "generation resources that no longer needed to rely on wholesale electricity markets to recover all of their costs are enabled and incented to submit lower than cost offers".
 - a. If this is a PJM concern, would regulated generators raise similar concerns?
 - b. If this is a PJM concern, do renewable resources that receive federal tax credits raise similar concerns?
 - c. If this is a PJM concern, do renewable resources that receive REC payments raise similar concerns?
 - d. If this is a PJM concern, would gas plants that receive property tax abatement and other economic development incentives raise similar concerns?
 - e. Has PJM established criteria by which resources receiving out-of-market revenues will be singled out? If so, please provide.
19. PJM's separate initiative regarding how marginal prices are formed is also expected to have some bearing on the proposed bills, according to PJM.
 - a. When does PJM plan to have the initiative on marginal prices completed and implemented?
 - b. Does PJM have an established process for that initiative?
 - c. What guarantees can PJM provide that the outcome on the marginal pricing initiative will integrate well with Ohio's objectives and benefit Ohioans?
 - d. If neither the regional solution, the marginal price solution or the resiliency solution are known, how could any state possibly agree to any one of them, in good faith?
20. In your letter alone, PJM has noted 3 significant problems with unknown solutions for integrating state policies, marginal pricing and resiliency.
 - a. What else does PJM believe that Ohio is missing?
 - b. With so many past and proposed "fixes" how can PJM be considered an effective party to oversee and manage wholesale power markets?
 - c. What engineering principles should PJM consider in developing solutions?

- d. Is PPM performing any additional studies to identify and understand unknown solutions and proactively manage appropriate outcomes?

Tock, Jennifer

From: adevitis1@gmail.com
Sent: Sunday, September 17, 2017 6:44 AM
To: Tock, Jennifer
Subject: Fwd: Re: PJM Letter
Attachments: ATT00001.txt; Legislative response to PJM letter 06072017 v1 LaRose edits.pages

----Forwarded using Multi-Forward Chrome Extension----

From: Frank LaRose
Date: Thu Jun 08 2017 23:54:42 GMT+1000 (AEST)
Subject: Re: PJM Letter
To: Ty Pine
Cc: "William J. Seitz" , Anthony DeVitis , John Eklund , Chris Oliveti

Attached is the document with a few minor edits which I am proposing to the letter and questions. Thanks, -
Frank

June XX, 2017

Kerry Stroup
PJM Interconnection, LLC
2750 Monroe Blvd.
Audubon, PA 19403

Dear Mr. Stroup,

Thank you for your comments regarding the Zero Emissions Nuclear Resource Program currently under consideration in the Ohio legislature. We value your input as we work to enact legislation that would support Ohio's two nuclear power plants and the vital environmental, economic, fuel diversity and security, grid resiliency and other benefits they deliver to the people of our state.

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