

**24th Annual Ohio**

# **Energy Management**

**C O N F E R E N C E**

**Rapidly-Changing Energy  
Marketplace: Powering the  
Future of Ohio's Economy**

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**Wednesday, February 19, 2020  
8:30 a.m. to 10:45 a.m.**

## Biographical Information

**Jenn Klein, President, Ohio Chemistry Technology Council  
88 E. Broad St. Ste. 1490, Columbus, OH 43215  
614-224-1730                      jklein@ohiochemistry.org**

Jenn Klein is currently president of the Ohio Chemistry Technology Council (OCTC). OCTC is the leading advocate for Ohio's chemical technology industry, the second largest manufacturing industry in Ohio. Prior to joining OCTC she was the manager of government affairs for Chesapeake Energy in Ohio.

Ms. Klein was formerly the director of energy and environmental policy for the Ohio Chamber of Commerce where she advocated on policy and regulatory issues related to energy and environmental matters.

Prior to joining the Chamber, she was employed for five years as a legislative liaison for the Ohio EPA. While at Ohio EPA, she worked with the legislature on various pieces of legislation and issues impacting the agency. She also has extensive statehouse and budget experience. Ms. Klein worked as a legislative aide to Ohio Senators Doug White and Roy Ray in their tenure as Finance Chairs.

She holds a bachelor's degree in political science from Russell Sage College in Troy, New York.

**Lisa M. Barton**  
**Executive Vice President, Utilities**  
**American Electric Power**

Lisa M. Barton is executive vice president, Utilities overseeing the activities of all AEP utility operating companies. She is responsible for continuing the growth of AEP's regulated utility operations as they focus on investing in advanced technologies to deliver more reliable, affordable and cleaner energy to customers. At AEP, we're improving our customers' experience, strengthening communities and energizing our employees to create a brighter future together.



Barton previously served as executive vice president, AEP Transmission, from 2011 through 2018. During her tenure, she established AEP Transmission Holding Company and its affiliates, oversaw transmission operations, and grew and managed an \$18 billion asset base for the largest owner, operator and developer of electric transmission in North America. She also oversaw AEP's system wide corporate safety and health efforts. Barton served as a board member of Electric Transmission Texas (ETT) and Transource Energy, a competitive transmission development joint venture with Great Plains Energy.

Barton is a member of the company's senior executive team and is an active participant in national forums on the subject of energy policy. She testified before the U.S. Senate, state commissions and served as a contributing member of the MIT Energy Initiative "Future of the Electric Grid"; and the bipartisan committee initiative on "Delivering Electric System Reliability and Clean Technology." Prior to joining the company in 2006, she worked for Northeast Utilities in Berlin, Conn., Ransmeier and Spellman in Concord, N.H., and Strategic Energy LLC in Pittsburgh, Pa.

Barton earned a bachelor's degree in electrical engineering from Worcester Polytechnic Institute in Worcester, Mass., and a juris doctorate degree from Suffolk University Law School in Boston, Mass. She completed the Harvard Mediation Program for the Instruction of Lawyers, the Executive Program-Darden School of Business at the University of Virginia and the Nuclear Reactor Technology Program at MIT. A former International Women's Foundation Fellow and member of G100 Next Generation Leadership, Barton is a current member of C200.

Barton is a board member of Commercial Metals Company and the New Hampshire and Massachusetts state bar associations. She is registered to practice before the U.S. Patent & Trademark office.

Community service has been an integral part of Barton's career. She currently serves as chair of the board of directors for the Columbus Symphony Orchestra. Barton is also a board member of ReliabilityFirst and the Wexner Center for the Arts. At AEP, she serves as an executive sponsor of the Pride Partnership Employee Resource Group.



# Frederick S. Bresler III

## Senior Vice President – Market Services



**Frederick S. “Stu” Bresler**, senior vice president – Market Services, PJM Interconnection, is responsible for all aspects of PJM’s market functions. Mr. Bresler’s responsibilities cover all of the markets operated by PJM, including those for Capacity, Day-Ahead and Real-Time Energy, Ancillary Services, Financial Transmission Rights and Demand Response operations. Mr. Bresler is responsible for the continued evolution of PJM’s markets, including the integration of renewable resources and the development of analytics around the performance of those markets.

Mr. Bresler has been involved with bulk power system operations and the development and implementation of electricity markets for capacity, energy, transmission rights and ancillary services for over 20 years. Mr. Bresler spent the first seven years of his career at PJM in System Operations, directly supporting dispatch through day-to-day transmission and generation analysis. He then was also responsible for the development and implementation of PJM’s demand response programs, as well as the systems and market design development necessary to support the expansion of the PJM markets. He led the development of mechanisms by which PJM’s operations and markets are coordinated with those of surrounding balancing authorities and regional transmission organizations.

Mr. Bresler earned a Bachelor of Science in electrical engineering and a Master of Management in business administration from The Pennsylvania State University. He is a licensed professional engineer in the state of Pennsylvania.

Mr. Bresler is chair of the board of PJM Connex, Inc., a PJM subsidiary. Mr. Bresler is also chair of the board of APEx (the Association of Power Exchanges), an international organization of electricity and gas market operators, and is a member of the board of directors of the North American Energy Standards Board and Habitat for Humanity of Chester County. He is also on the External Advisory Board for the Department of Energy and Mineral Engineering in the Penn State College of Earth and Mineral Sciences.

[PJM Interconnection](#), founded in 1927, ensures the reliability of the high-voltage electric power system serving 65 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. PJM coordinates and directs the operation of the region’s transmission grid, which includes over 84,236 miles of transmission lines; administers a competitive wholesale electricity market; and plans regional transmission expansion improvements to maintain grid reliability and relieve congestion. PJM’s regional grid and market operations produce annual savings of \$2.8 billion to \$3.1 billion. For the latest news about PJM, visit PJM Inside Lines at [insidelines.pjm.com](http://insidelines.pjm.com).

## Biographical Information

**Graham Leith, Senior Vice President, Head of Retail Energy  
ENGIE, 1990 Post Oak Blvd. Suite 1900, Houston, TX 77056  
713-636-1707                      Graham.Leith@engie.com**

With more than two decades of industry experience, Graham Leith has deep knowledge of the energy markets of the United States, Canada, and the United Kingdom. He has worked with a number of leading energy companies in positions involving sales, marketing, risk management, and operations.

His background includes serving as the Chief Risk Officer and the Vice President and General Manager of Commercial Energy Sales at AEP Energy. Prior to that, he held senior positions with Direct Energy and British Gas (Centrica plc), Ontario Power Generation Inc., and Photowatt Solar. He also worked in various marketing and sales roles with PremStar Energy, Inc., TransCanada Pipelines, Ltd., and Air Solutions, Inc.

Graham earned an undergraduate degree in business and mathematics from Wilfrid Laurier University in Waterloo, Ontario, Canada, and a Master of Business Administration degree from the Schulich School of Business at York University in Toronto, Ontario, Canada.

## Biographical Information

**Kevin Murray, Executive Director, Industrial Energy Users-Ohio**  
**21 East State Street 17th Floor, Columbus, Ohio 43215**  
**614-719-2844**                      **murraykm@mwncmh.com**

Kevin Murray is the Executive Director of the Industrial Energy Users-Ohio and a Technical Specialist in the Columbus, Ohio office of McNees Wallace & Nurick LLC. He has worked with customers addressing matters that affect the pricing, availability and reliability of natural gas, electricity and other utility services. His experience includes evaluating regulatory proceedings at the Federal Energy Regulatory Commission and various state agencies; providing analysis of proposed tariff or rate offerings; assisting in the development of regulatory and commercial strategies; and providing clients assistance in utility contract negotiations, utility and site selections for new facilities, and performing competitor analysis and analysis of customer usage patterns. He has assisted customers on committing energy efficiency projects towards electric distribution company portfolio obligations to comply with recent legislative requirements. He has been extensively involved in activities related to the creation and startup of regional transmission organizations and energy markets in the Midwest. He is a sector representative for end use customers on the Midcontinent ISO Advisory Committee and previously served as committee chairman.

Mr. Murray has served on Ohio's Public Benefits Advisory board representing industrial customers since 2016.

Prior to joining McNees Wallace & Nurick LLC, Mr. Murray spent twelve years with a large industrial corporation where his duties including managing a 20,000 DTH per day natural gas portfolio for the company's Midwest facilities and participating in natural gas, pipeline and electric utility contract negotiation. He also was a company representative at the Electricity Consumers Resource Council (ELCON) and Process Gas Consumers (PGC), where he participated in the development of regulatory advocacy positions and worked with outside counsel representing the company in regulatory proceedings. Mr. Murray also spent several years in supervisory positions in manufacturing operations.

Mr. Murray received a Bachelor of Science degree in Metallurgical Engineering from the University of Cincinnati.



**Sam Randazzo**

**Term ends April 10, 2024**

Sam Randazzo is the chairman of the Public Utilities Commission of Ohio (PUCO). He was appointed to the PUCO and designated chairman by Governor Mike DeWine in 2019.



Chairman Randazzo, an attorney, began his career as a member of the PUCO's technical staff. After leaving the PUCO, he was appointed to act as an assistant attorney general for the State of Ohio and assigned to the PUCO section. He then entered private practice where he focused on energy, communications and utility law.

At the end of 2018, Chairman Randazzo retired from the law firm of McNees Wallace & Nurick LLC where he provided guidance to a broad range of clients including residential, commercial and industrial customers, cooperatives, municipally-owned and investor-owned utilities. His experience includes developing Ohio's innovative self-help natural gas program in 1973; implementation of the Telecommunications Act of 1996 in Ohio; proactive leadership on Ohio utility legislation providing customers with supply side and demand side choices; and general counsel to the Industrial Energy Users-Ohio (IEU-Ohio). Throughout his professional career, Sam has strongly supported and been an active participant in utility consumer education activities.

Chairman Randazzo is a graduate of Cuyahoga Falls High School, the University of Akron and Capital University Law School.

## **Biographical Information**

**K. Jon Taylor**  
**Vice President, Utility Operations**  
**FirstEnergy, 76 S. Main St., Akron, OH 44308**  
**330-374-6505**  
**taylorj@firstenergycorp.com**

Jon Taylor is vice president, Utility Operations for FirstEnergy Service Company.

He began his career with FirstEnergy in 2009, holding various senior level financial positions, including assistant controller FirstEnergy Utilities and assistant controller FirstEnergy Solutions and FirstEnergy Generation. In October 2012, Jon was promoted to vice president and assistant controller for FirstEnergy Corp. He was named vice president, controller and chief accounting officer in 2013. In March 2018, Jon was named president of Ohio Operations and in April 2019, he was promoted to vice president, Utility Operations.

Before joining FirstEnergy, Jon worked for PricewaterhouseCoopers, LLP, from 1997 to 2009.

He graduated from The University of Alabama at Birmingham in 1996 with a Bachelor of Science degree, and he earned a Master of Accounting degree from The University of Alabama at Birmingham in 1997.

Jon is the former chairman of the board of the Development Finance Authority of Summit County – an Ohio Port Authority.



**Wednesday, February 19, 2020**

**8:30 a.m. to 10:45 a.m.**

**Rapidly-Changing Energy Marketplace: Powering the Future of Ohio's Economy ... Priceless Insights on Energy Efficiency, Outlook, Trends, Policy, Technology, Renewable Sources, Grid Security, Resilience, Generation & Transmission, and Stimulating Economic Growth**

**Break from 9:50 to 10:05 a.m. after Question 3**

*Moderator:* Jennifer Klein, *President*  
**Ohio Chemistry Technology Council, Columbus**

Lisa M. Barton, *Executive Vice President – Utilities,*  
**American Electric Power, Columbus**

F. Stuart Bresler III, *Senior Vice President, Markets & Planning*  
**PJM Interconnection, Valley Forge, PA**

Graham Leith, *Senior Vice President, Head of Retail Energy*  
**ENGIE Resources, Houston, TX**

Kevin Murray, *Executive Director*  
**Industrial Energy Users – Ohio (IEU-Ohio), Columbus**

Samuel C. Randazzo, *Chairman*  
**Public Utilities Commission of Ohio (PUCO), Columbus**

Jon Taylor, *Vice President, Utility Operations*  
**FirstEnergy Corp., Akron**

# Energy Management

C O N F E R E N C E

## Page 2 - Questions for Panelists (3- 4 Minute Reply)

1. In December, the **Federal Energy Regulatory Commission** issued an order – the “**MOPR Order**” – that directly addressed the interrelationship between state policy decisions on generation technologies and PJM’s wholesale capacity markets. Earlier in 2019, **HB6**, which reflects Ohio’s state policy decisions on certain generation technologies, was signed into law.

What are the likely **impacts** of the MOPR Order on **Ohio consumers**, given the passage of HB6? Should **stakeholders and FERC reconsider whether any capacity market** is necessary?

*Answers in Order by Panelists:*

**Ms. Barton, Mr. Bresler, Mr. Leith, Mr. Murray, Chairman Randazzo and Mr. Taylor**

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2. For decades, **electricity demand grew at a relatively steady rate of 2%** or so a year. In recent years, particularly since the 2008-2009 **recession, electricity demand growth has slowed** considerably and, in some cases, has declined. At the same time, we are seeing substantial growth in transmission and distribution investment and, consequently, continued growth in transmission and distribution rates.

Are the **current levels of growth in transmission and distribution investment** necessary? Can you explain this **apparent mismatch** between demand and supply, and what it means for Ohio consumers in terms of future transmission and distribution charges?

*Answers in Order by Panelists:*

**Mr. Bresler, Mr. Leith, Mr. Murray, Chairman Randazzo, Mr. Taylor and Ms. Barton**

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3. Many corporations in the energy industry, including a few that are represented on the dais today, have announced their **aspirations to be carbon-neutral by 2050**.

What is **driving** these announced aspirations and, more importantly, how **can these objectives be met** while ensuring that Ohio consumers receive reliable energy at **affordable prices**?

*Answers in Order by Panelists:*

**Mr. Leith, Mr. Murray, Chairman Randazzo, Mr. Taylor, Ms. Barton and Mr. Bresler**

# Energy Management

C O N F E R E N C E

## Page 3 - Questions for Panelists (3- 4 Minute Reply)

4. Over the past few years, the Department of Energy, FERC, state commissions, market participants, and others have devoted resources to discussing the “**resilience**” of our energy infrastructure, including the electric grid and natural gas pipeline infrastructure.

Are these ongoing “**resilience**” efforts likely to lead, in the near future, to any **substantial changes** that impact the ability of Ohio consumers to receive **reliable energy at affordable prices**? If so, what are they and what is that **anticipated impact**?

*Answers in Order by Panelists:*

**Mr. Murray, Chairman Randazzo, Mr. Taylor, Ms. Barton, Mr. Bresler and Mr. Leith**

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5. Over the past few years, we have witnessed dramatic shifts in **capital deployment in the energy industry**, with an increased focus on **renewable technologies, natural gas-fired generation, natural gas infrastructure**, and **emerging technologies** like grid optimization and energy storage.

Based on your interactions with those in the investment community – whether they be Wall Street investors or private equity firms – **what trends in capital deployment** are we likely to see over the **next 3-5 years**? What are the **major risks** that are perceived by the investment community?

*Answers in Order by Panelists:*

**Chairman Randazzo, Mr. Taylor, Ms. Barton, Mr. Bresler, Mr. Leith and Mr. Murray**

**UNITED STATES OF AMERICA  
BEFORE  
THE FEDERAL ENERGY REGULATORY COMMISSION**

|   |   |                         |
|---|---|-------------------------|
| Calpine Corporation, Dynegy Inc., Eastern | : | Docket Nos. EL16-49-000 |
| Generation, LLC, Homer City Generation,   | : | EL18-178-000            |
| L.P., NRG Power Marketing LLC, GenOn      | : | (Consolidated)          |
| Energy Management, LLC, Carroll County    | : |                         |
| Energy LLC, C.P. Crane LLC, Essential     | : |                         |
| Power, LLC, Essential Power OPP, LLC,     | : |                         |
| Essential Power Rock Springs, LLC,        | : |                         |
| Lakewood Cogeneration, L.P., GDF SUEZ     | : |                         |
| Energy Marketing NA, Inc., Oregon Clean   | : |                         |
| Energy, LLC and Panda Power Generation    | : |                         |
| Infrastructure Fund, LLC                  | : |                         |
|   | : |                         |
| v.  | : |                         |
|   | : |                         |
| PJM Interconnection, L.L.C.               | : |                         |
|   | : |                         |
| PJM Interconnection, L.L.C.               | : |                         |

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**REQUEST FOR REHEARING OF THE PUBLIC UTILITIES  
COMMISSION OF OHIO**

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**INTRODUCTION**

Pursuant to Section 313(a) of the Federal Power Act<sup>1</sup> (“FPA”) and Rule 713 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (Commission)<sup>2</sup>, the Public Utilities Commission of Ohio (PUCO) respectfully requests

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<sup>1</sup> 16 U.S.C. Sec. 8251(a)

<sup>2</sup> 18 C.F.R. Sec. 385.713

rehearing of the Order Establishing Just and Reasonable Rate (Order) issued on December 19, 2019 in the above-captioned docket.

In the pages below, the PUCO protests the Order on many grounds (substantive and procedural). This protest is necessary not because of some principled objection to the use of a market-based approach to protect and advance the public interest. Ohio's current laws, policies and its behavior show a strong commitment to and belief in the power of effective competition where and when it can better serve the public interest through service availability, service quality and price outcomes.

Beginning in 1973, Ohio was the first state in the nation to unbundle retail natural gas supply from delivery services so that consumers could act on their own preferences and better address the natural gas supply shortages produced by federal actions and inactions. Ohio's actions to unbundle delivery services from natural gas supply and require delivery services to be provided on a comparable and non-discriminatory basis occurred prior to the Commission's similar initiatives in Order 636 and related Orders.

Ohio has consistently developed and implemented pro-competitive policies in the transportation and telecommunications sector in alignment with pro-competitive federal policies.

And, in 2001 (through legislation enacted in 1999), Ohio retail electric consumers served by investor owned electric utilities received the right to competitively source electricity supply through the availability of unbundled, comparable and non-discriminatory delivery (transmission and distribution) services. One of the more

contentious issues the PUCO had to deal with as part of this restructuring effort involved determinations of how much, if any, “stranded cost” recovery should be made available to incumbent generators. Today, and by the terms of the Order, a state allowance of “stranded cost” recovery would fall within the definition of a “subsidy.” Yet, in Order 888, the Commission told states considering retail access that if the states did not properly provide what the Order now labels a subsidy in conjunction with enabling retail access, the Commission would do so.<sup>3</sup>

Ohio’s efforts to implement its retail electric restructuring legislation had to withstand: the re-regulation forces inspired by wholesale market manipulation perpetuated by a number of industry outliers that occurred under the Commission’s supervision; the Commission’s prolonged accommodation of owners of transmission systems that elected to create commercial and physical seams in Ohio and the region by joining different regional transmission organizations (RTOs); and, the Commission’s failure to ensure that the critically important RTOs were fully functional within the time that the Commission had specified.

The electric sector restructuring muddle that Ohio has had to work through to sustain its pro-competitive efforts has significantly contributed to a retreat by some states, like Michigan, West Virginia, and Virginia, to turn away from comprehensive pro-

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<sup>3</sup> *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities Recovery of Stranded Costs by Public Utilities and Transmitting Utilities* 75 FERC 61,080 at pg. 442 et seq. (1996).

competitive retail access plans. The difficult and challenging transition experience also prevented other states from even considering venturing in the direction of retail access.

And for all of what Ohio has been through and done to keep moving in a pro-competitive retail access direction, the Order singles out one piece of state legislation, Ohio's Substitute House Bill 6 (House Bill 6)<sup>4</sup>, and then wrongly cites the legislation as evidence of state action to increase out-of-market support.

The protests explained in more detail below do not arise because of any hostility to important efforts to harness market forces for the benefit of the public interest. Instead, the protests arise because of what the Order will do to create or feed this hostility because of the substantive outcomes that its directives will reveal as the many blanks are filled in, from concern about these presently unknown substantive outcomes or the time it will take before they are known, and from concern regarding the abrupt turn the Order takes in the direction of not seeking a more balanced accommodation of the rights of states like Ohio to legitimately exercise their police power for the benefit of the health, safety and welfare of their citizens—a power reserved to the states by the Constitution and the FPA itself. Instead of promoting an appropriate coordination between the states and the federal government that is a necessary condition for meeting electric sector reliability objectives and harnessing market forces to serve the public interest in reliable service and

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<sup>4</sup> House Bill 6 was but one of the bills enacted in Ohio in 2019. For example, Ohio House Bill 166, effective in 2019, supplemented Ohio's existing pro-consumer and pro-competitive electricity policy set forth in Ohio Revised Code Section 4928.02 by adding language to ensure that customers' meter data is provided in standard format in as close to real time as is economically justified to "...spur economic investment and improve the energy options of individual customers."

reasonable rates, the Order will discourage such coordination. The Order's failure to include the resource-specific FRR option that the Commission previously included in the prescription of a just and reasonable remedy is a prime example of the extent to which the Order left behind any accommodation of state action for states like Ohio.

At a time when the Commission has already significantly delayed the reveal of the three-year-forward capacity price, it is the PUCO's fear that the forces set in motion by the Order will promote long-lived uncertainty. This will, accordingly, strongly motivate states and market participants to take flight from the consequences attributed to the Order.

The Order unreasonably interferes with the lawful exercise of state police power, fails to accommodate the lawful exercise of such police power, and contravenes authority reserved to the states by the FPA. The responsibility of states to consider and advance the health, safety and welfare of the public is a broad and encompassing responsibility. States do not have the luxury of making public interest decisions based on the narrow focus that the majority has adopted in the Order—a focus that limits consideration of the theoretical potential of some state actions to unreasonably and unjustly affect administratively fixed capacity prices to the disregard of almost everything else. And after applying this narrow focus, the Order proceeds to unduly discriminate against some state actions regardless of how those actions may be viewed as just and reasonable when evaluated based on the much broader public interest responsibilities of states like Ohio. Accordingly, the Order is not the result of reasoned decision making and is, as a result, arbitrary and capricious.

The unduly discriminatory and selectively applied remedy conceptually described in the Order, and then vaguely so, has not been shown to eliminate any unjustness and unreasonableness that may reside in the current administrative process for fixing capacity prices. Similarly, there has been no showing that the newly announced layers of administrative process and administratively determined consequences that will determine capacity resource compensation going forward through an unpredictable and selectively applied new Minimum Offer Price Rule (MOPR) will yield a just and reasonable result. Indeed, the Order provides no objective criteria that will be applied to even specify a range of prices or compensation that, if available to capacity resources in the future, would fall within a just and reasonable zone.

And, the Order is unjust and unreasonable because it selectively imposes an undue or unjust prejudice on the bidding behavior of some state-supported resources while exempting other state-supported resources and *entirely* exempting all federally supported resources (when all such resources are similarly situated in terms of their ability to offer capacity into the organized wholesale market). It leaves stakeholders guessing about what happens to resources (like those in Ohio) supported by both state and federal programs (a common occurrence) and whether state action favorably responsive to recommendations from the federal Department of Energy (“DOE”) (like action by Ohio) share the same exempt status that they would enjoy by the terms of the Order if the support were to come more directly from DOE.

The Order directly violates the FPA by attempting to regulate state decisions about generation mix when such decisions are reserved to the states. And it does so not by finding that the state-supported resources affected by the new MOPR are, individually or collectively, causing unjust or unreasonable administratively determined price suppression. The Order "...is premised on the finding that, as a general matter, resources receiving out-of-market support are capable of suppressing market prices."<sup>5</sup> In fact the Order specifically rejects the notion that there is any need for a demonstration that such state support is actually allowing a resource to uneconomically enter or remain in the market.<sup>6</sup>

The Order is arbitrary and capricious in numerous ways.

It applies an entirely new version of a MOPR to resources participating in some state support programs while exempting other similarly situated resources participating in other state support programs and exempting all similarly situated resources participating in federal support programs. It does so while finding, regardless of the governmental source of the program, that the potential capacity price suppression effects are the same or substantially so.<sup>7</sup>

Without evidence and reasoned decision making, the Order appears to find that a limited population of targeted state support programs could possibly suppress the administratively determined capacity market prices and that a narrow population of state

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<sup>5</sup> Order pg. 35 para. 72.

<sup>6</sup> *Id.*

<sup>7</sup> Order at pg. 8 para. 10

support programs produce a potential suppressive effect that is, necessarily, unjust and unreasonable even when the state programs are responsive to and aligned with federal actions or urgings by DOE. To the extent the Commission-intended state programs responsive to the recommendations of DOE to enjoy the same exempt status as a direct federal support program, it should so state in response to this rehearing request.

The Order is so narrowly focused on the means by which the administratively determined capacity price is fixed that it unreasonably forecloses consideration of the end result, which typically is, as a matter of law, the benchmark for determinations regarding the justness and reasonableness of any service compensation, term or condition.<sup>8</sup> In this regard, the end result consideration must include, in accordance with the FPA, appropriate accommodation of the past, present, and future exercise of state authority.

Notwithstanding the fact that compensation for capacity is a relatively small portion, approximately 20 percent, of the total compensation authorized by the Commission-approved and supervised organized wholesale market, the Order unreasonably and unlawfully insulates determinations regarding the justness and reasonableness of the means by which the administratively determined capacity price shall be fixed from a required examination of the combined compensation available from the capacity, energy and ancillary services segments of such organized market. The Order also fails to consider the extent to which the level and direction of capacity prices<sup>9</sup> are

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<sup>8</sup> *Bluefield Water Works Co. v. Public Service Comm'n* 262 U.S. 679 (1923); *Federal Power Comm'n v. Hope Natural Gas Co.* 320 U.S. 591 (1944).

<sup>9</sup> Since the BRA for the 2007/2008 delivery year, the “rest of RTO” capacity prices have been highly varied, ranging from \$16.46 per MW-day to \$164.77 per MW-day and, in the most recent BRA (2021/2022 delivery year)

capable of or actually are being influenced by such things as: (1) bidding behavior; (2) the extent to which additions to the supply of capacity resources has outpaced growth in demand; (3) the extent to which forced outage rates have declined; (4) the extent to which equivalent availability factors have increased; (5) the extent to which “disruptive” market entrants are increasing opportunities for escape from the continuously changing organized wholesale capacity market; (6) the extent to which market rules of balancing authorities outside the PJM footprint create inappropriate barriers to or subsidize import or export; (7) relative changes in Capacity Import Limits; (8) the extent to which PJM’s annual load forecasts and the associated capacity obligation estimates have consistently been revised downward; and (9) the transmission system betterments that increase import and export capabilities between zones and regions (including those betterments receiving Commission-approved incentives). This improper, insular examination occurs in a context that includes a well-recognized price formation consequence within each capacity, energy and ancillary market segment that is tied to total compensation available from these combined segments.<sup>10</sup> This flawed examination occurs in a context that includes an abundance of capacity resources within or available to the region—a condition that is difficult to reconcile with the finding that current administratively determined capacity prices are (or could be) unjustly and unreasonably suppressed. And

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landing at \$140 per MW-day. For this same period, total capacity cleared through the BRAs has ranged from 129,409.2 to 167,329.5 MW (declining to 163,627.3 MW for the BRA for the 2021/2022 delivery year). The explanation for the pattern and direction of annual BRA results appears to require speculation. In the end, the capacity market cannot be competitive based on fundamental structural realities and the best that can be said about the results of the BRA in any year is that they are consistent with competitive outcomes.

<sup>10</sup> The net CONE and ACR computations that are essential for the specification of the new MOPR’s applicability to any non-exempt capacity resource include offsets for revenue available to the resource from the energy and ancillary services market segments.

the Order does not substantiate a finding that the selective imposition of an entirely new MOPR on some state-supported resources will result in a just and reasonable capacity price signal.

The Order recognizes that there is no reason to give existing resources in vertically integrated states a competitive advantage, then does so to the prejudice of states like Ohio that have embraced retail electric competition aligned with federal pro-competition policies.

The Order provides an exemption for existing renewable resources, but fails to do the same for other zero-emitting resources even when, as already stated, the state support for other zero-emitting resources responds favorably to recommendations by DOE.

Moreover, and perhaps most importantly, the many errors in the Order accompany an effort to increase prices for, and thus the cost of, capacity that consumers must purchase, while doing nothing to improve system reliability.

Ironically, it is reasonable to expect that the Order will cause one or more states to exit participation in the organized wholesale capacity market thereby erecting more walls within the logical physical market<sup>11</sup>; walls that will have commercial and reliability

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<sup>11</sup> Some states within the region are already operating under the FRR alternative. Again, the current FRR option provides a means for states to “escape” the consequences of capacity commerce otherwise compelled by the Commission-approved market design and avoid the consequences of the Commission substituting its capacity resource mix judgement for that of a state. The presence of the FRR option and the likelihood that its use within the region will be expanded as a direct consequence of the Order work against the notion that the selective application of an entirely new MOPR to some state-supported resources will somehow magically make the resulting residual organized wholesale capacity price signal just and reasonable. In other words, the Order resorts to speculation when reasoned analysis is required. On December 18, 2019, the Independent Market Monitor for PJM issued a report (*Potential Impacts of the Creation of a ComEd FRR*) that illustrates the potential capacity pricing consequences of an FRR election by Illinois. That report estimates (in scenario 1 and as shown at page 11) that this FRR election

significance for all consumers within the region whether they are inside or outside the walls. The Order does not consider the practical and lawful consequences of its failure to accommodate some state programs like those in Ohio and it selectively compels application of the new MOPR in ways that are likely to yield outcomes that are worse than the malady attributed to the status quo.

Instead, with critical details omitted, the Order commands further protracted contests, including more litigation, before the means by which the administratively determined three-year-forward capacity price signal shall be revealed. It commands movement in the direction of increasingly complicated MOPR slicing and dicing administrative routines that will: (1) pick winners and losers along the way without regard to the preferences of willing buyers and sellers<sup>12</sup>; (2) operate to the *advantage* of some resource for which preferences were established through the lawful exercise of state authority; (3) operate to *advantage* resources for which preferences are established through the exercise of federal authority; and, most importantly from the PUCO's perspective; (4) operate to *disadvantage* some resources for which preferences are established through the lawful exercise of state authority. The result is inherently unjust and unreasonable and, thus, so is the Order.

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would result in a “rest of RTO” capacity price of \$78.23 per MW-day (a drop of \$61.77 per MW-day compared to the reference-case actual BRA result) and that the FRR election would cause no capacity price change in certain zones in Ohio.

<sup>12</sup> The Order eliminates the resource-specific FRR option that the Commission previously determined should be included in fashioning a just and reasonable outcome. In doing so and without explanation, the Order left behind one opportunity for the preferences of buyers and sellers and state programs to be accommodated.

## STATEMENT OF ISSUES AND SPECIFICATION OF ERRORS

Pursuant to Rule 713(c) of the Commission's Rules of Practice and Procedure, the PUCO provides the following statement of the issues and specifies the following errors:

1. The FPA reserves to the states authority to regulate generation; federal regulation extends only to those matters that are not subject to regulation by the states.<sup>13</sup> The Order violates this statutory limitation on federal regulation by regulating, through disparate bidding limitations, the generation and resource mix choices made by some states. The Order substitutes the Commission's preferences for those of the states. 5 USC Sec. 706(2)(A)
2. The basic premise of the Order lacks evidentiary support. The Order assumes that prices in the capacity market could be unjustly and unreasonably suppressed due to some out-of-market support programs. If there were any validity to this claim, the region would likely be exhibiting capacity scarcity (likely leading to higher prices) rather than the capacity abundance that has accumulated based, in part, on the signals sent by the current capacity price signaling administrative process. Indeed, PJM shows capacity abundance as far in the future as the capacity price signal extends. To illustrate, a review of a recent report issued by PJM's Independent Market

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<sup>13</sup> 16 U.S.C. Sec. 824(b)(1)

Monitor (IMM) reveals that PJM will have significant capacity reserves above its installed reserve margin target of 15.9 percent; effectively increasing the actual reserve margin to **28.4** percent in June of 2020.<sup>14</sup> The Commission's decision is therefore not based on reasoned decision making. 5 USC Sec. 706(2)(A)

3. Although the Commission states that federal and state support programs have the same effects<sup>15</sup> on the administratively fixed capacity prices, it applies the new MOPR to only some resources eligible to participate in state programs, exempts some resources participating in state programs, and exempts all resources participating in federal programs notwithstanding the fact that all resources have the same ability to provide capacity. Accordingly, the selective application of the newly created MOPR is unduly discriminatory, arbitrary and capricious. 5 USC Sec. 706(2)(A)
4. While the Commission's stated rationale for exempting facilities participating in federal support programs from the application of the MOPR is that the Commission believes it cannot frustrate federal actions, the Order does exactly that. The very Ohio House Bill 6 that is referenced twice in the Order is aligned with the DOE's stated goal of allowing states to take steps to preserve fuel diversity.

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<sup>14</sup> IMM 2019 State of the Market Report, Table 5-7, at 273, November 14, 2019.

<sup>15</sup> Order at pg. 40 para. 89

Indeed, the DOE encouraged states to take action to support existing nuclear plants during the years when these proceedings have been pending before Commission.<sup>16</sup> Further, the application of the new MOPR to Ohio's Davis-Besse nuclear unit will frustrate the DOE's effort, through a recent grant to that plant, to support the competitiveness of the nuclear industry through the development of hydrogen production.<sup>17</sup> Thus, the Order violates its own reasoning. This is arbitrary and capricious. 5 USC Sec. 706(2)(A)

5. According to the Commission (and this view appears to have unanimous support), the effect of the Order will be to increase consumers' cost of capacity that they are compelled to purchase from the Commission-authorized wholesale market.<sup>18</sup> To increase consumers' electric bills with certainty today to avoid a speculative, hypothetical and unmeasurable suppression of an administratively determined capacity price signal observable in the future is arbitrary and capricious. 5 USC Sec. 706(2)(A)

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<sup>16</sup> See article at <https://www.utilitydive.com/news/perry-says-federal-coal-nuke-bailout-not-dead-but-encourages-states-to-a/550461/> (last visited January 8, 2020)

<sup>17</sup> See article at <https://www.world-nuclear-news.org/Articles/US-DOE-awards-funds-to-support-industry-innovation> (last visited January 8, 2020) and <https://www.toledoblade.com/business/energy/2020/01/14/davis-besse-chosen-as-pilot-site-hydrogen-production-research/stories/20200114139> (last visited January 16, 2020)

<sup>18</sup> At a time when there is increasing policy emphasis on leveraging the capabilities of distributed resources and organizing federal, state, and local laws and policies in favor of moving away from excessive dependency on a central station architecture, the Commission seems to be fortifying customers' captivity and expanding the scope of central planners' discretion as it relates to the central markets under their control.

6. The Commission has found that state support programs at any level are capable of suppressing capacity market prices.<sup>19</sup> Essentially, state support consisting of \$1, one renewable energy credit (“REC”), or one zero emissions credit (“ZEC”) per year triggers application of the new MOPR based upon an assumption that such support could unreasonably and unjustly suppress capacity prices. The Commission rejects, at least by implication, any new MOPR screening process that would involve an evaluation of whether a state-supported resource is actually causing an unjust and unreasonable end result.<sup>20</sup> Accordingly, the end result of the Order is to impose a disadvantage on resources obtaining support from some state programs regardless of their demonstrated effect on the capacity price signal end result or the justness and reasonableness of the dynamically interrelated combined compensation available from all wholesale market segments (capacity, energy and ancillary services). While this myopic approach to regulation may be administratively convenient for the Commission, it is nonetheless unduly discriminatory, arbitrary and capricious. 5 USC Sec. 706(2)(A)

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<sup>19</sup> Order at pg. 73 para. 176

<sup>20</sup> Order at pg. 35 para. 72

7. The Order correctly recognizes that there is no reason to give resources in vertically integrated states a competitive advantage<sup>21</sup> but then proceeds to do just that for existing resources.<sup>22</sup> This internal contradiction and the selective disadvantage it imposes on states like Ohio are unduly discriminatory, arbitrary and capricious and show a lack of reasoned decision making.<sup>23</sup> 5 USC Sec. 706(2)(A)
8. The Commission provides an exemption from the application of the MOPR for existing renewable facilities participating in a state RPS program but fails to provide a similar exemption for other existing zero-emitting resources receiving support under a different or the same state program.<sup>24</sup> The Commission gives no reason for treating these existing, zero-emitting resources differently and it fails to do so after it rejected the resource-specific FRR option that the Commission previously included in its guidance regarding its vision for a just and reasonable outcome. The action is unduly

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<sup>21</sup> Order at pp. 86-7 para. 204

<sup>22</sup> Order at pp. 85-6 para. 202-3

<sup>23</sup> By advancing this point, the PUCO is not suggesting that the substantive defects in the Order can be cured by applying the new MOPR to all resources benefiting from all state and federal programs that fit within the Order's definition of a subsidy. The point here is that the Order's selective application of the new MOPR to resources receiving support from programs like those in Ohio is unduly discriminatory, arbitrary, and capricious and has not been shown to do anything to remedy any unjust and unreasonable capacity price suppression that may be attributed to the existing means by which capacity prices are administratively fixed.

<sup>24</sup> Order at pp. 71-2 para. 173

discriminatory, arbitrary, capricious and shows a lack of reasoned decision making. 5 USC Sec. 706(2)(A)

9. The Commission's original rationale for restructuring the wholesale electric market and unbundling services (generation and transmission) was that the introduction of market forces would remedy an anticompetitive industry structure, improve service, and more effectively and efficiently establish just and reasonable compensation for generation supply. In this Order, the Commission has turned further away from a market design that harnesses the interaction of willing buyers and sellers to "regulate" supply, demand, prices, and compensation in the public interest. Instead, the Order, with critical details omitted, compels execution of more complex, centrally administrative routines for fixing the compensation available for capacity. In doing so, the Order erroneously omits an evaluation of the "end result" of this more complicated form of administrative price fixing and a demonstration of how this "end result" will serve the public interest in reasonable rates and reliable service; an omission that is incompatible with the Commission's duties. 16 U.S.C. Sec. 824d(a).
10. Although the magnitude of the impact of this Order is very difficult to assess due to its ambiguity, the Commission-intended direction seems clear in some cases but logically inconsistent at the same

time. It appears that the Commission is determined to increase the consumers' cost of capacity that they are compelled<sup>25</sup> to purchase from the organized wholesale market. The Order irrationally finds that, despite the ongoing abundance of capacity resources available within and to the region, the current administrative process by which capacity prices are fixed is unjustly and unreasonably suppressive. The Order selectively prescribes application of an entirely new MOPR in ways that are likely to accelerate entry of capacity resources or result in the displacement of some capacity resources by others rather than to do anything to ensure resource adequacy. Accordingly, the Order is likely to increase the number of states that take flight from the organized wholesale market fashioned to the current Commission's liking, by making an FRR election—a potential result that appears to have been completely ignored by the Commission's consideration of how the newly created, selectively applied MOPR will, in a misguided pursuit of justness and reasonableness, play out in the real world. Accordingly, the Order's remedy, conceptually described in the Order with critical details

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<sup>25</sup> In a recent decision by the Fifth Circuit of the United States Court of Appeals, the court struck down the individual healthcare purchase mandate in the Patient Protection and Affordable Care Act saying that Congress's power is limited to the regulation of commerce and it may not compel commerce. *Texas v. United States*, 2019 U.S. App. LEXIS 37567, 945 F.3d 355. The logical implications of the court's reasoning suggest that there may be legal limits on the Commission's authority to compel participation in a centrally organized wholesale market.

omitted, is unduly discriminatory, unlawful, unjust and unreasonable. 16 U.S.C. Sec. 824d(a).

11. The Order contains factual errors. These errors include the Order twice<sup>26</sup> referring to legislation in House Bill 6<sup>27</sup> as increasing out-of-market support when the legislation, taken as a whole and understood contextually, cannot accurately be described in this manner. This error is particularly troubling as it forms part of the basis for the action directed by the Order. Further, the Order cites PUCO support for the expansion of the application of the MOPR as one of the reasons for the directed action. The PUCO does not support the application of the MOPR as put forth in the Order; the PUCO was never given an opportunity to comment on the Order's entirely new MOPR or the selective application now only vaguely illuminated in the Order. The PUCO never anticipated that the Commission would take such broad action to displace and subvert states' decisions made through the lawful exercise of their police power or, in some cases, their taxing authority. Indeed, the PUCO explained (in prior comments) that it was providing constructive recommendations regarding the Commission's conceptually described MOPR, as it then existed, and resource-specific FRR

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<sup>26</sup> Order at pg. 7 para. 8 and pg. 16 fn. 55.

<sup>27</sup> The enrolled text of House Bill 6 is available *via* the Internet at <https://www.legislature.ohio.gov/legislation/legislation-documents?id=GA133-HB-6> (last visited January 9, 2020).

approach; but noted that it had joined in the rehearing of the Organization of PJM States, Inc., due to a failure to demonstrate the current PJM market construct was unjust and unreasonable.<sup>28</sup>

## **ARGUMENT**

At the most basic level the Order in this case attempts to do what the Commission cannot. It second guesses the decisions that are made at the state level regarding the generation or resource mix that the individual states enable through the lawful exercise of their police power. This Commission does not have regulatory or supervisory control over this subject. 16 USC Sec. 824(b)(1). Congress has left that to the states.

The majority decision reflected in the Order suggests that states remain free to use their police power to specify a resource mix they judge reasonable to advance the health, safety and welfare of their respective citizens. This statement appears to acknowledge the authority reserved to the states by the FPA. But it does not address and is not responsive to the requirement, pursuant to the Constitution, that the Commission respect and accommodate the proper exercise of state authority.

The Order makes it clear that: (1) some capacity resources that have been so preferred by the lawful exercise of state authority—regardless of the reason for this preference—shall be, either collectively or individually, subject to selectively applied bidding behavior rules that impose a disadvantage on such resources; (2) the similarly

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<sup>28</sup> PUCO comments in ER18-1314, October 2, 2018 at 3.

situated capacity resources in some states will continue to hold an offer price bidding advantage; and (3) all resources receiving preferential federal subsidies continue to hold an offer price bidding advantage. In other words, the majority decision establishes a system that selectively imposes a wholesale market participation bidding handicap on some state-supported capacity resources that, from a bottom line perspective, will nullify or, in wholesale market terms, “mitigate” the results lawfully pursued by those states. The Order imposes economic regulation on some state resources in ways that will either directly or indirectly nullify lawful state action.

While the PUCO cannot speak to the various support programs in other states, it can speak to the programs that exist in Ohio that the Order seeks to nullify. Those programs seek to cultivate the generation or resource mix that Ohio’s elected officials have determined is the best for the health, safety and welfare of Ohio citizens, and not to influence wholesale market prices. House Bill 6 has simply nothing to do with the PJM markets. No state-authorized support available to resources pursuant to House Bill 6 is tied to, or conditioned on, participation in the organized wholesale market. Rather, the legislation works, within a limited period of time and a limited level of support, to sustain the operation of Ohio’s largest zero-emitting source of electricity in the state in accord with the urgings of the DOE. The legislation was enacted at a time when it was unclear if, or when, the Commission would do anything to address wholesale market design and structure problems that have contributed to accelerated retirement of resources in Ohio and elsewhere.

House Bill 6 supports industrial and economic retention and growth in the regions that would have been negatively impacted by the accelerated retirement of the nuclear plants located in Ohio. It promotes, over a limited time and through a limited dollar amount of support, economic development in areas of Ohio that are particularly well suited to the development of solar resources which must be developed, if at all, in accordance with the public convenience and necessity determinations of the Ohio Power Siting Board<sup>29</sup>, decisions made well before the date of the Order.

The Commission cites House Bill 6 as one of the indications of a growing wave of states taking actions to provide out-of-market support. But the cumulative effect of House Bill 6 is to cause a *reduction* in the total amount of state support available to all resource types. The support in House Bill 6 for supply-side resources is temporary, narrowly focused on certain zero-emitting resources, and counterbalanced by a reduction in support for demand-side and other supply-side resources. The support is also capped at a total dollar amount and has no connection to, or dependency upon, the compensation available to these resources from the organized wholesale market. House Bill 6 was not based on the “contract for differences” model and does not directly connect state support to the organized wholesale market. House Bill 6 precludes a state-supported resource and any off-taker from also receiving any monetary value otherwise available from a REC or ZEC obtained from the state-supported production.

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<sup>29</sup> The responsibilities of the Ohio Power Siting Board are set forth in Chapter 4906 of the Ohio Revised Code.

With regard to demand-side resources, House Bill 6 accelerates the termination of Ohio's mandated support for energy efficiency resources in part as a result of growing merit-based parity compared to non-mandated resources. The long line of opponents who protested and continue to protest House Bill 6 did and are doing so because, in their expressed view, the legislation will cause Ohio to be left behind by other states that are increasing their mandates and out-of-market support programs.<sup>30</sup> As a result of House Bill 6, Ohio's mandated support of energy efficiency will now end in 2020, well before the beginning of any delivery year for which a future capacity price will be determined by an auction or competitive bidding process. Therefore, instead of providing evidence of state efforts to expand the level and duration of state support for supply-side and demand-side capacity resources, as suggested by the Order, House Bill 6 was a pro-competitive balancing endeavor that moved Ohio in a direction opposite the direction described in the Order.

Furthering the mistakes of fact, the Order misunderstands the situation regarding the Ohio Valley Electric Corporation (OVEC) and its two coal plants (one in Ohio and one in Indiana). As the Commission may recall, OVEC's origins are directly traceable to federal initiatives to promote commercial applications of nuclear energy. OVEC was created to provide electricity to a uranium enrichment facility in Piketon, Ohio.

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<sup>30</sup> See article at <https://insideclimatenews.org/news/30032017/ohio-clean-energy-fossil-fuels-john-kasich> (last visited on January 8, 2020)

This Ohio legislation has no effect on the compensation available to the OVEC resources for capacity or anything else. House Bill 6 did nothing to increase the compensation available to OVEC. The level of that compensation is dictated by a FERC-jurisdictional agreement requiring sponsoring companies (certain purchasers for resale located in and outside Ohio) to provide financial support to OVEC to the extent that the compensation otherwise available to OVEC is insufficient to cover OVEC's defined cost. House Bill 6 required that a portion of this FERC-jurisdictional support be funded by retail electric customers obtaining service from Ohio's electric distribution utilities, placed a cap on the amount of this FERC-jurisdictional support that is eligible for recovery from Ohio retail customers, and removed a return on equity allowance from the portion of the FERC-jurisdictional funding allocated to Ohio retail customers. It also placed a time limit on the extent to which Ohio retail customers will make contributions to this Commission-jurisdictional funding. Again, and despite the Order's indications otherwise, House Bill 6 did nothing to alter the compensation otherwise available to OVEC. Any out-of-market financial support received by OVEC is due entirely to results occurring under the exclusive supervision of the Commission and not by anything done by Ohio in House Bill 6 or otherwise.<sup>31</sup>

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<sup>31</sup> So, truth be known, the out-of-market compensation available to OVEC and any price suppression blame may be heaped upon such compensation as is the byproduct of a federal action and, apparently by the terms of the Order, exempt from the very MOPR that Order would attach to the OVEC resources had the support been authorized by Ohio. The irony here is that the Order's mistakes of fact help to illustrate the unjustness and unreasonableness of the Order's selective application of the newly created MOPR to some state-supported resources. The Order seeks to nullify the lawful exercise of some state authority in ways that wrongly attribute any unjustness and unreasonableness of outcomes produced by the exercise of Commission-granted authority to some state action.

Confusion or misunderstanding about Ohio actions could have been avoided had the Commission sought or allowed comment on the reasoning behind the newly created MOPR. Such comments were not previously possible as House Bill 6 was passed well after the expiration of the paper hearing process initiated by the Commission in June of 2018 after review of PJM's proposed MOPR tariff filed in April 2018. Due to the procedural posture of this docket, new evidence to correct the misunderstanding cannot be introduced now. Thus, the parties are faced with a decision based, in no small part, on claims, allegations, and changed circumstances that they have had no opportunity to address. This violates due process and even if it did not, the process here has been much less than what is due given the importance of the subject.

The remedy for the errors described above is obvious. The Commission should grant rehearing to permit it to update the record to take new evidence and engage in reasoned decision making as it should have done from the beginning given the burden of proof that must be carried in a Section 206 proceeding and in recognition of the more than three and one-half years that it has taken since this journey began.

In the meantime and as a matter of law, the PUCO respectfully requests that the Commission grant rehearing and specify that: (1) to properly respect and accommodate state authority, PJM's compliance filing must include the resource-specific FRR option (which the Order left behind); (2) resources that enjoy support from both state and federal programs, like those in Ohio, shall be exempt in the same way that federally supported resources are exempt; (3) resources receiving support from state programs that are

aligned with DOE recommendations, like the nuclear resources in Ohio, shall be exempt in the same way that federally supported resources are exempt; (4) resources, like the OVEC resources, receiving support pursuant to a Commission-jurisdictional agreement shall be exempt in the same way that federally supported resources are exempt; (5) capacity resources that are not eligible to receive and do not receive state out-of-market support in a future delivery year shall not, at the time of the BRA for that delivery year, be subject to the new MOPR; and (6) in the interest of getting a forward capacity price signal in place, plugging the three-year forward hole that currently exists and will likely grow, and providing for a transition period<sup>32</sup>, the next BRA process shall occur as soon as reasonably possible with the understanding that the new, and currently mysterious, MOPR shall not be applied to any capacity resource until net CONE and net ACR values are finalized and in place, exemption status, unit-specific outcomes and other details are finally determined and known.

## **CONCLUSION**

WHEREFORE, for the foregoing reasons, the PUCO requests that the Commission grant its request for rehearing, grant the relief requested and grant other such relief that, based on the law and evidence, may be in the public interest.

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<sup>32</sup> The introduction of the Capacity Performance (“CP”) product included a transition period during which the CP product was phased-in and the predecessor capacity product was phased out in favor of a single capacity product. Providing a transition period in the present circumstances is just and reasonable as it will provide states with adequate time to explore and implement options (including the FRR option) and permit states to make informed decisions after the Commission addresses and provides the new MOPR details through the compliance filing process.

Respectfully submitted,

**Dave Yost**

Ohio Attorney General

**John H. Jones**

Section Chief

*/s/ Thomas W. McNamee*

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**Thomas W. McNamee**

Assistant Attorney General

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**Attorney for**

**The Public Utilities Commission of Ohio**

## **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served an electronic copy of the foregoing document upon each person designated on the official service list established in Dockets EL16-49-000 and EL18-178-000 Consolidated.

*/s/ Thomas W. McNamee* \_\_\_\_\_

**Thomas W. McNamee**  
Assistant Attorney General

Dated at Columbus, Ohio this January 21, 2020.

# PUCO Transmission Meeting

## Transmission Infrastructure Investments

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### Stakeholders Discussion

July 15, 2019

*Presented by*  
*Samuel C. Randazzo*  
*PUCO Chairman*

# Our challenges

- Significant increase in capital spending on transmission
  - Major component of investment relates to supplemental segment versus baseline projects
- Ensure adequate level of coordination, vetting, and rigor of approval
- Understand impact on customers'/rate payers' electric bills
- Effective utilization of the transmission grid
- Maintain reliability, resiliency, and sustainability of the transmission system
- Promote economic growth and attract new customers
- Enable integration of prudent renewable and diverse generation

# Ohio New Baseline and Supplemental Projects

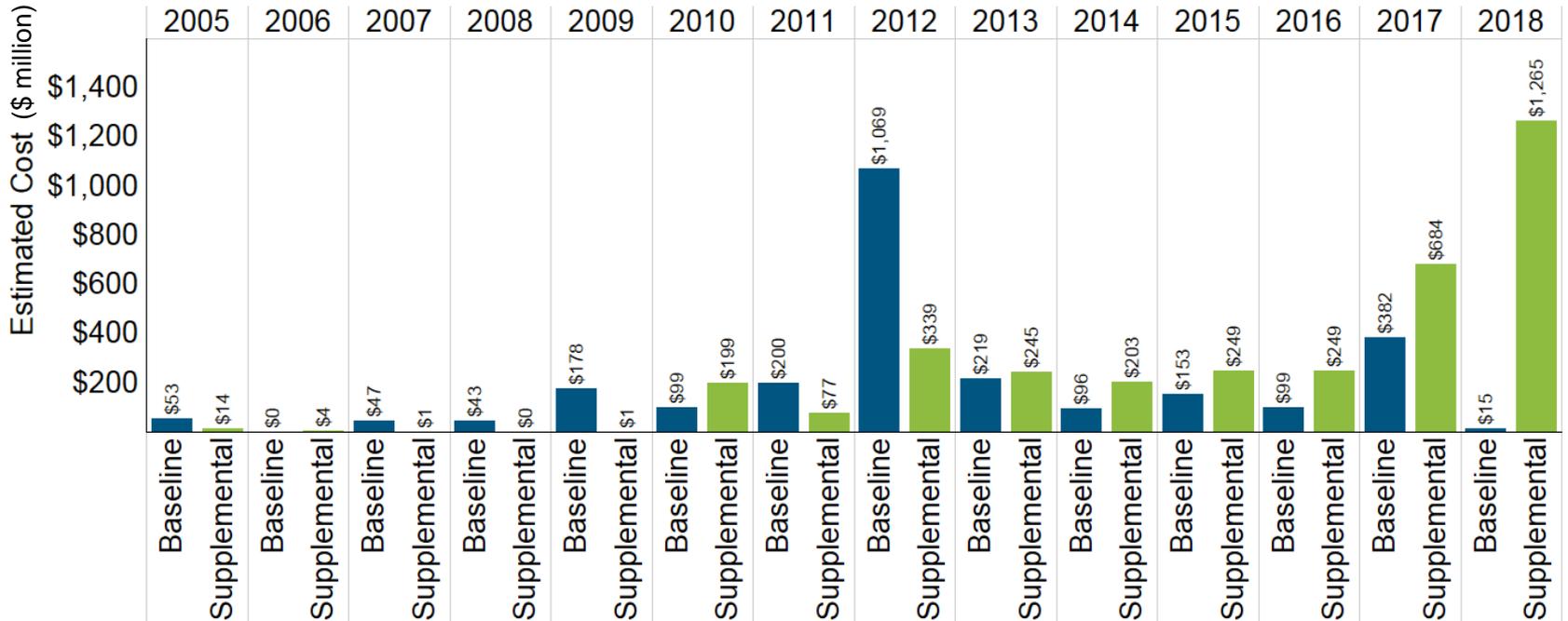


Figure 1. Chart sourced from PJM TEAC, 2019.

# Ohio New Baseline and Supplemental Project Detail: 2015-2018

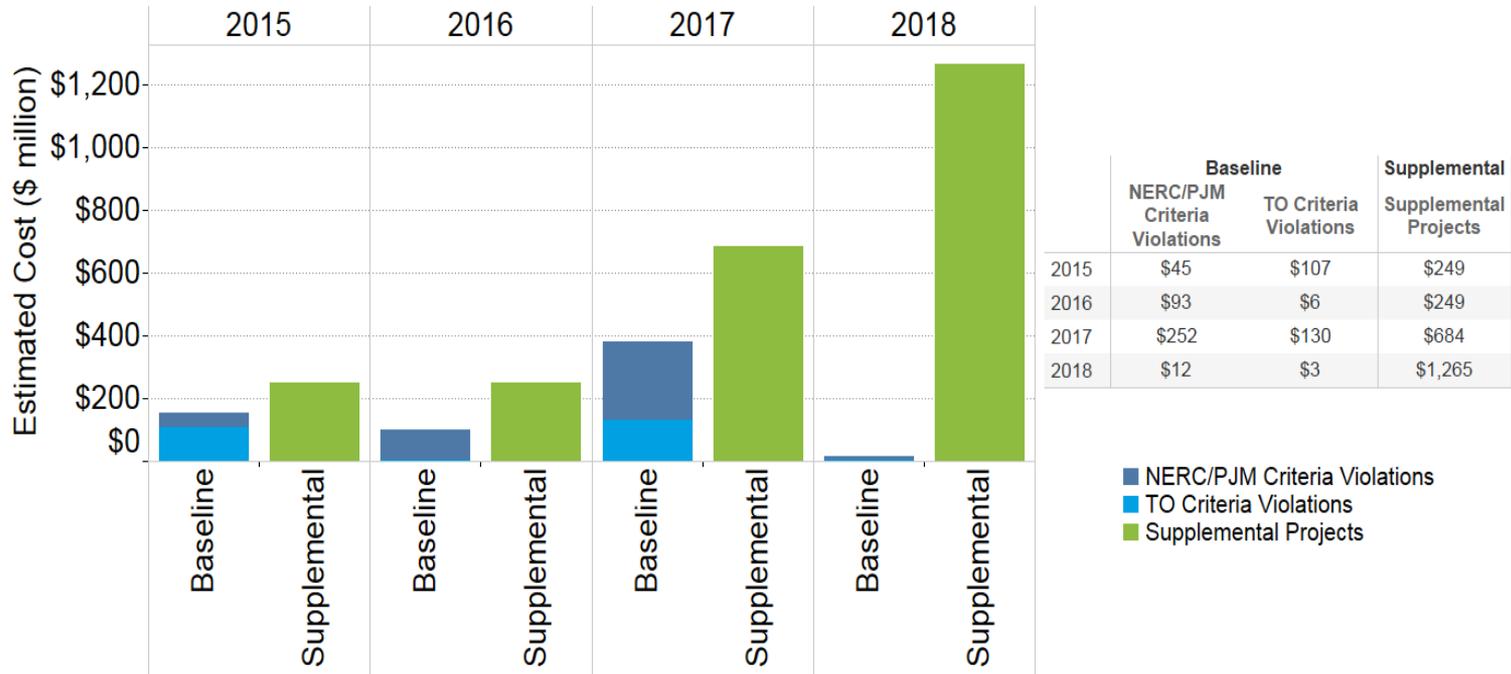


Figure 2. Chart sourced from PJM TEAC, 2019.

## Ohio Project Detail: 2015-2018

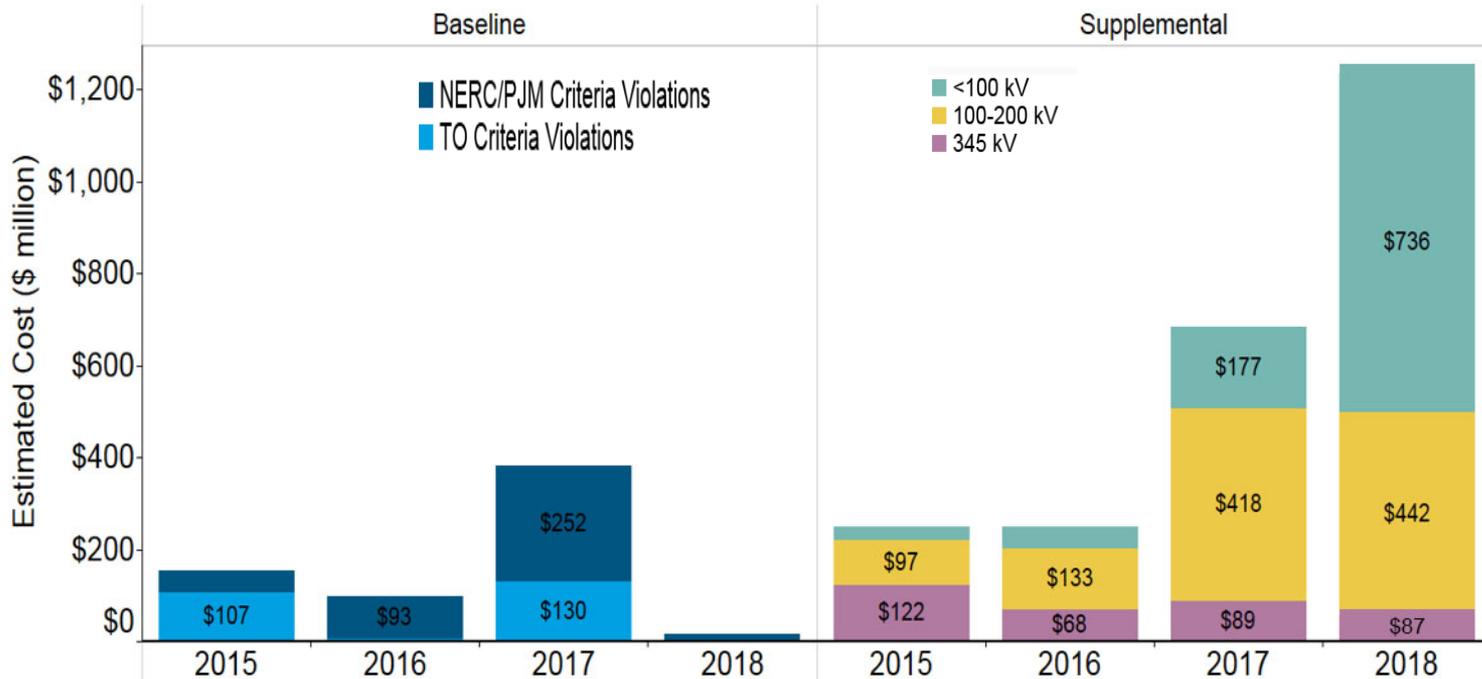
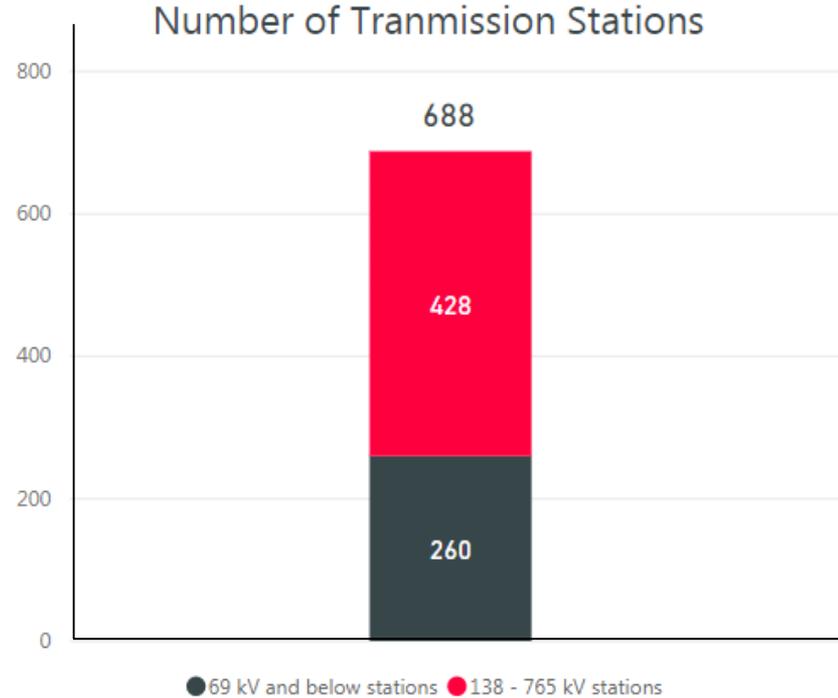
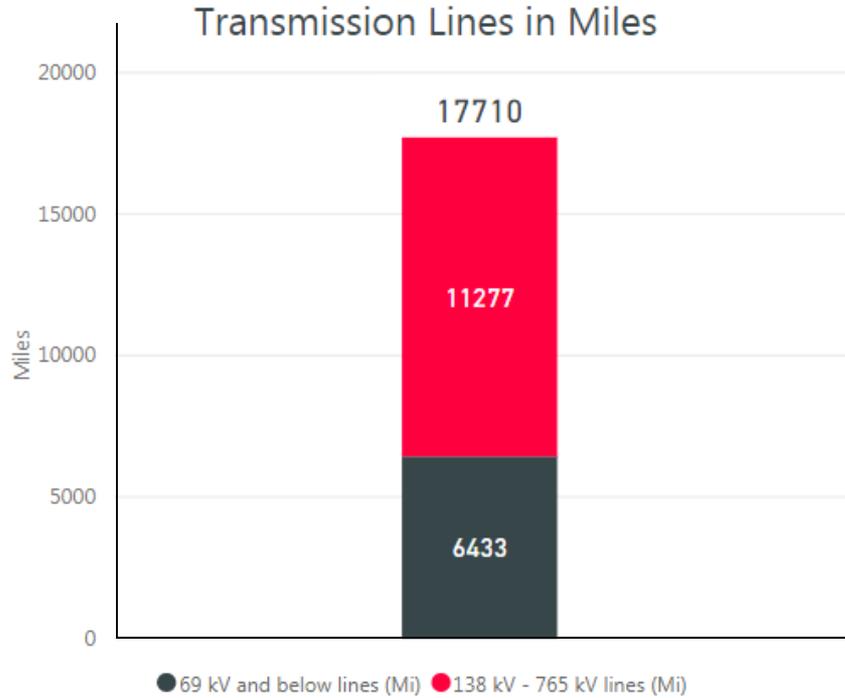
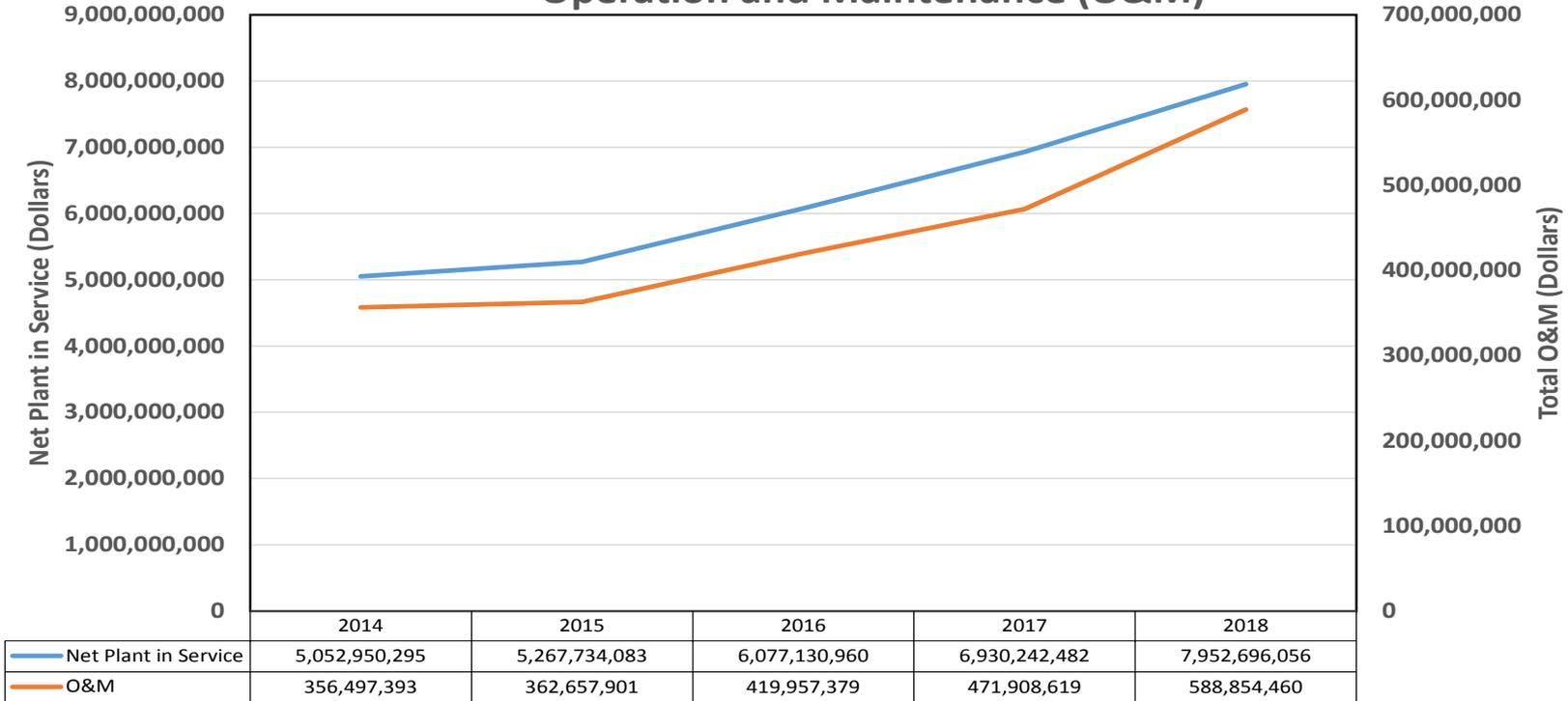


Figure 3. Chart sourced from PJM TEAC, 2019.



Figures 4 and 5. Data sourced from indicated utilities.

## Ohio Transmission Net Plant in Service Value versus Operation and Maintenance (O&M)



# Our observations

- In 2018, majority of transmission plant investment relates to supplemental projects
  - Approximately 99% of the total capital investment of \$1.27 B
- 69 kV and below transmission lines/substations constitutes approximately 37% of all transmission voltages
  - Corresponding capital investment is 60% of the total investment
- 100 kV and above falls within OPSB jurisdictional filing requirements
  - In essence, at least 60% of the total 2018 capital investment falls out of OPSB jurisdiction
- Transmission supplemental projects including aging infrastructure replacement or retirement or upgrade, mandates a well thought, coordinated, and prioritized holistic assessment



# Public Utilities Commission

Mike DeWine, Governor  
Sam Randazzo, Chairman

## Commissioners

M. Beth Trombold  
Lawrence K. Friedeman  
Dennis P. Deters  
Daniel R. Conway

January 31, 2020

The Honorable Steve Wilson  
Chairman, Senate Energy & Public Utilities Committee  
Ohio Senate  
1 Capitol Square  
Columbus, OH 43215

Dear Chairman Wilson:

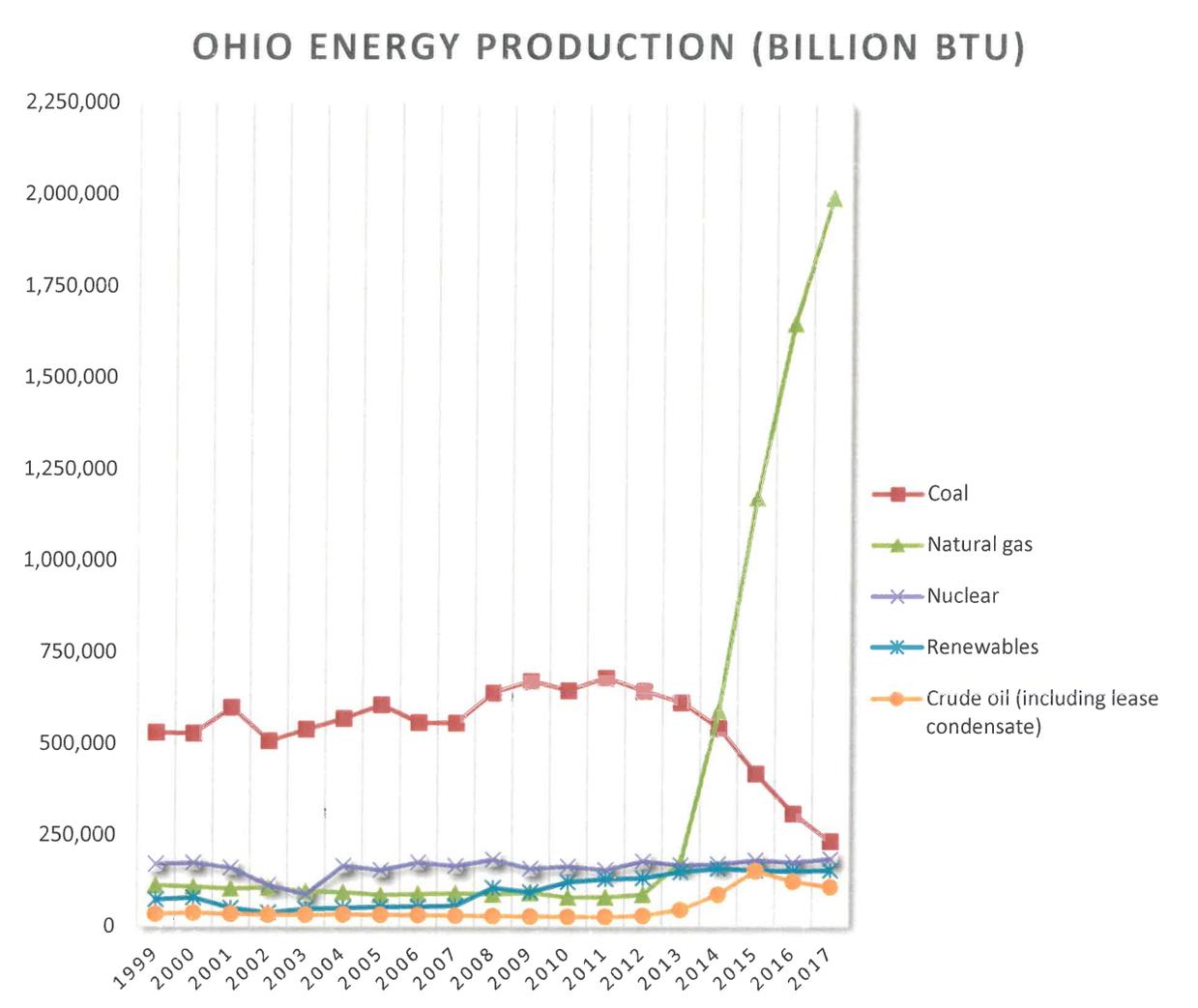
Thank you for the opportunity to provide informational testimony to the Ohio Senate Energy & Public Utilities Committee on December 10, 2019, regarding electric reliability. During the discussion of that testimony, you asked three questions for which you sought a follow-up response:

1. Since 1999, what has changed?
2. As it relates to reliability, what needs to be changed?
3. Does proximity matter—does Ohio need to maintain certain assets to recover faster from an interruption?

Please find my responses to your questions below.

## 1. Since 1999, what has changed?

The largest change that has taken place over the last two decades pertains to Ohio's energy production. The graph below shows how Ohio's fuel mix for production has been significantly affected by the shale gas revolution and, to a lesser degree, the retirement of coal-fired resources.

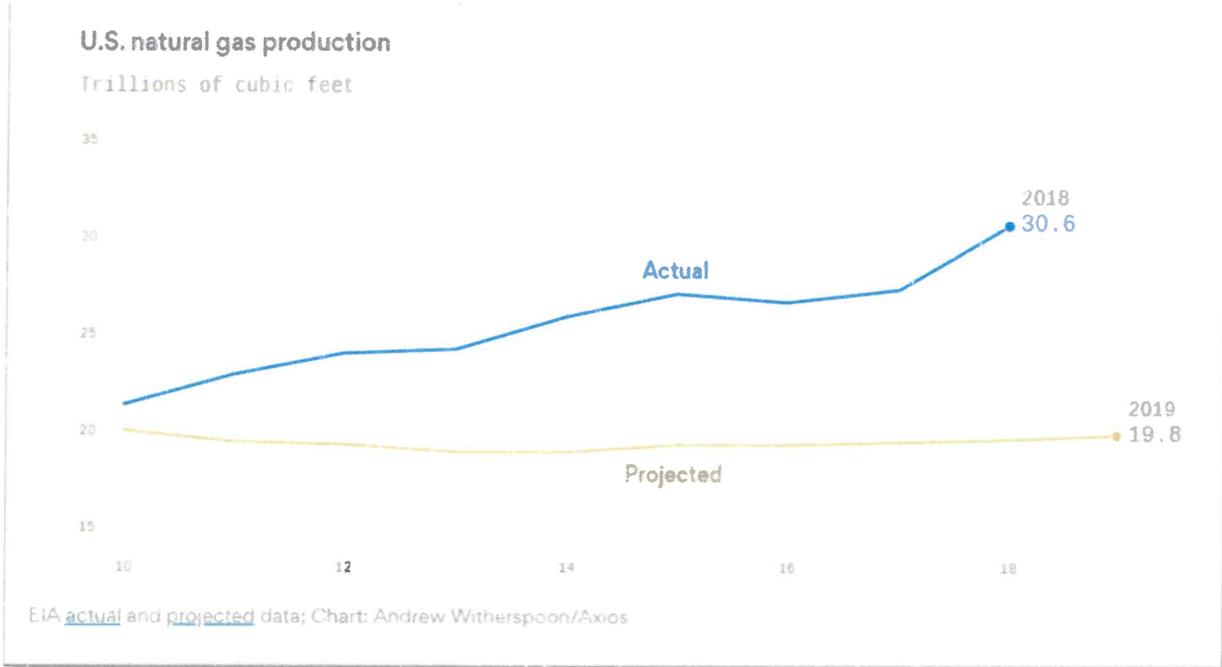


1

As demonstrated by the graph above, the most significant changes in Ohio's energy-production mix have taken place over the most recent decade. One news source recently termed the period of 2010-2019 as "[t]he decade that blew up energy predictions." Below is a graph from that news source showing national production of natural gas during that decade as compared with natural gas production forecasts made going into the decade. In many ways, the state of

<sup>1</sup> U.S. Energy Information Administration, State Energy Data System (SEDS): 1960-2017 (complete): Key statistics and indicators: Primary energy production in Btu – fossil fuels and nuclear; Primary energy production in Btu – renewable energy and total energy, at <https://www.eia.gov/state/seds/seds-data-complete.php?sid=US#StatisticsIndicators>.

the electric market today, which is heavily impacted by the abundance of natural gas, is what was predicted when, in 1999, policymakers elected to restructure the electric sector to better harness the forces of competition. Those market changes did not, however, occur until much later than they were anticipated.



2

<sup>2</sup> Amy Harder and Andrew Witherspoon, Axios, "The decade that blew up energy predictions," Dec. 23, 2019, at <https://www.axios.com/energy-predictions-reality-check-524b9be9-2c0c-407e-86cb-37b11aa72ed2.html>.

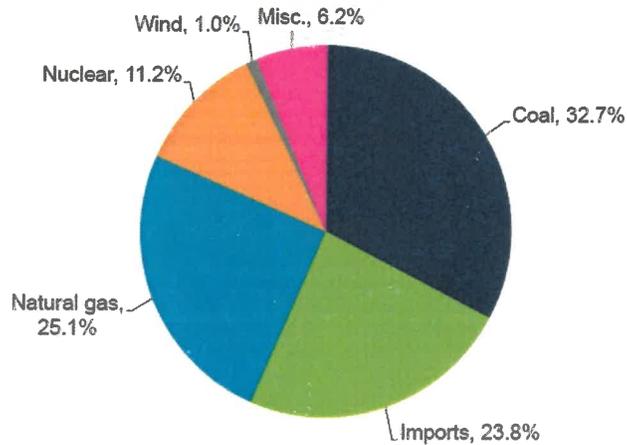
Below are slides from testimony provided to the Senate Energy & Public Utilities Committee last year by PJM Interconnection that show that trends within the region echo those in Ohio. Notably, in 2018, 23.8% of Ohio's generation was imported.



### Ohio – Energy Production

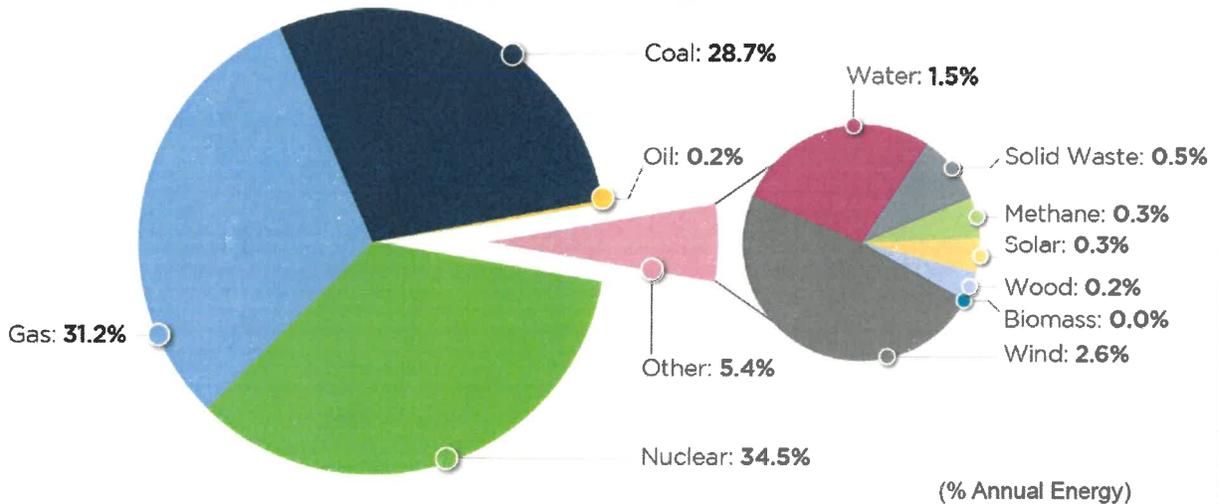
(January 1, 2018 – December 31, 2018)

Amount of energy produced by Ohio generation



### PJM – Energy Production

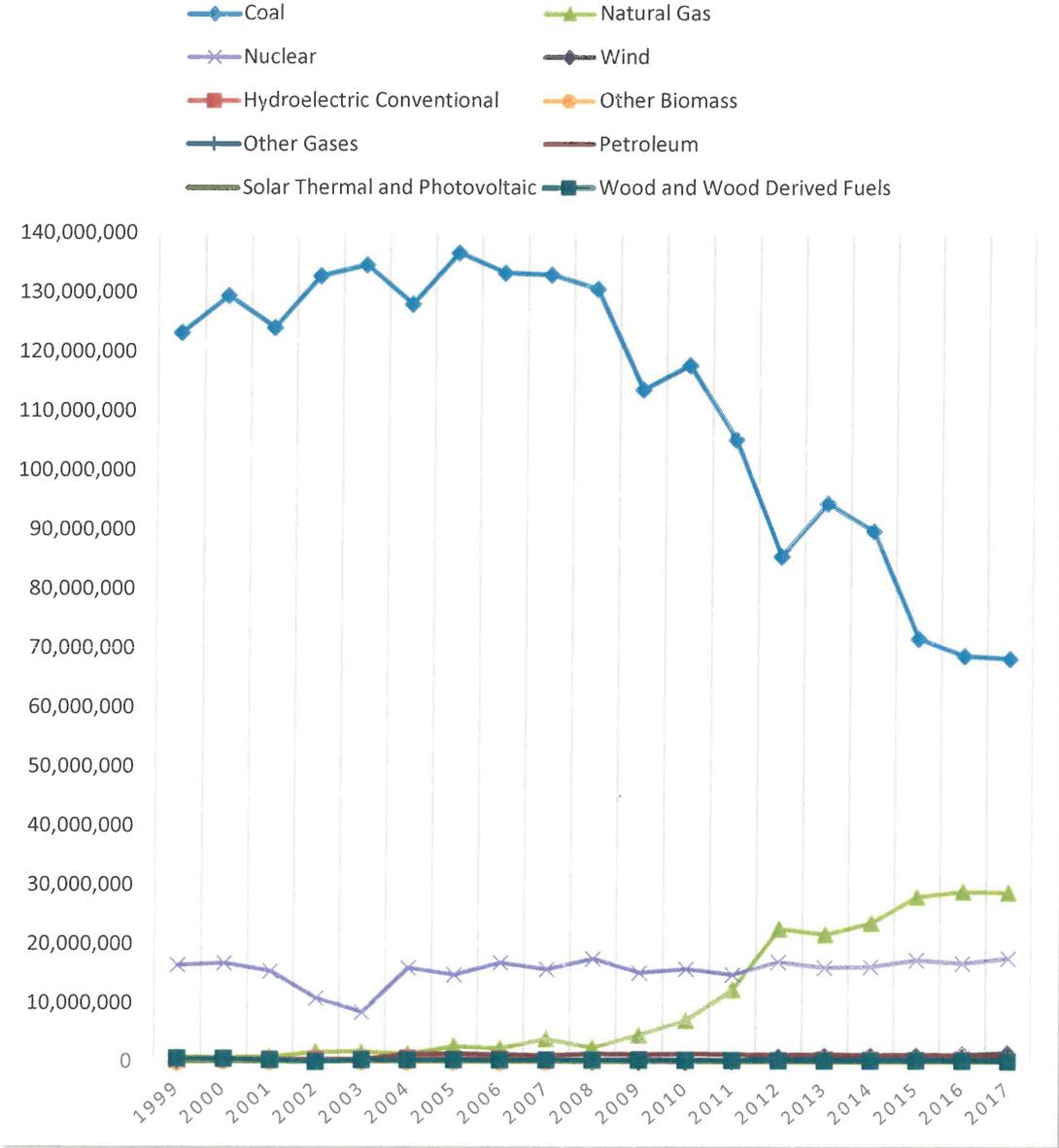
(January 1, 2018 – December 31, 2018)



<sup>3</sup> Attachment to the Testimony of Asim Z. Haque, June 5, 2019, at <https://www.ohiosenate.gov/committees/energy-and-public-utilities/document-archive>.

As illustrated below, the fundamental forces described above have caused changes in the electricity production mix in Ohio.

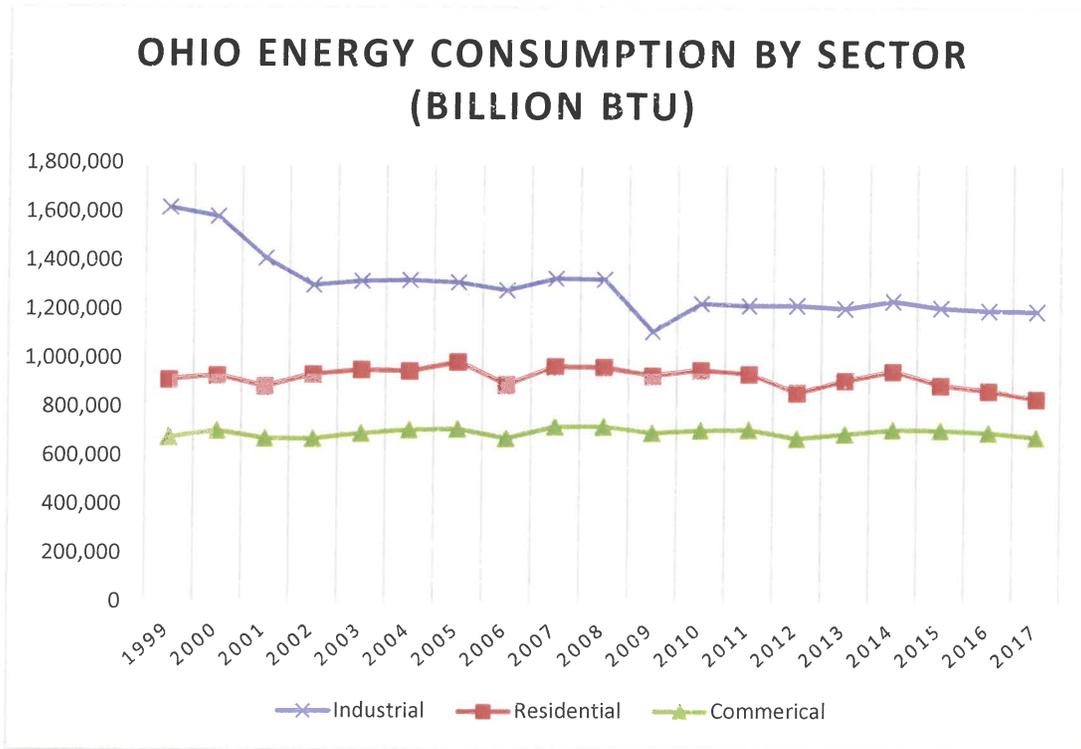
### OHIO ELECTRICITY GENERATION BY SOURCE (IN MEGAWATT HOURS)



4

<sup>4</sup> U.S. Energy Information Administration, Detailed State Data: Net Generation by State by Type of Producer by Energy Source (EIA-906, EIA-920, EIA-923) (sorted for Ohio and “Total Electric Power Industry”), at <https://www.eia.gov/electricity/data/state/>.

Despite the trend toward an abundance of fuel, and the relative decline in prices, the total amount of Ohio's energy consumption has decreased<sup>5</sup> ("energy consumption" here includes all energy sources consumed, as well as net interstate flow of electricity and net imports of electricity<sup>6</sup>).



7

Below is a timeline of some of the major regulatory and legislative changes that have impacted Ohio's energy landscape since 1999. One of the reliability-related changes that has taken place

<sup>5</sup> Justin Fox, "Americans Keep Using Less Electricity," Bloomberg, March 1, 2018, at <https://www.bloomberg.com/opinion/articles/2018-03-01/americans-electricity-use-just-keeps-falling>.

<sup>6</sup> U.S. Energy Information Administration, Technical notes & documentation – complete 2017, p. 127, at <https://www.eia.gov/state/seds/seds-technical-notes-complete.php?sid=US#Consumption> (Section 7: Total energy).

<sup>7</sup> U.S. Energy Information Administration, State Energy Data System (SEDS): 1960-2017 (complete): Key statistics and indicators: Total energy consumption by end-use sector, at <https://www.eia.gov/state/seds/seds-data-complete.php?sid=US#StatisticsIndicators>.

during this timeframe is the result of efforts to better align physical and commercial markets through regional approaches, including those occurring under the supervision of the Federal Energy Regulatory Commission (FERC) and the regional transmission organizations (RTOs) that it regulates.

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| <b>1999</b> | Ohio passes S.B. 3, beginning the restructuring of the state's electric industry through: <ul style="list-style-type: none"> <li>• Utility divestiture of generation assets;</li> <li>• Unbundling of electric rates;</li> <li>• Customer choice for electricity suppliers;</li> <li>• Governmental aggregation; and</li> <li>• The development of independent system operators.</li> </ul>  |
| <b>2000</b> | The Western Energy Crisis: a compelled energy-only spot market, market manipulation, high wholesale electric prices, and capped retail electric prices cause rolling blackouts and electricity shortages in California.  |
| <b>2001</b> | Ohio's S.B. 3 goes into effect with market development periods and transition periods not to exceed 10 years.  |
| <b>2002</b> | PJM becomes the nation's first fully functional regional transmission operator. <sup>8</sup>   |
| <b>2003</b> | As a result of a mismatch between expectations about the maturation of the wholesale market and reality, the PUCO begins to develop rate stabilization plans, to last through 2008, to gradually transition customers to market-based rates.   |
| <b>2004</b> | American Electric Power and Dayton Power & Light join PJM. <sup>9</sup>  |
| <b>2005</b> | S.B. 3's market development period ends, with a level of new market entrants less than what was anticipated.   |
| <b>2005</b> | Congress passes the Energy Policy Act of 2005, giving the FERC a more direct role under the Federal Power Act regarding grid reliability, including expanded jurisdiction over municipal utilities and electric cooperatives. <sup>10</sup>  |
| <b>2006</b> | The North American Electric Reliability Corporation (NERC) applies to the FERC for certification as the electric reliability organization to develop reliability standards in compliance with the Energy Policy Act of 2005. <sup>11</sup>   |
| <b>2007</b> | <p>FERC approves most of NERC's proposed Reliability Standards, which become the first set of legally enforceable mandatory standards for the country.<sup>12</sup></p> <p>PJM completes the first capacity auction under the Reliability Pricing Model.<sup>13</sup></p> <p>The FERC issues Order 890, reforming its Order 888, issued in 1996, which required utilities with transmission facilities to file open access non-discriminatory transmission tariffs.<sup>14</sup></p> <p>The Reliability Assurance Agreement (RAA) among load serving entities in the PJM region takes effect to ensure that adequate capacity, demand resources, and energy efficiency</p> |

<sup>8</sup> PJM, "PJM History," at <https://www.pjm.com/about-pjm/who-we-are/pjm-history.aspx>.

<sup>9</sup> PJM, "PJM History," at <https://www.pjm.com/about-pjm/who-we-are/pjm-history.aspx>.

<sup>10</sup> FERC, "Reliability Primer," pgs. 5-6, at <https://www.ferc.gov/legal/staff-reports/2016/reliability-primer.pdf>.

<sup>11</sup> FERC, "Reliability Primer," pg. 34, at <https://www.ferc.gov/legal/staff-reports/2016/reliability-primer.pdf>.

<sup>12</sup> FERC, "Reliability Primer," pg. 34, at <https://www.ferc.gov/legal/staff-reports/2016/reliability-primer.pdf>.

<sup>13</sup> PJM, "History Highway," at <https://learn.pjm.com/history-highway-go.html>.

<sup>14</sup> FERC, "History of OATT Reform," at <https://www.ferc.gov/industries/electric/indus-act/oatt-reform/history.asp>.

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|           | resources are planned and made available to provide reliable service, to provide assistance during emergencies, and to coordinate resource planning. <sup>15</sup>   |
| 2008      | Ohio passes S.B. 221 to: <ul style="list-style-type: none"> <li>• Allow electric utilities to establish prices for non-shopping customers through an electric security plan or a market-rate offer;</li> <li>• Establish requirements for the purchase of “advanced” and “renewable” energy; and</li> <li>• Establish requirements for energy efficiency savings and peak demand reduction.</li> </ul> <p>Ohio passes H.B. 562, containing requirements for economically significant wind farms.</p>   |
| 2008      | The FERC issues Order 706, approving initial critical infrastructure protection reliability standards, with a focus on cyber security. <sup>16</sup> <p>The Market Monitoring unit of PJM was split off to a separate company, Monitoring Analytics, LLC.<sup>17</sup></p>   |
| 2011-2012 | Cinergy, FirstEnergy, and Duke join PJM, thereby eliminating the seams created by Ohio transmission owners previously electing to join different RTOs. <sup>18</sup>   |
| 2014      | Ohio passes S.B. 310, which did the following: <ul style="list-style-type: none"> <li>• Eliminated Ohio’s advanced-energy purchase requirement;</li> <li>• Freezed Ohio’s renewable, energy efficiency, and peak demand reduction requirements for two years;</li> <li>• Clarified and expanded what could be counted toward compliance with the energy efficiency and peak demand reduction requirements; and</li> <li>• Expanded Ohio’s renewable energy requirements to allow more out-of-state facilities to qualify, provided the output is deliverable into Ohio.</li> </ul> |
| 2015      | PJM links generator performance to capacity payments to better ensure grid reliability. <sup>19</sup>  |
| 2018      | The Ohio Valley Electric Corporation joins PJM. <sup>20</sup>  |
| 2019      | Ohio passes H.B. 6, revising its support programs for demand-side and supply-side resources.   |
| 2019      | In response to a complaint filed by Calpine Corporation in 2016, the FERC orders PJM to expand its Minimum Offer Price Rule to certain generation resources bidding into the capacity market.  |

<sup>15</sup> PJM, Rate Schedule FERC No. 44, Articles 2 and 3.1, at <https://www.pjm.com/directory/merged-tariffs/raa.pdf>

<sup>16</sup> FERC, “Reliability Primer,” pgs. 45 and 63, at <https://www.ferc.gov/legal/staff-reports/2016/reliability-primer.pdf>.

<sup>17</sup> Monitoring Analytics, Home, at <https://www.monitoringanalytics.com/home/index.shtml>.

<sup>18</sup> U.S. Energy Information Administration, “Midcontinent Independent System Operator Adding Four New Electric Territories in December,” October 24, 2013, at

<https://www.eia.gov/todayinenergy/detail.php?id=13511>; PJM, “PJM History,” at <https://www.pjm.com/about-pjm/who-we-are/pjm-history.aspx>.

<sup>19</sup> PJM, “History Highway,” at <https://learn.pjm.com/history-highway-go.html>.

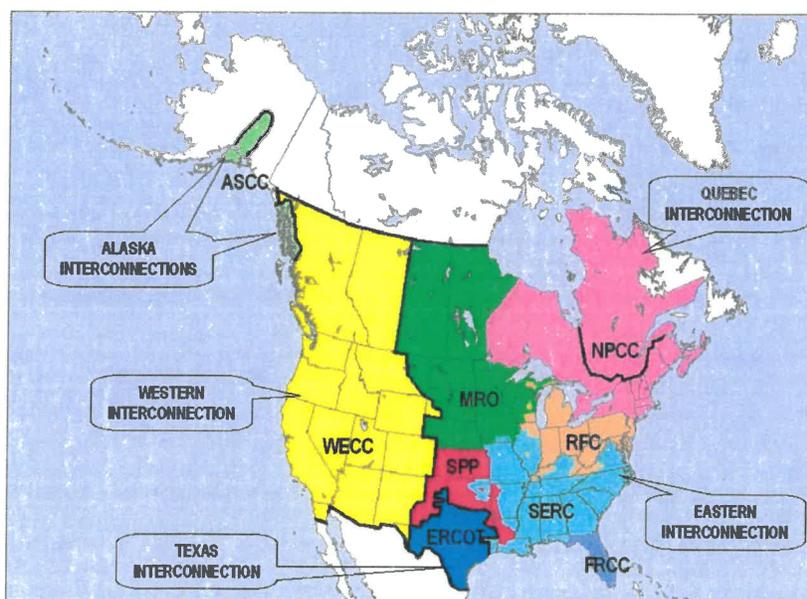
<sup>20</sup> PJM, “PJM History,” at <https://www.pjm.com/about-pjm/who-we-are/pjm-history.aspx>.

## 2. As it relates to reliability, what needs to be changed?

There are two related but separate types of reliability that need to be considered for purposes of responding to this question.

Meeting **operating reliability** objectives involves efforts to assess the ability of the inventory of existing resources (supply side and demand side) to so meet such reliability objectives. The field of view in an operating reliability context is typically a short- or near-term view. Meeting **planning reliability** or resource adequacy objectives involves an effort to assess, often through probabilistic analysis, the adequacy of resources and the mix of such resources to meet forecasted future demand. The field of view in a planning reliability context is typically a long-term view. In both cases, the physical realities associated with an interconnected network that behaves dynamically in real time as a function of changes in supply and demand must be respected. Since the **physical** performance of today's interconnected network is unaffected by political boundaries (national, state or local), efforts to meet operating and planning reliability objectives must be focused on the size and scope of physical system created and defined by interconnected grid or network.

North America is comprised of two major and three minor alternating current (AC) power grids or 'interconnections'. The Eastern Interconnection reaches from Central Canada Eastward to the Atlantic coast (including Quebec) [and including Ohio], South to Florida and West to the foot of the Rockies (excluding most of Texas). All of the electric utilities [investor owned, coops and government owned] are electrically tied together during normal system conditions and operate at a synchronized<sup>21</sup> frequency operating at an average of 60Hz.<sup>22</sup>



<sup>21</sup> In an alternating current electric network, synchronization involves designing, constructing and operating interconnected resources so that they, in effect, communicate through a common language. An alternating current generator cannot deliver electric energy to an AC electric grid unless the generator is running at the same frequency as the network.

<sup>22</sup> <https://www.energy.gov/oe/services/electricity-policy-coordination-and-implementation/transmission-planning/recovery-act-0>. Outside North America, some electric AC grid systems operate and are synchronized to a 50Hz standard.

Because national, state and local political boundaries have no influence over the physical performance of the North American interconnected electric grid, new organizations or institutions have been created to develop and enforce reliability-related standards.<sup>23</sup> As the physical performance potential of North America's interconnected electric grid evolves over time (as it has evolved for over 100 years), the means and methods by which operating and planning reliability objectives are pursued and satisfied must evolve as well. Accordingly and from a government policy perspective, satisfying operating and planning reliability objectives requires governments to respect and defer to physical laws.

The answer to the what needs to change question lies in an understanding and appreciation of outcomes compelled by physical laws and how physical laws dictate the performance of our interconnected electric grid.

To the extent, government subordinates the significance and importance of these physical laws in developing laws and regulations, the opportunity to meet evolving operating and planning reliability objectives will be compromised.

To the extent national, state and local governments do not uniformly respect these physical laws and coordinate their actions based on the commands of these physical laws, the opportunity to meet evolving operating and planning reliability objectives will be compromised.

Our system of government and the administration of this system must be synchronized with the physical laws that dictate what can and must be done to "keep the lights on".

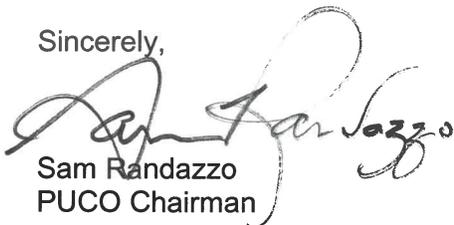
### 3. Does proximity matter—does Ohio need to maintain certain assets to recover faster from an interruption?

As implied by the response to the above question, uncoordinated and unilateral action by Ohio to construct, maintain or retire certain assets will, in general terms, only coincidentally result in an improved capability to recover faster from an interruption.

When proximity matters, it matters as a consequence of the physical laws that command outcomes without regard to political boundaries. If proximity has no influence over the outcomes dictated by these physical laws, it matters not.

I hope this information is both responsive and useful. Should you have any additional questions, please do not hesitate to contact me.

Sincerely,



Sam Randazzo  
PUCO Chairman

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<sup>23</sup> See Federal Energy Regulatory Commission Reliability Primer available via the Internet at <https://www.ferc.gov/legal/staff-reports/2016/reliability-primer.pdf> .