



Technical Conference: Impacts of COVID-19 on the Energy Industry

Panel 2: Electricity Demand and Transmission Planning

Panelist Biographies and Statements

Docket No. AD20-17-000
July 8-9, 2020



Impacts of COVID-19 on the Energy Industry

Panel 2: Electricity Demand and Transmission Planning

Panelist Biographies and Statements:

- Stefan Bird, President and Chief Executive Officer, Pacific Power, on behalf of PacifiCorp
- Travis Fisher, President and Chief Executive Officer, ELCON
- Robert “Mac” McLennan, President & Chief Operating Officer, Minnkota Power Cooperative
- Clair Moeller, President and Chief Operating Officer, Midcontinent Independent System Operator, Inc., on behalf of the ISO/RTO Council
- Curtis A. “Curt” Morgan, President and Chief Executive Officer, Vistra Energy
- Gil C. Quiniones, President and Chief Executive Officer, New York Power Authority
- Sam Randazzo, Chairman, Ohio Public Utilities Commission
- Paul Segal, President and Chief Executive Officer, LS Power Associates, LP



Stefan Bird
President and Chief Executive Officer
Pacific Power
Speaking on behalf of PacifiCorp

Stefan Bird is president and CEO of Pacific Power, a division of PacifiCorp serving 773,000 customers in 243 communities across Oregon, Washington and California.

In his role, Bird also oversees the optimization of PacifiCorp's 16,500-mile transmission system spanning 10 states, its multi-state renewable resource and grid operations, commercial and risk management activities, as well as its Portland, Oregon-based corporate teams serving 1.9 million customers in Pacific Power and Rocky Mountain Power service areas.

PacifiCorp is the largest regulated utility owner of wind resources in the West and operates the largest privately held grid in the West. Under his leadership, the company is making historic investments in renewable energy and the transmission infrastructure needed to transform the West to a sustainable energy future. The investments emphasize a diversity of new renewable resources, storage and modern grid technology. Taken together, they put PacifiCorp on the path to deliver the cleaner, affordable and reliable energy the West needs to grow while dramatically reducing greenhouse gas emissions.

Bird led the company's partnership with the California ISO in 2014 to develop a transformative Western U.S. energy market that maximizes renewable energy, grid reliability and lowers customer energy costs. Since its inception the market has saved customers across the West over \$860 million while simultaneously decarbonizing the Western grid. For PacifiCorp customers, market participation has delivered more than \$230 million in energy savings so far and reduced portfolio carbon emissions by over 15 million tons.

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

Impacts of COVID-19 on the Energy Industry) Docket No. AD20-17-000

**Statement of Stefan Bird
President and CEO, Pacific Power
July 8-9, 2020 Technical Conference
Panel 2: Electricity Demand and Transmission Planning**

Thank you Chairman Chatterjee and Commissioners for the opportunity to speak to you on the important topic of transmission planning in a COVID-19 environment. My name is Stefan Bird and I am the president and CEO of Pacific Power, which is the retail division of PacifiCorp that serves California, Oregon and Washington. PacifiCorp also serves Utah, Wyoming and Idaho through our Rocky Mountain Power retail division, for a total of approximately two million customers across the West. In my role, I also oversee PacifiCorp's transmission system operations. PacifiCorp's transmission system is the largest privately-owned grid in the Western United States, spanning 16,500 miles across 10 states and nearly 200 interconnection points with 11 adjacent Balancing Authority Areas.

First, I am pleased to share that PacifiCorp has answered the call during these challenging times and will continue to be there for our customers. I am proud of our employees – particularly our frontline workers – and I am proud of the resiliency of our communities. While COVID-19 has had dramatic impacts in many respects, transmission remains more central than ever to enable the achievement of our primary mission: to deliver safe, reliable and affordable energy to meet customer demands across the West. Transmission will remain a key focus now and into the future.

Our integrated system and vast energy grid will be central to support the future

Energy use across customer segments has changed, but the overall load on the system has remained relatively unchanged. In fact, we are anticipating small, year-over-year increases in load within the 10-year planning horizon, and we have had no issues keeping the lights on for our customers during this challenging time. A key reason for that reliable, low-cost service is our transmission grid that connects diverse resources scattered across the West. That abundance and diversity, connected and optimized by our transmission grid and the people who run it, is also the foundation of my optimism for our ability to meet our customers' future demands.

We continue to execute our \$6 billion Energy Gateway transmission expansion plan to advance grid reliability and resilience, and to accelerate the reach and integration of more low-cost renewable energy resources. Our most recent 2019 Integrated Resource Plan includes adding over 6,000 megawatts of new renewable resource and storage infrastructure by 2023, and nearly 11,000 megawatts of new renewable energy resource infrastructure over the 20-year planning period. That

transformation would not be possible without a well-planned, expanded and optimized transmission grid.

Because forecasted economic activity remains strong and lead-times are long, even with COVID-19, we are focused on maintaining and developing a robust transmission network and efficient markets that integrate this extraordinary volume of renewable resources reliably and cost-effectively, and leverage the inherent diversity of this clean energy future. With this Commission's leadership and support, we partnered with the California Independent System Operator to develop the Western energy imbalance market (EIM). Since its inception in 2014, this market has saved customers across the West \$920 million - and PacifiCorp customers alone have saved over \$243 million - while simultaneously reducing our carbon emissions by over 20 million tons – the equivalent of taking 4 million cars off the road for an entire year. The market has grown rapidly as others have joined to capture these same benefits, which increases the diversity and benefits for all participants.

This collaborative success among utilities in the West, with the Commission's continued support, is enabling the evaluation of the next step from the EIM to a potential day-ahead market, as well as a potential new resource adequacy market by the Northwest Power Pool. PacifiCorp is taking an active leadership role in both of these efforts that promise to optimize the West's abundant, diverse resources. Further, additional transmission is needed to enhance these efforts, as adequate transfer capacity is a critical component for delivering more resilience, more reliability and low-cost energy with the increasingly clean resource mix that customers across the West are demanding. We will keep the Commission up to date on these exciting developments, which will ultimately require the Commission's endorsement.

Wildfire season is also now in full swing across the West, and is unabated by COVID-19, so it is timely to mention our efforts to improve the resiliency and safety of our system to mitigate wildfire risk. We are investing in new technologies like covered conductor to harden our assets, installing a new network of weather monitoring stations that improve our situational awareness, increasing the frequency of facility inspections and conducting enhanced vegetation clearings around lines and poles in high-risk wildfire areas. We have enhanced our coordination with state, local and community officials in advance of and during wildfire season and we are forging new partnerships with industry and federal agencies through the Electricity Sector Coordinating Council to streamline critical work and pursue advanced technology to mitigate wildfire risk.

We seek to pursue systems and connections necessary to move our communities forward

The nature of the sweeping and systemic complexities we face — from system reliability and resiliency to decarbonization and affordability — suggest our work is best done in partnership with others, including stakeholders, our communities and this Commission. Most recently, this Commission approved key reforms to PacifiCorp's interconnection queue process, which included nearly 40,000 megawatts in the queue at the time of filing, to enable a more competitive, cost-effective array of renewable resources to become a reality for all entities seeking incremental

generation on PacifiCorp's system. Efforts like these will ensure a robust transmission grid and access to diverse, low-cost resources that will be vital to meeting future needs.

Because of our integrated energy system and expansive grid, and our collaborative work with others across the energy marketplace, we are able to leverage more of the West's diverse resources and infrastructure. Achieving this goal, while reducing customer costs, reducing carbon emissions and providing the always-on power our customers need, now more than ever, will bring stability in this unprecedented time and create a thriving future.

But more must be done. As a transmission operator managing two balancing area authorities in the West, PacifiCorp plans transmission to meet reliability criteria and integrate new generating resources that ultimately serve customer load. But there are other values served by adding to the Nation's high voltage networks in the form of resilience, enabling markets that reduce customer costs and helping to facilitate larger volumes of low or zero emission generation and storage. To that end, we appreciate the Commission's pursuit of additional transmission incentives in recognition of those benefits. Congress has a role to play as well in fostering a more robust grid. Building on current regulatory efforts, the streamlining of statutory requirements to provide more certainty of process – namely, reducing the time and complexity associated with federal siting and permitting processes – will lower the capital risk to pursue new large lines. I would also note that legislation has been introduced in both the U.S. House and Senate to provide a tax incentive for investment in new high-voltage transmission that integrates new renewables and/or provides further transfer capacity to rural areas.

The dynamic, long-term and multi-value nature of transmission development requires these types of initiatives for long-term success. In the case of Energy Gateway, that plan was driven by load growth requiring the need to build new generation and transmission. At the present time, we are building 140 miles of 500-kilovolt transmission through the Energy Gateway West Aeolus to Bridger project in 2020, and plan to build 400 miles of 500-kilovolt transmission through the Energy Gateway South project by 2023. These investments will not only ensure continued firm service to customers, but will also reduce emissions and save customers money, through the dramatic cost reductions in renewable energy facilitated, in part, by market efficiencies borne out of the EIM that enable us to add these resources. These investments will also improve the overall reliability of our network and represent a great outcome. Transmission incentives, siting reforms and tax incentives, collectively, will help get transmission projects built and will overcome the economic challenges of adding reliability and resilience, while building the energy infrastructure backbone needed for future generation technologies. We support these measures.

I remain firmly optimistic about the path forward.

Thank you for this opportunity to share PacifiCorp's story, and I look forward to answering any questions you may have.

Respectfully submitted,

/s/ Stefan Bird

Stefan Bird
President and CEO, Pacific Power

Dated: June 30, 2020



Travis Fisher
President and Chief Executive Officer
ELCON

Travis Fisher is the President & CEO of the Electricity Consumers Resource Council (ELCON). ELCON is a Washington, DC-based national association representing large industrial consumers of electricity. ELCON's multi-national member companies own and operate major manufacturing facilities throughout the United States and in all foreign markets. They produce a wide range of products from virtually every segment of the manufacturing community. Many ELCON members also cogenerate steam/thermal energy and electricity.

As President & CEO of ELCON, Fisher actively advocates for electricity consumers before the Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC), the Department of Energy (DOE), and Congress. He also routinely speaks at conferences and drives the development of economically sound electricity policy literature. Fisher was first published in the journal of the US Association for Energy Economics in 2012 and has remained active in academic discussions of electricity policy. He serves on the Advisory Committee of the Future Power Markets Forum, a project of Columbia University and Johns Hopkins University.

Fisher has over 15 years of experience in energy policy. Most recently, he served as Economic Advisor to FERC Commissioner Bernard L. McNamee from December 2018 until March 2020. He also held several roles at FERC in 2018 under the leadership of former Chairman Kevin J. McIntyre.

In January 2017, after serving on the Presidential Transition Teams at FERC and DOE, Fisher joined the DOE as a Senior Advisor in the Loan Programs Office and the Office of Electricity Delivery and Energy Reliability. At the DOE, he was responsible for leading the Department's efforts on the Staff Report to the Secretary on Electricity Markets and Reliability.

Prior to joining DOE, Fisher was an economist at the Institute for Energy Research, where he oversaw and expanded the think tank's research on electricity markets, FERC, and grid reliability. And prior to that, he served as a staff economist at FERC for seven years in the Office of Energy Market Regulation.

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Docket No. AD20-17-000

**STATEMENT OF TRAVIS FISHER
PRESIDENT & CEO, ELECTRICITY CONSUMERS RESOURCE COUNCIL
PANEL 2: ELECTRICITY DEMAND AND TRANSMISSION PLANNING**

The Electricity Consumers Resource Council (“ELCON”) is grateful for the opportunity to discuss with the Federal Energy Regulatory Commission (FERC) the impacts of COVID-19 on industrial consumers and the broader implications for reliable electricity supply at just and reasonable rates.

For over 40 years, ELCON has represented large industrial consumers of electricity. Our member companies produce a wide range of products and services from virtually every segment of the industrial community. ELCON members operate hundreds of major facilities and are consumers of electricity in the footprints of all organized markets and other regions throughout the United States. Reliable electricity supply at just and reasonable rates is essential to our members’ operations. ELCON appreciates the opportunity to join today’s technical conference and share the consumer perspective.

The COVID-19 pandemic has impacted everyone from the smallest mom and pop businesses to the largest international corporations, some of which ELCON represents. For example, according to industry reports, more than 100,000 workers

have been forced out of the oil industry since the end of February. Those who remain on the job are facing pay cuts of 8 to 10 percent, and the industry will likely recover more slowly than the rest of the national economy.

Clearly these are challenging times, as we can all see from the fact that – four months into a work-from-home lockdown – many of us are still conducting business from our home offices. In light of that, I just want to take a moment to congratulate the Commission on working so effectively during this trying time. I recall months ago when I was still on staff at FERC and Anton Porter and Mark Radlinski first informed us of the situation and how dire it was, and I think they handled it flawlessly. The Chairman and FERC staff should be commended.

In the interest of time I would just like to highlight a couple of concerns that ELCON members have as we navigate this pandemic, and I'll also give an example of what our members are doing to lend a helping hand.

First, as large industrial consumers of electricity, ELCON members place a particularly high value on electric reliability. Even a small glitch can shut down a manufacturing facility for days and cost millions of dollars. According to the North American Electric Reliability Corporation (NERC), these elevated risks are likely to continue throughout the summer, and new risks may emerge. We commend NERC on its efforts to ensure that power quality remains high even during the pandemic.

Second, industrial consumers are very sensitive to the cost of the electricity. Just and reasonable rates are critical for our members to keep costs low and compete in international markets. ELCON members are concerned about the impacts to rates that

may result from some utilities attempting to recover costs connected to COVID-19. Some of the sought-after rate treatment is styled as a “recovery of fixed costs” but could in fact be a true-up of lost revenues stemming from demand slumps due to COVID-19. We have seen filings along those lines at the state level in Indiana, Wisconsin, Louisiana, and elsewhere, and ELCON members find this trend very concerning.

At the federal level, ELCON encourages the Commission to take a close look at any rate filing that may include COVID-19-related costs to ensure that they are in fact just and reasonable. It is a simple matter of fairness that certain segments of American business should not be singled out to be made whole at the expense of consumers.¹

Finally, I want to close on a high note and discuss what ELCON members are doing to help. Some of our members make the isopropyl alcohol used in disinfectants. Others manufacture industrial gases and have prioritized the supply of oxygen used to support medical professionals and give hospitalized COVID-19 patients a fighting chance. Still others have shifted their manufacturing efforts to focus on ventilation systems or personal protective equipment like face shields and masks. ELCON is proud of the work our members do, and we are especially proud of the way they continue to put the safety and health of their employees, customers, and communities at the forefront of what they do.

Thank you.

¹ See <https://www.utilitydive.com/news/will-regulators-allow-utilities-to-reap-a-windfall-because-of-covid-19/580279/>.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Travis Fisher', with a long horizontal stroke extending to the right.

Travis Fisher
President & CEO
Electricity Consumers Resource Council
1101 K Street NW, Suite 700
Washington, DC 20005
Email: tfisher@elcon.org

Dated: June 30, 2020



Robert "Mac" McLennan
President & Chief Operating Officer
Minnkota Power Cooperative

Robert "Mac" McLennan is the President and CEO of Minnkota Power Cooperative based in Grand Forks, N.D.

Minnkota generates and transmits electricity for 11 distribution cooperatives in eastern North Dakota and northwestern Minnesota. The cooperative has about 390 employees and revenues of about \$400 million annually.

McLennan has spent his career serving the rural electric cooperative industry. Prior to joining Minnkota in 2011 as CEO, he was employed by Tri-State Generation & Transmission Association, an electric cooperative based in Colorado, as senior vice president of external affairs & member relations. McLennan has also worked for the National Rural Electric Cooperative Association (NRECA) as director of environmental affairs.

A Wyoming native, McLennan earned his bachelor's degree from the University of Jamestown. He and his wife, Debbie, reside in Grand Forks.



Clair Moeller

President and Chief Operating Officer, Midcontinent Independent System Operator, Inc. Speaking on behalf of ISO/RTO Council

As MISO president and chief operating officer, Clair Moeller leads all aspects of the Operations division, including grid operations, forward markets, system planning, external affairs, information technology and corporate services.

Mr. Moeller is a respected industry expert with experience in the operation of power systems throughout the Midwest. He is skilled at identifying and implementing the best practices in transmission planning and operations.

Before joining MISO in 2004, Mr. Moeller was with Xcel Energy for 25 years. Mr. Moeller completed the Oxford Advanced Management and Leadership course at Oxford Said Business School, the Executive Management program at the Carlson School of Business, University of Minnesota, and earned a Bachelor of Science degree in electrical engineering from Iowa State University.

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Docket No. AD20-17

**PREPARED REMARKS OF CLAIR MOELLER
ON BEHALF OF THE
MIDCONTINENT INDEPENDENT SYSTEM OPERATOR, INC.**

Good afternoon Chairman and Commissioners, I am Clair Moeller, President and Chief Operating Officer of the Midcontinent Independent System Operator, also known more commonly as “MISO”. I look forward to the opportunity to discuss impacts of COVID-19 on our system demand and planning. The system that MISO manages includes almost 72,000 miles of high-voltage transmission and over 175,000 MW of generation, which we do not own or maintain but rather exercise functional control. Our diverse footprint is the largest in North America in terms of geographical scope, serving about 42 million people across all or parts of 15 states in the middle of the continent, stretching from the Canadian province of Manitoba to the Gulf of Mexico. We maintain control room operations in four locations: Carmel, IN; Eagan MN; Little Rock, AR; and Sheridan, IN.

MISO is a member of the ISO-RTO Council (“IRC”) and while my prepared remarks reflect our experience at MISO, I coordinated with other IRC members for feedback on their experiences that are the subject of this panel. The RTO community has been working together and coordinating our efforts throughout the epidemic to share relevant information and best practices in order to best mitigate the impacts of COVID-19 on the power sector and maintain efficient, reliable operations across the country.

Regardless of where you reside, there have been real and terrible impacts from COVID-19. Even if our individual employees do not feel the worst of what COVID-19 can bring, it has surely impacted how we live and work. As a whole, we have been grateful for our team’s efforts and dedication while working through this period of uncertainty and volatility.

MISO has leveraged its regional model to help ensure continuous operations. MISO benefits in that we have four geographically separate control room locations that act as a buffer against spread of the virus within our facilities. While COVID-19 has not adversely impacted the

reliability of our system, we have observed impacts to operations, are adapting to changes in load and face unique coordination issues.

Turning to the load impacts in the MISO footprint, we observed that system-wide demand was down during the spring as a result of COVID-19-related closures. We estimated a demand drop of about 11% in May but are generally seeing a recovery of load since the lifting of a number of restrictions in various states. Load in June measured about 5% lower than normal as those stay-at-home restrictions were beginning to be lifted.

We also observed a significant change in our load profile. MISO's load shape has flattened due to COVID-19 related measures. Morning and evening load ramping rates are lower than normal. This contrasts from more challenging operational situations, such as the Polar Vortex, which required higher ramping. With the decline in load and different load shape, MISO also observed higher than usual load forecast errors. These observed load forecast errors, however, did not impact reliable operations. We have taken steps to reduce these errors and our forecast models are able to adapt to changes over time.

COVID-19 has also had an impact on our coordination of transmission and generation outage scheduling. Approximately 16% of planned transmission outages shifted to later spring or fall. The majority were COVID-19 related. We understand that much of this shift is due to the workforce – that is, the transmission owners were dealing with workforce restrictions due to COVID-19. We also understand that these outages are generally not being rescheduled over the summer peak so that they do not add any additional operational risk. Total Planned Transmission outages showed a steady decline beginning in early March compared to prior years. COVID-19 also affected planned generation outage schedules as well. MISO is working with its Generator Owners with a focus on reliably rescheduling outages and coordinating the scheduling of outages for the fall of 2020.

We only have 4 months of experience with this event and we expect the situation to be fluid for the foreseeable future. At this time, we have not observed the need for any significant changes to our planning, market or operating procedures due to COVID-19, but continue to monitor the situation for potential impacts. We have made relatively minor waiver filings relating to 1) site control provisions in our interconnection process and 2) registration opportunities for Load Modifying Resources. We are continuing work on our 2020 MISO Transmission Expansion Plan and Futures for 2021. Practically speaking, our long-term transmission plans are more dependent on changes in the resource mix than on economically-driven load growth. MISO's resource adequacy construct includes a prompt year annual Planning Resource Auction held in March of each year that serves as a residual balancing market that supports our utilities' state-approved resource plans. The load forecasts and other assumptions that populate that auction are made in the previous fall. As of now, our auction for the 2021/2022 planning year will be based on the best information available this fall. It is possible we may revisit the issue to evaluate a best path forward.

Consistent with what we have seen at the Commission, we at MISO have continued to move forward unimpeded with our daily activities and on our planned initiatives to meet our future challenges, despite the COVID-19 disruption. With the ongoing shift in resource mix in our region, we continue work on our Reliability Initiative maintaining particular attention to our ongoing Resource Availability and Need effort to meet our future market and operational needs, and well as our Long-Range Transmission Planning initiative that will identify cost-effective transmission infrastructure solutions to maintain a reliable and efficient grid.

The most significant long-term impacts from COVID-19 to MISO may well come in changes to the MISO workplace and stakeholder environment. MISO's top priorities remain the health and safety of our employees and stakeholders and maintaining reliable grid operations. Stakeholder meetings are taking place virtually, and our employees are just starting to phase in working from office locations again. Just as businesses around the country are grappling with how to incorporate this experience going forward, we at MISO will be taking a fresh look at our business practices and environment to help ensure we are able to continue to serve our customers most effectively.

I look forward to answering any questions you might have.

Respectfully submitted,

/s/ Clair J. Moeller

Clair J. Moeller

President and Chief Operating Officer for the
Midcontinent Independent System Operator, Inc.

Dated: June 30th, 2020



Curtis A. "Curt" Morgan
President and Chief Executive Officer
Vistra Energy

Curtis A. "Curt" Morgan, president and chief executive officer: Since October 2016, Mr. Morgan has served as president and chief executive officer of Vistra.

Prior to joining Vistra, Morgan was an operating partner at Energy Capital Partners, a private equity firm focused on investing in North America's energy infrastructure. He joined the firm in 2015 and was involved in all areas of the firm's investment activities, with a particular emphasis on origination, diligence and portfolio company governance and oversight, across all of Energy Capital's sectors of investments.

During his 35-year career, Morgan has held leadership responsibilities in nearly every major U.S. power market. Prior to joining Energy Capital, he served as the president and CEO of both EquiPower Resources Corp. and FirstLight Power Resources, Inc. He recently served as a director of Summit Midstream General Partner at Summit Midstream Partners. He has also held leadership positions at NRG Energy, Mirant Corporation, Reliant Energy and BP Amoco.

Morgan has served on the board of directors of the Electric Power Supply Association, the competitive power generation industry organization, and on the board of Prevent Child Abuse Georgia.

A certified public accountant, Morgan received a bachelor's degree in accounting from Western Illinois University and a master's of business administration in finance and economics from the University of Chicago.

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**Opening Statement of
Curt Morgan
President and CEO, Vistra Corp.**

The single most important thing the Commission can do right now is to work expeditiously on pending matters to ensure regulatory certainty. The COVID-19 pandemic and associated reduction in economic activity and electric load have introduced substantial uncertainty into the financial system and broader economy. As a result, market participants need regulatory certainty now more than ever. I appreciate the Chairman's statement during the April 2020 Commission meeting that the Commission would remain open for business. The Commission's workload since the beginning of the stay-at-home orders has proven the Commission's ability to continue to process critical orders and initiate important new areas of exploration. The industry needs the Commission to continue to act on pending matters, prioritizing those matters that have created the most uncertainty. No single issue has created more regulatory uncertainty than the timing of the next PJM capacity auction. It is imperative that the next auction is conducted as soon as possible.

The Commission's support for competitive markets is as important as ever. Coal resources were already under financial pressure prior to COVID-19 due to competitive, environmental, technological and market pressures. Now, the virus and related reduction in load, if it persists, simply add to that financial pressure. Lower near-term natural gas and power prices have displaced coal and squeezed overall margins. While we believe natural gas prices could rise in 2021-22 due to lower drilling and completions, demand destruction from COVID-19 is likely to adversely impact power prices and margins in 2021, especially for coal. Vistra currently owns 6,640 megawatts of coal assets in PJM and the Midcontinent ISO, and has announced retirement of 2,134 MWs of coal assets in these markets since the merger with Dynegy in 2018. The decision to close a power plant is a painful one for all parties and is not taken lightly. I can share that we are seeing some short-term cost increases at coal units due to low demand and low power

prices associated with the pandemic. We have some coal plants that have historically high coal piles that may affect our ability to offload new deliveries of coal. That could require us to incur rail penalties. We have also seen some of our coal plants cycling more than they were designed to cycle, which will increase wear and tear and ultimately require additional maintenance costs. Finally, we expect some coal units may be forced into more take-or-pay contracts for coal and other consumables as vendors respond to changes in coal unit output. It is not yet clear whether the changes in load and associated increase in cost will materially add pressure to coal resource viability in the near- and medium-term. As a company that believes deeply in competitive markets, we understand this financial pressure is part of a well-functioning market. It forces us to remain focused on finding ways to become more cost-competitive. Since the merger with Dynegy, we have conducted a comprehensive operational performance review at each of our generating plants, reducing costs and enhancing value by hundreds of millions of dollars – it is a source of competitive advantage. As regulators and legislators look for ways to ease the financial impact on the energy industry resulting from reductions in demand, it is possible new subsidies will be considered. That could include subsidies for resources like nuclear power plants or coal plants. For some companies, subsidies are way to make up for their inability to compete and create competitive advantage. Typically subsidies are reserved for nascent technologies in order to allow them to build to scale to compete, and then the subsidies expire. I would like to emphasize that any new subsidy for nuclear, coal, and even solar and wind, which have parity and can compete on their own, will undermine the incentives to innovate to lower costs. It will also discourage subsidized resources from finding ways to invest in an economic fashion by employing advantages and capabilities. Now more than ever, the Commission needs to remain supportive of competitive markets and ensure all resources compete on a level playing field.

The Commission should remain flexible in the near-term as companies and markets adapt to new circumstances. First, ISOs and RTOs need to be thoughtful when forecasting load for future years. We recognize the need to account for changes in load in the capacity market, particularly for near-term incremental auctions; but we also believe ISOs and RTOs need to be careful not to over-emphasize recent reductions in load. The evidence from just the last few weeks¹ suggests that load may be returning to pre-quarantine levels. There is considerable

¹ See e.g., ISO-NE weekly load analysis showing that load appears to be returning to normal around mid-June, available at <https://www.iso-ne.com/static-assets/documents/2020/06/isone-covid-19-update-06-23-2020.pdf>

uncertainty regarding how the economy will recover. Given the novelty of our current circumstances, it is difficult to know how peak loads will change this summer, much less three summers from now. Our advice is to avoid putting disproportionate weight on recent load changes when updating load forecasts, especially load forecasts for distant delivery years. Second, we believe there may need to be some short-term flexibility on how maintenance outages affect capacity ratings. Vistra had a very successful spring maintenance season, despite the fact that we were managing around new quarantine and social distance rules and travel restrictions. In fact, Vistra completed 86 maintenance outages this spring in order to be ready for the summer peak without incurring a single positive COVID test at any of our sites. In addition to spring maintenance, we were able to complete our once-through-cooling testing at Moss Landing this spring. We hope the fall maintenance season will be even smoother based on lessons learned from the spring. We encourage ISOs, RTOs, and the Commission to provide some short-term flexibility on how those outages affect capacity ratings without undermining incentives for companies to find ways to get maintenance completed.

I would like to highlight for the Commission a few other observations that may serve to enhance the Commission's situational awareness. On the project development side, we have seen COVID-19 impacting transmission project schedules in the California ISO that have a potential ripple effect on energy storage and other projects. So far, there have been no issues with Vistra's projects, but the potential for delays is an issue that we track weekly with our interconnecting transmission owner. Also in California, we have seen increased *local* solar curtailments driven by low load. Historically, solar curtailments are done at the system level and local load pockets almost never see curtailments. We are also monitoring possible under-recovery of wholesale volumetric charges, like ISO administrative fees or network transmission charges. If those charges are rolled over to future periods, we hope the Commission will be mindful of any further increase in costs to market participants. In particular, as the Commission considers steps to insulate transmission owners from the impact of COVID-19, it should recognize that there are customers on the other end who may already be subject to future cost increases. Similarly, on the retail side, we expect the near-term changes in load will lead some retail suppliers to under-recover their capacity and transmission costs because most retail suppliers pass these charges on to customers as volumetric rates. We don't think the Commission can or should do anything to

change the cost due from load-serving entities, but we want to bring this to the Commission's attention.

In closing, I want to highlight the industry personnel who have continued to work, both at generation plants and in the dispatch and control rooms, to keep operations and markets working smoothly. While many of Vistra's employees are able to work from home, Vistra's plant operations, commercial team, and retail customer service personnel are not. They must go into work every day due to the essential nature of the business and the requirement to be at the specific work location. These employees did a fantastic job adapting to circumstances to remain on the job and healthy while observing new requirements for temperature testing, social distancing, wearing facial coverings, and adhering to strict hygiene practices. We are proud that we have not had one case of COVID-19 contracted at work by our team members during daily activities and planned power plant outages. I want to note that the ISOs and RTOs have also had personnel show a truly inspiring level of commitment, especially those who were sheltering in place for a while. As an example, PJM's control operators recently ended more than two months in sequestration. Those operators were separated from their families so that the essential product they help deliver could remain available to all who needed it. We owe each of these individuals a debt of gratitude.

In the end, it is vitally important for the Commission to continue its normal business practices as much as possible, albeit in a safe and healthy manner, in order to offer as much stability as possible to competitive power markets. In addition, the Commission should look for opportunities to reduce the potential burden of market rules triggered by the uncontrollable effects of COVID-19 and do not let the virus' near-term and likely short-term impacts drive decisions that have long-term ripple effects.



Gil C. Quiniones
President and Chief Executive Officer
New York Power Authority

Gil C. Quiniones has served as President and Chief Executive Officer of the New York Power Authority (NYPA), the nation's largest state-owned electric utility, since 2011.

Mr. Quiniones is responsible for developing and implementing the statewide utility's strategic vision and mission and for supervising its operations, legal and financial matters and relationships with external stakeholders.

Under his leadership, NYPA is playing a key role in Governor Andrew M. Cuomo's Green New Deal, the nation's leading clean energy and jobs agenda. This landmark initiative places New York State on a path to economy-wide carbon neutrality. This initiative will provide for a just transition to clean energy, spurring the growth of the green economy and mandating New York's power be 100 percent clean and carbon-free by 2040, one of the most aggressive goals in the U.S.

Mr. Quiniones is Co-Chair of the Board of Directors of the Alliance to Save Energy and serves on the Boards of the New York State Energy Research and Development Authority and the Large Public Power Council. He is also NYPA's principal representative to the American Public Power Association.



**NY Power
Authority**

**Canal
Corporation**

ANDREW M. CUOMO
Governor

JOHN R. KOELMEL
Chairman

GIL C. QUINIONES
President and Chief Executive Officer

BRIAN U. STRATTON
Director, Canal Corporation

July 1, 2020

Chairman Chatterjee and Commissioners, thank you for allowing me to participate in today's FERC Technical Conference. Representing the public power industry and the New York Power Authority (NYPA), I will address the impact of COVID19 on electric demand, operations, planning and infrastructure development.

I would like to observe at the outset that the electric industry is doing an exemplary job of maintaining reliable service while managing through the many challenges presented by the pandemic. Trade groups like the American Public Power Association (APPA), Large Public Power Council (LPPC) and collaborative bodies, such as the Electricity Subsector Coordinating Council (ESCC) in coordination with government partners, are supporting collective industry response efforts. They include the sharing of planning considerations and mutual aid for utilities particularly impacted by COVID19.

I am hopeful that the collective industry response to the emergency so far bodes well for addressing the longer-term impacts of COVID19, and I commend the Commission for convening this conference to explore some of these multi-year challenges.

As you may know, NYPA generates approximately 25 percent of New York State's power and owns and operates one-third of the bulk electric transmission system in the state. The Governor of New York, Andrew M. Cuomo has set a bold goal of supplying 70 percent of the state's electricity with renewable sources by 2030 and a 100 percent carbon-free electric system by 2040. Regrettably, the ongoing global pandemic has made this vision of a sustainable future more challenging.

New York, one of the original epicenters of the COVID19 pandemic, experienced a nearly 10 percent reduction in electric load statewide at the height of the pandemic. In addition, New York State's strong economy—a prime driver of state's electric load—has seen a decline, and might not return to 2019 levels for quite some time.

This is consistent with projections that the national economy might take a while to bounce back. This reduction in load and the uncertain pace of recovery will have a direct effect on planning the much-needed expansion and upgrades to major power infrastructure.

While transmission planning might be difficult, now is the time to invest in the power grid to meet clean energy goals and to help restart the economy. In addition, it is also critical that we help address the disproportionate impact of pandemics such as COVID19 and severe weather events on low income communities, especially communities of color.

Specifically, the negative effects of high-emitting and polluting power plants in urban centers, and the corresponding health impacts, need to be avoided or minimized as soon as possible. This objective can be achieved by efficiently building out the transmission system to carry clean energy supply from more rural areas to urban load centers along with clean distributed energy resources.

Public power, moreover, has a strong interest in improving grid system efficiency, reliability and resiliency to serve its residents, communities and businesses. It stands ready to collaborate with the FERC as it looks to update its transmission planning processes, especially Order 1000, to support transmission investment. This approach will bring more renewable energy, and the innovation and jobs that come with it, to environmentally and historically-overburdened communities.

Thank you for this opportunity and I look forward to answering your questions today.

Sincerely,

Gil C. Quiniones
President and Chief Executive Officer



Sam Randazzo
Chairman
Public Utilities Commission of Ohio

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.

Before the Federal Energy Regulatory Commission

Prepared Statement of Sam Randazzo

Chairman of the Public Utilities Commission of Ohio and Ohio Power Siting Board

July 8, 2020, Panel 2: Electricity Demand and Transmission Planning

Mr. Chairman, Commissioners and Commission Staff, my name is Sam Randazzo. I serve the citizens of the State of Ohio in the positions of Chairman of the Public Utilities Commission of Ohio (PUCO) and Chairman Ohio Power Siting Board (OPSB)¹. I appreciate the opportunity to participate in this Electricity Demand and Transmission Planning Panel and hope to learn much from this experience. As you may well appreciate, I need to begin by first saying that the views I offer here today are not necessarily the views of either of these multi-member Ohio state agencies.

The journey that brings me here today began with some reluctance. Quite frankly, I looked at the questions directed at this panel and concluded that my background and experience do not qualify me to offer opinions on many of the posed questions which mostly seem to be directed at transmission owners (“TOs”) or regional transmission operators (“RTOs”). When I communicated this reluctance to the person who was kind enough to invite me, I was informed that my role would be to provide the perspective of a state regulator. So, for what it may be worth, I am here today to offer my state regulator perspective on what is going on in the electric transmission piece of the larger energy puzzle and I will do that by focusing on what I see from my Ohio-based observation point.

Let me begin by sharing my perspective on the questions we were told we might be called upon to answer during this panel. At a high level, the questions are focused on COVID-19 lessons learned as they may relate to forecasting, differential impacts on supply-side resources or the mix of such resources and potential impacts on reserve margins and transmission planning, impacts on competitive transmission development and the

¹ The OPSB is Ohio’s statewide land use regulator with regard to “major utility facilities” and wind turbine generator projects of 5 megawatts or above. Before construction of facilities subject to the OPSB’s jurisdiction can commence, the OPSB must issue a certificate and make the findings required by Ohio Revised Code Section 4906.10. Facilities subject to OPSB’s jurisdiction are exempt from land use regulation by local authorities. Chapter 4906 of the Ohio Revised Code is the source of the OPSB’s delegated authority.

possible need for more flexibility in the Commission's regulations to permit utilities to better adapt to unanticipated changes in electric demand resulting from the COVID-19 emergency. To the extent I have correctly captured the gist of these questions, I suggest that they may not yield as much useful information as may have been intended when it comes to operational or planning reliability, as these functions may be affected by pandemics of the COVID-19 variety.

First, the potential for a pandemic was and is well known and this potential was and is already incorporated into the relevant operational and planning functions. In the North American Electric Reliability Corporation's (NERC's) *Special Report, Pandemic Preparedness and Operational Assessment, Spring 2020*,² NERC observed that the "...electricity industry in North America is rising to the challenge, coordinating effectively with government partners and taking aggressive steps to confront the threat to reliability and security of the bulk power system (BPS)". NERC also stated that "[a]t this time, NERC has not identified any specific threat or degradation to the reliable operation of the BPS." The NERC Special Report then identified an increased reliability risk by operating period as illustrated below³.

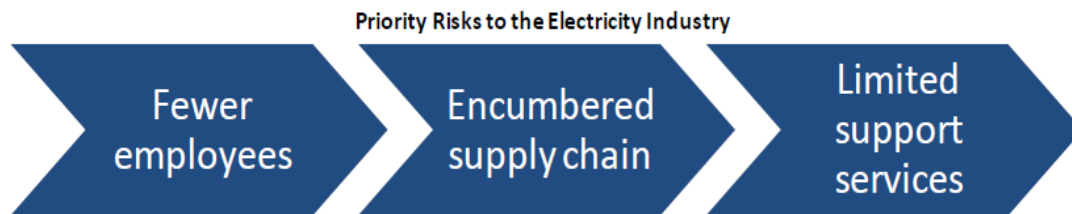
Increased Reliability Risk Profile by Operating Period		
Spring 2020	Summer 2020	Long-Term
<ul style="list-style-type: none"> • No specific reliability issue identified • Potential workforce disruptions • Supply chain interruption • Increased cyber security threat and monitoring • Different system conditions including lower demands and higher voltages. • System operators under sequester • Noncritical staff are remote 	<ul style="list-style-type: none"> • Continued potential for workforce disruptions; support service disruption • Potential equipment and fuel supply chain disruptions • Deferred generation maintenance and other factors impacting unit availability • Generation in-service dates <p>Note: a more granular assessment will be included in NERC's 2020 Summer Reliability Assessment</p>	<ul style="list-style-type: none"> • Potential changes to generation and transmission in-service dates • Increased remote operation of non-critical staff • Changes to pandemic preparedness and operating plans based on lessons learned <p>Note: a more granular assessment will be included in NERC's 2020 Long-Term Reliability Assessment</p>

² Available via the Internet at https://www.nerc.com/pa/rrm/bpsa/Alerts%20DL/NERC_Pandemic_Preparedness_and_Op_Assessment_Spring_2020.pdf

³ NERC *Special Report, Pandemic Preparedness and Operational Assessment, Spring 2020*, at page 1.

NERC's Special Report also identified the nature of the risk presented by a pandemic.

Pandemic risk differs from many other threats facing the BPS because it is a 'people event'. The fundamental risk is the loss of staff critical to operating and maintaining the BPS such that firm loads could no longer be served safely.⁴



NERC's Special Report was followed by the traditional NERC Summer Reliability Assessment. In this case the assessment for the Summer of 2020.⁵ NERC's latest Summer Reliability Assessment also discusses pandemic preparedness beginning at page 9.

Since the start of the widening coronavirus infection in North America in February 2020, registered entities have taken steps from pandemic plans and industry advisories to maintain the reliability and security of the BPS. In March 2020, the Electricity Subsector Coordinating Council (ESCC) issued the first version of the ESCC Resource Guide⁶ as a resource for electric power industry leaders to guide informed localized decisions in response to the COVID-19 global health emergency; it is updated on a regular basis as new approaches, planning considerations, and issues develop. The guide highlights data points, stakeholders, and options to consider in making decisions about operational status while protecting the health and safety of employees, customers, and communities. Sharing experiences and expertise helps users of the guide to make independent, localized decisions aimed at reducing negative impacts to the continent's power supply during the COVID-19 global pandemic. In addition to immediate measures designed to protect critical operations, personnel, and functions, entities are working to minimize risk to resource and BPS equipment availability, assure fuel

⁴ NERC Special Report, Pandemic Preparedness and Operational Assessment, Spring 2020, at page 3.

⁵ NERC 2020 Summer Reliability Assessment available *via* the Internet at https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2020.pdf.

⁶ Available *via* the Internet at https://www.electricitysubsector.org/-/media/Files/ESCC/Documents/ESCC_COVID_Resource_Guide_v2-03242020.ashx?la=en&hash=D3732CBFB46827AA0331277E8D5CBE0CC4DFC3BF

supplies, and prepare operating personnel for peak season. Since the start of the widening coronavirus infection in North America in February 2020, registered entities have taken steps from pandemic plans and industry advisories to maintain the reliability and security of the BPS. In March 2020, the Electricity Subsector Coordinating Council (ESCC) issued the first version of the ESCC Resource Guide⁶ as a resource for electric power industry leaders to guide informed localized decisions in response to the COVID-19 global health emergency; it is updated on a regular basis as new approaches, planning considerations, and issues develop. The guide highlights data points, stakeholders, and options to consider in making decisions about operational status while protecting the health and safety of employees, customers, and communities. Sharing experiences and expertise helps users of the guide to make independent, localized decisions aimed at reducing negative impacts to the continent's power supply during the COVID-19 global pandemic. In addition to immediate measures designed to protect critical operations, personnel, and functions, entities are working to minimize risk to resource and BPS equipment availability, assure fuel supplies, and prepare operating personnel for peak season.

My point in referencing the work of NERC and other organizations that have operating or planning reliability functions is to recognize that quite a bit of work has already been done in this area including work focused on the always-important lessons learned objectives. I suggest that this existing work be used to narrow the Commission's focus to the risks presented by a pandemic and identify useful ways to improve the already significant efforts that have been undertaken to mitigate these risks.

As I work on utility system network infrastructure and operating or planning reliability issues, I try to organize my thinking and approach by segmenting interconnected and interdependent necessary questions into two buckets with each bucket containing a few compartments or sub-buckets. My approach is consistently applied regardless of whether we are dealing with a public health emergency such as the COVID-19 pandemic or operating in less stressful times. And, with regard to regulated lines of business such as transmission service, I view my regulatory responsibility as requiring me to try to answer all the questions based on my view of the purpose of economic regulation. More specifically and for regulated lines of business, I seek regulatory outcomes that will mimic those that occur if the questions were answered by the forces of effective competition. It is my view that economic regulation is at its best when it indirectly accomplishes that

which effective competition would accomplish directly. The pursuit of this goal often involves more art than science.

In any event, the first bucket is the “what is the physical need” bucket and it has sub-bucket space for content responsive to such questions as what is the best fit with the existing network, when do we need a solution, how long do we need a solution, what solution satisfies the need and provides the best bang for the buck and by what process should the solution and solution provider be selected.

Once content is gathered to fill the first bucket and all of its compartments, I am ready to move on to the second bucket which must also be filled with content before my work can proceed.

The second bucket is the “who will pay for the solution” bucket. This bucket has sub-bucket space for content responsive to such questions as what is the causation of the cost, how should cost responsibility be distributed (by direct assignment or allocation), what pricing structure should be used to bill and collect the distributed-cost, over what period should the cost be recoverable, what is the proper way to recognize the business and financial risk assumed by the solution provider and customer, what terms and conditions should attach to define the commercial relationship between the solution provider and those who will compensate the provider.

With this organizational framework in mind, operational and planning reliability related transmission planning would mostly reside in my first bucket regardless of whether we are working during the time of a public health emergency or not.

From my state regulator perspective, I do not think the current approach to transmission planning is mindful of all the compartments in my first bucket. And, whatever is occurring in the name of transmission planning is not done transparently enough, particularly when “supplemental projects” are involved. And, whatever is happening occurs with an unacceptable disregard for what must be done to fill the second content bucket before work can proceed. Accordingly, I cannot do more than guess about the relationship between current output and a competitive market output.

And when we get to the second bucket, the deficiencies in the first bucket boil over into the second bucket sometimes igniting a robust fight between stakeholders firmly attached to their litigation positions.

The performance in the who-will-pay-for-the-solution bucket to date seems to involve some inventing or reinventing as Commissioners come and go plus a formula rate compensation structure that transfers all or almost all business and financial risk from the solution provider to wholesale and retail customers (who have no say in the governance of the solution provider)⁷. And to make things worse, the solution providers are demanding and receiving return on equity bonuses for a business model where the solutions provider's managers and equity owners are effectively held harmless. In some cases, the solution provider may also be seeking and obtaining return on equity bonuses for complying with their state law obligations to transfer operation control to an RTO meeting the Commission's functionality requirements.

From my perspective, these outcomes would be on shaky ground in a world where the forces of effective competition control.

As I see things, the content in both buckets is currently being assembled through an internally focused and silo approach that encourages the performance of tasks that are disconnected from the public interest mission.

I already briefly mentioned supplemental projects. But this category of transmission network infrastructure deserves some additional attention. And it may be helpful to use a few pictures to help you see what I am seeing from my Ohio point of observation.

My Attachment A shows, over time, the investment in supplemental and baseline projects by the TOs with zones in Ohio.

My Attachment B shows, over time, the increases in network transmission service prices for the same zones. Relative to the total delivered price of electricity, these transmission-

⁷ In this context, a suggestion that access to capital (a subject for tomorrow) is a problem for TOs makes my head hurt. People have been buying Hertz stock!

service-price increases are most impactful on energy-intensive manufacturers that take service at transmission voltages and increasingly must compete globally.

So that I might leave here today being viewed as someone who is interested in solving problems, I respectfully offer a few suggestions for your consideration. I make these suggestions understanding that for states like Ohio, “customer-choice” states, FERC has, as a matter of law, exclusive jurisdiction and will determine what, if anything, happens in bucket 1 and bucket 2. I believe Ohio is willing to help through the use of FERC’s joint board authority or otherwise, but the ball is in FERC’s court as things presently stand.

Suggestion No. 1

Direct that regional planners must thoroughly evaluate all projects and investment that involve transmission functions that are subject to FERC’s ratemaking jurisdiction and ensure that such regional planners have the requisite authority and expertise to do so.

Reasoning Behind Suggestion No. 1

PJM Interconnection LLC. (PJM) is the regional planner for the footprint that includes Ohio. It is the logical place for identifying and administering outcomes produced by the answers to the questions hosted by my first bucket. Yet, when it comes to supplemental projects, PJM seems, from my perspective, to be timid about ensuring the spending or investment is needed and is prudent and that an open, transparent process is used to this end. Perhaps this timid receptiveness can be explained, at least in part, by its fear that the TOs will exit their “voluntary” relationship with PJM and reduce PJM’s relevance. But, when I have discussed this subject with PJM, PJM has told me that: (1) it is lacking in clear authority to fulfill what is and should be a regional planner’s responsibility; and, (2) it lacks the full expertise required to do so.

Suggestion No. 2

Seek a better balance between the solution provider’s compensation and the business and financial risk taken on by the solution provider.

Reasoning Behind Suggestion No. 2

The academic literature and extensive experience tell us that cost-plus economic regulation provides very weak public interest protection against business models that

benefit from over capitalization. If the form of cost-plus economic regulation takes shape as an annually reconciling formula rate that effectively transfers all or almost all of the service provider's business and financial risk to captive customers, that already weak protection is eroded further. In both cases, as the necessary public interest protection is diminished by the form of economic regulation, the need for regulatory due diligence on the investment side of the equation increases. As described above, there is little, or no regulatory due diligence embedded in the regulatory supervision system presently when it comes to supplemental projects.

This balance must be respectful of the right of the service provider to have an opportunity to bill and collect just and reasonable compensation. And, changes in circumstances also need to be considered. While large amounts of investment in transmission facilities recognized through cost-plus ratemaking may result in abrupt increases in prices, it may nonetheless be smart and prudent to accelerate investment in needed transmission facilities at times when the cost of capital is relatively low. None of my suggestions should be construed or applied to suggest that we should sit on our hands, ignore needed investment and also ignore the fact that current interest rates are relatively low (the lowest in my lifetime). In fact, I would argue that the public interest is not served by sitting on our hands in such circumstances. I am only suggesting that we need to find the right risk-reward balance while being respectful of the weak public interest protection provided by cost-plus regulation.

Suggestion No. 3

Recognize the principle of gradualism as you apply the just and reasonable test.

Reasoning Behind Suggestion No. 3

From my perspective, a lot of the complaining about supplemental projects and the review process that is missing relative to these projects is causally related to the rapid increase in prices for network transmission service like those I have illustrated in Attachment B. And, based on the investor owned utility earnings calls and the associated presentations regarding future capital investment in transmission plant and the related level of projected earnings growth, it is reasonable to expect this price escalation is going to continue. As

you know, the growth rate in the demand for transmission service like that for the demand for energy is relatively flat and this means that there is little,, if any, growth to absorb the increased cost.

Traditional economic regulation typically front-end-loads net “rate base” into the revenue requirement at the highest plant value which then declines as depreciation occurs. This front-end-loaded aspect of economic regulation tends to amplify the escalation in prices caused by a period of either rapid investment in plant or rapid escalation in the cost of new plant. Again, these are not criticisms. These are mathematical consequences of one traditional approach to ratemaking.

But ratemaking and the just and reasonable standard involve considerations beyond those purely mathematical. And so, the principle of gradualism enters the picture to inform our just and reasonable conclusions in ways that will allow us to fairly compensate the service provider but to do so in a way that avoids abrupt increase in rates. One of the tools that has been used in the past to serve both of these objectives involves the use of a levelized (rather than front-end loaded) approach to determining the revenue requirement. The levelized approach essentially uses an average plant value over the useful life of the asset to inform the revenue requirement computation thereby dampening the abruptness that may otherwise occur.

Please keep in mind that no ratemaking approach can fully mitigate or fix problems created by over investment or over capitalization, unbalanced risk-reward relationships or inattentive regulatory supervision over investment decisions that are not disciplined by effective completion and that affect captive customers.

Suggestion No. 4

Consider other rate design and rate structure options to give customers more control over their bill and provide better bill predictability. Consider the introduction of zonal non-firm network service.

Reasoning Behind Suggestion No. 4

The current Commission-approved rate design or rate structure for network transmission service establishes a customer’s bill for transmission service by applying the tariff price

to a billing determinant. The billing determinant or “tag” is dictated by the customer’s contribution to the total zonal demand at the time of a historical peak. In some cases, multiple historical peaks may be harvested for the math exercise.

Given the rapid escalation in transmission service prices, there is an increased customer interest in using demand response to reduce the transmission tag in a context where zonal peaks on a transmission system are more difficult to predict than, say, the peak coincident demand for the entire RTO.

So, what I see in the real world is customers, wholesale and retail, chasing the peaks to try to deploy their demand response so as to minimize their transmission tag and all of this is occurring at the same time when the full capacity of the transmission system is underutilized. As a result, we end up with underutilization of transmission investment and capacity while imposing opportunity costs on the customers who have to reduce widget productivity to effectively chase the billing determinant peak.

In an effective competition world, any producer or supplier that developed, implemented and then tolerated an approach that both underutilizes capital assets and imposes opportunity cost on customers would be escorted to the exit. I don’t understand why regulation facilitates the use of such a waste-producing price signal.

As you know, the economy has been hobbled by efforts to address the COVID-19 spread risks. As a result, the math behind the computation of transmission service prices is going to produce, in my view, some very challenging results for both customers and transmission owners. Maybe this will help to shine some light on an area that needs attention. In any event, it needs attention.

Can this wasteful approach to capital asset utilization be eliminated and the imposition of opportunity costs on the macro economy be mitigated? If so, what might we do instead to better serve the public interest? These are questions that need to be addressed by a fuller consideration than is possible today.

But, why not let customers subscribe for a portfolio of network transmission services consisting of firm and non-firm components and require discontinuation of non-firm service at times when the system is expected to experience or is actually experiencing

physical stress? Would this approach bring more demand response into the marketplace? Would it encourage more battery storage or distributed generation? Would it give customers more predictability and control over their transmission service bill? Would this also reduce the risk of overcapitalization and underuse of capital assets? What would a transmission supplier subject to effective competition do to beneficially distinguish herself in ways that appeal to customers and yield greater market share and profitability?

Conclusion

Over the last 100 years, the electricity business has evolved from a local business enabled by franchises authorized by local government to a business conducted through an interstate and international network that functions without regard to political or RTO boundaries. The current industry architecture presents issues and opportunities that cannot be most effectively and efficiently resolved or taken advantage of without relentless coordination. In my view, too much time is devoted to questions about who has jurisdiction to take action and not enough time or effort is dedicated to producing the type of coordination that is required to best serve the public interest. And as I hope my illustrations of what is happening to transmission prices indicate, I think it is fair to say that there is a growing need for Commission action to better balance the interests of TOs and customers (wholesale and retail).

I appreciate the opportunity that I have been given today to share some views and I hope the views I have shared are useful.

Attachment A

Supplemental and Baseline Project Investment in Ohio

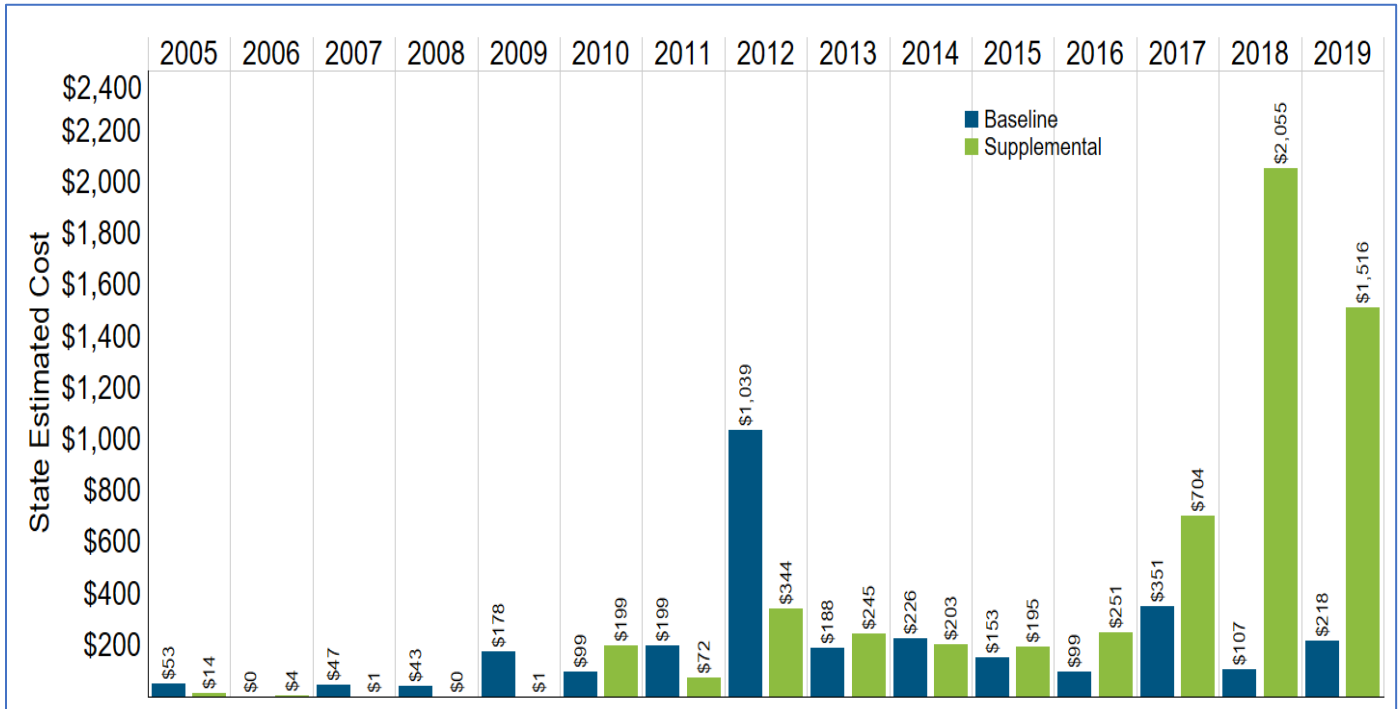


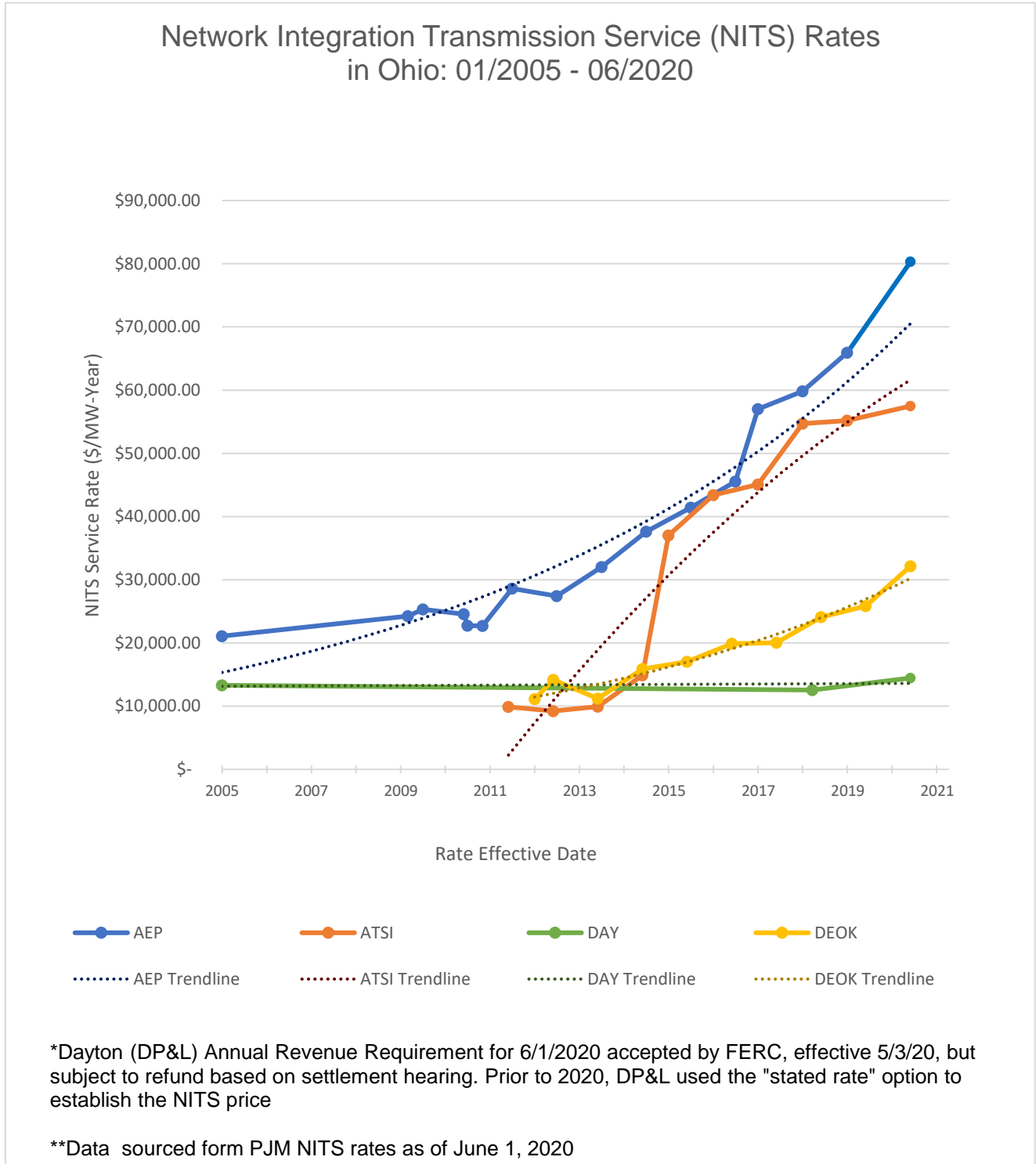
Chart sourced from PJM Transmission Expansion Advisory Committee (TEAC); data as of June 30, 2020

Baseline Projects are PJM Board Approved; Supplement projects are reviewed at TEAC meetings

Attachment A was provided by PJM at the PUCO's request.

Attachment B

Increases in Network Transmission Service Prices in Ohio Zones





Paul Segal
President and Chief Executive Officer
LS Power Associates, LP

Paul Segal is the Chief Executive Officer of LS Power and has served in that capacity since 2011. Mr. Segal is also a member of LS Power's Management Committee, overseeing one of the largest independent power and transmission developers in the United States. Since its inception in 1990, LS Power has consistently been at the leading edge of the industry's evolution, often introducing or commercializing new technologies and developing new markets.

To date, LS Power has developed, constructed, managed or acquired more than 42,000 MW of power generation, including utility scale solar, wind, hydro, natural gas-fired and battery storage projects, and 630 miles of transmission. Additionally, LS Power actively invests in businesses and platforms focused on distributed energy resources and energy efficiency. Through its greenfield businesses and investment partnerships, LS Power has raised over \$45 billion in debt and equity financing to support North American infrastructure.

Prior to his appointment as CEO, Mr. Segal oversaw LS Power's asset management and renewables development activities. In 2002, Mr. Segal founded Luminus Management, a hedge fund which invested across the capital structure of publicly-traded power, energy, utility and related companies. He was President and Portfolio Manager until 2011 and sold the business in 2017. Mr. Segal began his career at Smith Barney as a generalist in the Mergers and Acquisitions Investment Banking group.

Mr. Segal is a member of the Mount Sinai Department of Medicine Advisory Board, the Weill Cornell Medicine Dean's Council, the board of the Digestive Disease Research Foundation, the Advisory Board of the NYU Law School's Institute for Policy Integrity, and Chairman of the Electric Power Supply Association.

Mr. Segal graduated with highest honors from the Rutgers College of Engineering with a B.S. in Bio-Chemical Engineering.

Paul Segal
Chief Executive Officer, LS Power
Written Introductory Remarks as Filed with FERC
Docket No. AD20-17 – FERC Technical Conference
Panel 2: Electricity Demand and Transmission Planning
July 8, 2020

Chairman Chatterjee, Commissioners Glick, McNamee and Danly, and Commission Staff thank you for the opportunity to participate today.

I would like to start by acknowledging the heroic efforts of the plant and grid operators who continued to show up to work risking their lives and wellbeing to keep power flowing throughout the USA over the last few months. We are forever grateful for their efforts.

We have also seen tremendous efforts by people working on our construction jobs. With their help we have delivered critical infrastructure on schedule across three competitively awarded Order 1000 high voltage transmission projects and at the world's most powerful battery storage project which we are commissioning today in California.

Our panel will be discussing Electricity Demand and Transmission Planning and my key take away for you is that COVID-19 must not be viewed by our industry as a rationale to halt progress and defer planning and reform. I worry that the easy takeaway from our very recent experience will lead the industry to extrapolate forward to an environment with lower demand. I believe that our future is more complex and not necessarily understandable through linear thinking. We should expect and plan for a wider range of scenarios – these scenarios must be viewed as bi-directional pointing to the possibility of greater energy demand and lower energy demand ... higher energy pricing and lower energy pricing.

Let me explain. I believe that the most difficult economic parts of COVID-19 are behind us. The Federal Reserve's aggressive actions and fiscal stimulus helped to take some of the most extreme downside scenarios off of the table. Markets quickly halted their freefall and returned to function. A testament to this fact is that credit markets are open to even some of the most impacted sectors of our economy like aviation and cruise lines. Even the pipeline companies like Kinder and Williams, the former MLPs, can raise money – their 10 year duration corporate unsecured bonds are trading at a yield to worst of between 2.5% and 3.0%.

Some of our most capable clinical and research hospitals were the hardest hit by the early phases of COVID-19. Over the course of just a few months our country's health systems have learned a

great deal about this disease and how best to treat it. The ingenuity of our people and companies has been released to tackle this disease. I expect that within a year our perception of COVID-19 will be very different because we will learn how to live with it. Our actions will change the trajectory of the disease and we will learn how to treat the symptoms to reduce severity and/or immunize against it. But these changes in actions have impacts on energy and electric demand.

From the perspective of electricity demand and forecasting it is easy to imagine and manage the downside case – we have been living it. Demand in certain regions declined by close to 25% before beginning a gradual recovery.

But, it would be dangerous to extrapolate from this recent experience. Events like COVID-19 tend to trigger paradigm shifts - today there are many paradigm shifts happening all at once. That leaves us needing to consider a number of questions about how these changes will impact demand and usage patterns for electricity.

One key paradigm shift underway is the way we work: more working from home and less densification in the office. Fundamentally, I expect that this will lead to the less efficient use of space and less efficient use of energy, including electricity. The office electrical systems will need to run, perhaps at a modestly lower capacity than might have been required otherwise. But more people at home will lead to use of electricity to heat, cool and light the home when previously it would have been unoccupied. In the aggregate this may well result in a meaningful increase in electric demand over the intermediate term.

Work from home is also likely to drive demand for natural gas. This could well be problematic in places like New England where energy into the market is constrained by infrastructure limitations in the winter.

These changes are non-linear and multifactorial. They can often be derivative of one another. For example, the recent collapse in oil prices has crushed drilling for oil in many shale plays. The indirect consequence of this will be a significant reduction in the availability of essentially free associated natural gas. Gas prices will need to incentivize more drilling for natural gas as we move forward. It is conceivable that this new paradigm will result in natural gas prices moving into a range that is persistently 50% higher than we would have expected them to be before COVID-19 – for example \$3.00-\$3.50/mmbtu vs. the \$2.00-\$2.50/mmbtu environment that we have been experiencing recently. This would result in higher wholesale power prices for the first time in years. It may allow many coal and nuclear plants that have struggled economically for years to prosper as they used to. It may make the need for state subsidies for

these resources unnecessary. This may also lead to a political response that pushes toward more green energy investment.

The impacts of COVID-19 have been economically devastating. As we focus on the road back we should keep in mind that affordable electricity is, to a large extent, a function of transmission grid optimization. Competitive procurement and regional planning of transmission must remain a priority as we tackle affordability going forward. The regional planning processes must be robust enough to enable the RTOs to plan for and facilitate the construction of the power grid of the future — one that anticipates and supports the states' evolving energy investment policies and goals — rather than sitting idly by while every element of yesterday's aging grid is simply rebuilt and replaced with the same thing as facilities reach the ends of their useful lives. Also, irrespective of the ultimate direction of electric demand, we must not lose sight of the critical importance of reliability. We must continue to work to ensure the durability of competitive market constructs that promote planning for a reliable electric grid.

So as you can see, this complexity in planning for the future in these unprecedented times is why it is more important than ever to understand that there is much that we do not know and, as a result, we must plan for a broader range of outcomes. Critically, we must continue to plan, innovate and execute. And, we must continue to focus on affordability and reliability for the customer.