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

Panel 1: System Operations and Planning Challenges

Panelist Biographies and Statements

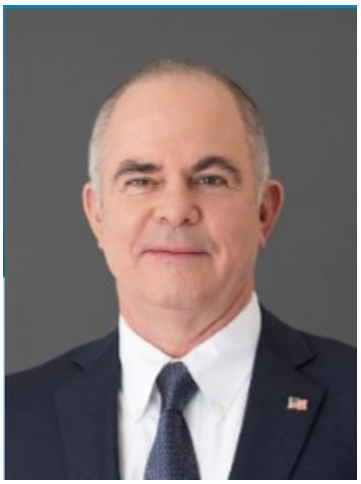
Docket No. AD20-17-000
July 8-9, 2020

Impacts of COVID-19 on the Energy Industry

Panel 1: System Operations and Planning Challenges

Panelist Biographies and Statements:

- Michael E. Bryson, Senior Vice President, Operations, PJM Interconnection
- Timothy P. Cawley, President, Consolidated Edison Company of New York
- Stanley Graham Chapman, III, Chief Executive Officer, TC Energy
- Stanley W. Connally, Jr., Executive Vice President – Operations, Southern Company Services, Inc.
- Eric DeBonis, Senior Vice President – Operations, Southwest Gas Corporation
- Mike Haynes, Chief Operating Officer, Seattle City Light
- Shawn M. Lyon, President of Marathon Pipe Line, and Vice President of Operations, MPLX GP LLC
- James B. Robb, President and Chief Executive Officer, North American Electric Reliability Corporation



Michael E. Bryson
Senior Vice President – Operations
PJM Interconnection

Michael E. Bryson is responsible for PJM's Operations Division, overseeing 24/7 transmission operations for real-time systems. This includes scheduling, transmission dispatch, generation dispatch, reliability coordination, training, and all engineering analysis required to run the system and support the critical energy management systems.

Mr. Bryson also held the positions of executive director of System Operations, general manager of Dispatch Operations and manager of the Transmission Department for the System Operations Division. He was responsible for PJM's transmission operations support for real- time operations to include transaction scheduling, transmission analysis and regional and seasonal studies.

Mr. Bryson is a member of the Consortium for Electric Reliability Technology Solutions and the ISO/RTO Operating Committee. He serves on the board of PJM Technologies, Inc., and PJM Repository Information Services, Inc.

Prior to joining PJM, Mr. Bryson held various senior-level positions with DIMAC DIRECT, Inc. in St. Louis, including vice president of information services, manager of operations and technical services and manager of applications development.

Mr. Bryson has nearly ten years of military experience as a pilot. He was awarded the Bronze Star for Combat Service in Desert Storm. His responsibilities in the United States Army included operations planning and support, supervision and training of pilots and mechanics, and tactical computer systems training and maintenance.

Mr. Bryson earned a Bachelor of Science in general engineering from the United States Military Academy at West Point, NY, focusing on computer science and electrical engineering, and has a Master of Business Administration from Saint Joseph's University in Philadelphia. Mr. Bryson also earned a graduate certificate in power engineering from the Worcester Polytechnic Institute.

Testimony of Mike Bryson, Senior Vice President – Operations

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

June 30, 2020

For Public Use

Introduction:

As PJM's senior vice president of Operations, I am responsible for PJM's Operations Division, including 24/7 transmission operations for real-time systems, as well as the engineering analysis required to run the system and support the critical energy management systems.

I am pleased to provide this opening statement to briefly outline how PJM Operations and the larger PJM community have managed through operating challenges brought on by the COVID-19 pandemic.

Although the spread of the virus was certainly not foreseeable, planning and operating through a pandemic was not a totally new subject in PJM. In 2009, Tom Bowe, one of PJM's senior executives involved in Operations, participated extensively in the drafting of a NERC report[1] which was designed to provide guidance to the industry in planning and operating during a pandemic.

Beginning in early 2020, as news of impacts of the virus affecting the U.S. emerged, PJM activated its Incident Response Team; implemented its Pandemic Plan; and began to take steps to mitigate potential risks to employees including restricted business travel, restricted campus visitors, restricted Control Center access, and enhanced cleaning measures throughout PJM campuses. Beginning in Mid-March, PJM took additional measures including canceling all travel and face-to-face meetings, including stakeholder meetings while maintaining strong stakeholder interaction through Webex meetings and conference calls. In addition, PJM staff moved almost entirely to a work-from-home posture as PJM shift operators moved to an aggressive isolation between the two campus Control Centers, including moving to 12-hour shifts and contactless shift turnover.

As the COVID-19 pandemic began having a greater impact on regions within PJM's footprint, PJM expanded communication efforts with its members, this commission, state commissions and the public to share the impact of the pandemic on PJM, and for PJM to clearly understand the impact of the pandemic on its members. PJM began holding weekly sessions during which PJM could share information with its members and respond to questions in a public forum. In addition to these meetings, PJM created a forum to serve as a weekly venue where member company operators would feel more comfortable sharing details that they might be unwilling to share more openly. PJM also held weekly meetings with the Commission's Pandemic Response Team, as well as with the state commissions, and incorporated that feedback into its analysis as well. Having these meetings helped PJM quickly communicate the information it was gathering, and also identified and prioritized issues effecting its members. These meetings and the one-on-one forum also helped inform PJM steps by learning from member company approaches to the pandemic. During this time, PJM also coordinated closely with IRC members – also learning valuable approaches to pandemic operations.

[1] *High-Impact, Low-Frequency Event Risk to the North American Bulk Power System*, North American Electric Reliability Commission, June 2010.
https://www.nerc.com/pa/Stand/Geomagnetic%20Disturbance%20Resources%20DL/HILF_112012.pdf#search=High%20Impact%20Low%20Frequency%20Risk%20AND%20JUNE%202010%20%20%20%202010

Our initial focus for system operations was to develop approaches to mitigate potential impacts to PJM member companies and PJM staff – either directly to protect employees or indirectly to protect supply chains. PJM worked closely with PJM stakeholders, including state regulators, to identify and mitigate impacts to resources such as potential curfews and road closures. PJM also provided liaisons to multiple ESCC working groups to develop industry best practices to various COVID operations.

In addition, PJM took more targeted actions with system operations, which included splitting staff between Control Center campuses; eliminating all access to control rooms except for dispatchers; moving to 12-hour shifts to reduce potential for spread; shifting turnover to dispatchers at an adjacent Control Center; establishing a third control room; testing and sequestering dispatchers. We also established a bench operator effort which established a formal identification and training effort to backup shift operators based on specific reliability tasks. We had an epidemiologist review our plans at each step. We have also been engaged in international industry groups to capture lessons learned and best practices from other similar companies around the globe.

PJM has developed a robust return-to-campus plan, which is conservative and flexible. For the most part, staff will continue to telecommute through the summer and then transition staff back to our campuses. For Operations, we have developed processes that could be used to bring some critical support staff back to campus to assist with critical operating periods. Basically, operationally we are going to step out of our pandemic posture, more or less using the same step-by-step approach that we used to enter into our pandemic response posture, albeit in the opposite direction. All of these plans include steps to quickly return to full pre-pandemic operations.

General PJM Generation Information Section:

PJM has 186,788 MW of total generating capacity.

The typical generation outage levels in the PJM footprint are seasonally dependent. During the summer and winter months, when demand is much higher and outage are more restricted, outages levels typically range from 5,000 MW to 10,000 MW. However, during the spring and fall months, which are the traditional outage seasons for the generators, outage levels can reach peaks between 50,000 MW and 60,000 MW.

Overview of PJM Generation Outage Process

PJM ensures that there is adequate generation to serve load and meet various operational requirements. PJM's outage system, eDART[2], tracks the availability of every generator in the PJM region, as well as the projection of near- and long-term load forecasts. This information is used to calculate the remaining generator outage margin.

Both of these tools are used in PJM's approval process for generator Planned and Maintenance outages. Outage requests starting within the next seven days are evaluated using this system, which calculates generator outage

[2] eDART (Dispatcher Application and Reporting Tool) allows generation and transmission owners to submit generation and transmission outage requests. eDART allows its users to manage their outage data by viewing the status of their outages and obtaining outage reports. https://www.pjm.com/markets-and-operations/etools/edart.aspx

margins using the near-term load forecast. Outages that are longer than seven days, or are scheduled to start seven+ days out, are evaluated using the long-term load forecast.

PJM Generation Outage Coordination Actions in Response to COVID-19

Generation Resource Owner Communication:

In addition to these regular meetings, PJM issued an open survey to its generation resource owners to collect detailed information from them on the impacts of the COVID-19 pandemic on a company and a unit level. The survey collected information ranging from the actual impact to the member workforces, to mitigation and risk management best practices, to outage impacts due to the pandemic. This survey was opened to members in March 2020 and has remained open for members to update their responses to provide PJM an evolving view of the pandemic on the generators within its footprint. To monitor the data coming in, PJM built a real-time dashboard to display the data collected from this survey which provided both a high-level view of the data in aggregate, and also the details down to the unit level. This dashboard was available internally to inform decision-making, outreach and technical analysis.

PJM COVID-19 Severe Generator Plant Staff Impact Analysis:

Due to the unknown duration and impact of the COVID-19 pandemic on generator plant staff, PJM performed several worst-case generator unavailability scenario studies to assess the potential impact of generator outages during spring and summer peak loads. PJM developed outage scenarios based on large concentrations of generation located near COVID-19 hotspots within the PJM footprint. The results[3] of the analysis indicated that unprecedented amounts of generation unavailability would need to be concentrated in one area – prior to severe, uncontrollable issues developing – that would need to be mitigated by dropping load.

MOC Remote Operations:

PJM provided market participants with guidance[4] on how to conduct MOC remote operations as a last resort. This was developed along with PJM member feedback to address questions raised by market participants who identified the possibility of having to move some or all of their control center operations to one or more non-traditional remote locations.

[3] PJM COVID 19 Generator Availability Analysis, May 8, 2020. https://pjm.com/-/media/committees-groups/pandemic/postings/covid-19-gen-availability-analysis-presentation.ashx?la=en

[4] PJM Manual 1, Attachment F. https://www.pjm.com/~/media/documents/manuals/m01.ashx

Gas-Electric Coordination:

In late March, PJM, through the ISO RTO Council Electric Gas Coordination Task Force (IRC EGCTF), initiated a biweekly conference call to identify best practices associated with COVID-19 operational response efforts across the electric and gas industries. Participants on these calls include:

- ISOs and RTOs that comprise the IRC EGCTF
- The Interstate Natural Gas Association of America (INGAA)
  - The interstate pipelines represented by INGAA
- The Natural Gas Supply Association (NGSA)

These calls are continuing as both industries begin to implement their return-to-work efforts through the summer and fall months, and opportunities to learn from each other's experiences remain.

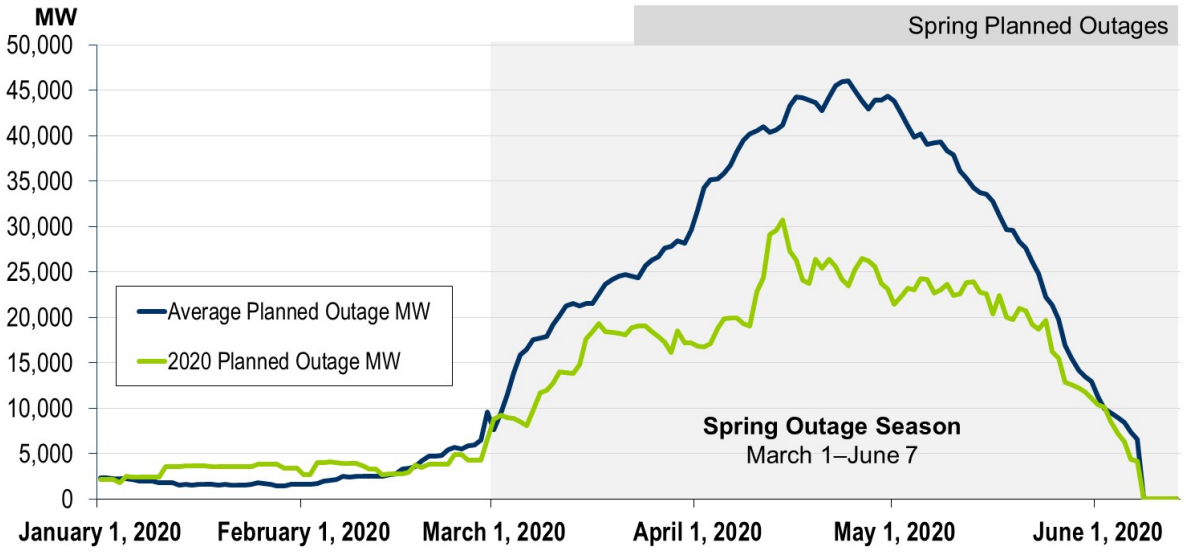
COVID-19 Impact on Generation Planned and Maintenance Outages:

Throughout the period of the pandemic, neither generation nor transmission resources within the PJM footprint experienced any major or systemic issues. While isolated issues did appear to crop up, there were no impacts to operations or reliability.

PJM identified multiple outages that were at risk of delay, postponement or outright cancellation via the survey that was issued to generators, for a variety of pandemic-related reasons (local work restrictions, the reliance on contractors or equipment from outside of the state or U.S., concerns regarding availability and delivery of consumables, etc.). PJM also actively monitored the status of the planned and maintenance outage tickets throughout the height of the pandemic. While the number of outages remained consistent with pre-pandemic numbers, an after-the-fact review of the magnitude (on a megawatt basis) of the generator Planned Outages shows a clear reduction from the average spring outage season of the prior four years. This indicates that outages were still taking place, but many Planned Outages were reduced in scope and/or duration, making the 2020 spring Planned Outage numbers much lower.

Compared to the past four years (2016–2019), PJM saw impacts to both the generation planned and maintenance outage numbers taken during the 2020 spring outage season, which happened to largely coincide with the peak of the COVID-19 pandemic within PJM's footprint. For example, the magnitude of the Planned Outages this spring were, on average, over 10,000 MW lower on a daily basis, an average drop of 37 percent relative to the past four years (Figure 1: Planned Outage Megawatts – 2020 Versus Average).

Figure 1. **Planned Outage Megawatts – 2020 Versus Average**



Looking forward to the 2020 fall outage season, PJM anticipates potentially higher-than-average Planned Outages this year. As of June, the forecasted Planned Outage numbers for the fall outage season are already very close to the average Planned Outage amounts for fall outage seasons. Since PJM sees most Planned Outages scheduled 30- to 90-days prior to the start of the Planned Outage, we expect to see additional Planned Outages scheduled as we draw closer to the 2020 fall outage season, potentially exceeding the averages.

At this time, PJM does not anticipate difficulty in maintaining sufficient available generation while also allowing higher-than-average Planned Outages this fall. PJM uses an outage scheduling model to calculate the amount of outages that can be approved in mid/long-term outage scheduling, and even when estimated Maintenance Outages are added, PJM is generally below that model's threshold. A necessary amount of margin still exists in the case that additional outages from the 2020 spring outage season get rescheduled to this fall, and as those dates get closer and PJM switches to its near-term outage scheduling model, we expect even more margin for outages to become available.

In conclusion, even though PJM is currently forecasting an above-average amount of Planned Outages for the 2020 fall outage season, outage margins from the longer-term outage approval model still exist for additional outages this fall. We are still investigating with generation owners if they have additional outages needed for this fall that have yet to be scheduled, but again, PJM maintains adequate reserves in line with published Installed Reserve Margin value via the longer-term calculations and can recall/defer Maintenance Outages as needed.

COVID-19 Load Impacts and Changes

Starting in mid-March, the COVID-19 pandemic manifested itself in broad business shutdowns. This has resulted in significant changes in people's typical behaviors, and with it, a sizeable reduction in electricity demand. Much still remains to be learned, but some impacts and trends have become apparent.

Prior to the pandemic, the share of RTO annual demand for each of the three customer sectors was: residential – 37 percent, commercial – 37 percent, and industrial – 26 percent. Each of these sectors has drastically different use profiles. Commercial and industrial customers have a large share of their demand driven by non-weather-sensitive end uses, while residential customers tend to be much more weather-sensitive. Although PJM does not have insight into specific sector impacts, it is clear the relative sector impacts do affect load conditions at the grid level. In addition to the economic impacts, the observations cited here PJM believes are in-part driven by a shifting of load from the commercial and industrial sectors to residential.

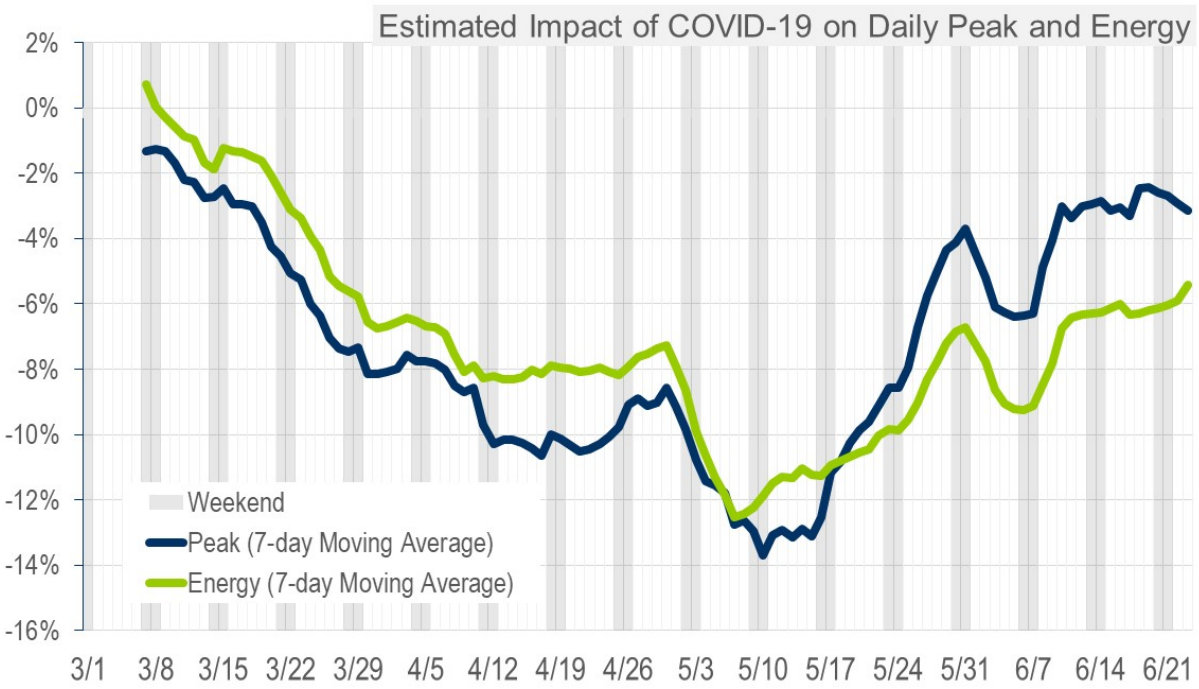
Intra-Day Effects

From an operational perspective, one of the first observations was a shift in morning load behavior. Winter and early and mid-spring days are often characterized by a double-hump hourly load pattern, where load ramps to a peak in the morning and then again in the evening. As stay-at-home orders started to materialize, PJM began to observe a later morning peak, with morning peaks occurring more in the 8–9 a.m. or 9–10 a.m. hours, rather than 7–8 a.m. Then, between the morning and evening peaks, the afternoon sag was less pronounced. With the onset of late spring and early summer, the morning impact is less apparent. This time of year tends to not have morning peaks, and the morning ramp has also generally been more moderate.

Daily Peak and Energy Impacts

COVID-19 began to have a noticeable impact on PJM load starting about mid-March and began to intensify starting around March 23 when many states' stay-at-home orders went into effect. The chart below depicts the seven-day moving average of the estimated COVID impact on daily peaks and energy demand. These estimates indicate that daily peak demand was around 8–10 percent lower than it otherwise would have been for much of April, with the drag accelerating to 12–14 percent for the first half of May. Over the same time period, the impact on energy has been less pronounced, buoyed by the previously mentioned smaller afternoon sag.

Figure 2. **Estimated Impact of COVID-19 on Daily Peak and Energy**



Since mid-May, peak impacts have decreased considerably, and energy impacts have as well to a lesser extent. The cause is twofold:

- **Increased Residential Demand** – The shift toward residential comprising a larger share of electricity demand results in greater weather sensitivity of PJM load. The onset of summer weather conditions, coupled with the increased weather response, is reducing the COVID impacts on load.
- **Resumed Commercial/Industrial Demand** – The rollback of some restrictions has lifted commercial and industrial demand.

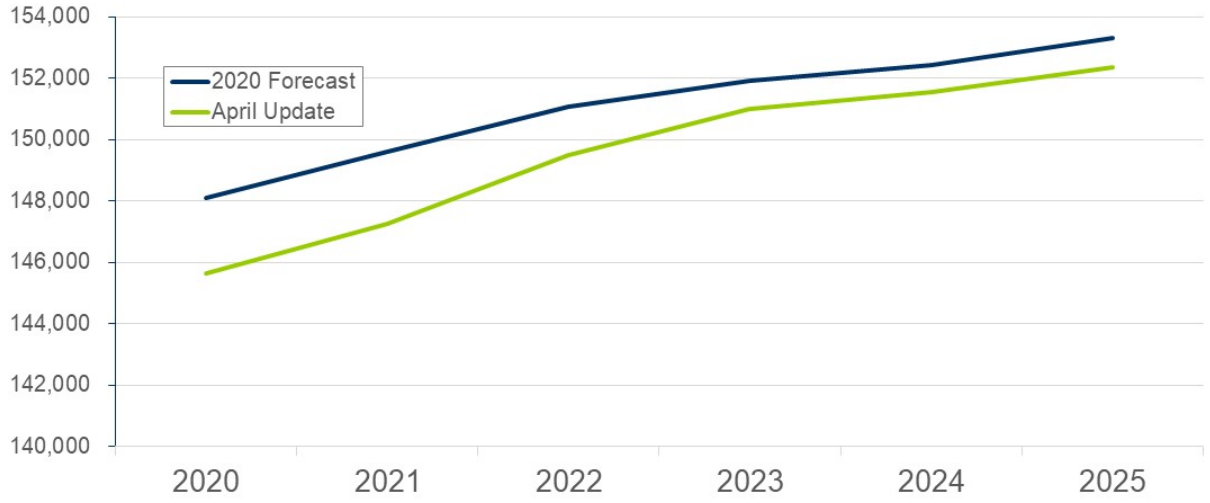
Our analysis seems to indicate that increased residential demand is the more dominant factor thus far, as this would be consistent with the more significant reduction in peak impacts than in energy impacts. Peak is more weather-sensitive than energy, and energy impacts have been now outpacing peak impacts since mid-May. As restrictions continue to ease, it is possible there will be some interplay between the two factors of increased residential demand and resumed commercial/industrial demand as eased restrictions may reduce residential cooling demand with people returning to work.

Load Forecast

PJM produced an updated long-term load forecast outside of its normal schedule to better reflect COVID-19 impacts. PJM was granted a waiver by FERC to use this forecast for the Second Incremental Capacity Auction for the

2021/2022 Delivery Year[5]. When compared to our pre-COVID forecast from January, 2020, this update showed a 1.6 percent reduction in our projected peak demand for summer 2021 (see graph below).

Figure 3. **PJM RTO Summer Peak Forecast**

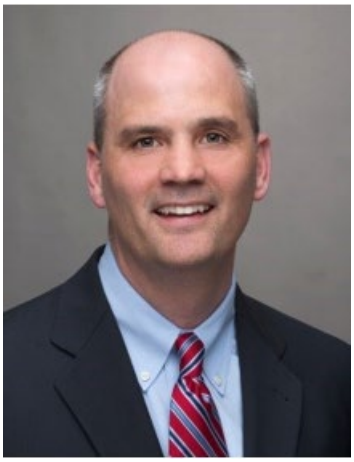


	2020	2021	2022	2023	2024
April Update – Percent difference from 2020 Forecast	-1.7%	-1.6%	-1.0%	-0.6%	-0.6%

Cybersecurity Threats and Vulnerabilities

From PJM's view of the threat landscape, COVID brought increased phishing emails, with themes related to the pandemic. In addition to monitoring our existing defensive technologies to protect against phishing, PJM provided additional awareness messaging to end-users to help spot malicious email. PJM was able to maintain all of its normal cybersecurity operations remotely, including 24/7 security event monitoring, patch and vulnerability management, password management, and configuration monitoring. PJM continued to work with its government and commercial partners to get up-to-date cybersecurity threat intelligence information. In addition, PJM's remote access infrastructure was already prepared both for the capacity needed for remote operations and for the security configuration needed to protect PJM while in remote operation.

[5] FERC Docket No. ER20-1870-000. https://elibrary.ferc.gov/IDMWS/search/fercgensearch.asp



Timothy P. Cawley
President
Consolidated Edison Company of New York

Timothy Cawley is president of Consolidated Edison Company of New York, Inc., with responsibility for the safety, construction, planning, design, and reliability of Con Edison's energy systems serving more than 9 million New Yorkers with electricity, natural gas and steam.

Mr. Cawley previously served as president and chief executive officer for Orange and Rockland Utilities, Inc. (O&R), Consolidated Edison Inc.'s other regulated subsidiary, which operates in suburban New York and New Jersey.

Before becoming president and CEO of O&R, Mr. Cawley served in a series of positions of increasing responsibility at both regulated companies, including in roles at Con Edison as SVP of central operations; as VP of substation operations; and as VP of Bronx and Westchester electric operations. He originally joined Con Edison in 1987.

Mr. Cawley holds a Master of Business Administration (MBA) from New York University and a bachelor's degree in electrical engineering from Union College in 1987.

Consolidated Edison Company
of New York, Inc.
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Remarks of Tim Cawley at the Federal Energy Regulatory Commission Technical Conference, Docket No. AD20-17-Impacts of COVID-19 on the Energy Industry Panel 1 July 8, 2020

Good morning. On behalf of Con Edison, I thank the Federal Energy Regulatory Commission for inviting me to this discussion.

The Covid-19 crisis is an historic challenge for Con Edison and New York City and while we are far from past the pandemic, our city and region are recovering.

There's no overstating how severely we were hit. Places that make New York the world capital of culture and commerce – the great restaurants, museums, schools, and houses of worship - were eerily empty and dark, instead of bustling with New Yorkers and excited tourists.

At our low point, nighttime traffic was so light that the only constant sound was sirens on ambulances carrying victims.

It was clear before the virus hit the United States that reliable energy service would take on even greater importance. Hospitals and first responders needed Con Edison's industry-leading reliability to perform their critical work of treating victims.

We formed a pandemic team 10 years ago. We quickly assembled this group to gather information, communicate with employees and plan our response.

As we do with every task, we went right to our core principles: safety, operational excellence and the customer experience.

Safety is always first for us, so we moved on that right away. We halted non-essential visits to customer properties. This meant a suspension of meter reading, smart meter installations, energy efficiency visits and other customer contacts.

We took steps to protect our employees, setting up temporary reporting locations and staggering shift start times for social distancing. We sequestered some bulk power control room personnel to ensure availability of these critical employees.

Our workers showed their talents and dedication by quickly establishing electric service for temporary hospitals created to treat the expected wave of coronavirus patients.

Some 8,000 employees who typically work in offices began working efficiently from home.

The health crisis has painful economic consequences for many customers due to the necessary New York Pause order. To help, we suspended service turnoffs for non-payment and stopped adding new late fees to customers' accounts.

Bad actors will seize any opportunity to do harm, so we took action to protect our information systems.

An alert workforce is a great defense against cyber threats, so we provided daily messages to keep everyone focused on security and privacy.

We have seen an increase in vendors targeted by ransomware and e-mail compromise attempts. In these cases, we follow a strict process to disable communications between our users and the compromised vendor until security is ensured.

We are grateful for the willingness of fellow energy companies, industry associations and other stakeholders to share information on best practices with us. It made a difficult task a bit easier

The timing of this crisis presented another challenge. As a summer-peaking utility with most of our customers served by an underground system, we prepare for summer year-round. We were well into that process when it became clear the health crisis was coming to our area in a forceful way.

Our analysis showed that while overall energy usage would drop due to decreased office and commercial demand, usage in certain residential areas would increase. That analysis informed our strategy for this summer and we are ready to address this shift.

A health crisis – particularly a respiratory illness – points out the importance of a clean environment. We think clean energy will be an economic driver as we recover from the impact of the virus.

Here's something many people may not know: Through our Clean Energy Businesses, Con Edison is the second largest solar energy producer in North America and seventh largest in the world. So, we consider ourselves a leader in the transition to a clean energy economy.

As our city and region recover, Con Edison must maintain financial integrity to fulfill our integral role in restoring economic vibrancy, helping to meet climate goals, and providing benefits for our communities.

We are likely to see more people across our economy working from home after the pandemic than before. This could be an opportunity for energy companies and regulators to add value to their residential energy efficiency programs.

The work of our industry is powering ventilators, first responder facilities and other emergency equipment. Coming out of the pandemic, customers are likely to have even higher expectations when it comes to reliability.

Energy companies, regulators and other stakeholders will have the responsibility of investing adequately and wisely in infrastructure to meet these increased expectations. I am confident we are up to the challenge.

Thank you for your time.

Timothy P. Cawley
President, Con Edison Co. of New York

Stanley Graham Chapman, III
Chief Executive Officer
TC Energy

Stanley G. Chapman, III was appointed Chairman of the General Partner for TC PipeLines GP, Inc., effective January 1, 2019. In addition, Mr. Chapman serves as Executive Vice-President and President of U.S. Natural Gas Pipelines for TC Energy Corporation since April 2017 where he is responsible for all pipeline operations and commercial activities across TC Energy's FERC-regulated transmission and storage assets, as well as its unregulated midstream business.

Prior to that he served as TC Energy's Senior Vice-President and General Manager of its FERC-regulated U.S. natural gas pipeline business. Before joining TC Energy in July 2016 as part of the Columbia Pipeline Group (CPG) acquisition, Mr. Chapman served as Columbia's Executive Vice-President and Chief Commercial Officer. Previous to joining CPG in December 2011, Mr. Chapman held various positions of increasing responsibility with El Paso Corp and Tenneco Energy and was responsible for various marketing and commercial operations, as well as supply, regulatory, business development and optimization activities.

Mr. Chapman is Chairman of the Board of Directors for the Interstate Natural Gas Association of America, a current member and past executive committee member of the Society of Gas Lighters, and a member of the International Association for Energy Economics. Mr. Chapman holds a Bachelor of Science degree in Economics from Texas A&M University as well as a Master of Business Administration degree with a specialization in Finance from the University of St. Thomas.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

OPENING REMARKS OF STAN CHAPMAN, EXECUTIVE VICE PRESIDENT AND PRESIDENT OF U.S. NATURAL GAS PIPELINES, TC ENERGY, AND CHAIRMAN, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA, FOR FERC TECHNICAL CONFERENCE

JULY 8, 2020

Good morning. Thank you, Chairman Chatterjee, Commissioners McNamee, Danly and Glick. I appreciate the opportunity to address you today.

My name is Stan Chapman, and I am an Executive Vice President and President of U.S. Natural Gas Pipelines at TC Energy, which is one of North America's largest energy infrastructure companies. I'm also serving this year as Chairman of INGAA, the Interstate Natural Gas Association of America. As INGAA Chair, I represent our 25 member companies, which provides me with a broad overview of our nation's critical midstream infrastructure as we continue to safely deliver the natural gas that millions of Americans rely on to live their lives and do their jobs.

Amid this global public health crisis, it's important to highlight how the transmission of natural gas through our nation's underground pipeline network is safely and reliably bringing stability to our nation.

As many businesses across the U.S. closed their doors over the past several months, our employees never stopped working. These men and women are recognized by the federal government as a critical workforce, the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) listed pipelines as one of the 16 critical infrastructure sectors that are, "considered so vital that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof."

Across the country, pipeline operators worked quickly to implement COVID-19 response and recovery plans that incorporate the guidance of CDC, OSHA and other local and state agencies. Our industry developed, through the INGAA Foundation, a publicly-available guidance document that synthesizes practices the pipeline industry is using to prevent and control the spread of COVID-19 during construction and maintenance work.

In the case of TC Energy, nearly 2,000 field workers across 40 states continued to report for work along with more than 70 gas controllers, many of whom were sequestered away from their families and friends for extended periods of time. These individuals dutifully answered the call and helped underpin the work of essential health services.

With our industry workforce performing its essential work, doctors in hospitals were able to treat their patients, manufacturers were able to produce more medical equipment and PPE, and millions of others were able to maintain their productivity by converting their homes to offices, as natural gas, which accounts for 38 percent of electricity generation, continued to be a safe, reliable and affordable energy source.

While there was understandably some initial confusion between local, state and federal guidelines with respect to what was or wasn't considered an essential service, differences were resolved and many of the communities where we operate recognize the value in what we do. Throughout this time, we have been able to support local businesses, such as hotels, restaurants and emergency medical services, through our gas control sequestration, construction and maintenance projects. Many of these small business owners have expressed their gratitude and emphasized that without our ongoing work continuing, they would have had to furlough most, if not all, of their workforce.

What our employees do is a duty, and we're proud to serve. The natural gas community has worked tirelessly to prepare contingency plans for crises. That planning has prepared us well for the COVID-19 challenge that we face today. Through established continuity plans, coordination along the natural gas value chain and collaboration with government agencies, the industry is prepared for a range of emergency scenarios. Health and safety process and procedures are a way of life for our industry. While we do not know what the future will bring, you can rest assured that we are well prepared.

Perhaps, now more than ever, what we need in these uncertain times, and what the Commission can help deliver, is a stable and predictable regulatory climate. When I started in this industry more than 30 years ago, it took no more than five months to secure a certificate for a pipeline expansion. Now, it takes a year or more and, once the certificate is received, it's no longer the start of construction, but the start of a new set of challenges.

Our nation is blessed with an abundance of resources, including cleaner burning natural gas. The continued production of these resources in a safe and environmentally efficient manner will not only continue to reduce energy costs for millions of U.S. consumers, but it will drive economic prosperity through the creation of real jobs that pay a living wage, enhance our domestic security by reducing our nations reliance on energy imports from volatile regions across the globe, and strengthen the security of our allies abroad as we continue to export LNG and related energy products.

I am an optimist. I believe we will emerge from the pandemic we currently face stronger and smarter. I believe that what we do collectively – deliver the energy that millions of individuals rely on every day to live their lives and do their jobs – will be needed for many decades to come. And I believe that the Commission, by ensuring a stable, predictable regulatory climate, can create an environment of energy and economic prosperity for our country to ensure we continue to meet challenges at the frontline, just as we are right now.

Stanley W. Connally, Jr.
Executive Vice President – Operations
Southern Company Services, Inc.

Stanley W. (Stan) Connally Jr. is executive vice president of operations at Southern Company – one of the largest producers of energy in the United States.

Connally oversees Southern Company's systemwide operations. This includes generation, transmission, engineering and construction services, commercial operations, supply chain management, system planning and environmental affairs, as well as Southern Wholesale Energy, Southern Linc and Southern Telecom. He is dedicated to helping ensure employees under his leadership are able to work safely and provide value through a shared-services model to all Southern Company subsidiaries and their customers.

Since beginning his career with Southern Company in 1989 as a co-op student at Georgia Power's Plant Yates, Connally has served in senior leadership roles at each of the company's electric operating companies – Alabama Power, Georgia Power, Mississippi Power and former subsidiary Gulf Power. Most recently, Connally was Gulf Power's chairman, president and CEO.

Earlier in his career, he served as senior vice president and senior production officer for Georgia Power, where he was responsible for fossil and hydroelectric generation. Connally's earlier experience across the company ranges from customer operations, sales and marketing to power plant leadership. Connally actively supports and serves the community. He has served on the boards of a number of community and economic development organizations that support children and families and help communities grow. He was vice chair of Enterprise Florida, the state's public-private partnership for economic development, served on the Florida Chamber of Commerce board as chair of the policy council, and sat on the Florida Council of 100 board. He has been a member of the external advisory board of the Georgia Tech Woodruff School of Mechanical Engineering.

As first vice chair of the Electric Power Research Institute (EPRI) board of directors, Connally serves on both the executive committee and as chair of the compensation and leadership development committee. He is a member of Capital City Bank Group's board.

Connally earned a bachelor's degree in mechanical engineering from the Georgia Institute of Technology. He has completed the Goizueta Executive Education Program at Emory University and the Southern Company Senior Leadership Development Program.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

COMMENTS OF SOUTHERN COMPANY SERVICES, INC.

(July 8, 2020)

Southern Company Services, Inc., provides these comments for the upcoming Commissioner-led technical conference regarding COVID-19 and the Energy Industry. These comments are for Day 1, Panel 1: System Operations and Planning Challenges.

Good morning. I am Stan Connally, executive vice president of Operations at Southern Company. Thank you for the opportunity to participate in today's discussion.

Southern Company is one of the nation's largest energy providers and operates seven regulated utilities serving 9 million electric and gas customers in six states with capabilities across the country. We are a vertically integrated company with a competitive generation business serving wholesale customers across the country, and we are also a nationally recognized provider of customized energy solutions and distributed energy infrastructure such as microgrids. Our success is grounded in the principle of keeping the customer at the center of everything we do.

Southern Company's 28,000 employees are committed to the communities we are privileged to serve. We understand our responsibility to provide customers with value and to ensure they can count on us to deliver the clean, safe, reliable and affordable energy that makes our shared way of life possible.

Our core values – which include Safety First and Total Commitment – have guided us in our response to COVID-19 and in doing our part to ensure the well-being of those we serve. We know that when our communities are physically and economically healthy, our company and industry are healthy.

Living up to our promise to our communities requires deep collaboration and partnership across the industry. We are grateful for constructive relationships with our local, state and national regulatory partners – including the Commission.

Utilities and the energy service they provide are essential to powering our nation's economy. Without them, it would not be possible to provide the most critical goods and services needed during this crisis. We have a responsibility to keep energy flowing for those serving on the front lines as well as for our communities. We have never stopped working during this pandemic.

As an industry, our ability to respond in a crisis is built upon preparation through years of attention to and investment in our people, business continuity plans, resilient infrastructure and systems and our ability to draw the funds needed through access to credit markets when the unexpected happens: a severe storm, a cyberattack or a pandemic like the one we are now facing.

Southern Company has taken steps throughout the pandemic to help protect the health and safety of workers, facilities and communities during both normal daily operations and recent storm response. We have modified work processes, embraced new ideas and ways of thinking and established innovative partnerships to adapt to the unique nature and safety concerns of COVID-19. Some measures have included teleworking for those who are able to perform their work remotely, staggering work locations and schedules to promote social distancing and providing appropriate personal protective equipment. Like others across our industry, our people have responded to these unusual times with continued steadfast dedication to serving customers.

Constructive partnerships with industry groups, federal and state agencies and regulatory bodies, and others across the energy sector have been essential in developing adaptable business continuity plans, informed by guidance from the Centers for Disease Control and Prevention and medical experts, to respond to emergencies caused by events like COVID-19. Cross-industry collaboration with groups such as the Electricity Subsector Coordinating Council, North American Transmission Forum, American Gas Association, Southeast Electric Exchange and many others has enabled the development of an ESCC resource guide and the adaptation of mutual assistance plans. Southern Company's own Responsible Reentry plan reflects the

combined thinking of our own business continuity experts and industry groups like those mentioned previously.

Our business never closed during the pandemic. We have continued work deemed essential to the safe and reliable operation of our energy systems and we have maintained expected response levels to customer needs. Critical operations groups such as power plant control rooms and grid operations control centers activated their respective pandemic plans and demonstrated the resilience to adverse conditions that our customers expect. Our information technology infrastructure supported over 16,000, or 60%, of our teammates to successfully work remotely. At the same time, we have continued projects and maintenance to preserve reliability of our generation fleet, transmission system and gas operations. Our planning and investment in systems to support this level of resilience and business continuity has been tested and proven.

The ability to build resilient resources for the long term and to access credit markets in the toughest of times – such as during the 2008-09 financial crisis and the current financial challenges due to the coronavirus – is built upon constructive federal and state regulation, which balances the needs of consumers and businesses with the financial requirements of building and maintaining a healthy utility.

We are grateful for the work that the Commission has done thus far to support our industry with constructive regulation during the pandemic. Going forward, and particularly during these uncertain times, we ask for continued partnership to minimize the operational and economic impact to customers and to keep energy reliably flowing to our communities.

We recognize this unprecedented situation may present further challenges ahead for our company, industry and nation. We continue to evaluate processes and think innovatively to ensure our continued success and remain steadfast in our focus on safety and reliable operations amid these extraordinary circumstances.

Thank you again for the opportunity to participate today. I look forward to the conversation and to addressing any questions you may have.

# # #

Eric DeBonis
Senior Vice President – Operations
Southwest Gas Corporation

DeBonis joined Southwest Gas Corporation in 1993. During his 26 years with the company, DeBonis held various positions in Engineering, and Operations. In 2008, DeBonis was named Vice President/Central Arizona Division. In 2010, DeBonis was named Vice President/Special Projects. In 2011, DeBonis was named Senior Vice President/Staff Operations and Technology, and in 2012, DeBonis was named Senior Vice President/Operations. Prior to joining Southwest Gas, his experience included positions in marketing and operations at Public Service Company of New Mexico.

DeBonis holds Bachelor's and Master's degrees in Mechanical Engineering from the University of New Mexico, and an MBA from the University of Nevada, Reno. He completed the Advanced Executive Program at Northwestern University Kellogg School of Management in 2011. DeBonis is a registered Professional Engineer in Arizona, Nevada, and California. He is a member of the American Gas Association Board Safety Committee and the Western Energy Institute Board of Directors. DeBonis currently serves on the Board of Trustees of HELP of Southern Nevada.

FERC Panel for July 8– Opening Statement by Eric DeBonis

Good morning Chairman Chatterjee, Commissioners Glick, McNamee, and Danly. My name is Eric DeBonis and I am the Senior Vice President of Operations for Southwest Gas Corporation, which provides natural gas service to over two million customers in Nevada, Arizona and portions of California. Thank you for inviting me to participate in this important technical conference discussing the impact of the COVID-19 pandemic.

Throughout the COVID pandemic, America's natural gas distribution network continues to be safe and reliable. Systems have remained fully operational, and natural gas has continued flowing to our country's over 71 million customers. Half of all Americans depend on natural gas as energy to fuel their homes and businesses. This includes the hospitals, grocery stores and other vital services that are critical to the nation's pandemic response. It also includes making sure people have heat, hot water and cooking when they are sheltered in place. They're counting on us now more than ever, and I'm proud to say that the natural gas industry is delivering.

Natural gas companies across our nation are committed to protecting their employees and customers. Companies have changed policies and procedures to prevent the spread of COVID 19 and to provide reassurance to employees and customers that their health and safety are always the most important consideration. Utilities are closely following the CDC's guidance and using this information in developing company policies and procedures.

Utility personnel have been designated as essential critical infrastructure workers. This designation has afforded us the ability to continue responding to the needs of customers, which includes emergency response activities like leak investigations which may require us to enter a customer's home. Utility personnel have been provided the appropriate personal protective equipment such as masks, gloves, protective suits and coverings, soap and hand sanitizer to mitigate the threat of contamination. Natural gas utilities have deferred certain work activities, which do not diminish safety, that would otherwise have put utility workers in direct interface with customers. For example, energy audits, meter reading and meter maintenance and non-safety related work that would require a natural gas worker to enter a home or building have been delayed since the onset of the pandemic.

Gas distribution utilities recognized early on that many of our customers would face financial difficulty, so they took immediate action to help. Utilities across the country suspended late fees and service disconnections for non-payment, reconnected those who had been disconnected, and offered bill assistance for those struggling to keep up. Furthermore, most large utilities have made significant contributions to local fundraising efforts in order to provide support for individuals in need.

Utilities, such as Southwest Gas Corporation, have taken various measures to ensure the energy system remains safe and reliable. In addition to elevated personal protective

equipment for our gas company emergency responders, we have gone all out to protect our system controllers from exposure to COVID. Gas controllers are responsible for quickly identifying abnormal operating conditions such as drops or spikes in pressure at regulator stations or along the pipeline which could reflect a pipeline failure. These real-time pressures are captured through an operator's Supervisory Control and Data Acquisition, or SCADA, which is monitored by controllers in a centralized location. Gas control is a highly specialized skill requiring qualifications for those personnel who perform this function. Natural gas utilities have taken aggressive actions to clean control rooms, perform temperature screening, and restricting access to other gas company employees.

The natural gas industry understands additional challenges lie ahead, given that many areas are seeing a rise in COVID cases and most medical authorities are predicting a second wave for the virus to occur in the fall. Similar to other industries, we have been studying leading practices used for the responsible re-entry of office workers who have a compelling need to be back in the office. Field personnel will continue using protocols which enable social distancing and minimize large group interactions. Natural gas utilities will also continue collaborating with public safety officials to ensure that our communities have a broad net of capable first responders who can respond to any type of large-scale event. Finally, our industry will continue using technology where it can be effectively used to reduce larger gatherings. For instance, virtual training and virtual meetings will continue to be used across the industry, particularly as companies become more adept in using them.

Thank you, again, for inviting me to speak today and I look forward to continued discussions on how the natural gas industry is responding to the pandemic.

Mike Haynes
Chief Operating Officer
Seattle City Light

Mike Haynes has been in the energy industry since 1980 and has held a variety of engineering and management positions with electric utilities and in consulting. Most of this time has been spent in all elements of hydropower.

He joined Seattle City Light in 2000 and has worked in a variety of engineering and operations management positions. Prior to working for SCL, he spent 13-years with PSE, followed by 7-years with HDR Engineering.

Mike is currently the Chief Operating Office for Seattle City Light, with responsibility for all operations and engineering functions for the utility.

Shawn M. Lyon
President of Marathon Pipe Line
Vice President of Operations, MPLX GP LLC

Mr. Lyon is president of Marathon Pipe Line LLC. He is also vice president, operations of MPLX GP LCC.

Mr. Lyon joined Marathon in 1989 as an engineer in Indianapolis, Indiana. While in Indianapolis, he worked in various positions in the Transportation and Logistics and the Marketing and Transportation Engineering organizations. In 1998, he began a series of engineering manager positions, providing engineering services for Marathon Petroleum's marketing business in the Marketing and Transportation Engineering organization. In 2002, Mr. Lyon transferred to Findlay, Ohio, where he has held a variety of leadership positions. He was named the Product Quality manager in the Transportation and Logistics organization in 2005 and operations manager in Operations and Logistics for Marathon Pipe Line LLC in 2006. Mr. Lyon was named district manager in Transport and Rail for the Terminal, Transport and Marine business in 2008 and manager, Marketing and Transportation Engineering for Marathon Petroleum Company in 2010. He was named vice president of operations for Marathon Pipe Line LLC in 2011 and to his current position in 2018.

Mr. Lyon graduated from Purdue University with a Bachelor of Science degree in construction engineering in 1989. He was licensed as a Professional Engineer in 1994.

Mr. Lyon, by appointment of the Secretary of Transportation, serves on the Technical Hazardous Liquid Pipeline Safety Standards Committee, an advisory body to the U.S. Department of Transportation. He serves on the boards of directors of the Association of Oil Pipe Lines (AOPL), the Louisiana Offshore Oil Port (LOOP), and as an owner representative for Marathon Petroleum's interest in Capline. He also serves as chairman of the American Petroleum Institute's (API) pipeline subcommittee steering group and on the API-AOPL pipeline safety excellence steering committee, AOPL Federal Energy Regulatory Commission (FERC) Policy Committee, and the pipeline industry public engagement recommended practice development group. Previously, Mr. Lyon served as chair of the pipeline industry's implementation of the Pipeline Safety Management System (API RP 1173) from 2015-2018 and on the Michigan Pipeline Safety Advisory Board, by appointment of Governor Rick Snyder, from 2017-2018. In 2019, Mr. Lyon received the Pipeline Leadership Award for driving transformation and improvement in the industry.

FERC COVID-19 Technical Conference
Panel 1 – Impacts of COVID-19 on the Energy Industry
July 8, 2020 9:30-12:00

Opening Statement
Shawn Lyon, President
Marathon Pipe Line LLC

Thank you for the opportunity to share how the COVID-19 emergency has impacted the oil pipeline industry and Marathon Pipe Line. Recovering from this pandemic will be a journey for everyone in the energy industry, and meetings like this, where we can come together and share, is the next step.

Marathon Pipe Line controls the operations of ~10,000 miles of crude oil, refined petroleum products and LPG pipelines in 25 states via three pipeline operations centers in California, Texas, and Ohio. Every day, 24/7/365, ~700 front line workers manage Marathon Pipe Line's operations on the ground and within our operations centers. Another ~500 employees who normally work in our offices, but worked from home during the pandemic, are slowly transitioning back to the office – about 50% are back at their desks today. While COVID-19 caused us to make alterations to ***how*** we complete our work, it ***did not*** alter our mission to safely and reliably operate pipelines. In fact, it only strengthened our resolve.

EMPLOYEE HEALTH & SAFETY

When the pandemic hit, we reacted with swift and detailed protocols across our enterprise:

- An incident command structure was set up
- Remote work guidelines quickly went into effect
- We procured and distributed PPE (masks, sanitizer, cleaning supplies, etc.), which, as you all know, was a challenge due to incredibly low availability across the nation
- We limited on-site personnel in our pipeline operations centers to reduce exposure and ensure the safety of that ***mission-critical*** portion of our business
- We implemented health screening, social distancing, and kept the size of crews and contractors minimal, and

- Lastly, we maintained an open line of communication to inform, educate, reinforce, and uplift our entire workforce

Due to these actions and the strong safety culture instilled in our 1,200 employees, I am happy to report that Marathon Pipe Line has had ZERO confirmed cases of COVID-19. We did all of this to not only protect our people, but to protect our pipeline operations so that we can fuel the nation when our first responders, healthcare professionals, and front line workers need us most.

DIRECT OPERATIONAL IMPACT

As guardians of public safety, it's our duty to maintain safe and reliable operations not only for our people but for the people who live and work along our pipelines, regardless of pandemics or other emergencies that may occur. All 10,000 miles of our pipelines remained operational during the COVID-19 emergency. Our in-line inspection tool runs, damage prevention and rights-of-way activities, maintenance activities, safety and regulatory requirements…all these ***mission-critical*** activities continued without interruption. In some cases, we had to think creatively and find a new way to get the job done safely by asking "how can we?" For example, we modified our valve hydrotest inspection process to witness via video conference instead of in-person at the valve vendor's shop. This is just one example of finding different ways to perform necessary activities to ensure safe operations continued.

We also evaluated non-mission-critical activities to determine which could be deferred ***due to COVID-19***. Some proactive maintenance activities were rescheduled, and some scheduled projects were delayed to limit the number of contractors at any given site.

INDIRECT OPERATIONAL IMPACT

The steep decline in demand for crude oil and refined products due to economic conditions stemming from the pandemic resulted in industry-wide throughput reductions and lost revenue, which is ongoing today. We have updated our 2020 business plan to reflect the current challenges by looking for opportunities to reduce our spending levels while still

operating in a safe, reliable manner. Our pipelines do not charge cost-of-service rates, but rely heavily on indexing, as do most in the oil pipeline industry. COVID-19 means there are many costs that will not be recovered due to reduced revenue.

The domino effect created by the COVID-19 emergency has rippled through the energy sector, and we'll be feeling the effects for some time. As we all work to return to some type of normalcy, I'm fortunate to be here with all of you to share the impacts and seek solutions – ***together***.

Thank you for allowing Marathon Pipe Line to be a part of this important conversation.

James B. Robb
President and Chief Executive Officer
North American Electric Reliability Corporation

Mr. Robb oversees NERC's mission of assuring the reliability and security of the North American bulk power system. As president and CEO, Mr. Robb directs key programs affecting more than 1,400 bulk power system owners, operators, and users, including mandatory NERC Reliability Standards, compliance monitoring, enforcement, situational awareness, event and risk analysis, reliability assessments and forecasting, cyber and physical security, and government relations. Mr. Robb also oversees the operations of the Regional Entities who support the reliability mission across North America.

From 2014 to 2018, Mr. Robb served as president and CEO of the Western Electricity Coordinating Council (WECC) where he was responsible for the strategic direction and leadership of all of WECC's activities.

Mr. Robb has more than 30 years of experience in the energy sector as an engineer, a consultant, and a senior executive. Prior to becoming WECC's CEO in 2014, he held three major leadership roles in the industry at Northeast Utilities (now Eversource Energy) as senior vice president of Enterprise Planning and Development; at Reliant Energy (now part of NRG Energy) where he served as senior vice president of Retail Marketing for the competitive retail business in Texas and the Northeast; and at McKinsey & Company where he was a partner and the leader of the West Coast's Energy and Natural Resource Practice. During his 15-year career at McKinsey, he worked closely with prominent electric power companies in California, western Canada, the Pacific Northwest, and the Rocky Mountain states, as well as with some of the region's largest energy consumers.

Mr. Robb earned a bachelor's degree in Chemical Engineering from Purdue University in Indiana and a master's degree in Business Administration from the Wharton School of Business at the University of Pennsylvania, Philadelphia, PA.

Opening Statement of James B. Robb
President and Chief Executive Officer,
North American Electric Reliability Corporation

Before the Federal Energy Regulatory Commission
"Impacts of COVID-19 on the Energy Industry"
Docket No. AD20-17-000
July 8, 2020

Thank you for organizing this technical conference to evaluate the energy industry impacts of COVID-19. The pandemic is an acute reminder of our human interconnectedness around the globe. As the world community continues to navigate the ongoing crisis, NERC serves a vital role in addressing pandemic risks to North America's interconnected grid. Working with the Commission, government partners, policymakers, and industry stakeholders, NERC's work has never been more critical.

NERC is employing all appropriate tools and resources toward addressing the reliability and security risks associated with COVID-19. Because a pandemic is a "people" event, mitigation requires keen focus on supporting continuity of the critical workforce and supply chain. Pandemic risks include:

- Fundamentally, a shortage of critical staff needed to operate and maintain the BPS
- Managing abnormal system conditions, delayed preventive and corrective maintenance, prolonged outages, system operations and control room continuity
- Preparing for the summer peak operating season, including preventive maintenance, supply stocking, and training
- Navigating summer load forecasting challenges
- And increased cyberattacks from opportunistic actors

Combined, these pandemic threats have introduced significant uncertainty that is without precedent and highly challenging even for the most prepared of industries. Yet industry is successfully rising to the challenge, coordinating effectively with government partners, and taking aggressive steps to confront significant new risk. Throughout the crisis thus far, NERC has not observed any degradation to reliable operation of the BPS.

NERC is addressing pandemic risk through focused activities in three areas: situational awareness, coordination with government partners and industry, and regulatory discretion. As my full statement is included for the record, I will focus on a few highlights.

When the crisis began to unfold, NERC identified a need to support industry's preparedness for pandemic conditions. In February, the E-ISAC sent an All-Points Bulletin alerting companies of the potential operational and security impacts of pandemic conditions. On March 10, we issued a Level 2 Alert asking a number of questions concerning industry preparedness. Responses found that pandemic planning was pervasive. More than half said they would support mutual aid requests. Responses also identified risk factors, including the potential for summer staffing and materials shortages, and impacts from construction and maintenance delays.

In April, NERC issued a special report reviewing reliability considerations and operational readiness. The report found no specific threat or degradation to the reliable operation of the BPS. However, as pandemic mitigation and containment strategies continue, prolonged periods of operator sequestration and deferred maintenance could increase industry's risk profile and exacerbate impacts during the summer months, and potentially over the longer-term horizon.

Coordination with industry and government is another critical focus area. NERC continues to convene weekly calls with Reliability Coordinators across North America. These meetings provide a forum for RC's to share challenges and solutions, and to coordinate activities. Thus far, RCs report that the sector is effectively navigating challenges with no reliability impacts. Through the ESCC, NERC also participates in ongoing coordination calls with numerous government partners.

Finally, working with the Commission, NERC has exercised targeted regulatory discretion to help industry stay focused on the immediate reliability and security needs. Areas of discretion include:

- Guidance advising Registered Entities that we will consider the impact of the pandemic in evaluating compliance with Reliability Standards,
- Temporary suspension of in-person compliance activities,
- Deferral of certain new standards requirements falling in the second half of 2020.

In conclusion, the ERO Enterprise remains focused on our core mission. Our work on supply chain and other standards is continuing. Through innovation, the Regional Entities have migrated many traditional onsite activities to offsite settings. This includes work with their Registered Entities on their monitoring activities. Working with the Regions, NERC is tracking potential noncompliance related to pandemic impacts and using regulatory discretion when appropriate.

I would like to thank the Commission for our strong working relationship and support. While the pandemic is stressing organizations, NERC remains highly resilient and nimble in our ongoing work with industry, the Commission, policymakers, and government partners.

Statement for the Record of James B. Robb
President and Chief Executive Officer,
North American Electric Reliability Corporation

Before the Federal Energy Regulatory Commission
"Impacts of COVID-19 on the Energy Industry"
Docket No. AD20-17-000
July 8, 2020

Thank you for organizing this technical conference to evaluate the impacts of COVID-19 on the energy industry of the United States. The pandemic is an acute reminder of our human interconnectedness around the globe. As the world community continues to navigate the ongoing crisis, the North American Electric Reliability Corporation (NERC) serves a vital role in addressing pandemic risks to North America's interconnected grid. Working with the Federal Energy Regulatory Commission (FERC), government partners, policymakers, and industry stakeholders, NERC's work has never been more critical.

NERC is employing all appropriate tools and resources toward addressing the reliability and security risks associated with COVID-19. Because a pandemic is a "people" event, mitigation requires keen focus on supporting continuity of the critical workforce and supply chain. Pandemic risks include:

- Fundamentally, a shortage of critical staff needed to operate and maintain the bulk power system (BPS)
- Managing abnormal system conditions, delayed preventive and corrective maintenance, prolonged outages, system operations and control room continuity
- Preparing for the summer peak operating season, including preventive maintenance, stocking of supplies, and training
- Navigating summer load forecasting challenges due to changed work habits and economic factors
- Increased cyberattacks from opportunistic actors

Combined, these pandemic threats have introduced significant uncertainty that is without precedent and highly challenging even for the most prepared of industries. Yet industry is successfully rising to the challenge, coordinating effectively with government partners, and taking aggressive steps to confront significant new risk. Throughout the crisis thus far, NERC has not observed any degradation to reliable operation of the BPS.

I would like to thank the Commission for our strong working relationship and support of measures that help industry stay focused on the immediate reliability and security needs. While

the pandemic is stressing organizations, NERC remains highly resilient and nimble in our ongoing work with industry, the Commission, policymakers, and government partners.

Throughout this ongoing crisis, the ERO Enterprise remains focused on our core mission. Our work on supply chain and other standards is continuing. Through innovation, the Regional Entities have migrated many traditional onsite activities to offsite settings. This includes work with their Registered Entities on their monitoring activities. Working with the Regions, NERC is tracking potential noncompliance related to pandemic impacts and using regulatory discretion when appropriate.

As discussed below, NERC is addressing pandemic risk through focused activities in three areas: situational awareness, coordination with government partners and industry, and regulatory discretion.

Situational Awareness

As the early stage of the crisis began to unfold, NERC identified a need to support industry's preparedness for pandemic conditions. On, February 5, the Electricity Information Sharing and Analysis Center (E-ISAC) distributed an All-Points Bulletin alerting companies of the potential operational and security impacts of pandemic conditions. On March 10, 2020, NERC issued a Level 2 Alert recommendation to industry, "Coronavirus Disease (COVID-19) Pandemic Contingency Planning." The Alert recommended that companies:

- Maintain suitable situational awareness
- Reinforce good personal hygiene practices and employ deep cleaning regimens
- Review and update existing business continuity plans
- Assess the organization's resilience against supply chain disruption
- Assess the need to adjust planned construction and maintenance
- Anticipate and prepare for coronavirus-themed opportunistic social engineering attacks

The Alert also asked companies if they have established pandemic response plans, reviewed staffing and supply chain needs, and of their ability to support mutual aid agreements. Key takeaways from the Alert include the following observations:

- Pandemic planning is pervasive across the industry
- The majority of companies have reviewed pandemic staffing requirements
- A large majority have reviewed supply chain needs
- More than half said they would support mutual aid requests

- Other risks could lead to constraints over the summer, such as staffing shortages, material shortages, and the ability to complete major construction and maintenance projects

Other NERC activities include coordination with Reliability Coordinators (RCs). NERC's Bulk Power System Awareness department convenes weekly calls with RCs across North America. These weekly meetings provide a forum for RC's to share challenges and solutions, and to coordinate activities. Thus far, RCs reported no reliability issues during pandemic conditions. Other findings include:

- Testing kits are available
- COVID-19 cases are starting to rise in several states where RCs are located
- Most RC organizations are extending their return to work as a result of seeing increased cases within their region of the country
- An increase in load in some areas, although it is still lower than pre-COVID-19

To support an immediate need for focused attention on pandemic reliability and security risk, NERC published a special report on April 23, 2020.[1] The special report, *Pandemic Preparedness and Operational Assessment – Spring 2020* — reviews reliability considerations and operational preparedness. The report found no specific threat or degradation to the reliable operation of the BPS. However, as pandemic mitigation and containment strategies continue, prolonged periods of operator sequestration and deferred equipment maintenance could increase industry's risk profile and exacerbate impacts to the BPS during the summer months, and potentially over the longer-term horizon. NERC examined reliability risk across three operating periods:

Spring 2020	Summer 2020	Long-Term
• No specific reliability issue identified • Potential workforce disruptions • Supply chain interruption • Increased cyber security threat and monitoring • Different system conditions including lower	• Continued potential for workforce disruptions; support service disruption • Potential equipment and fuel supply chain disruptions • Deferred generation maintenance and other	• Potential changes to generation and transmission in-service dates • Increased remote operation of non-critical staff • Changes to pandemic preparedness and

[1] NERC Special Report, *Pandemic Preparedness and Operational Assessment – Spring 2020,* April 23, 2020, https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_Pandemic_Preparedness_and_Op_Assessment_Spring_2020.pdf.

demands and higher voltages • System operators under sequester • Noncritical staff are remote	factors impacting unit availability • Generation in-service dates	operating plans based on lessons learned *Note: a more granular assessment will be Included in NERC's 2020 Long-Term Reliability Assessment*

Following the special report, NERC's *2020 Summer Reliability Assessment* (SRA) provides an additional view of pandemic-related risk during the summer operating season.[2] The SRA emphasizes the need to focus on any deferred maintenance, protect critical electricity workers, and manage demand forecast uncertainty. With regard to summer season maintenance, some owners and operators have deferred or canceled preseason activities in response to pandemic-related issues. Monitoring the progress of ongoing efforts to prepare staff and equipment for summer will be important to ensuring the availability of anticipated resources to meet electricity demand.

System and generation plant operators have implemented operating postures and personnel restrictions prescribed by their pandemic plans in order to protect essential personnel and support reliable operations. Many of these measures will need to be maintained for the foreseeable future. There is a continuing risk that control centers or plants could be temporarily shut down if a significant number of operators or plant employees test positive for COVID-19 despite preparedness efforts. As restrictions are relaxed, operators will likely need to stay postured to return to heightened protections in response to dynamic public health conditions.

The pandemic has also introduced significant new uncertainty for electricity demand forecasting during the summer months. System operators must be prepared to address this uncertainty and potentially challenging operating conditions resulting from low demand on the system.

Coordination with Government Partners and Industry

As a steering committee member of the Electricity Subsector Coordinating Council (ESCC), NERC participates in ongoing coordination calls with government partners, including the Departments of Energy, Homeland Security, Health and Human Services, and FERC, as well as a broad "tiger team" industry effort to spot issues and provide leading practices to help industry operate through the pandemic. These calls also included Canadian entities to ensure a full North American perspective. This North American view was further extended through a webinar with

[2] *2020 Summer Reliability Assessment*, NERC, June 2020, https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2020.pdf

the European Union and the European Network of Transmission System Operators for Electricity (ENTSO-E) in which worldwide responses in the energy sector were discussed. We also participate in regular calls with DOE and other government partners to ensure our operational actions are aligned with the government.

The ESCC executive level calls, held as frequently as twice each week at the height of the COVID-19 crisis, convene senior officials in industry and government to share vital information, prioritize industry needs, and coordinate pandemic response. Mutual assistance and unity of message are distinguishing characteristics of the electricity industry. These calls enable real time discussions about challenges facing the industry and development of timely solutions.

For NERC, and in close working relationship with FERC, the calls give us the opportunity to reassure industry that we are there to assist them and help support the response. These industry calls provide insight and help guide our decision making on regulatory discretion, thereby freeing up resources to keep the system running. We did encourage organizations to keep up voluntary reporting, and highlighted other emerging, but related security issues like the Bulk Power System executive order, and COVID-related cybersecurity trends and threats from our E-ISAC.

NERC staff also supported the ESCC on tiger teams that were stood up to address critical priorities. The primary output of that effort was the ESCC COVID-19 Resource Guide, now in Version 8. Our team served as subject matter experts on topics such as supply chain and technology considerations, as well as helping coordinate the drafting of the report alongside industry trade associations. The guide has been used subsequently to respond to storms in the southeast and northeast, as well as responsibly and safely returning the workforce back to the office and field where appropriate.

Through our E-ISAC, we also promoted and shared the guide with other critical infrastructure sectors given its many transferable lessons, especially the communications and financial service sectors through the Tri-Sector initiative. Other sectors, and one or two federal agencies, have found the ESCC resource guide useful in developing their own documents. So the effort has had an impact broader than electricity, and we were proud to have been a part of it.[3]

Concurrent with NERC's support of the ESCC resource guide, NERC, the North American Transmission Forum, DOE, and FERC jointly developed a resource to help utilities create, update, or formalize their pandemic plans.[4] The *Epidemic/Pandemic Response Plan Resource,*

[3] "Assessing and Mitigating the Novel Coronavirus, a Resource Guide," Electricity Subsector Coordinating Council, May 2020, https://www.electricitysubsector.org/-/media/Files/ESCC/Documents/ESCC_COVID_Resource_Guide_v2-03242020.ashx?la=en&hash=D3732CBFB46827AA0331277E8D5CBE0CC4DFC3BF.

[4] See *Epidemic/Pandemic Response Plan Resource*, https://www.natf.net/docs/natf/documents/resources/resiliency/epidemic-pandemic-response-plan-resource.pdf.

based on a plan from one of the Power Marketing Administrations, focuses on planning/preparedness, response, and recovery activities for a severe epidemic/pandemic. Noting that these types of events are unpredictable, an effective response depends on flexible and scalable management strategies and preventive measures taken in advance of potential events. The document is complementary of other pandemic resources and has a specific and granular focus on operational aspects. Though developed for electric transmission organizations, the information may be adaptable to other critical infrastructure sectors and subsectors.

Finally, NERC has taken steps to share experiences and lessons learned with regulators and industry in Europe. Under an information sharing agreement with the European Union (EU), NERC convened a webinar with representatives from the Directorate-General for Energy (DG-ENER), the European Network of Transmission System Operators for Electricity (ENTSO-E) and the EU Delegation to the United States. FERC staff and the North American Transmission Forum (NATF) also took part in this discussion. This was an engaging conversation where participants exchanged experiences with response during the pandemic. Although Europe is at a different stage compared to the US, they confronted similar challenges and responded in a similar manner to maintain system reliability and security.

Regulatory Discretion

To help entities focus their resources on safe and reliable operations, NERC has been working with the Commission on the use of regulatory discretion. On March 18, FERC and NERC jointly issued guidance advising all Registered Entities that they will consider the impact of the coronavirus outbreak in complying with Reliability Standards. The guidance stated:

- The effects of the coronavirus will be considered an acceptable basis for non-compliance with obtaining and maintaining personnel certification, as required in Reliability Standard PER-003-2, for the period of March 1, 2020 to December 31, 2020. Registered Entities should notify their Regional Entities and Reliability Coordinators when using system operator personnel that are not NERC-certified.
- The effects of the coronavirus will be considered an acceptable reason for case-by-case non-compliance with Reliability Standard requirements involving periodic actions that would have been taken between March 1, 2020 and July 31, 2020. Registered Entities should notify their Regional Entities of any periodic actions that will be missed during this period.
- Regional Entities will postpone on-site audits, certifications and other on-site activities at least until July 31, 2020. Registered Entities should communicate any resource impacts associated with remote activities to their Regional Entities.

NERC and the Regional Entities received numerous questions concerning the FERC/NERC guidance. To help provide clarity to industry, and in consultation with FERC staff, NERC created a frequently asked questions document that is updated regularly as questions arise.

On April 6, NERC filed a motion with the Commission seeking to defer the implementation of several Reliability Standards that have effective dates or phased-in implementation dates that fall in the second half of 2020. NERC requested a three-month deferral of the implementation of Reliability Standards CIP-005-6 (Cyber Security – Electronic Security Perimeter(s)), CIP-010-3 (Cyber Security – Configuration Change Management and Vulnerability Assessments), and CIP-013-1 (Cyber Security – Supply Chain Risk Management). NERC requested a six-month deferral of the implementation of Reliability Standards PRC-002-2 (Disturbance Monitoring and Reporting Requirements), PRC-025-2 (Generator Relay Loadability), PRC-027-1 (Coordination of Protection Systems for Performance During Faults), and PER-006-1 (Specific Training for Personnel). On April 17, shortly after NERC's initial filing, the Commission granted NERC's motion.

With support from the Commission, the ERO Enterprise released new guidance on May 28 providing additional regulatory relief related to Registered Entities' coronavirus response. The relief temporarily expands the Self-Logging Program to allow all Registered Entities to self-log instances of potential noncompliance with minimal or moderate risk related to their coronavirus response. While Registered Entities remain responsible for maintaining compliance with NERC Reliability Standards, this expansion allows them to focus their immediate efforts and resources on maintaining the safety of their workforce and communities to assure the reliability of the bulk power system during this public health emergency. Under this temporary expansion of the Self-Logging Program, potential noncompliance related to coronavirus impacts and logged consistently with this guidance is expected to be resolved without further action.