FirstEnergy Transmission Affiliates
Pre-Qualification Submittal for
Designated Transmission Entity Status

Submitted to PJM on August 24, 2020

(Revised and Updated August 24, 2020)

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(A) Name and Address of Parent and Affiliates with Point of Contact

Parent:

FirstEnergy Corp. (FirstEnergy)
76 South Main Street
Akron, OH 44308

Affiliates – FirstEnergy Transmission Owners:

American Transmission Systems, Incorporated
(ATSI)
76 South Main Street
Akron, OH 44308

Trans-Allegheny Interstate Line Company (TrAILCo)
800 Cabin Hill Drive
Greensburg, PA 15601

Jersey Central Power & Light Company (JCP&L)
300 Madison Avenue
Morristown, NJ 07962

Mid-Atlantic Interstate Transmission, LLC
(MAIT)
76 South Main Street
Akron, OH 44308

Monongahela Power Company (Mon Power)
5001 Nasa Boulevard
Fairmont, WV 26554

The Potomac Edison Company (Potomac Edison)
800 Cabin Hill Drive
Greensburg, PA 15601

West Penn Power Company (West Penn Power)
800 Cabin Hill Drive
Greensburg, PA 15601

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FirstEnergy Service Company
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Akron, OH 44380
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Corporate Structural Summary:

FirstEnergy is a regional energy provider headquartered in Akron, Ohio. Its subsidiaries and affiliates are involved in the transmission, distribution and sale of electricity, as well as energy management and other energy-related services. FirstEnergy is a publicly traded corporation. JCP&L, Mon Power, Potomac Edison, and West Penn Power are wholly-owned direct subsidiaries of FirstEnergy. ATSI, MAIT and TrAILCo are wholly-owned direct subsidiaries of FirstEnergy Transmission, LLC, which is a wholly-owned subsidiary of FirstEnergy.

FirstEnergy has 10 utility operating companies, forming one of the nation's largest investor-owned electric systems based on six million customers served within a nearly 65,000 square-mile area of Ohio, Pennsylvania, Maryland, West Virginia, Virginia, New Jersey and New York. In addition, FirstEnergy has three multi-state stand-alone transmission companies. FirstEnergy has $40 billion in assets with $11.3 billion in annual revenues and is ranked 263 out of Fortune Magazine's top 500 U.S. Companies for 2019.

FirstEnergy, through its subsidiaries, is a PJM member. FirstEnergy representatives are actively involved in various PJM Committees, Sub- Committees, Task Forces, User Groups, Working Groups and Stakeholder Groups.

The seven FirstEnergy Transmission Owners – ATSI, TrAILCo, JCP&L, MAIT, Mon Power, Potomac Edison and West Penn Power – operate approximately 25,000 miles of transmission lines connecting the Midwest and Mid-Atlantic regions. (For the purposes of this Submittal, the transmission line and other transmission facilities of the FirstEnergy Transmission Owners will be collectively referred to as "FirstEnergy Transmission System".)

ATSI owns, operates and maintains 8,341 circuit-miles of transmission lines, substations and other transmission facilities operated at nominal voltages of 345 kV, 138 kV and 69 kV located solely in the ATSI Zone of PJM. The ATSI system has tie-lines to the neighboring transmission

systems of American Electric Power (AEP), Dayton Power and Light, International Transmission Company, Duquesne Light Company (DLCO), Cleveland Public Power, Buckeye Power, Inc., American Municipal Power, Inc. and ATSI affiliate, West Penn Power and Mon Power. The ATSI system was integrated into PJM on June 1, 2011. As a result, PJM became the Reliability Coordinator, Balancing Authority, Transmission Operator and Transmission Planner for all ATSI 100 kV and above facilities. ATSI is permitted by Attachment H-21 of the PJM OATT to recover costs for its transmission facilities. ATSI does not own or operate any distribution or generation facilities.

TrAILCo owns, operates and maintains 262 circuit-miles of transmission lines, substations and other transmission facilities operated at nominal voltages of 500 kV, 345 kV, 230 kV, 138 kV and 115 kV,[1] including the Trans-Allegheny Interstate Line which became commercially operational on May 19, 2011, and the Black Oak SVC which became commercially operational in December 2007. Currently, TrAILCo's operating assets are located in the Allegheny Power Zone, with projects in the MAIT zones. TrAILCo is interconnected to the neighboring transmission systems of Dominion Virginia Power (DVP), AEP and TrAILCo affiliates Mon Power, Potomac Edison and West Penn Power. PJM is the Reliability Coordinator, Balancing Authority, Transmission Operator and Transmission Planner for all TrAILCo 100 kV and above facilities. TrAILCo is permitted by Attachment H-18 of the PJM OATT to recover costs for facilities it may own, operate and maintain in the Allegheny Power, MAIT, Zones. TrAILCo does not own or operate any distribution or generation facilities.

MAIT was formed in June 2016 from the combined assets of Metropolitan Edison Company (Met-Ed) and Pennsylvania Electric Company (Penelec), both FET Operating Companies. MAIT received regulatory approvals to become a PJM Transmission Owner on January 31, 2017. MAIT owns and operates all the FERC-jurisdictional assets previously owned by Met-Ed and Penelec, consisting of 4,255 circuit miles of transmission lines with nominal voltages of 500kV, 345kV, 230kV, 138kV, 115kV, 69kV, and 46kV in the PJM region. Collectively, MAIT has tie-lines with neighboring transmission systems of PPL Electric Utilities (PP&L), Philadelphia Electric Company (PECO), New York State Electric & Gas, National Grid, Allegheny Power Cooperative (AEC) and FirstEnergy affiliates ATSI, Jersey Central Power & Light (JCP&L), Potomac Edison and West Penn Power. MAIT does not own or operate any distribution or generation facilities. PJM is the Reliability Coordinator, Balancing Authority, Transmission Operator and Transmission Planner for all MAIT 100kV and above facilities. MAIT is permitted by Attachment H-28 of the PJM OATT to recover costs for its transmission facilities.

JCP&L owns, operates and maintains 2,598 circuit miles of transmission lines, substations and other transmission facilities operated at nominal voltages of 500 kV, 230 kV, 115 kV and 34.5 kV. JCP&L has tie-lines with neighboring transmission systems of PP&L, Long Island Lighting Company, Central Hudson Gas & Electric Company, Public Service Electric & Gas, Atlantic City Electric Company and affiliate MAIT. JCP&L is permitted by Attachment H-4 of the PJM OATT to recover costs for its transmission facilities. PJM is the Reliability Coordinator, Balancing Authority, Transmission Operator and Transmission Planner for all JCP&L 100 kV and above facilities. JCP&L also owns and operates distribution and generation facilities.

[1] TrAILCo owns and operates limited 765 kV facilities but does not own any 765 kV transmission lines

Potomac Edison owns, operates and maintains 2,085 circuit miles of transmission lines, substations and other transmission facilities operated at nominal voltages of 500 kV, 230 kV, 138 kV and 115 kV. Potomac Edison has tie-lines with neighboring transmission systems of DVP, Potomac Electric Power Company and affiliates MAIT, Mon Power, TrAILCo and West Penn Power. PJM is the Reliability Coordinator, Balancing Authority, Transmission Operator and Transmission Planner for all Potomac Edison 100 kV and above facilities. Potomac Edison is permitted by Attachment H-11 of the PJM OATT to recover costs for its transmission facilities. Potomac Edison also owns and operates distribution facilities but does not own or operate any generation facilities.

Mon Power owns, operates and maintains 2,611 circuit miles of transmission lines, substations and other transmission facilities operated at nominal voltages of 500 kV, 345 kV and 138 kV.[2] Mon Power has tie-lines with neighboring transmission systems of AEP, DVP and affiliates ATSI, Potomac Edison, TrAILCo and West Penn Power. PJM is the Reliability Coordinator, Balancing Authority, Transmission Operator and Transmission Planner for all Mon Power 100 kV and above facilities. Mon Power is permitted by Attachment H-11 of the PJM OATT to recover costs for its transmission facilities. Mon Power also owns and operates distribution and generation facilities.

West Penn Power owns, operates and maintains 4,331 circuit miles of transmission lines, substations and other transmission facilities operated at nominal voltages of 500 kV, 345 kV, 230 kV, 138 kV and 115 kV. West Penn has tie-lines with neighboring transmission systems of AEP, DLCO and affiliates ATSI, TrAILCo, MAIT, Mon Power, Potomac Edison and TrAILCo. PJM is the Reliability Coordinator, Balancing Authority, Transmission Operator and Transmission Planner for all West Penn Power 100 kV and above facilities. West Penn Power is permitted by Attachment H-11 of the PJM OATT to recover costs for its transmission facilities. West Penn Power also owns and operates distribution facilities but does not own or operate any generation facilities.

(B) Technical and Engineering Qualifications

The FirstEnergy Transmission System spans seven states and five PJM Transmission Zones and consists of approximately 25,000 miles of transmission lines. To assure that the system is operated reliably, assessments of the system are conducted annually by the FirstEnergy Transmission Owners and PJM. This is accomplished by evaluating system reliability against the federally mandated Reliability Standards established by the North American Electric Reliability Corporation (NERC) and approved by the Federal Energy Regulatory Commission (FERC), the PJM reliability criteria, and the FirstEnergy Transmission Planning Criteria.

The PJM assessment process follows the rigorous Regional Transmission Expansion Planning Protocol which develops the Regional Transmission Expansion Plan (RTEP) focusing on five-year and 15-year timeframes with the results shared through the PJM stakeholder process. Representatives of the FirstEnergy Transmission Owners actively participate in the PJM planning process and use this process to evaluate system conditions for future years. Results of these studies drive system upgrades to the overall PJM transmission system, including the

[2] Mon Power owns and operates limited 765 kV facilities but does not own any 765 kV transmission lines.

FirstEnergy Transmission System.

In addition, the FirstEnergy Transmission Owners perform internal studies that assess the FirstEnergy Transmission System and associated sub-transmission systems through near- term and long-term planning windows. These internal studies identify thermal, voltage, voltage stability and dynamic stability issues on the transmission and sub-transmission systems. The PJM and FirstEnergy assessments ensure the FirstEnergy Transmission System and associated sub-transmission systems are operated in a reliable and secure manner. Models are created representing a wide variety of load levels and stressed conditions depending on the type of study being performed. When a potential criteria violation is identified, further study is initiated to determine if it can be resolved by a formal operating procedure and if a system upgrade is warranted. If a system upgrade is determined to be needed and is authorized by management, the upgrade is installed subject to any necessary PJM reviews.

As mentioned previously both the PJM RTEP and the FirstEnergy Transmission Owners' internal assessments identify potential projects throughout the FirstEnergy Transmission System footprint which are further reviewed and upgrades implemented where required to improve the reliability of the FirstEnergy transmission and sub-transmission systems.

The FirstEnergy Transmission Owners have significant experience as Transmission Owners in responding to PJM's directives to build RTEP projects, and have never failed to build projects that PJM has determined are needed for reliability or market efficiency of the PJM transmission system. The FirstEnergy Transmission Owners build, operate and maintain their transmission facilities reliably and safely and in accordance with all governmental regulations as well as applicable industry requirements.

FirstEnergy has three main transmission design offices staffed with engineers and designers.[3] At these locations, FirstEnergy-trained and experienced engineers perform design, procurement and regulatory permitting activities necessary for the construction and modification of transmission lines and substations ranging from 34.5 kV up to 500 kV.[4]

In addition to these professionals, FirstEnergy has a cadre of trained and experienced personnel dedicated to transmission system construction, operation and maintenance stationed throughout the entire FirstEnergy transmission system footprint. FirstEnergy engineers and support personnel provide a comprehensive suite of energy services that drive transmission construction. This is accomplished through their combined experience and knowledge of the technical, engineering and infrastructure requirements for transmission construction, including the power engineering services necessary for transmission lines, substation facilities, protection and controls. Overall, FirstEnergy's personnel have extensive direct, hands-on experience with all phases of design, build, maintenance and operation of the transmission system.

Working in coordination with PJM, FirstEnergy professionals work to develop the best, most cost-effective solution to the reliability and market efficiency needs of the transmission system

[3] FirstEnergy's design offices are located in Akron, Ohio; Reading, Pennsylvania; and Greensburg, Pennsylvania.

[4] FirstEnergy engineers have professional licenses in the states in which FirstEnergy operates transmission facilities.

based on PJM's determination of the need for reliability and market efficiency improvements. Proactively over the years, FirstEnergy engineers have worked with PJM through multiple iterations of studies, cost estimates, right-of-way (ROW) and other regulatory considerations to ensure the final plans for construction of RTEP projects are the most effective and cost efficient. Over the years, FirstEnergy has developed an excellent working relationship with PJM Staff to facilitate discussions and reviews of the electrical need and the proposed solution for various transmission projects and has worked successfully with PJM to produce the best outcome.

FirstEnergy has long-term alliances with several design firms including Burns & McDonnell, Black & Veatch and GPD. FirstEnergy's in-house staff is currently supplemented by over 1,000 full time equivalents from these and other firms for design work to perform necessary support on projects when in-house staff is unavailable to complete the work in a timely manner necessary. In addition, FirstEnergy maintains lists of certified contractors with proven records of building transmission projects. When these contractors are retained to construct a project, FirstEnergy professionals provide oversight management of the construction process including cost control, quality review and completion times.

FirstEnergy plans to build a series of PJM RTEP projects to enhance reliability across its five PJM Transmission Zones. This initiative, known as "Energizing the Future," will include transmission projects – new or rebuilt high voltage power lines, new substations and the installation of specialized voltage regulating equipment. PJM has determined the projects are needed to enhance system reliability as the result of the deactivation of certain generating facilities.

One of FirstEnergy's past transmission line construction successes is the 500 kV Trans-Allegheny Interstate Line (TrAIL) approved by PJM in 2006. TrAIL consists of 661 structures and extends 180 miles from southwestern Pennsylvania across West Virginia to northern Virginia. The project includes the construction of the 502 Junction Substation and modifications to other substations. The project was energized on May 19, 2011 two weeks prior to the June 1, 2011 in-service date set by PJM. This new line was needed to meet the demand for electricity in the mid-Atlantic region and prevent overloading on the transmission grid.

FirstEnergy Transmission Senior Management Team

FirstEnergy Transmission's senior management team is dedicated to the safe, reliable and efficient delivery of electricity through the FirstEnergy Transmission System. These individuals manage a dedicated full-time workforce of professional engineers, legal and business personnel focused on the planning, construction, operation and maintenance of the transmission system.

Samuel L. Belcher is Senior Vice President of FirstEnergy and President of FirstEnergy Utilities, a business unit of FirstEnergy. He has responsibility for energy delivery, customer service, compliance with FERC transmission requirements, and energy efficiency activities, while leading FirstEnergy's 10 utility operating companies and its three stand-alone transmission companies. Mr. Belcher joined the company as FENOC senior vice president and chief operating officer in December 2012 from Constellation Energy Nuclear Group, where he was senior vice president, Site Operations. Previously, he held the positions of site vice president and plant general manager at Constellation's Nine Mile Point Nuclear Station. Prior to Constellation,

he served as director of Fleet Operations at FENOC. He held a number of operations leadership positions with Energy Northwest's Columbia Generating Station and Entergy Nuclear's River Bend and Arkansas Nuclear One. He advanced to his current position in March 2018. He earned a Bachelor of Science degree in engineering from Arkansas Tech University and is a licensed professional engineer. He also held a Senior Reactor Operator license for the River Bend Station in Louisiana. Mr. Belcher is a member of the Board of Directors for the Electric Power Research Institute (EPRI) and serves on the Governance & Nominating Committee. He also is on the Board of Directors of the Great Trail Council, Boy Scouts of America. Mr. Belcher also is a member of the Board of Directors for the Greater Akron Chamber of Commerce.

Robert R. Mattiuz, Jr. is Vice President, Compliance and Regulated Services, and Chief FERC Compliance Officer for FirstEnergy Service Company, a subsidiary of FirstEnergy. Prior to his promotion in May 2018, he served as director, FERC and State Regulatory Compliance. Mr. Mattiuz has worked at FirstEnergy for more than 36 years and has held numerous management positions in Transmission & Distribution Engineering, Planning and Operations, and Federal & State Regulatory Compliance. Mr. Mattiuz is a member of the ReliabilityFirst Board of Directors. He has a Bachelor of Science degree in Electrical Engineering from Penn State University and a Master's of Science degree in Industrial Administration from Carnegie Mellon University. Mr. Mattiuz is a registered professional engineer in the state of Pennsylvania.

Carl J. Bridenbaugh is Vice President of Transmission for FirstEnergy Service Company. In his current position, Mr. Bridenbaugh is responsible for transmission operations, system planning and protection, transmission line and substation maintenance, asset and project management and transmission substation and line design. He also is FirstEnergy's interface with transmission organizations such as NERC, PJM and RFC. Mr. Bridenbaugh began his career with Ohio Edison Company, a FirstEnergy operating company, in 1988 as a transmission planning engineer and has held positions in the FirstEnergy organization as Manager, Transmission Planning and Director, Transmission Operations. Prior to promotion to his current position, Mr. Bridenbaugh was Director of Transmission Planning and Protection. Prior to joining Ohio Edison Company, he was an application engineer with General Electric Company. Mr. Bridenbaugh received a bachelor's degree in Electrical Engineering from the University of Detroit Mercy and a Master's Degree in Electrical Engineering from Union College. He is a Registered Professional Engineer in Ohio.

Mark D. Mroczynski is Vice President, Construction and Design Services. Mr. Mroczynski began his career at FirstEnergy in 2004 as supervisor of Technical Services for the Bruce Mansfield Power Plant, and became manager of Technical Services for Consolidated Coal Plants in 2006. Mr. Mroczynski was named director, Operations Support, for Ohio Edison and Penn Power in 2008 and became executive director, Transmission Programs in 2013. Mr. Mroczynski was promoted to his current position in May 2018. Prior to joining FirstEnergy, Mr. Mroczynski spent 18 years with J&L Specialty Steel, serving in a number of operations management and supply chain positions. Mr. Mroczynski received a Bachelor of Science degree in mechanical engineering from The University of Akron, and a Master of Business Administration degree from Kent State University. Mr. Mroczynski is a professional engineer in Ohio and Pennsylvania, and is a founding director and member of the Association of Iron & Steel Technology.

FirstEnergy Transmission Organization
The transmission function within FirstEnergy includes hundreds of highly skilled professionals organized in the following key departments:

- Asset Management and Record Controls
- Transmission and Substation Design
- Transmission and Substation Services
- Transmission Planning and Protection
- Transmission Operations
- Portfolio and Project Management

(C) Demonstrated experience of the entity or its affiliate, partner, or parent company to develop, construct, maintain, and operate transmission facilities. Including a list or other evidence of transmission facilities previously developed regarding construction, maintenance, or operation of transmission facilities both inside and outside of the PJM Region.

Through a series of several strategic mergers and asset transactions over the past 15 years, the most recent of which was completed in February 2011, FirstEnergy has grown its diverse and sizeable asset base. FirstEnergy is now uniquely positioned as the nation's largest contiguous electric system with complementary assets across its transmission and distribution operations. These assets are in a prime location within PJM.

FirstEnergy's vision is to be a leading regional energy provider, recognized for operational excellence, outstanding customer service and a commitment to safety; the choice for long-term growth, investment value and financial strength; and a company driven by its leadership, skills, diversity and character of its employees.

Through the FirstEnergy Transmission Owners, FirstEnergy expects to invest approximately $1.2 to $1.45 billion over the next several years in its transmission system across its five PJM Transmission Zones to help maintain system reliability following the deactivation of several older coal-based power plants. From 2014 to 2019 FirstEnergy invested $6.8 billion on regulatory required and reliability enhancement projects (*i.e.*, grid improvement projects). These investments are driving significant performance improvements. With the implementation of our "Energizing the Future" program, FirstEnergy Transmission has achieved a 47 percent reduction in equipment-related outages on the transmission system serving our ATSI footprint as well as a 59% reduction in the duration of transmission-caused distribution outages and a 66% reduction in the number of customers affected by such outages, with the expectation of similar results as the program expands eastward across our service territory.

Since 2014, we have completed 600 to 700 new transmission projects per year focused on four areas of investment: regulatory required projects, upgrading or replacing aging equipment to strengthen our facilities against severe weather; enhancing system performance through technology upgrades; and adding operational flexibility that enables grid operators to more swiftly respond to changing grid conditions and energy resources.

As part of this effort, we have replaced or rebuilt more than 900 miles of transmission lines

across our service area. FirstEnergy Transmission has also installed approximately 1,250 miles of new fiber optic-cable across our system to improve network communications and enable grid operators to react immediately to disturbances on the system by quickly isolating damage and rerouting power from other sources. This advanced, secure, communications network improves real-time monitoring and predictive maintenance of our substation equipment and alerts us to problems before they impact service to our customers.

Additionally, ATSI built a new transmission operations facility in Akron, Ohio. The center features advanced computer systems to monitor grid reliability across the FirstEnergy Transmission System. The transmission and substation operations of several FirstEnergy utilities are now operated out of the new transmission operations facility to maximize efficiency.

FirstEnergy is also enhancing the reliability of the distribution system through targeted investments in new technologies that provide greater information on system conditions and customer usage. New features have been introduced, including an online 24/7 Power Center and greater functionality on mobile devices that make it easier for customers to stay informed when outages occur.

Portfolio and Project Management Department

FirstEnergy's Portfolio and Project Management Department, comprised of transmission specialists, schedulers, engineers and project and construction managers, have three main responsibilities: (1) to develop and facilitate strategies and processes to maximize the value of FirstEnergy's transmission and distribution assets; (2) to manage the process and facilitate the development of FirstEnergy's transmission and distribution capital portfolio; and (3) to provide project management and construction site management support for FirstEnergy's capital projects. The Portfolio Management group facilitates Energy Delivery's capital portfolio development process and provides corporate governance for the basic criteria and systems used in its development for both Distribution and Transmission. A Project Development group has been created which is expected to further vet more complex projects to minimize execution issues. This group also has responsibility for budgeting, forecasting and reporting the FET Capital portfolio as well as ensuring appropriate accounting and timely financial close out of Transmission projects. The Project Management groups manage large transmission projects and work with each FirstEnergy Transmission Zone's project management to ensure capital projects are appropriately managed. The Project Management group staff are located across FirstEnergy territories and execute transmission capital projects to meet financial and operational objectives. These workgroups are accountable for planning and executing FirstEnergy's 'Energizing the Future' program. Long range plans are developed to balance the resources of the reliability program with needs to implement PJM-RTEP projects.

Asset Management and Records Controls

The Asset Management group is responsible e for managing asset monitoring & health, asset data management & inventory, and compliance implementation strategy & procedures across all transmission and distribution field assets. Additionally, this group develops asset strategies and processes including those associated with spare equipment levels and total life-cycle analyses. Asset Management also manages Cascade which is FirstEnergy's asset management system.

Transmission and Substation Design Department

The mission of the Transmission and Substation Design organization is to support regional operations and bulk transmission on design and technical activities associated with capital projects. Additionally, this group provides design and technical support on projects associated with electricity delivery to retail customers and, upon request, for projects undertaken by the generation business unit. This group also maintains engineering and material schedules, coordinates equipment specification and evaluation, drawing management, transmission system wireless communication attachment process and the PJM transmission interconnection study process.

Transmission and Substation Services Department

FirstEnergy's transmission and substation maintenance programs are designed to ensure the reliability and integrity of transmission infrastructure and substation equipment to safeguard employees and the public and to meet all state and federal regulatory requirements. These programs include preventive maintenance and corrective maintenance practices. Preventive maintenance is typically time and/or conditioned based. Corrective maintenance is used to address equipment deficiencies that are identified during or outside of a preventive maintenance program. All preventive maintenance and corrective maintenance practices are based on accepted electric utility practices, manufacturer's specifications, NESC, ASTM, ANSI and IEEE standards, Electric Power Research Institute Copper Book on power transformers, expertise from FirstEnergy engineers, managers, supervisors and other subject matter experts in the industry. Maintenance practices are designed to provide guidance to field personnel for the maintenance and testing of transmission infrastructure and substation equipment and to ensure compliance with federal and state regulations.

FirstEnergy utilizes a combination of manufacturer's guidelines, utility industry transmission benchmarking, condition assessment and reliability evaluations to determine maintenance programs and intervals, and to determine when substation equipment should be repaired or replaced. The expected remaining life of equipment, in addition to other factors, is taken into consideration when determining whether to repair, replace or refurbish equipment. FirstEnergy retains maintenance records and/or inspection results as required by all federal and state regulations.

FirstEnergy engineers assigned to the Transmission and Substation Services Department are responsible for commissioning infrastructure, equipment, relay and control installations, which includes releasing these assets for service. In addition to commissioning responsibilities, the Transmission and Substation Services Department engineers participate in equipment failure

investigations and system mis-operations.

Transmission Planning and Protection Department

The Transmission Planning and Protection Department is responsible for planning as well as protecting the FirstEnergy Transmission System and associated sub-transmission systems in the PJM footprint. This analysis ensures compliance with NERC, PJM and FirstEnergy reliability standards and criteria. Transmission Planning routinely performs studies and makes system enhancement recommendations for transmission (*i.e.*, the PJM RTEP process) and sub-transmission system changes, new load connections and new generation connections. Transmission Protection provides relay system requirements, relay settings and operational event analysis for FirstEnergy transmission and sub-transmission protection systems. The Transmission Planning and Protection Department activities drive the FirstEnergy transmission capital budget. In support of these activities, and by working with PJM and RFC, the Transmission Compliance and Models group is responsible to develop and maintain load flow, short circuit and dynamic stability models.

Transmission Operations Department

The Transmission Operations group operates three control centers with direct responsibility for the operation of over 25,000 circuit-miles of transmission lines with voltages ranging from 34.5 kV to 500 kV. The three control centers are staffed 24/7 by 84 NERC and PJM certified Transmission System Operators and Shift Supervisors.

FirstEnergy maintains a state-of-the-art Energy Management System (EMS) that allows for the monitoring and control of the bulk electric system. FirstEnergy personnel have experience in designing and managing data acquisition systems that are integrated into the bulk transmission assets. These systems acquire data made available to FirstEnergy transmission control centers and transmit FirstEnergy data to PJM to assist in its role as Reliability Coordinator. The three control centers also utilize state-of-the-art large-screen visualization, which affords the Transmission System Operators effective situational awareness of the status of the FirstEnergy Transmission System.

FirstEnergy has been recognized as a NERC-approved continuing education provider and maintains an internal training department dedicated to Transmission System Operator training and credential maintenance. FirstEnergy Transmission Operations also maintains a power network analysis engineering group responsible for the review and support of real-time network analysis and EMS network model maintenance. FirstEnergy is committed to a culture of compliance in its Transmission Operations Compliance and Procedures group, which is responsible for procedure development and regulatory compliance.

(D) Previous record of the entity or its affiliate, partner, or parent company to adhere to standardized construction, maintenance and operating practices

Standardized Construction Maintenance and Operation Practices

FirstEnergy's transmission construction, maintenance and operation standards and practices are currently publicly posted on the PJM website at: pjm.com/planning/design- engineering/maac-to guidelines.

The standards and practices documents posted at the above website are as follows:

- Transmission System Design Criteria
- Substation Bus Configuration and Substation Design Requirements
- Spare Equipment Philosophy
- Design, Application, Maintenance and Operations Technical Requirements
- Ratings Guides
- Installation & Commissioning
- Inspection, Testing and Acceptance

(E) Capability of the entity or its affiliate, partner, or parent company to adhere to standardized construction, maintenance and operating practices

FirstEnergy has a long history of proven adherence to all state, federal and industry practices and requirements. FirstEnergy has well-established design standards across its system for implementation of new and retrofit projects. These standards are based on industry, local, state and federal requirements in addition to good utility practice. These standards are reviewed and revised on a regular basis. Additionally, FirstEnergy has documented standards, and materials for timely emergency restoration following failures of both substation and transmission line equipment. All identified project design solution alternatives are thoroughly reviewed during the conceptual design layout period, and include constructability review. FirstEnergy was involved in the creation and intent to post the standard Technical Guidelines and Recommendations outlined in response to part (D) above.

(F) Financial statements of the entity or its affiliate, partner, or parent company. Please provide the most recent fiscal quarter, as well as the most recent three fiscal years, or the period of existence of the entity, if shorter, or such other evidence demonstrating an entity's current and expected financial capability acceptable to the Office of the Interconnection

The following documents are provided as appendices :

Standard & Poors Rating Agency Report for the following FirstEnergy Companies:

- American Transmission Systems, Incorporated
- FirstEnergy Transmission LLC
- Jersey Central Power & Light Company
- Mid-Atlantic Interstate Transmission, LLC
- Monongahela Power Company
- The Potomac Edison Company
- Trans-Allegheny Interstate Line Company
- West Penn Power Company

(G) Commitment by the entity to execute the Consolidated Transmission Owners Agreement, if the entity becomes a Designated Entity.

All of the FirstEnergy Transmission Owners companies are signatories to the Consolidated Transmission Owners Agreement (CTOA) and active participants in the Transmission Owners Sector of PJM and the CTOA's Administrative Committee, Legal Issues Team, and various working groups. The FirstEnergy Transmission Owners commit to remaining signatories to the CTOA while they are transmission owning members of PJM.

Met-Ed, JCP&L and Penelec were transmission owning members of PJM and signatories to a predecessor transmission owners' agreement prior to FERC's designation of PJM as an Independent System Operator and later as a Regional Transmission Organization. Met-Ed, JCP&L and Penelec were members of the original PJM power pool and have remained members of PJM as it has evolved over the past fifty-plus years. Mon Power, Potomac Edison and West Penn Power, doing business as Allegheny Power, became signatories to a predecessor transmission owners' agreement on December 15, 2005. Subsequently, Met-Ed, JCP&L, Penelec, Mon Power, Potomac Edison and West Penn Power became signatories to the CTOA when it replaced the predecessor transmission owner agreements. TrAILCo became a signatory to the CTOA on November 8, 2007 followed by ATSI becoming a CTOA signatory on

December 17, 2009. MAIT became a signatory to the CTOA on January 31, 2017.

(H) Evidence demonstrating the ability of the entity to address and timely remedy failure of facilities.

The FirstEnergy Transmission Owners have a strong record of responding quickly and safely to service interruptions. Most recently, this was demonstrated by FirstEnergy's response to Hurricane Sandy, which struck FirstEnergy's service area on October 29, 2012. Sandy ranks as the most damaging weather event faced by FirstEnergy. By comparison, Sandy disrupted service to nearly 2.6 million FirstEnergy customers which is more customers than Hurricane Irene and the October 2011 snowstorm combined and more than twice as many customers as the 2011 Summer derecho. By the time Sandy's wind and rains ceased and floodwaters receded, the super storm had crossed every state served by FirstEnergy.

Sandy's hurricane-force winds and rains hammered FirstEnergy's operating companies in New Jersey, Pennsylvania and parts of Maryland. In addition, FirstEnergy service areas in western Maryland and parts of West Virginia were blanketed with up to three feet of snow and wind gusts of up to 80 mph. In Ohio, FirstEnergy's service area along the Lake Erie shoreline experienced high winds and rain.

FirstEnergy's transmission and distribution utilities responded to the catastrophic destruction caused by Sandy with the largest mobilization of crews, equipment, material and support in FirstEnergy history. While the regional dispatch offices of FirstEnergy's utilities directed local restoration efforts, FirstEnergy's emergency operations center in Akron, Ohio, supported the overall service restoration effort.

More than 20,000 workers, comprised of FirstEnergy employees, other utility personnel and contractors, joined the massive service restoration effort. Linemen, hazard responders, damage assessors, and other service and support personnel were engaged in restoring service to customers. Companywide, crews responded to more than 65,000 reports of lines down and other hazards. During the restoration effort, approximately 20,000 damaged crossarms, 6,300 utility poles and 4,600 transformers were replaced and 700 miles of wire hung. Overall, FirstEnergy's three customer contact centers received 1.5 million outage calls, the most ever taken in a single service restoration event.

In the face of many challenges, crews restored service to more than half of the affected FirstEnergy customers within three days and two-thirds of customers within five days. More than 95 percent of the affected FirstEnergy customers in Pennsylvania, Ohio, West Virginia and Maryland had service restored within eight days of Hurricane Sandy coming ashore. By day 13 over 95 percent of JCP&L's customers had their service restored.

In addressing large-scale outages, securing outside utility crews, electrical contractors and tree contractors can be challenging as utilities impacted by the storm are pursuing the same pool of utility workers and support personnel. To bring in sufficient crews to tackle the historic rebuild effort in a safe and timely manner, FirstEnergy worked with six mutual-aid assistance groups, including Mid-Atlantic Mutual Assistance, the New York Mutual Assistance Group, Southeastern Electric Exchange, Great Lakes Mutual Assistance, Midwest Mutual Assistance

and Western Region Mutual Assistance. Additionally, the Dept. of Energy volunteered personnel and contractors from the Bonneville Power Administration, Western Area Power Administration and Southwestern Power Administration. In all, workers were recruited from more than 30 states and Canada, coming from as far away as Oregon and California.

As part of the restoration process, 13 helicopters flew about 10,000 miles to perform aerial patrols on FirstEnergy's transmission, sub-transmission and distribution systems. Crews worked 16 hours with eight hours mandatory rest until the job was done. And, despite challenging work conditions, no significant safety incidents occurred.

Effective communication with key state personnel was vital to the successful service restoration effort. In New Jersey, JCP&L implemented its recently enhanced emergency communications plan during Sandy, providing information updates to local officials, the Board of Public Utilities (BPU), legislators and the governor, including participation in twice-daily calls with the BPU president and governor. In Ohio, daily communications were provided to the governor, the chairman of the Public Utilities Commission of Ohio, and the mayor of Cleveland. In Pennsylvania, updates were provided to local officials, the Public Utility Commission, the General Assembly and the governor's staff. In Maryland, frequent status updates were provided to the governor and his administration's energy advisor, and included helicopter tours of storm-ravaged Garrett County to show the extent of the damage to the electrical infrastructure.

FirstEnergy's ability to have skilled resources available to restore transmission facilities is measured by the industry standard of outage duration. FirstEnergy's outage duration was better than first quartile in four of the past six years (based on PJMs "2006-2012 Performance Metrics Comparison" report).[5]

(I) Description of the experience of the entity in acquiring rights of way (ROW)

To address the right-of-way (ROW) requirements of the large FirstEnergy Transmission System, FirstEnergy has a substantial full-time internal staff responsible for ROW acquisition. The ROW group has personnel throughout the FirstEnergy transmission zones with numerous ROW acquisition efforts underway at all times.

Presently, FirstEnergy has hundreds of millions of dollars in planned transmission upgrades and improvements underway for which the necessary ROW have been or are being acquired. This follows an additional several hundred million dollars in transmission completed in recent years for which substantial ROW acquisition also was required.

Additionally, FirstEnergy has the ability to exercise eminent domain in the states covered by its transmission zones. The FirstEnergy ROW group has considerable experience working within the eminent domain construct to timely effect construction of RTEP projects. FirstEnergy also benefits from participation in the Midwest Utilities Real Estate Managers group and other utility

[5] For the two years that FirstEnergy did not meet these criteria, associated long-duration outages were a result of the SF6 buss failure at Smithburg and, as noted above, the major storms that occurred across its service territory in 2011

real estate professionals' groups to standardize procedures and to collaborate on real estate issues making the entire process more efficient and more transparent.