

PRE-QUALIFICATION APPLICATION

of

DOMINION ENERGY, INC.

and

CERTAIN ELECTRIC AFFILIATES

Submitted to the PJM Interconnection, L.L.C.
Office of Interconnection

Per the PJM Operating Agreement, Schedule 6, Section 1.5.8(a)

This is a confirmation of the Pre-Qualification Filing submitted

to PJM on July 5, 2017 and approved by PJM on

August 1, 2017 for

**Virginia Electric and Power Company and Dominion High Voltage Holding, Inc.'s Pre-
Qualification (ID13-03)**

(i) Name and address of the entity including a point of contact

Corporate Parent: Dominion Energy, Inc.
Designated Entities: Virginia Electric and Power Company (Dominion Energy Virginia)
Dominion High Voltage Holdings, Inc. (DHVH)
Dominion High Voltage MidAtlantic, Inc. (DHV-MidAtlantic)

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Introduction

Dominion Energy, Inc. submits this pre-qualification information to the PJM Interconnection, L.L.C. (PJM) Office of Interconnection to confirm the approved Designated Entity status for its subsidiary Virginia Electric and Power Company (Dominion Energy Virginia) and Dominion High Voltage Holdings, Inc. (DHVH) that was previously submitted to PJM on July 5, 2017 and approved by PJM on August 11, 2017 (Prequalification ID13-03). This filing includes the pre-qualification for the following wholly owned subsidiaries of Dominion Energy, Inc.:

- Virginia Electric and Power Company (Dominion Energy Virginia)
- Dominion High Voltage Holdings, Inc. (DHVH)
- Dominion High Voltage MidAtlantic Inc. (DHV-MidAtlantic)

Subject to applicable state and federal authority, services from Dominion Energy entities may be made available or provided to other Dominion Energy entities and affiliates, including Dominion Energy Technical Solutions, Inc. (DTech), Dominion Energy Virginia and DHVH. Consequently, as used herein unless otherwise specified, "Dominion Energy" refers to Dominion Energy, Inc. and its direct and indirect subsidiaries (Dominion Energy's other subsidiaries include generation, transmission and distribution entities in South Carolina which is separate and apart from Dominion Energy Virginia and outside the PJM Zone. References herein do not include South Carolina subsidiary operations and activity).

Overview of Dominion Energy, Inc.

Dominion Energy, Inc., headquartered in Richmond, Virginia and incorporated in Virginia in 1983, is one of the nation's largest producers and transporters of energy with more than \$100 billion of assets providing electric generation, transmission and distribution, as well as natural gas storage, transmission, distribution and import/export services. Dominion Energy's portfolio of assets includes approximately 20,063 MW of generating capacity, 6,690 miles of electric transmission lines, 58,000 miles of electric distribution lines, and 12,200 miles of natural gas transmission. Dominion Energy serves nearly 7 million utility and retail energy customers in 20 states.

Dominion Energy continues to expand and improve its regulated electric and natural gas businesses, in accordance with its five-year capital investment program. A major impetus for this program is to meet the anticipated increase in electricity demand in its electric utility service territory and to upgrade Dominion Energy's gas distribution and electric transmission and distribution networks.

Dominion Energy's nonregulated operations include merchant generation, energy marketing and price risk management activities and retail energy marketing operations. Dominion Energy's operations are conducted through various subsidiaries, including Dominion Energy Virginia.

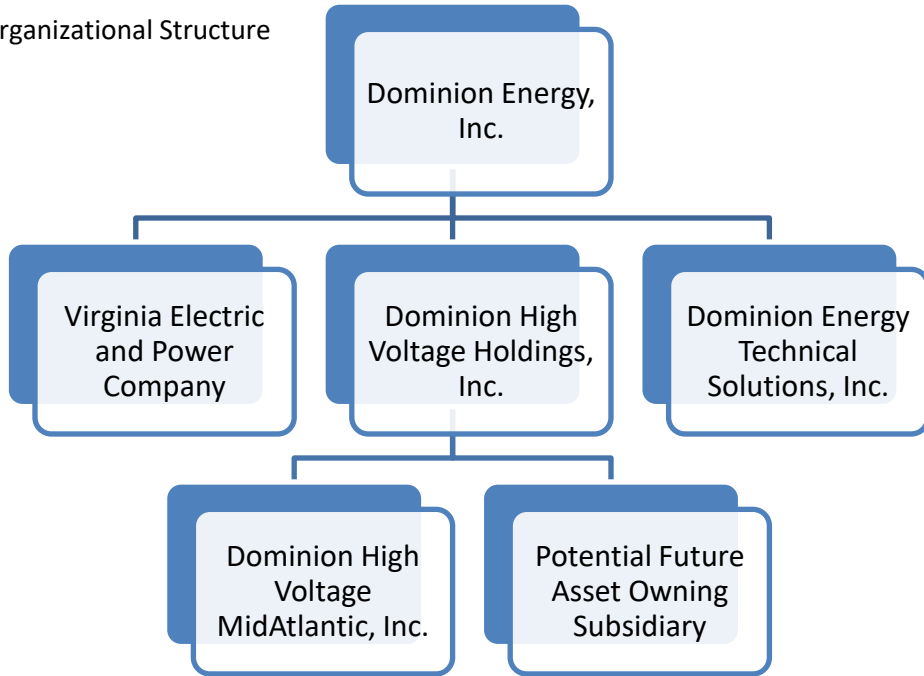
Dominion Energy Technical Solutions, Inc. (DTech) is a direct subsidiary of Dominion Energy, Inc. established in 2002. DTech, with over 500 employees, provides the following services to both Dominion Energy subsidiaries and unaffiliated entities:

- Preparation and coordination of planning and design of energy and electric transmission and substation plant facilities, including in the study and consult therefor;
- Planning, engineering and construction operations;
- Operations support services;
- Plant and facilities operation;
- Generation outage support;
- Maintenance and management support;
- Development of long-range operational programs; and
- Advice and assistance in coordination of operational programs with the programs of other companies.

Structure of Dominion Energy Transmission companies

The following Figure 1 depicts the new transmission companies that will operate in PJM.

Figure 1: Organizational Structure



Domination Energy Virginia

As a vertically-integrated utility subsidiary of Dominion Energy, Inc., Dominion Energy Virginia maintains and operates 6,690 miles of electric transmission in Virginia, North Carolina and West Virginia. These transmission facilities serve distribution franchises in Virginia and northeastern North Carolina, providing electric service to about 2.6 million customer accounts in the two-state area, as well as 462,000 customers served through VA and NC electric cooperatives and municipalities.

Domination High Voltage Holdings, Inc.

DHVH, a subsidiary of Dominion Energy, Inc., was created to facilitate the ownership and operation of transmission facilities that are located outside of the Dominion Energy Virginia designated transmission zone. As noted in the organizational structure in Figure 1, DHVH is one of three designated entities, along with Dominion Energy Virginia, to be operated under the Dominion Energy, Inc. oversight structure. As such, Dominion Energy, Inc. will provide all appropriate financial and credit support to DHVH to the extent separate support is needed. DHVH would also have access to the planning, engineering, construction, and operations staff of Dominion Energy, more specifically the Electric Transmission business unit discussed at length below.

Domination High Voltage MidAtlantic, Inc.

DHV-MidAtlantic, a subsidiary of DHVH, was created to own and operate transmission facilities that are located outside of the Dominion Energy Virginia designated transmission zone. DHV-MidAtlantic is requesting Designated Entity (DE) status under Schedule 6, Section 1.5.8 (a) of the PJM Operating Agreement. As noted in the organizational structure in Figure1, DHV-

MidAtlantic would be one of three designated entities, along with Dominion Energy Virginia and DHVH, to be operated under the Dominion Energy, Inc. oversight structure. As such, DHVH will provide all appropriate financial and credit support to DHV-MidAtlantic to the extent separate support is needed. DHV-MidAtlantic would also have access to the planning, engineering, construction, and operations staff of Dominion Energy, more specifically the Electric Transmission business unit discussed at length below.

In addition to the companies named and described in this document, Dominion Energy, Inc. may form additional subsidiaries of DHVH as the competitive marketplace for transmission projects within PJM develops.

Technical Qualifications

The following technical qualifications for DTech, which supports Dominion Energy Virginia, DHVH and DHV-MidAtlantic, are explained in detail as required by the PJM Operating Agreement, Schedule 6, Section 1.5.8(a).

(ii) Technical and engineering qualifications of the entity or its affiliate, partner, or parent company

Dominion Energy has a fully staffed Substation Engineering team inclusive of Physical Design, System Protection Design, Communications support, Civil Engineering support, Site Plan Development, Transmission Line Engineering inclusive of overhead and underground design, Civil Engineering support and Geotechnical support. Dominion Energy is fully staffed for engineering support activities inclusive of siting/routing transmission lines, site development for substations as well as all real estate related activities.

(iii) 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.

As noted previously Dominion Energy is one of the nation's largest producers and transporters of energy, with a portfolio of approximately 20,063 megawatts of generation, 12,200 miles of natural gas transmission, and 6,690 miles of electric transmission lines. In addition, Dominion Energy serves nearly 7 million utility and retail energy customers in 20 states.

Dominion Energy Virginia's existing electric transmission facilities are all within the PJM footprint. Dominion Energy Virginia has an Electric Transmission staff of over 1,000 engineers, technicians, operators, and other construction and support personnel dedicated to develop, construct, maintain, and operate these facilities.

Dominion Energy has over 80 years' experience in developing, constructing, maintaining and operating transmission facilities, including the most recent nine years as a PJM member. Dominion Energy's engineering and construction standards for transmission facilities are currently posted on the PJM website at the following link:

<http://www.pjm.com/planning/design-engineering/to-tech-standards.aspx>

Since joining PJM on May 1, 2005, Dominion Energy has completed approximately \$9 billion of transmission construction projects, including the following examples:

- Meadowbrook to Loudoun 500 kV line (Part of 502 Junction to Loudoun): Obtained right-of-way (ROW) and Certificate of Public Convenience and Necessity (CPCN) in Virginia, and constructed 65 miles of 500kV line by the PJM target date of 6/01/2011
- Carson to Suffolk 500 kV line: Project to build a new 60-mile 500kV line. Obtained ROW and CPCN in Virginia, and constructed line by the PJM target date of 6/01/2011
- Yorktown to Hayes 230kV line: Project to build a new hybrid overhead and underwater 230kV line. Obtained CPCN in Virginia and completed project by the projected in-service date of 12/18/2012
- Mt Storm to Doubs 500 kV rebuild project: Project to wreck and rebuild Dominion Energy's 96.4-mile portion of the line. Obtained CPCN in Virginia and completed project by the PJM target date of 6/01/2014
- Lexington to Dooms 500kV rebuild project: Project to wreck and rebuild 39-mile 500kV Line. Obtained CPCN in Virginia and completed project by the projected in-service date of 12/31/2016
- Elmont to Cunningham 500kV rebuild project: Project to wreck and rebuild 51-mile 500kV Line. Obtained CPCN in Virginia and completed project by the projected in-service date of 12/31/2017
- Landstown, Chesapeake, Fentress, Lynnhaven STATCOM Project: Project to install four new 125 MVAR STATCOMs. Completed in advance of the PJM required target date of 6/01/2018

Additional projects undertaken since Dominion Energy's membership in PJM, including linear projects, interconnections and station work, can be found on PJM's Project Status & Cost Allocation database at <https://www.pjm.com/planning/project-construction.aspx>.

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

As evidenced in sections iii and v, Dominion Energy has established a long record of constructing, owning and operating transmission assets. Dominion Energy participates in many PJM committees and industry forums to maintain best practices in transmission operations and maintenance practices. Dominion Energy also operates a 24-hour system operations center staffed with North American Electric Reliability Corporation (NERC) and PJM certified operators.

Dominion Energy has a proven track record of compliance with all state, federal and industry practices and requirements and, in addition, adherence to good utility practice.

See section viii for Dominion's demonstrated record in addressing and responding to facility failures.

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

The Electric Transmission Department of Dominion Energy has over 1,000 personnel dedicated to standardized construction, maintenance and operating practices. To accomplish this, Electric Transmission is organized in groups with specific responsibilities.

Transmission Construction

Transmission Construction is responsible for supporting the growth of transmission assets, maintaining the electric transmission lines, and the vegetation management of transmission rights of ways.

Transmission Construction is organized in these business groups:

- Electric Transmission & Substation Construction
- Electric Transmission Lines
- Electric Transmission Forestry

Field Operations

- Transmission Field Operations is committed to safely and efficiently maintaining the Electric Transmission System, and insuring asset compliance, reliability, and performance. The department consists of the following groups: Electrical Equipment, System Protection, T&S Nuclear, and Operational Engineering Support.

Planning & Communications

- Transmission Planning oversees the development of the company's long-range transmission expansion plan through the PJM Planning process to assure compliance with NERC Reliability Standards. Transmission Planning also performs stability studies of generation within the Dominion Energy Virginia service territory and participates on various regional and inter-regional planning study groups and committees. The Project Communication Leads help communicate the technical content as project plans are shared with internal and external stakeholders.

Transmission Projects

- Transmission and Substation Projects is responsible for implementing projects to build or improve new substations and transmission lines. This business unit's customers are from transmission and distribution planning, transmission and distribution reliability, generation, and cooperatives.
- Once internal funding approval for a project has been received, this group is responsible for leading a multi-disciplined team representing all groups involved to develop and then implement the appropriate solution that satisfies the customers' needs.
- This group is directly responsible for acquiring all right of way, securing necessary permits, engineering and overall project management with supply chain and construction support provided within the project teams. The project manager is responsible for managing this team to deliver projects within specified schedules and budgets.

Substations

- Substations is at present responsible for the operation, maintenance, and installation of all substation electrical equipment in over 790 substations in Virginia, North Carolina, and West Virginia.
- This group provides investigative and diagnostic tests to establish health assessment and operational integrity of the substation equipment.
- Substations administers strategic modernization plan which focuses on the replacement of aging infrastructure to improve operational reliability.
- Substations provides technical support to Dominion Energy's environmental regulatory review process and supports compliance with environmental programs.
- This group develops work methods and procedures for the operation and maintenance of substations with emphasis on improved safety, training, and productivity; and maintains adequate spare major equipment and mobile units in order to limit extended outages due to equipment failure.

Transmission Reliability

- Transmission Reliability performs highly technical functions in support of transmission and distribution operations and analysis.
- Transmission Reliability is responsible for circuit calculations and protective relay settings, as well as fault analysis.
- Transmission Reliability is responsible for reliability metrics and statistics, and recommendations to improve the reliability of the electric transmission and distribution systems.
- Transmission Reliability serves as the primary liaison to key transmission customers such as large industrials and government agencies.

System Operations

- The System Operations Center (SOC) is responsible for the safe and reliable operation of Dominion Energy's electric transmission system or "grid" in Virginia and North Carolina for its vertically integrated utility operations. This grid includes approximately 6,690 miles of transmission lines and 790 substations.
- The staff in the SOC monitors each transmission facility around the clock and continuously assesses the potential impacts on system reliability that could result from an unplanned loss of any single facility. The SOC's system operators also authorize and direct all transmission switching in order to support construction and maintenance needs, or to facilitate system restoration in the safest manner possible. They work in close coordination with the system operators of PJM, the Regional Transmission Operator (RTO) of which Dominion Energy has been a member since 2005.
- The System Operations Engineering group performs a technical support role for the SOC as well as providing its back-office functions. This group is responsible for regulatory review and standards development, compliance monitoring and reporting, engineering support of the computer model of the transmission system, documentation of SOC procedures and references, training support, and miscellaneous projects. They also serve as the primary liaison to the operations support functions of PJM and other industry groups.

- (vi) **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

See financial statements in Attachment A

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

As an existing Transmission Owner in PJM, Dominion Energy, Inc.'s vertically integrated subsidiary, Dominion Energy Virginia, is already a signatory to the Consolidated Transmission Owners Agreement. DHVH and DHV-MidAtlantic commit to signing the Consolidated Transmission Owners Agreement upon becoming a Designated Entity.

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

Dominion Energy works hard to maintain grid reliability and address issues before they become failures. In that regard, we have received accolades for both our reliability projects, restoration efforts and overall company performance.

Most recently, in 2020, the company's Mobile STATCOM implementation was selected as the winner of the prestigious Chairman's Award in the Substation Category of the Southeastern Electric Exchange (SEE) 2020 Industry Excellence Awards.

The Electric Power Research Institute presents annual Technology Transfer Awards to "recognize industry leaders and innovators who help companies transform research into results and solutions that can improve the efficiency of power plants, harden transmission and distribution equipment, improve cybersecurity, and enhance end-use electrification — all for the end-benefit of utility customers." In early 2020, numerous Dominion Energy employees won the award for work done the previous year for:

- implementing advanced power-quality monitoring tools;
- application of voltage control area and reactive power assessment software; and
- validation of overhead distribution designs for improved reliability and resiliency.

Other notable awards include:

- Top Utility 2020 (*Black EOE Journal*)
- Third-most-admired company in power sector for 2020 (*Fortune*)
- Emergency Response Award (January 2019, for Tropical Storm Michael in 2018) from the Edison Electric Institute
- Emergency Recovery Award (January 2020, for Hurricane Dorian in 2019) from the Edison Electric Institute)

Previous awards include:

In 2012, Dominion Energy was awarded the SEE Industry Excellence Award (Substation Category) for its restoration of the Surry Nuclear Power Station switchyard following a tornado.

On Saturday night, April 16, 2011, an EF 3 tornado (winds 135-165 MPH) touched down near Surry, Virginia, and carved a swath of destruction through the high voltage switchyard, cutting off power to the Surry Nuclear Power Station. Within a span of 21 seconds, five transmission lines locked out, transformers and bus work locked out, and both nuclear units tripped offline. In those 21 seconds, Dominion Energy Virginia lost 1,700 MW of generation and the 500kV transmission network serving the Hampton Roads area – from Williamsburg to Norfolk to Virginia Beach.

Yet, in the face of extensive damage, emergency equipment, processes and personnel responded exactly the way they should. Support personnel began working within minutes to restore electrical service to the station and customers. Contractors working on nearby construction projects immediately shifted gears and responded for duty. Within six hours of the event, emergency service had been restored to the power station and more than seventy percent of affected customers had been restored. Normal, redundant feeds were completely restored to the station within three days, enabling the nuclear plant to restart less than a week after the storm. Over an intense five-day period, the switchyard was completely restored. The restoration was well-organized and smoothly implemented, without a reportable injury.

Dominion Energy was also awarded SEE's Industry Excellence Award in 2010 for an emergency restoration. This award highlights Dominion Energy's emergency restoration efforts following an extremely rare weather event that ripped conductors from their towers over the James River. The success of the project is evidenced by the fact that two critical lines were repaired safely and in a manner that was essentially invisible to Dominion Energy's customers, including one of Dominion Energy Virginia's largest customers, the Newport News Shipyard.

Dominion Energy won the SEE Industry Excellence Award in the transmission category for "500kV Transmission Tower Emergency Restoration" in 2009. When a catastrophic failure occurs on a high voltage transmission line during peak loading conditions, it is imperative that a utility has an effective emergency restoration plan, quick response and stellar execution of the plan. In June of 2008, Dominion Energy's Mt. Storm to Doubs 500kV line experienced a direct hit from a tornado resulting in a tower collapse during peak load conditions in the Mid-Atlantic and Southeast regions. The emergency restoration plan was executed without a single safety incident and within a timeframe that PJM, the regional transmission operator, called extraordinary.

DTech has been supporting Dominion Energy Virginia's transmission and substation facilities since 2003 and will support DHVH and DHV-MidAtlantic. Dominion's existing approach to off system support of critical facilities has proven to provide reliable operational support, prompt problem identification and resolution and has improved operational performance of the facilities that have been purchased. DTech's Operations personnel have expertise in EMTP, RTDS, PSSE, PSCAD and Ansys, in addition to other computer software, to support resolution of complex problems. DTech is active in developing the use of sophisticated monitoring / modeling tools.

Experienced transmission and substation contractors will be retained in the area of the facilities to provide continuous response for critical alarms. DTech is notified of alarms through an advanced suite of monitors that query critical parameters at the facility and contact response personnel immediately typically before the SOC response is required. Additional security monitors and video coverage provide site assessment on a

continuous basis. Electrical equipment personnel are trained in the specifics of the facility for equipment that is unique to provide quick knowledgeable response. System protection personnel are trained and have access to critical controls and protection information to respond to the facility when dispatched. Fault analysis personnel provide continuous response and Transmission Forestry, Transmission lines specialist, substation specialist, substation engineering, and transmission lines engineering support are dispatched as required to support local contract personnel in the operation and/or response activities required. In addition, Dominion Energy has a dedicated aircraft fleet that assist in reducing response time if the situation warrants.

For specialized equipment, such as series capacitor banks and static VAR compensators, electrical equipment and system protection personnel will be trained and located at Dominion Energy's facilities in Northern Virginia and West Virginia to provide timely response as required. These individuals will be the technical interface with original equipment manufacturers under contract as part of the equipment purchase to provide technical support and technical maintenance services as required. DTech's Operation Engineering group provides technical support as needed in addition to modeling the facility using the Real Time Digital Simulator to ensure responses and actions are understood and quickly resolved. Spare parts of critical equipment will be stored on site in a separate secure storage structure that has security-controlled access.

(ix) Description of the experience of the entity in acquiring rights of way

Dominion Energy's full-time staff of Real Estate Specialists provides support to over six thousand miles of transmission line easements and over 800 fee owned substation properties for over 80 years.

Scope of services provided include but are not limited to: Obtain land rights for existing and potential fee-owned/easement properties by conducting research on property rights, ownership, and parcel size, conduct courthouse research when applicable, determine environmental concerns and political aspects of land to be acquired, provide easement rights analysis for rebuilds and/or construction of additional lines, research Railroad and Government permit rights for Routing/Permitting Team, estimate the cost and time needed to acquire fee owned and easement owned property, support Open House and possible Public Hearings, represent Company and applicable projects at Chamber of Commerce and/or Homeowner's Association Meetings, coordinate acquisitions with Surveying, Routing/Permitting, Engineering, and Project Management Teams, obtain appraisals of acquisition areas, prepare bona-fide offer packages, conduct time sensitive acquisition for Right of Entry. Note section iii above for recently successfully completed projects or projects in progress.

As noted above, Dominion Energy has decades of experience acquiring right of way using internal resources as well as external vendors for support on a per project basis that have supported Dominion Energy Virginia and will support DHVH and DHV-MidAtlantic. At present, contractor support is managed through the Electric Transmission Organization in Richmond, Virginia. Dominion Energy has several active and long-term Master Service Agreements (MSA) with contractors of various scalable project abilities as well as experience levels already in place that could be utilized. These contractors have an existing presence and historical presence in the PJM footprint – both within the Dominion Energy transmission zone and outside of it. For

DHV-MidAtlantic projects, Dominion Energy anticipates securing experienced outside consultants in a sub-consultant role to aid in the permitting, ROW acquisition, and regulatory approval.