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pepco

A PHI Company

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December 18, 2015

Ms. Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission of the District of Columbia
1325 G Street, N.W.
Suite 800
Washington, D.C.20005

Re: Formal Notice of Plans to Construct Two 230 kV Underground Transmission Circuits on Buzzard Point in Southwest District of Columbia

Dear Ms. Westbrook-Sedgwick:

Pursuant to Chapter 21 of Title 15 of the District of Columbia Municipal Regulations ("D.C.M.R."), Potomac Electric Power Company ("Pepco") hereby provides formal notice of its intent to construct two 230 kV underground transmission circuits on Buzzard Point in Southwest District of Columbia ("Formal Notice"). Specifically, the transmission project consists of constructing two 230 kV underground transmission circuits between the Buzzard Point Substation and the Waterfront Substation in the District of Columbia. As explained in further detail in the Formal Notice, the 230 kV transmission lines are necessary to allow for a reconfiguration of the aging Buzzard Point 230 kV Station B to increase reliability and to allow the Waterfront Substation to operate at its full capacity when it is converted to a 230kV substation.

For the convenience of the Commission and to assist in the efficient processing of this request, Pepco is supplying the information responsive to both §§ 2111.1 and 2111.5 with this Formal Notice. Pepco is serving a copy of this Formal Notice on the affected Advisory Neighborhood Commissions and the Office of the People's Counsel, as required by 15 D.C.M.R. § 2111.3. Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

Andrea H. Harper

AHH/mda

Enclosures

cc: All Parties of Record

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

Formal Notice

of Plans to Construct Two
230 kV Underground Transmission Circuits on
Buzzard Point in Southwest District of Columbia

Pursuant to Chapter 21 of Title 15 of the District of Columbia Municipal Regulations ("D.C.M.R") the Potomac Electric Power Company hereby provides this Formal Notice consistent with 15 D.C.M.R § 2111.1.

15-2111 UNDERGROUND TRANSMISSION LINES IN EXCESS OF SIXTY-NINE THOUSAND VOLTS AND SUBSTATIONS CONNECTED TO SUCH LINES

2111.1 An electric corporation which plans to construct inside the District of Columbia an underground transmission line in excess of sixty-nine thousand (69,000) volts, or substation connected to such line, shall file formal notice with the Commission six (6) months prior to the construction. This formal notice shall include a discussion of the following:

(a) The name and address of the principal place of business of the electric corporation;

Potomac Electric Power Company
701 Ninth Street, NW
Washington, DC 20068

(b) The name, title, and address of the person authorized to receive notices and communications with respect to the application;

Andrea H. Harper
Associate General Counsel
Pepco Holdings, Inc.
701 Ninth Street, NW
Suite 1100
Washington, D.C. 20068

(c) The location or locations where the public may inspect or obtain a copy of the application;

Potomac Electric Power Company
701 Ninth Street, NW, First Floor
Washington, DC 20068

(d) A list of each District of Columbia, state, or federal government agency having authority to approve or disapprove the construction or operation of the project and containing the following:

(1) A statement indicating whether the necessary approval from each agency has been obtained, with a copy of each approval or disapproval attached;

For a list of the District of Columbia and federal permits, see Attachment A (Permit Matrix). Pepco will comply with the permitting and related processes and to seek the necessary permits on an expedited basis.

(2) A statement indicating the circumstances under which any necessary approval has not been obtained;

See Attachment A in response to 2111.1(d)(1)

(3) A statement indicating whether any waiver or variance has been requested, with a copy of each approval or disapproval attached.

No waivers or variances have been requested.

(e) The proposed date construction is to be initiated;

May 2016

(f) The need for the underground transmission line or substation;

The 230 kV transmission lines proposed under this Formal Notice are necessary to allow for a reconfiguration of the aging Buzzard Point 230 kV Station B to increase reliability. The transmission lines' interconnection with the Waterfront Substation will also allow the substation to operate at its full capacity when it is converted to a 230kV substation. The construction schedule of the proposed DC United stadium project requires that Pepco first install the underground pipes and manholes for the proposed 230 kV transmission lines prior to the commencement of the work to install and energize the proposed 230 kV transmission line. The installation of the 230 kV transmission line will be completed at a later time, as discussed in section (j) below. In addition, the installation of the Pepco facilities must be installed in coordination with the DDOT's South Capitol Street Bridge project to minimize the impact on that project.

(g) The type and voltage level(s) of the underground transmission line or substation;

Two 230 kV AC underground transmission lines utilizing high-pressure fluid-filled cables. Subsurface infrastructure will utilize two (2) 8" steel pipes to house the two (2) proposed transmission lines.

(h) Property or property right acquired or to be acquired;

None

(i) Location of the proposed construction, including affected streets by name;

The route for the 230 kV transmission lines will start near the existing Buzzard Point Substation B from two locations. The first will start south of the intersection of 1st Street, SW and T Street, SW, will proceed east through the Buzzard Point Substation and then turn north proceeding along Half Street, SW. The feeder will then turn on Potomac Avenue, SW heading southwest, continuing onto R Street, SW and terminating at Waterfront Substation 223. The second feeder will start on S Street, SW between 1st Street, SW and Half Street, SW. The feeder will head east on S Street, SW until turning north on Half Street, SW near the intersection of Half Street, SW and T Street, SW and proceed along Half Street, SW where it follow the path of the first feeder to Potomac Avenue, SW. Both feeders will proceed to R Street, SW and terminate at Waterfront Substation 223.

(j) Duration of the proposed construction;

The construction of the underground transmission pipes and manholes is expected to begin in May 2016 and to finish in July 2017. In order to minimize impact on the community and neighboring Buzzard Point redevelopment projects, Pepco is scheduling construction of the underground infrastructure to be completed in advance of the commencement of the proposed DC United soccer stadium and in coordination with DDOT's South Capitol Street Bridge construction. The installation of the conductors will not occur until 2020, when they are necessary for the conversion of Waterfront Substation from 138 kV to 230 kV. This future work will only require localized excavation of one area to intercept the existing 230 kV conductors and work within the manholes to install and splice the conductors. The total duration of the work associated with the cable installation would be approximately 3 to 4 months.

(k) Impact of the proposed project on affected neighborhood and community; and

By constructing these facilities in advance of the DC United Stadium construction and neighboring Buzzard Point redevelopment projects as well as DDOT's South Capitol Street Bridge construction, the impacts on the neighborhood and community should be minimized. There will be temporary disturbance and traffic/parking restrictions that are associated with the construction activities.

(l) Possible mitigating measures which could be employed to minimize impact upon the affected neighborhood or community.

Pepco will employ its typical mitigation measures to minimize the temporary impacts, including compliance with DDOT-approved traffic control plans and performing construction in roadways during off-peak usage hours. Pepco will continue to coordinate construction activities with the DC United soccer stadium and DDOT's South Capitol Street Bridge projects.

Supplemental Information

2111.5 If the Commission initiates an investigation, the electric corporation shall submit a detailed analysis of the information required in §2111.1. The electric corporation shall also submit the following information:

(a) An explanation of the need for and the cost-effectiveness of the project in meeting demand for service;

The 230 kV transmission lines proposed under this Formal Notice are necessary to allow for a reconfiguration of the aging Buzzard Point 230 kV Station B to increase reliability. The transmission lines' interconnection with the Waterfront Substation will also allow the substation to operate at its full capacity when it is converted to a 230kV substation. The construction schedule of the proposed DC United soccer stadium project requires that Pepco install the underground pipes and manholes for the proposed 230 kV transmission lines prior to the commencement of that work. In addition, the installation of the Pepco facilities must be installed in coordination with the District Department of Transportation's ("DDOT") South Capitol Street Bridge project to minimize the impact on that project. Building these lines now would be at a lower cost versus building them after the DC United and South Capitol Street Bridge projects are completed and would avoid performing duplicative excavation and replacement of newly paved streets.

(b) A description of the effect of the project on system stability and reliability;

This project will lead to increased reliability on the system by enabling the future replacement of the aging Buzzard Point 230 kV Station B with a more reliable 230 kV High Side Buss. The two underground transmission lines will also facilitate the future conversion of Waterfront Substation 223 from a 138 kV radial supply configuration to a 230 kV network configuration in 2021. Converting from a radial to network configuration improves the reliability of the supply to the Waterfront substation by decreasing the risk of the loss of the supply, which could result in loss of the entire substation.

(c) A description of the consequences if the project is delayed or not approved;

Construction of the proposed DC United soccer stadium is scheduled to commence in July 2017 and DDOT's South Capitol Street Bridge project is scheduled to commence in early 2017. Pepco has been coordinating with the engineers managing the DC United soccer stadium construction and those managing DDOT's South Capitol Street Bridge project and have determined that this construction will not impact either project as long as the underground pipes and manholes are installed before July 2017. Delaying this project could negatively impact the opening and operation of the stadium and bridge construction as well as create future disturbances within the community through reoccurring construction activities. In addition, delay or non-approval would place at risk the Buzzard Point substation reliability, which requires

enhancement due to aging infrastructure. It would also impact the conversion of the Waterfront Substation to 230 kV since the conversion depends upon the two 230 kV lines proposed herein.

(d) A statement regarding the probability that the consequences of § 2111.5(c) will occur;

There is a high probability that this Pepco construction project will negatively impact the DC United soccer stadium and DDOT's South Capitol Street Bridge projects if this Pepco project is delayed such that installation of the underground pipes and manholes continues into July 2017 or beyond. If the project is not approved, there is a high probability that the enhancement of the Buzzard Point and the conversion of the Waterfront Substation will be delayed, placing at risk system reliability and Pepco's ability to support the forecasted load in some areas of the District of Columbia.

(e) A description of the applicant's transmission planning criteria;

See Attachment B, Pepco Transmission Planning Criteria. In addition, all applicable reliability criteria are contained in the PJM Manual 14 B available on the PJM web site.

(http://pjm.com/~/media/documents/manuals/m14b.ashx)

(f) A description of one-line diagrams regarding the power flows relied upon which determined the need for the proposed line;

Buzzard Point Station B is supplied by two 230 kV underground circuits from Ritchie Substation 123 and two 230 kV underground circuits from Alabama Avenue Substation 136. The two 230 kV lines proposed herein would intercept the lines between Ritchie Substation 123 and Buzzard Point Station B and redirect them to the Waterfront Substation 223. Two other 138 kV / 230 kV underground transmission lines that are being built as part of the Waterfront Substation 223 will be between Waterfront Substation 223 and Buzzard Point Station B. The proposed transmission lines in conjunction with the Waterfront lines will change Waterfront Substation 223 from a radial to a more reliable network supply configuration.

(g) Engineering and construction features including the following:

(1) Width, length, and total acreage of the right-of-way;

Alternative Route 3 (Selected Route):
Nominal four (4) feet in width and a total of 2,200 linear feet of trench for two high pressure fluid filled feeders in the same trench. These nominal dimensions yield a total of 0.08 acres of construction within the public right of way. A significant portion of this route will run through an easement Pepco has obtained along the west side of Half Street and through Pepco property at Buzzard Point Substation.

(2) Line voltage;

230 kV

(3) Number of circuits;

Two (2)

(4) Number of circuits per structure;

There will be two circuits installed per underground manhole structure utilizing two 8" steel pipe between manholes.

(5) Structure type and dimensions;

Inside dimensions of the concrete manholes will be 8'x28'x7' (WxLxD).

(6) Conductor configuration and size;

Pepco is evaluating the sizing of the conductor; however, it will be high-pressure fluid-filled cable. The size of the cable will be determined during the detailed engineering that will occur closer to the installation of the cable in 2020 and is dependent upon proximity to other heat sources and calculated pulling tensions on the cable.

(7) Nominal capacity (MA);

400 MVA normal rating and 480 MVA emergency rating per circuit.

(8) Nominal length of span between structures; and

Approximately 525 linear feet between manholes.

(9) Description of any related conduit.

3,600 linear feet of 8" steel pipe

(h) Location and identification of all portions or the right-of-way requiring construction within the one hundred (100)-year floodplain of any stream;

According to FEMA Flood Insurance Rate Map, map number 110001057C, dated September 27, 2010, all construction for the transmission lines will be outside the 100-year floodplain.

(i) The description of each alternative route considered for the transmission line and alternative placement of a substation shall include the following:

(1) An estimate of the capital and annual operating cost of each alternative route or placement; and

Transmission Routes:

Alternative Route 1:

Alternate Route 1 for the transmission feeders would start near the existing Buzzard Point Substation B from two locations. The first feeder would start south of the intersection of 1st Street, SW and T Street, SW and would proceed West along T Street ,SW, turn north on 2nd Street Southwest, then proceed East on R Street, SW, terminating at the Waterfront Substation. The second feeder would start on S Street, SW between 1st Street, SW and Half Street, SW. The feeder will head West on S Street, SW, and turn north on 1st Street, SW. The feeder would turn East on R Street, SW terminating at the Waterfront Substation. That total capital cost for the installation was estimated to be $ 9,768,177, with an annual operating cost of $3,100. This route is impeded both physically and operationally by numerous underground feeders and several other existing underground utilities along the route, preventing space for additional new underground facilities, and therefore is not constructible.

Alternative Route 2:

Alternate Route 2 for the transmission feeders would start near the existing Buzzard Point Substation B from two locations. The first feeder would start south of the intersection of 1st Street, SW and T Street, SW and would proceed north along 1st Street, SW, joining the second feeder at its starting point near the intersection of 1st Street, SW and S Street, SW. Both feeders would continue north on 1st Street, SW, turn west on R Street, SW and terminate at the Waterfront Substation. The total capital cost for the installation was estimated to be $9,902,928, with an annual operating cost of $3,100. This route is impeded both physically and operationally by numerous underground feeders and the new DC United Soccer Stadium, which will occupy 1st Street, SW, preventing space for additional new underground facilities, and therefore is not constructible.

Alternative Route 3 (Selected Route):

The route for the 230 kV transmission lines will start near the existing Buzzard Point Substation B from two locations. The first transmission line will start south of the intersection of 1st Street, SW and T Street, SW, will proceed east through the Buzzard Point Substation and then turn north proceeding along Half Street, SW.

The feeder will then turn on Potomac Avenue, SW heading southwest, continuing onto R Street, SW and terminating at the Waterfront Substation 223. The second feeder will start on S Street, SW between 1st Street, SW and Half Street, SW. The feeder will head east on S Street, SW, turning north on Half Street, SW near the intersection of Half Street, SW and T Street, SW and proceed along Half Street, SW where it will follow the path of the first feeder along Potomac Avenue, SW to R Street, SW, terminating at the Waterfront Substation 223. The total capital cost for the installation was estimated to be $13,557,360 with an annual operating cost of $3,100.

(2) A statement of the reason why each alternative route or placement was rejected.

See Responses to 2111.5(i)(1)

(j) An analysis of potential impact upon the environment; and

The construction of the transmission lines will potentially impact the environment. However, impacts will be managed and/or mitigated to pre-existing construction conditions. Potential impacts are characterized below along with actions or steps to be taken to mitigate them.

During construction, dewatering will be required to manage accumulated precipitation and possible groundwater intrusion into excavated areas. All dewatering will be completed in accordance with District regulations and requirements and in accordance with an approved sediment and erosion control plan, which will include measures to prevent release of sediment from all work areas during construction.

The Company expects minimal environmental impacts to street/sidewalk trees and surrounding surface areas (turf). Tree trimming in selected areas may be required. In the affected turf areas, the Company will follow District-regulated erosion and sediment control measures. Soil excavated near subsurface tree roots will be removed using air pressure.

Impacts from construction could include possible traffic and noise. The project is proposed to be conducted with a traffic control plan developed and coordinated with the appropriate District agencies and representatives. There will be no long-term negative impacts on noise levels within the project areas. The impacts on noise levels are associated with general construction activities that will occur within the property and roadway. The Company will conduct all construction activities in compliance with local noise regulations and permits.

Potential noise-level impacts may occur if night construction is necessary. Mitigation measures, such as completing only low-noise activities at night, will be implemented to the extent possible to meet the construction schedule

and permit requirements.

Pepco does not anticipate that the project will impact any cultural resources within the vicinity of the property or along the project corridor. If cultural resources are found as construction progresses, Pepco will notify and work with the District of Columbia Historic Preservation Office to identify and take measures necessary to minimize impacts to those cultural resources.

Pepco is completing preliminary assessments of the environmental conditions along the proposed construction corridor. The assessments are done in order for Pepco to anticipate the locations of potentially impacted soils that may be encountered during the underground construction. Pepco will develop a soil management plan after conducting the pre-construction sampling and analysis to evaluate requirements for proper handling and disposal of excavated soils. The excavated materials will be handled in accordance with District and federal regulations, and transported and disposed of at PHI-approved facilities able to accept the soil.

(k) Engineering and construction features of the alternative underground transmission line including the following:

(1) Width, length, and total acreage of the right-of-way;

Alternative Route 1:

Nominal four (4) feet in width and a total of 2,650 linear feet of trench for two high pressure fluid filled feeders in separate trenches. These nominal dimensions yield a total of 0.24 acres of construction within the public right of way.

Alternative Route 2:

Nominal four (4) feet in width and a total of 1,500 linear feet of trench for two high pressure fluid filled feeders in the same trench. These nominal dimensions yield a total of 0.14 acres of construction within the public right of way.

(2) Line voltage;

230 kV

(3) Number of circuits;

Two (2)

(4) Number of circuits per structure;

There will be two circuits installed per underground manhole structure utilizing two 8" steel pipe between manholes.

(5) Structure type and dimensions;

Inside dimensions of the concrete manholes will be 8'x 28'x7' (WxLxD).

(6) Conductor configuration and size;

Pepco is evaluating the sizing of the conductor; however, it will be high-pressure fluid-filled cable. The size of the cable will be determined during the detailed engineering and is dependent upon proximity to other heat sources and calculated pulling tensions on the cable.

(7) Nominal capacity (MVA);

400 MVA normal rating and 480 MVA emergency rating per circuit.

(8) Nominal length of span between structures; and

Approximately 525 linear feet between manholes.

(9) Description and dimensions of any related conduit.

Alternative Route 1:
2,650 linear feet of 8" steel pipe

Alternative Route 2:
2,100 linear feet of 8" steel pipe

ATTACHMENT A

Attachment A - Permit Matrix

Preliminary Permitting Requirements

	Permit/Notice	Agency	Address	Status
1	Formal Notice of Intent	DC PSC	1325 G St., NW Suite 800 Washington, DC 20005	A
2	Soil Disposal Permit	DOEE Toxic Substances Division	1100 4th St., SW Washington, DC 20024	PA
3	Erosion and Sediment Control Permit	DDOE Watershed Protection Division	1200 1st St., NE 5th Floor Washington, DC 20002	PA
4	Environmental Impact Screening Form (EISF)	DCRA	1100 4th St., SW Washington, DC 20024	PA
5	Public Space / ROW Permit	DDOT	1100 4th St., SW Washington, DC 20024	PA
6	Traffic Control Permit	DDOT	1100 4th St., SW Washington, DC 20024	PA
7	Occupancy Permit	DDOT	1100 4th St., SW Washington, DC 20024	PA
8	Steel Plate Permit	DDOT	1100 4th St., SW Washington, DC 20024	PA

Assumptions:
No Archeological Investigation required.
Permit applications will be made where applicable.

Abbreviations:
DC PSC - District of Columbia Public Service Commission
DCRA - Department of Consumer and Regulatory Affairs
DOEE - Department of Energy and Environment
DDOT - District Department of Transportation
ROW - Right of Way

Status:
PA - Pending Application
A - Application Submitted
R - Received

ATTACHMENT B

POTOMAC ELECTRIC POWER COMPANY

FERC Form 715 (Part 4) - Transmission Planning Study Guidelines

Transmission and Interconnection
Reliability Standards

I. Transmission and Reliability Standards

Pepco's bulk transmission system shall be planned and constructed in such a manner that it can be operated so that the more probable contingencies can be sustained with no loss of load. Less-probable contingencies will be examined to determine their effect on system performance.

These standards apply to bulk power transmission facilities including the facilities which have the primary function of giving Pepco a point of interconnection to generation and to the PJM and neighboring transmission systems. These Criteria do not apply to facilities affecting the reliability that only supply local loads. Exceptions are the 138kV/Bells Mill Road/Buzzard Point Network System and the 115kV/Benning Network System. These two systems are networked, with supply entering from either end of the tied system. Each of these two systems supply in excess of 1000 MVA of summer peak load, much of which is downtown area network government and large commercial load. The significant amount of load at risk and the type of load at risk necessitate more conservative planning criteria beyond that which is applied to the rest of the internal transmission and subtransmission systems. The recent retirement of Benning and Buzzard generation furthers the need for heightened transmission planning criteria within this part of the system.

Pepco's transmission planning criteria are consistent with the North American Electric Reliability Corporation (NERC), Reliability*First* Corporation (RFC), and PJM Interconnections. As a result of restructuring, the Pennsylvania-New Jersey-Maryland Interconnection (PJM), as the Regional Transmission Organization (RTO), is responsible for planning the bulk transmission system, including Pepco's facilities, under the PJM Open Access Transmission Tariff and Schedule 6 of the PJM Operating Agreement.

II. Transmission Criteria

The bulk transmission system shall be developed so that it can be operated at all load levels to meet the following unscheduled contingencies without instability,

cascading, or interruption of load. Normally, maintenance is expected to be scheduled so that these criteria are not violated.

A. The loss of any single generating unit, transmission line, transformer, circuit breaker or bus, in addition to normal scheduled outages including maintenance outages, without exceeding the applicable Emergency Rating of any facility or the applicable voltage criteria. After the outage, the system must be capable of readjustment so that all equipment will be loaded within Normal Ratings.

   After occurrence of the outage and the readjustment of the system specified above, the subsequent outage of any remaining generator, line, or transformer without exceeding the applicable Short Time Emergency Rating of any facility. After this outage, the system must be capable of readjustment so that all remaining equipment will be loaded within the applicable Emergency Rating and the voltage criteria will be met for the probable duration of the outage.

B. The loss of any double-circuit line or the combination of facilities resulting from a line fault and a stuck breaker, in addition to normal scheduled outages including maintenance outages, without exceeding the applicable Short Time Emergency Rating of any facility. After the outage, the system must be capable of readjustment so that all remaining equipment will be loaded within the applicable Emergency Rating and the voltage criteria will be met for the probable duration of the outage.

C. Perform a Generation Deliverability test that includes the following: (1) For normal system conditions with no line, transformer, or generation unit out of service all transmission facilities should not exceed their normal (continuous) rating; (2) For a contingency loss of any one facility (line, transformer, or generator), the system should not exceed its emergency (4 hour) rating: (3) For a contingency loss of any one facility (line, transformer, or generator) and the discrete outage of one generator, the system should not exceed its emergency (4 hour) rating; and (5) For generating stations where new generation is being added, all generation at the plant will be modeled at full output.

III. Stability Requirements

The stability of the system shall be maintained without loss of load during and after the following types of contingencies occurring at the most critical location at all load levels.

A. A three-phase fault with normal clearing time.

B. A single-phase-to-ground fault with a stuck breaker or other cause for delayed clearing.

C. The loss of any single facility with no fault.

IV. Voltage and Reactive Requirements

The Transmission System shall have controls capable of maintaining the voltages at levels which will not exceed the limits of the connected equipment and will allow for meeting the voltage limits specified below.

PEPCO Zone Base Line Voltage Limits				
Limit	500 kV	230 kV	138 kV	115 kV
High	550 **1.10**	242 **1.05**	145 **1.05**	121 **1.05**
Normal Low	500 **1.00**	219 **0.95**	131 **0.95**	109 **0.95**
Emergency Low	485 **0.97**	212 **0.92**	130 **0.92**	108 **0.92**
Load Dump	475 **0.95**	207 **0.90**	124 **0.90**	103.5 **0.90**

Note
These values may be different than the PJM base line voltage limits listed in Section 3, Exhibit 5 of the PJM Transmission Operations Manual MO3. These differences are recognized by PJM and provide more conservative operational limits for the PEPCO transmission zone.

Sufficient reactive compensation with adequate controls will be planned to allow supply of the reactive load and losses requirement in order to maintain acceptable voltage profiles, generally within ±5% of nominal voltage, on the Pepco Transmission System at all load levels during normal conditions and any of the contingencies described in {II} above.

V. Tests by Simulation for the Ability of the Pepco System to Withstand Abnormal Disturbances

It is recognized that it is impossible to anticipate or test for all of the contingencies that can occur on the present or future Pepco system. The system,

therefore, will be tested by simulation to determine the effect of various types of abnormal disturbances on system performance, including stability. These tests serve primarily as a means to measure the ability of the system to withstand less probable contingencies, some of which may not be readily apparent. These tests are prescribed not on the basis of a high level of probability, but rather as a practical means to study the system for its ability to withstand disturbances beyond those which can reasonably be expected.

Recognition should be given to the occurrence of similar contingencies in neighboring systems and their effect on the Pepco system.

Examples of less probable contingencies to be studied are:

A. The sudden loss of the entire generating capability of any station for any reason.

B. The outage of the most critical transmission line on any one of the interconnected systems as the result of a three-phase fault immediately following (i.e., before adjustment) the tripping of another critical line on the same or an adjacent system.

C. A single-phase-to-ground fault coupled with the malfunction of a protective device.

D. The sudden loss of all lines of one voltage emanating from a substation.

E. The sudden loss of all lines on a single right-of-way.

F. The sudden dropping of a large load or a major load center.

G. The occurrence of a multi-phase fault with delayed clearing.

VI. Relaying and Protective Devices

Independent devices shall be installed to the extent necessary to provide backup for the primary protective devices and components so as to limit equipment damage, to limit the shock to the system and to speed restoration of service. The design of a particular line's relay protective schemes shall recognize the need for an appropriate balance between dependability (assurance that relays will operate when required) and security (protection against relay operation when not required). In cases where the requirements of Sections {II-A} and/or {IV} are

not met, additional security against the over tripping of critical facilities may be considered. Relaying installed shall not restrict the normal or the necessary realizable network transfer capabilities of the system.

VII. Ratings

Generally, ratings are defined as Normal, Emergency, or Short Time Emergency. All ratings are based on PJM rating methods and are provided by either Transmission Engineering and Design or Distribution Engineering and Construction.

A. Normal Operation -- All loads must be within the facility's normal rating.

B. Emergency Operation -- Applicability of emergency ratings is explained in {II}.

1. The Emergency Rating referred to is a generic term for equipment emergency ratings of various durations depending on the type of equipment:

   - Underground Pipe-Type cable = 300 hours
   - All other underground cable = 36 hours
   - All other equipment = 24 hours

2. The Short Time Emergency Rating referred to is a generic term for equipment emergency ratings of various durations depending on the type of equipment:

   - Overhead conductors = 10 hrs.
   - Transformers = 4 hrs.

   - Underground Pipe-Type cables for all 230kV & 115kV & for Feeder 13851 = 300 hrs.
   - Underground Pipe-Type cables for all 138kV except Feeder 13851 = 4 hrs.

C. The capacities of existing circuits at 115kV up to 500kV have been determined, generally by using actual construction parameters.

D. In planning studies for adding new circuits, the thermal capacities to be used are to be based on the ratings and designed voltage-class of the cable or wire size to be installed, taking into account existing and proposed infrastructure installations along the route and the normal operating voltage.

VIII. Associated Items

A. System Standard Frequency

Standard frequency on the Pepco System is 60 hertz.

B. Under-Frequency Load Shedding

Under-frequency relays are installed to provide additional insurance against widespread system disturbances. The electric companies operating under the PJM ISO have agreed to under-frequency load shedding allocations on an equitable basis. The Pepco share is 30% of its system peak load. Approximately 10% of the total load shedding occurs by each of the following frequencies: 59.3 HZ, 58.9 HZ, and 58.5 HZ. Pepco's under-frequency relays are set to pick up at each one-tenth HZ.

VERIFICATION

Washington, D.C.)
) ss:
District of Columbia)

ROBERT J. ANDRUKAITIS, being first duly sworn, deposes and says that he is the Manager, Special Projects of Potomac Electric Power Company and he has read the foregoing Formal Notice of Plans to Construct Two 230 kV Underground Transmission Circuits on Buzzard Point in Southwest District of Columbia, and he has knowledge of the matters set forth therein and that the statements therein are true and correct to the best of his information, knowledge and belief.

Robert J. Andrukaitis

Subscribed and sworn to before me this 18th day of December, 2015.

Notary Public

DISTRICT OF COLUMBIA NOTARY PUBLIC LISA M. BRANNOCK My Commission Expires 8/31/2019

Lisa M. Brannock
Notary Public, District of Columbia
My Commission Expires 8/31/2019

Lisa M. Brannock
Notary Public, District of Columbia
My Commission Expires 8/31/2019

CERTIFICATE OF SERVICE

I hereby certify that a copy of Formal Notice of Plans to Construct Two 230 kV Underground Transmission Circuits on Buzzard Point in Southwest District of Columbia was sent to all parties listed below on this 18th day of December 2015 by electronic mail.

Ms. Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission
of the District of Columbia
1325 G Street N.W. Suite 800
Washington, DC 20005
bwestbrook@psc.dc.gov

Sandra Mattavous-Frye, Esq.
People's Counsel
Office of People's Counsel
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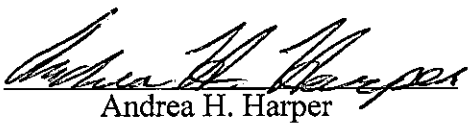

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