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September 28, 2018

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

Re: Formal Case No. 1145

Dear Ms. Westbrook-Sedgwick:

In accordance with D.C. Code § 34-1313.07 (b) of the codified Undergrounding Act, enclosed, please find the District Department of Transportation and Potomac Electric Power Company's Annual Report, detailing DC PLUG initiative work that has been completed from the Biennial Plan.

Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

Andrea H. Harper

Enclosures

Cc: All Parties of Record

BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

IN THE MATTER OF

APPLICATIONS FOR APPROVALS OF	**)**	
BIENNIAL UNDERGROUND	**)**	**Formal Case No. 1145**
INFRASTRUCTURE IMPROVEMENT	**)**	
PROJECTS PLANS AND	**)**	
FINANCING ORDERS	**)**	

ANNUAL STATUS REPORT ON ELECTRIC COMPANY INFRASTRUCTURE IMPROVEMENT ACTIVITY

Pursuant to § 34-1313.07 (b) of the D.C. Official Code ("D.C. Code"), and Order No. 19167,[1] issued by the Public Service Commission of the District of Columbia ("Commission"), and the Joint Stipulation of the Office of the People's Counsel ("OPC"), Potomac Electric Power Company ("Pepco") and the District Department of Transportation ("DDOT"),[2] DDOT and Pepco (collectively, "Joint Applicants") hereby submit this Annual Status Report on Electric Company Infrastructure Improvement Activity ("Annual Report") as part of the District of Columbia Power Line Undergrounding ("DC PLUG") initiative.

I. BACKGROUND

On May 19, 2017, the Mayor signed into law the Electric Company Infrastructure Improvement Financing Emergency Amendment Act of 2017 (the "Amendment Act"),[3] which

[1] *In the Matter of Applications for Approval of Biennial Underground Infrastructure Improvement Projects Plans and Financing Orders*, Formal Case No. 1145, Order No. 19167 ("Order No. 19167") at P 269 (Nov. 9, 2017).

[2] *In the Matter of the Application for Approval of Triennial Underground Infrastructure Improvement Projects Plan*, Formal Case No. 1116, Joint Stipulation of the Office of the People's Counsel, Potomac Electric Power Company and the District Department of Transportation (Sept. 15, 2014) ("Joint Stipulation").

[3] D.C. Law 22-05, effective July 11, 2017.

permanently amended the Electric Company Infrastructure Improvement Financing Act of 2014 (the "Original Act")[4] (the Original Act, together with the Amendment Act is referred to as "the Undergrounding Act").[5] In accordance with the Undergrounding Act, on November 9, 2017, the Commission issued Order No. 19167,[6] as clarified on January 18, 2018 by Order No. 19237,[7] approving the Joint Applicants' first Biennial Plan, the Underground Project Charge, the imposition of the DDOT Charge on Pepco, and the Underground Rider. On June 13, 2018, the Joint Applicants held a Semi-Annual Meeting reporting on the status of the DC PLUG initiative and subsequently filed the Thirty-Day Report on July 13, 2018.

By September 30th of each year in which a biennial Underground Infrastructure Improvement Project Plan ("Biennial Plan") is not filed, D.C. Code § 34-1313.07 (b) of the codified Undergrounding Act requires Joint Applicants to submit an Annual Report detailing what DC PLUG initiative work from the Biennial Plan was completed during the previous year and what further DC PLUG initiative work from the Biennial Plan is scheduled to be complete during the upcoming year..

In compliance with D.C. Code § 34-1313.07 (b) and Order No. 19167 and in accordance with the Joint Stipulation, Pepco files this Annual Report on behalf of the Joint Applicants. All data presented below represents the available information as of September 14, 2018.

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[4] D.C. Law 20-102

[5] To the extent there is any ambiguity, the term "Undergrounding Act" means the Original Act as it may be amended from time to time, including by the Electric Company Infrastructure Improvement Financing Amendment Act of 2015, Title II, Subtitle K of D.C. Law 21-36, effective October 22, 2015.

[6] Formal Case No. 1145, Order No. 19167 (Nov. 9, 2017) ("Order No. 19167").

[7] Formal Case No. 1145, Order No. 19237 (Jan. 18, 2018) ("Order No. 19237").

II. FEEDER 308

As reported at the Semi-Annual Meeting, DDOT issued an invitation for bids ("IFB") for civil construction of Feeder 308 on February 15, 2018. The notice of award was sent to the Fort Myer Construction Corporation ("Fort Myer") on September 12, 2018. Attachment A to this Report presents the DC PLUG First Biennial Plan Projects Schedule and includes the estimated start and projected end date for the construction of Feeder 308. An updated and detailed Feeder 308 construction schedule will be developed by Fort Myer and reviewed by the DDOT Construction Management Contractor. DDOT and Pepco will provide the schedule after that time. DDOT released the Request For Quotation for the DDOT Construction Management Contractor on July 31, 2018 and is currently reviewing responses.

The civil engineering designs for Feeder 308 incorporates information obtained in the field survey. The field survey enabled the Joint Applicants to identify locations for approximately 13,200 linear feet of 5-inch fiberglass encased conduit ductbank, 59 roadway manholes, five sidewalk equipment vaults, 18 underground tapholes, and 45 single-phase transformer facilities.

Concurrent with DDOT's solicitation of civil construction services for Feeder 308, the Joint Applicants continue to work towards completion of the electrical engineering design. As of this filing, the electrical schematics are mostly complete, and the final review is in process. After the schematic is finalized, it will be drawn into GIS/GWD to create the work orders necessary for material reservations. The Joint Applicants anticipate that they will complete the electrical engineering designs during the first quarter of 2019. Electrical construction will follow the civil construction.

III. FEEDER 14900 Opportunity Project[8]

A portion of Feeder 14900 is an Opportunity Project being completed as part of the federally-funded Oregon Avenue Project, which is a reconstruction project. The civil engineering design for the Oregon Avenue Project, which includes the Opportunity Project Feeder 14900, is complete. The timeline for construction for the Oregon Avenue Project will be defined after the award of the construction contract. The construction contractor will provide a detailed timeline, and electrical design and construction will follow civil construction.

The civil engineering designs for Feeder 14900 incorporate information obtained in the field survey. The field survey enabled the Joint Applicants to identify locations for approximately 3,100 linear feet of 5-inch fiberglass encased conduit duct bank, approximately 9,500 linear feet of 4-inch PVC-encased conduit duct bank, 26 roadway manholes, five sidewalk equipment vaults, two sidewalk equipment vaults, eight underground tap holes, and 16 single-phase transformer facilities.

IV. STATUS OF DESIGNS FOR REMAINING FOUR FEEDERS IN THE FIRST BIENNIAL PLAN

Pepco has updated its proposed electrical and civil engineering designs for Feeders 368, 14007, 14758 and 15009. Pepco has completed proposed schematics, and they have been transmitted to DDOT for civil engineering procurement. The process includes analyzing transformer loading to ensure transformers are sized appropriately based on existing load conditions; conducting multiple field visits to verify locations of three-phase transformers in

[8] "Opportunity projects" are DC PLUG projects that take advantage of existing or planned DDOT roadway reconstruction projects to place an adjacent highly-ranked feeder underground.

conjunction with reviewing Google maps imagery; load-flow and short-circuit analysis; and then finalization of the schematics.

V. DISTRIBUTION AUTOMATION

Pepco's distribution automation ("DA") design for the DC PLUG initiative feeders includes at least one mid-line interrupter and an automated feeder tie switch to adjacent feeders for 13kV feeders. The mid-line interrupter allows for automatic isolation of customers in the event of a fault past the location of the interrupter. The switches will be installed sufficiently far away from the substation such that Pepco will be able to use a 25kA rated device, instead of requiring a 40kA rated device. This serves to further control cost and allow Pepco to use products that are more readily available in the marketplace.

An interrupter switch has been installed on Feeder 14722, located near 16th Street and Newton Street, NW. The next step for activating DA for Feeder 14722 is coordinating telecom and protection coordination with the Control Center. The underground DA design has been completed for Feeder 15703, located near Bladensburg Road, NE at Morse Street, NE. Finally, Pepco is in the process of installing an interrupter switch on underground Feeder 14786 near 5th Street, NE at I Street, NE and design is complete for the installation of an interrupter switch on Feeder 14786 near 3rd Street, NW at Massachusetts Avenue, NW.

VI. DISTRICT BUSINESS OUTREACH AND ENGAGEMENT

In accordance with § 34-1311.02 (7) of the D.C. Code, the Joint Applicants' goal is to award "100% of the construction contracts to District businesses, where qualified to perform such work." To that end, DDOT designated the solicitation of civil construction for Feeder 308 as a set aside for Certified Business Enterprise ("CBE") bidders only, under the provisions of the Small

and Certified Business Enterprise Development and Assistance Act of 2014.[9] DDOT held a pre-bid conference for Feeder 308 on February 27, 2018 for all interested bidders. DDOT then amended the IFB for Feeder 308 as a 100% CBE set aside on March 15, 2018. The IFB closed on May 24, 2018 and was awarded to a CBE on September 7, 2018.

On September 26, 2014, Pepco released a Request for Proposal for professional civil engineering design services for Feeder 308. Civil engineering design services include the physical survey of above- and below-ground structures along the proposed route of the feeder and the design and creation of the schematics for the civil electric utility infrastructure required to place the feeder underground. A contract was awarded on November 3, 2014 and approximately 41% of the contract was awarded to a CBE firm, amounting to more than $630 thousand in contract value for the civil engineering work on Feeder 308. As of this report, the civil engineering design work is complete.

Further, the Joint Applicants continued their engagement of District of Columbia businesses by providing an update on the DC PLUG initiative at the September 29, 2017 Disadvantaged Business Enterprise ("DBE") Summit and jointly held a March 1, 2018 "match-making" event with 25 District-based DBEs. The Joint Applicants also sent out a request for information ("RFI") to over 150 District-based and local companies for project management, electrical construction, and electrical engineering. DDOT and Pepco also plan to release another RFI for companies that would be qualified as CBEs. Additionally, on May 15, 2018 the Department of Small and Local Business Development held a meeting on strategies for pursuing government construction contracts to give vendors the opportunity to meet with representatives of the DC PLUG initiative.

[9] D.C. Code § 2-218.01.

On April 2, 2018, Pepco hired a District of Columbia resident to serve as the Community Relations Coordinator to the DC PLUG team. The primary role of the Community Relations Coordinator is to act as the DC PLUG initiative's interface with customers and to execute the Education Plan.

On April 26, 2018, the Community Relations Coordinator provided an overview of the DC PLUG initiative to a group of leaders at the DC Federation of Civic Associations meeting. In addition, Pepco employee ambassadors have been attending and continue to attend community meetings to provide information to the community regarding the DC PLUG initiative. The Community Relations Coordinator will provide updates to the Undergrounding Project Consumer Education Task Force when necessary. The Community Relations Coordinator has created an outreach strategy targeting residents and businesses in the neighborhoods surrounding Feeder 308. The DC PLUG initiative website, email account, and phone hotline are all active.

VII. DESIGN AND CONSTRUCTION ALTERNATIVES

In the Joint Stipulation, the Joint Applicants agreed to consider design alternatives recommended by OPC in its protest, filed August 15, 2014 in the final design phase.[10] Those design alternatives include the use of single-phase cable (rather than three-phase cable), directional boring (rather than trenching), and padmounted transformers (rather than submersible transformers). In a subsequent settlement, OPC and Pepco agreed that Pepco no longer had to pursue padmounted transformers as design alternatives.[11] The Joint Applicants also agreed to

[10] Joint Stipulation at 4-5.

[11] *Motion to Approve Joint Stipulation and Joint Stipulation of the Office of People's Counsel, Potomac Electric Power Company and the District Department of Transportation regarding consideration of Pad-Mounted Transformers for DC PLUG Initiative Feeders,* Formal Case No. 1116 (Mar. 8, 2016), *approved In the Matter of the Application for Approval of Triennial Underground Infrastructure Improvement Projects Plan*, Formal Case No. 1116, Order No. 18154 (Mar. 24, 2016).

provide specific information regarding the actual inclusion of design and construction alternatives identified by OPC and other parties, along with an explanation of the bases for inclusion or exclusion of various alternatives in the feeders for which final design has been completed.

A. Number of miles and location of single phase cable included in the final design

As stated above, the Joint Applicants are working to finalize the final detailed electrical schematics for Feeder 308. The Joint Applicants anticipate that the final electrical schematics for Feeder 308 will call for approximately 1.5 miles of 600 Quad cable for the main trunk as well as 3.2 miles of #2 EPR three-phase cable and 2.7 miles of #2 EPR single phase cable for the laterals. The exact location of each type of cable will be provided in the final electrical schematics for Feeder 308.

B. Locations where directional boring was sufficiently practical that it could be evaluated for feasibility

The civil engineering design contractor for Feeder 308 informed the Joint Applicants that there were no feasible locations along Feeder 308 where it would be practical to employ directional boring. The contractor indicated that directional boring would require 24x7 operations when drilling a particular run of pipe. This would cause traffic and noise impacts to residential neighborhoods served by Feeder 308. The contractor also indicated that directional boring would be made more difficult in the area of Feeder 308 by the presence of house laterals for water, sewer and gas at unknown depths in the boring path. Avoiding those lines would require the contractor to dig many test pits, thus increasing cost and time to complete the work as well as defeating the general purpose of directional boring. Finally, the contractor indicated that directional boring is generally used for long, underground runs. Feeder 308 is characterized by many short runs ranging

from 100 to 600 feet, which would require significant setup time to dig launching and receiving pits, further increasing the time and cost to complete the project. For these reasons, the Joint Applicants do not intend to further evaluate the feasibility of directional boring on Feeder 308.

C. Locations where directional boring was employed

No locations where directional boring would be feasible and cost-effective have been identified. The Joint Applicants do not intend to employ directional boring on Feeder 308.

D. Number and location of ties constructed

Please see Section IX ("Feeder Tie Points") below for a discussion of the tie points along Feeder 308.

VIII. OPPORTUNITIES TO LEAVE LINES OVERHEAD

In accordance with OPC's recommendation that the Joint Applicants work to identify sections of feeders that are cost-effective and practical to leave overhead, the Joint Applicants have identified two sections of Feeder 308 that will remain overhead once the feeder is placed underground. These overhead sections are reflected in the final civil engineering designs for Feeder 308. The first section is a 335-foot section along 44th Street. The second section is a 750-foot section along River Road. The 44th Street section, which serves only one customer, will remain overhead due to limited tree cover and service to only a single customer. The River Road section of Feeder 308 will remain overhead due to limited feasibility of placing of that section of the line underground.

IX. FEEDER TIE POINTS

In the Joint Stipulation, Pepco agreed to analyze the need for each feeder tie point and share its findings in the semi-annual meetings and in the annual report.[12] Pepco is evaluating feeder ties on each of the DC PLUG feeders to make sure they conform to the Pepco standard that requires Pepco to be able to transfer the load off of a given feeder within four switching operations. Through its analysis, Pepco has concluded that the existing tie points for Feeder 308 are appropriate.

The tie between Feeders 144 and 308 will remain after Feeder 308 is placed underground to maintain operating flexibility and emergency backup for both feeders. Pepco does not intend to construct any additional ties between Feeder 308 and other feeders as part of the DC PLUG.

X. MATERIAL SCHEDULE DELAYS, CHANGE ORDERS AND BUDGET OVERRUNS

In the Joint Stipulation, the Joint Applicants agreed to identify any material schedule delays, change orders and budget overruns, including those associated with DDOT's construction of ductline and manholes.[13] As construction has not yet begun on any feeder selected to be placed underground as part of the first Biennial Plan, the Joint Applicants have not identified any material schedule delays, change orders or budget overruns. The Joint Applicants will provide another update in the next semi-annual meeting.

[12] Joint Stipulation at 5.

[13] Joint Stipulation at 5.

XI. JOINT-USE CONTRACTS

In the Joint Stipulation, Pepco agreed to provide an update of the status of its review of joint-use contracts in the Annual Report to determine whether there is an opportunity to increase fees charged to the communications companies who share Pepco poles.[14] Pepco has reviewed its joint-use contracts and determined that there are currently no opportunities to increase fees charged to the communications companies who share Pepco poles. If Pepco determines, in the future, that there is such an opportunity, it will address that opportunity in future Annual Reports.

XII. Benning Area Reliability Plan Feeders 15705 and 15707

The Benning Area Reliability Plan is progressing as anticipated.[15] To date, all associated feeders have been visually inspected (poles, crossarms, conductor spacing, transformers, capacitor banks, insulators, lightning arrestors, animal guards, etc.) and remediation work has been designed. Pepco is continuing efforts to ensure fuse coordination, install reclosers and fault indicators, and perform hot spot tree-trimming.

In addition to the above, the following feeder work is planned to be completed in the fourth quarter 2018. This work has been bid out to contractors and will be sent for construction.

Feeder 15705

- Feeder rearrangement tied to Feeders 15705, 14717, and extended Feeder Benning 15711 to reduce feeder customer counts
- Replace 1,721 feet of existing three-phase mainline primary wire with 477 ACSR Tree wire

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[14] Joint Stipulation at 6.

[15] See *In the Matter of Applications for Approval of Biennial Underground Infrastructure Improvement Projects Plans and Financing Orders*, Formal Case No. 1145, Report of Potomac Electric Power Company on the Status of The Benning Area Reliability Plan (December 11, 2017).

- Replace 2,870 feet of three-phase lateral primary wire with 1/0 ACSR Tree wire

Feeder 15707

- Feeder rearrangement tied to feeders 15707, 15706, and new feeder Walker Mill 15247 to reduce feeder customer counts
- Replace 9,345 feet of existing three-phase mainline primary wire with 477 ACSR Tree wire
- Replace 1,287 feet of three-phase mainline primary wire with 4/0 ACSR Tree wire
- Replace 1,043 feet of three-phase mainline primary wire with 477 AAC Spacer cable

XIII. Obstacles

No obstacles have been identified at this time.

ATTACHMENT A:

DC PLUG First Biennial Plan Estimated Projects Schedule

DC PLUG First Biennial Plan Estimated Projects Schedule[16]

Ward	Feeder	Estimated Start Date	Projected End Date
3	308	11/2018	1/2020
4	14900	3/2019	7/2021
7	368	12/2020	6/2022
5	14007	1/2021	12/2022
8	14758	3/2021	12/2022
4	15009	3/2021	1/2023

[16] The DDOT Oregon Avenue Project construction contract has not been awarded and the detailed schedule is unknown at this time. This has a direct impact on the planned schedule for the work associated with the Feeder 14900 Opportunity Project.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the District of Transportation and Pepco's Annual Report detailing DC Plug was sent to the recipients listed below on September 28, 2018 by electronic mail, first-class, postage prepaid, or hand delivery.

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