

District of Columbia Power Line Undergrounding (DC PLUG) Initiative

Community Hearing – 125 Michigan Avenue, NE Washington, DC 20017
Presented by: Aaron Smith (Pepco), Ronald Williams (DDOT) and Morgan O'Donnell (Pepco)

July 24, 2017



Agenda

- Background and History
- Task Force Evaluation and Recommendations
- Current Overhead System
- Before and After DC PLUG Initiative
- Biennial Plan
- Biennial Plan Feeder Locations
- Community Facts – Feeder 14007
- One Line Diagram – Feeder 14007
- DC Business Engagement
- Integrated Communications Strategy – DC PLUG Education Plan
- Paying for the DC PLUG Initiative
- DC PLUG Video
- Appendix

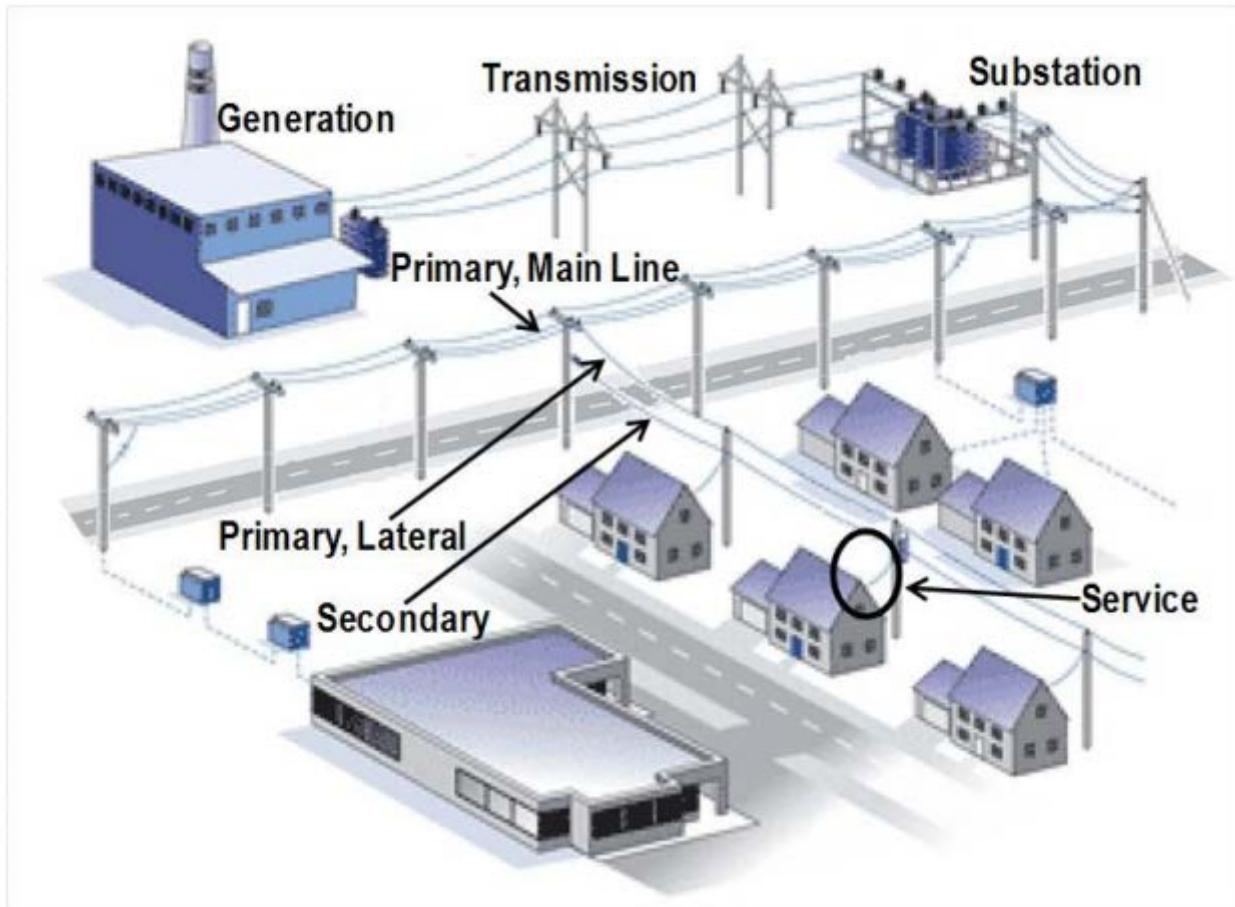
Background and History

- Severe weather events, especially those between 2010 and 2012, challenged the electric system's resiliency and led to increased customer interruptions due to major events.
- Mayor's Executive Order established a Task Force to evaluate options to improve resiliency during severe weather events.
- Task Force members represented a broad cross section of stakeholders (the Mayor's Office and other District Agencies, the council of the District of Columbia, the Public Service Commission, the Office of People's Counsel, Pepco, business and resident representatives).
- Electric Company Infrastructure Improvement Financing Act of 2014 became law on May 3, 2014 and was further amended on May 17, 2017.
- July 3, 2017: District Department of Transportation (DDOT) and Pepco filed the First Biennial Plan and Financing Order Application.

Task Force Evaluation and Recommendations

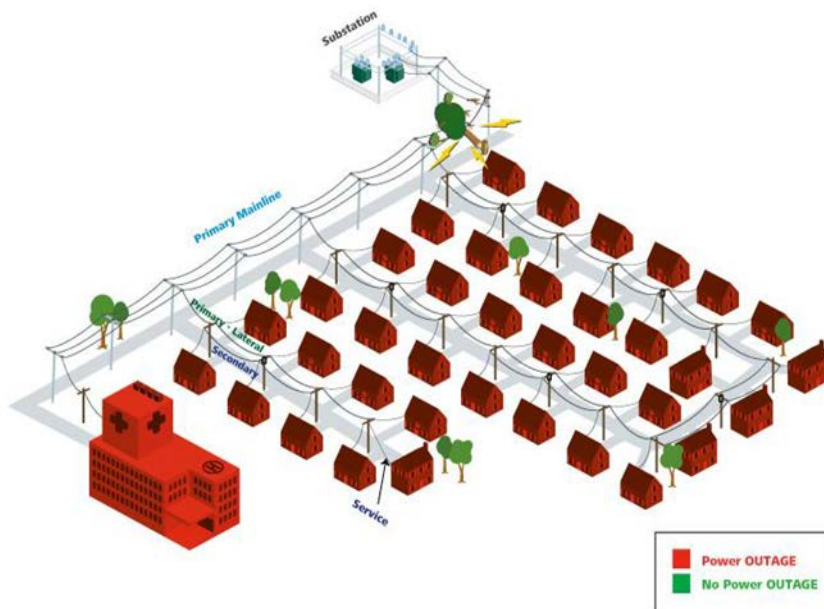
- The Task Force used a model to analyze outage data and service value to the community for all overhead feeders in the District of Columbia.
- Feeders are primary distribution power lines that provide service to approximately 1,100 people within a neighborhood.
- The recommended criteria for choosing which feeders would be moved underground include:
 - Average frequency of outages (SAIFI)
 - Average duration of outages (SAIDI)
 - Economic impact (CMI/\$)
- The final recommendation is to move underground the primary and lateral lines of the least reliable feeders in Wards 3, 4, 5, 7 and 8.
- Pepco's existing reliability programs will be continued in all Wards.

The Current Overhead System

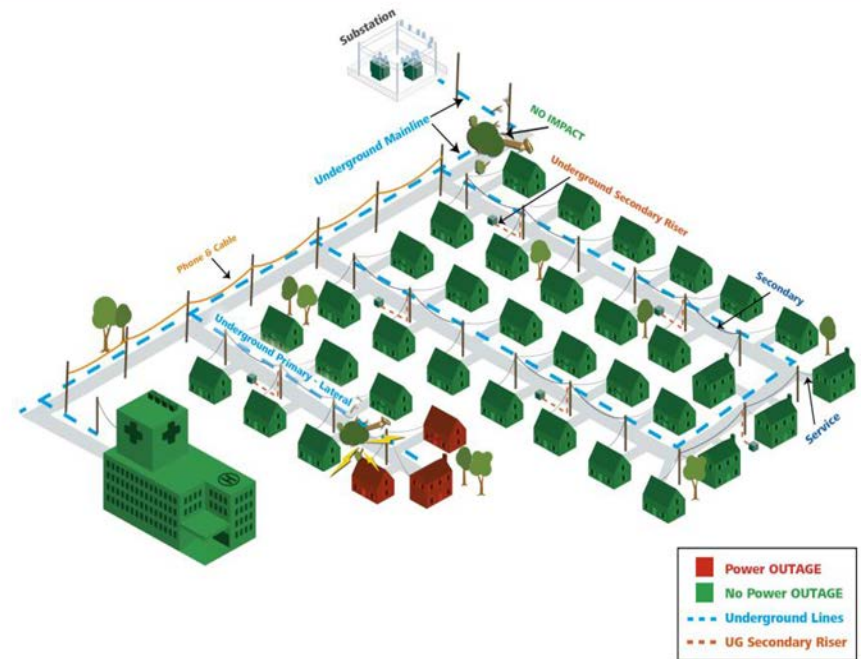


Before and After DC PLUG Initiative

EXISTING OVERHEAD SYSTEM



PROPOSED UNDERGROUND PLAN



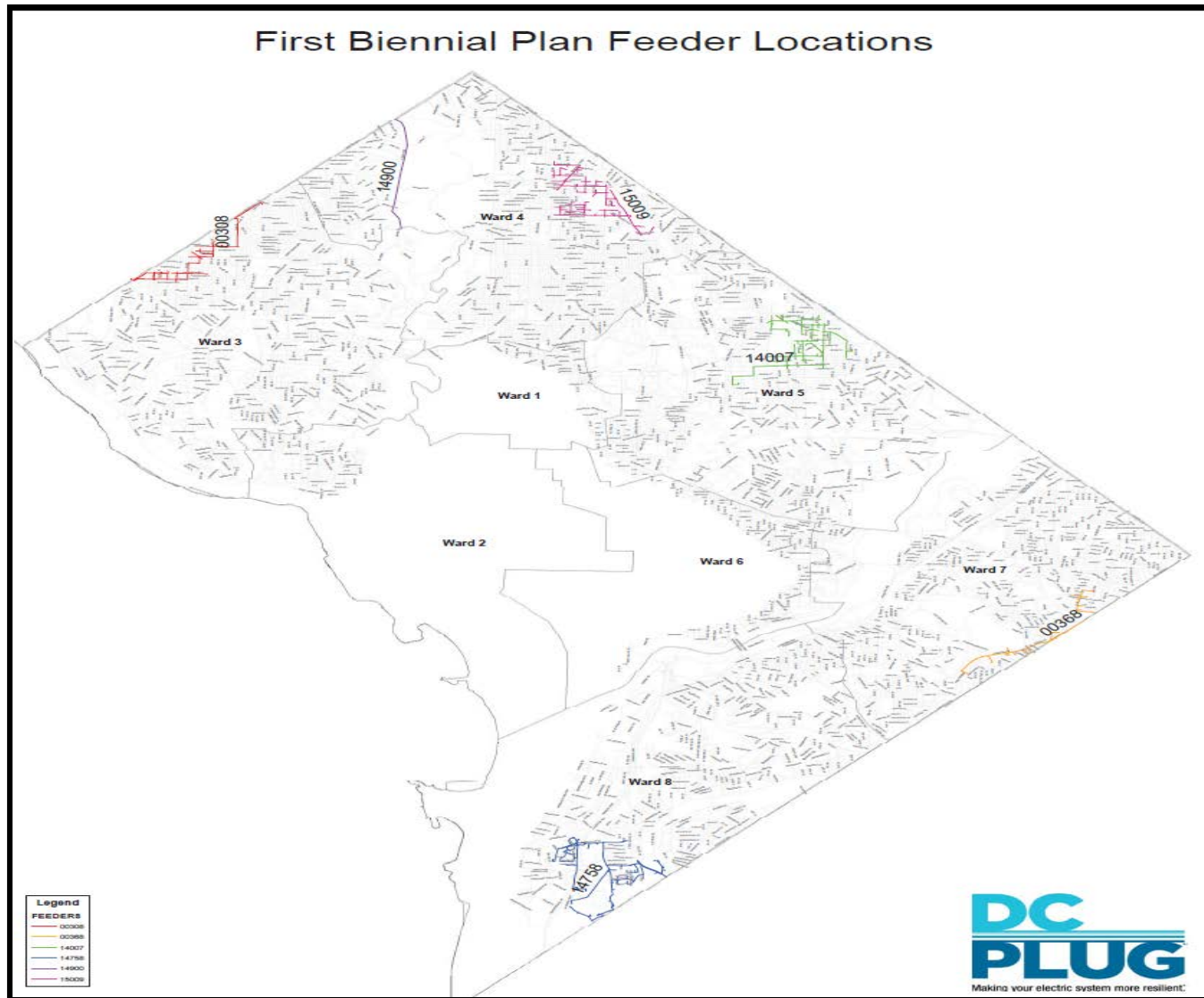
Biennial Plan

- In accordance with the Act, Pepco and DDOT filed a joint Biennial Plan on July 3, 2017 covering the two-year period, 2017-2018. The next Biennial Plan is planned to be filed in 2019.
- Under the Biennial Plan, DDOT primarily will construct the underground facilities, and Pepco primarily will install the underground electric distribution for six overhead feeders affected by outages.
- The Biennial Plan also includes the DC PLUG Education Plan and a commitment to District business contracting and resident hiring.

Biennial Plan	Feeder	Ranking	Ward	# Customers Served	Estimated Total Cost
1	308	3	3	595	\$24M
	368	18	7	697	\$18M
	14007	8	5	1,624	\$31M
	14758	4	8	2,165	\$22M
	15009	9	4	1,406	\$32M
	14900*	16	4	1,371	\$7M
	First BP Total:				7,858

* The planned work for Feeder 14900 coincides with DDOT's Oregon Ave road reconstruction project.

Biennial Plan Feeder Locations



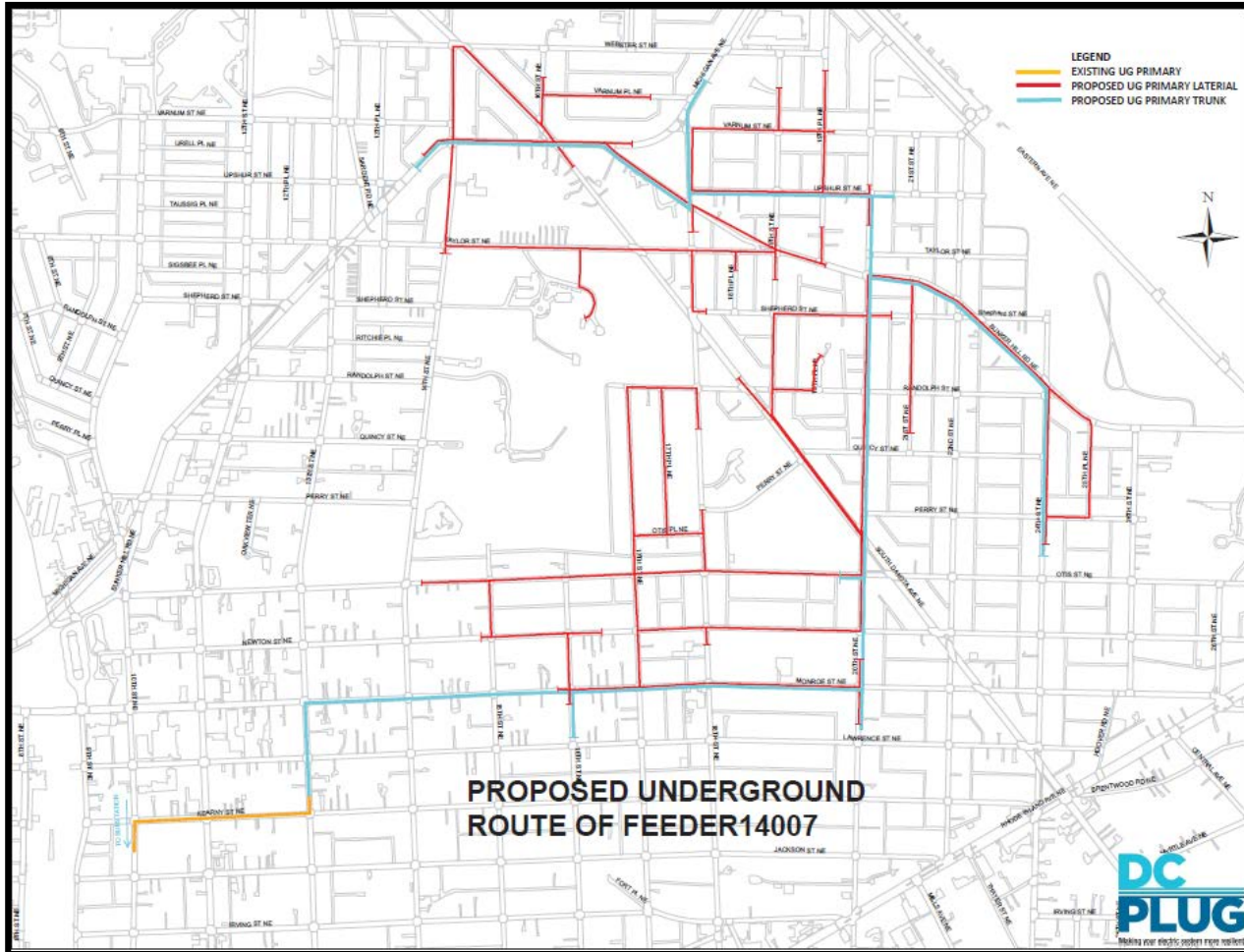
Community Facts – Feeder 14007

- The Biennial Plan filing contains information that describe the work to be performed in your Ward, including:
 - Feeder
 - Ward
 - Neighborhoods
 - Description (percent residential/commercial)
 - Length of feeder (percent overhead and percent underground)
 - Number of customers

Proposed Scope of Work- Example Feeder 14007:

Material	Quantity
Manholes	143
Underground Tapholes	57
Duct Bank/ Trench	8.9 miles
Transformers	103
Switches	9
Mainline Cable	2.8 miles
Lateral Cable	9.5 miles

One Line Diagram - Feeder 14007



DC Business Engagement

- Contractor Forums
 - Pepco and DDOT jointly hosted contractor forums, sponsored a DC PLUG Initiative Networking Event for contractors, and hosted a project schedule update webinar for contractors
- Engagement
 - Pepco and DDOT will continue to conduct one-on-one meetings with Certified Business Enterprises (CBEs) and attend local events to learn about the capacity and capability of the local contracting community
- Capability and Capacity Building (C&C) Program
 - Pepco created limited scope C&C Program request for proposals for CBE construction and inspection firms
- Communications
 - Pepco hired a woman-owned CBE firm responsible for development of all DC PLUG communications materials



Integrated Communications Strategy – DC PLUG Education Plan

- Comprehensive plan to educate and update District customers and other stakeholders about DC PLUG
 - Responsive and reliable information is critical for successful implementation of DC PLUG.
- Community engagement meetings hosted by DC PLUG team, for each feeder, with a focus on key phases:
 - Project introduction and planning
 - Construction kick-off (what to expect)
 - Progress updates
- Community outreach in coordination with the Advisory Neighborhood Commission (ANCs), OPC, PSC, community meetings, and other forums

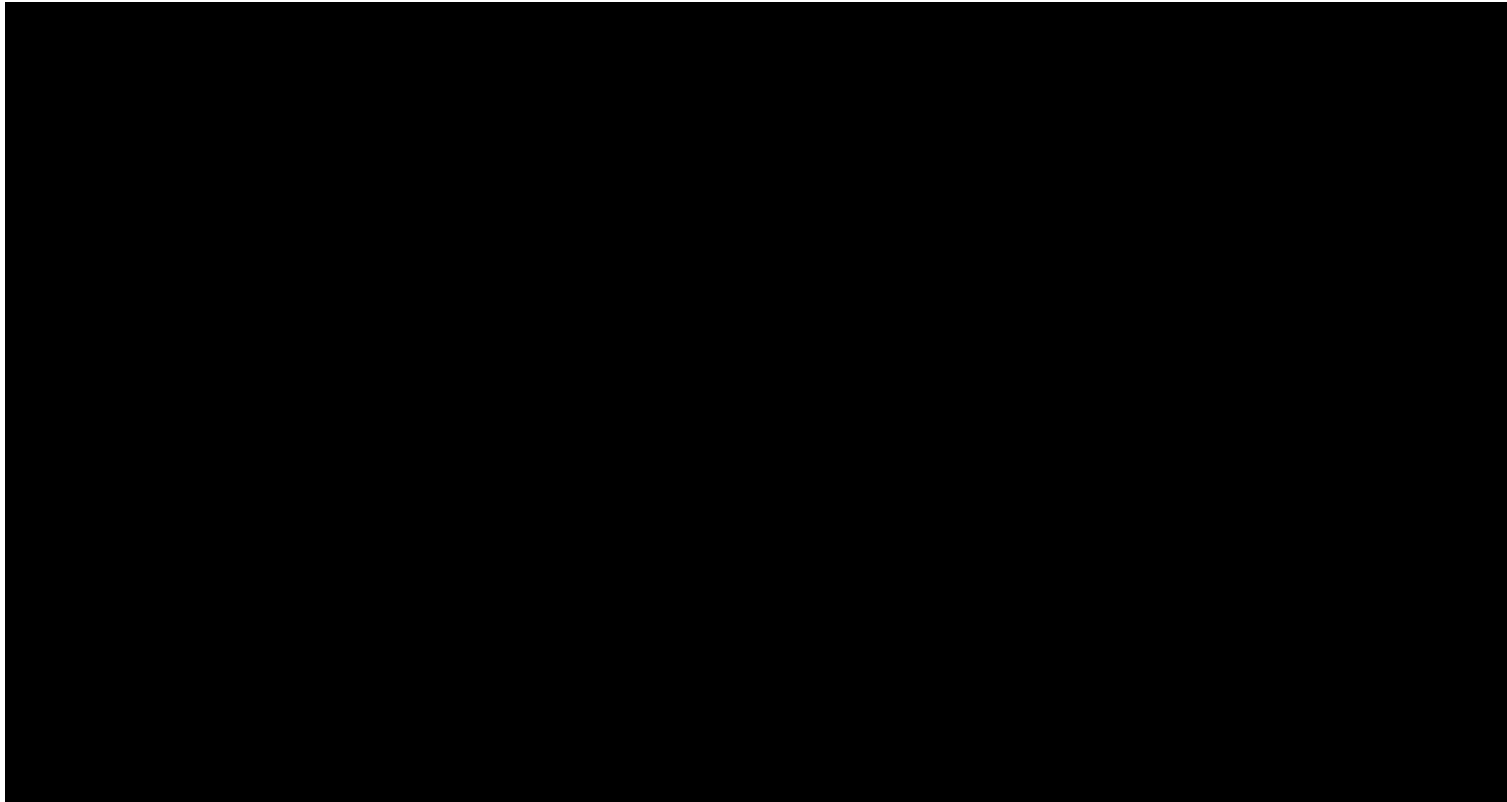
Paying for the DC PLUG Initiative

- The \$500 million DC PLUG initiative will be funded by the following three sources:
 - \$250 million – funded by Pepco and recovered from customers
 - \$187.5 million – funded by the District through a charge imposed on Pepco; Pepco recovers its cost from customers
 - Up to \$62.5 – funded through DDOT
- Estimated monthly bill impact for a typical residential customer (675 kwh per month) is:

	<u>Pepco Charge</u>	<u>Pepco Recovery of DDOT Charge</u>	<u>Total</u>
Year 1	\$0.14	\$1.05	\$1.19
Year 2	\$0.05	\$1.05	\$1.10

- Residential Aid Discount (RAD) Customers will be exempt from DC PLUG initiative charges.

DC PLUG Video



Appendix

Program Updates

	DC PLUG Original Program	DC PLUG Amended Program
Program Budget	<p>\$1B project cost funded through a combination of the following:</p> <ul style="list-style-type: none"> • \$375M securitized bond financing issued by the District • Pepco finances up to \$500M in traditional debt and equity • DDOT through its Capital Improvement Funding will fund \$62.5M - \$125M 	<p>\$500M project cost funded through a combination of the following:</p> <ul style="list-style-type: none"> • District imposes DDOT Charge on Pepco for up to \$187.5M • Pepco finances up to \$250M in traditional debt and equity • DDOT through its Capital Improvement Funding will fund up to \$62.5M
Program Timeline	Approximately 10 year initiative; bond repayment extends beyond construction schedule	First phase – approximately 6 years. Can be extended for a second phase by further legislation
Program Scope	<ul style="list-style-type: none"> • Triennial project plans • Feeder selection based on 2010-2012 outage data including storm outage data 	<ul style="list-style-type: none"> • Biennial project plans • Feeder selection based on 2010-2016 outage data including storm outage data
Program Application	Within 45 days after the effective date of the Act, DDOT and Pepco file a Triennial Underground Infrastructure Improvement Projects Plan; 90 days after effective date of the Act, Pepco files a one-time Application for a Financing Order that becomes irrevocable after bond issuance	Within 45 days after the effective date of the Emergency Amendment, Pepco and DDOT file a combined application for Biennial Underground Infrastructure Improvement Projects Plan and Financing Order Application, with both approvals covering the funding requirement for the same two-year funding period



Feeder Selection Process

In selecting the feeders, DDOT and Pepco followed a five-step process:

- Based on data from January 1, 2010 through December 31, 2106, ranked feeders by historical reliability and customer minutes of interruptions reduced per dollar spent (SAIFI, SAIDI, CMI/\$).
- Identified the highest-ranked feeders in each of the five Wards (Wards 3, 4, 5, 7 and 8) of the District of Columbia characterized by a large concentration of overhead power lines and susceptibility to overhead outages.
- Analyzed ongoing reliability work as well as current and planned system work.
- Identified opportunities to take advantage of existing or planned DDOT roadway reconstruction projects.
- Finalized the feeder selection for inclusion in the First Biennial Plan.

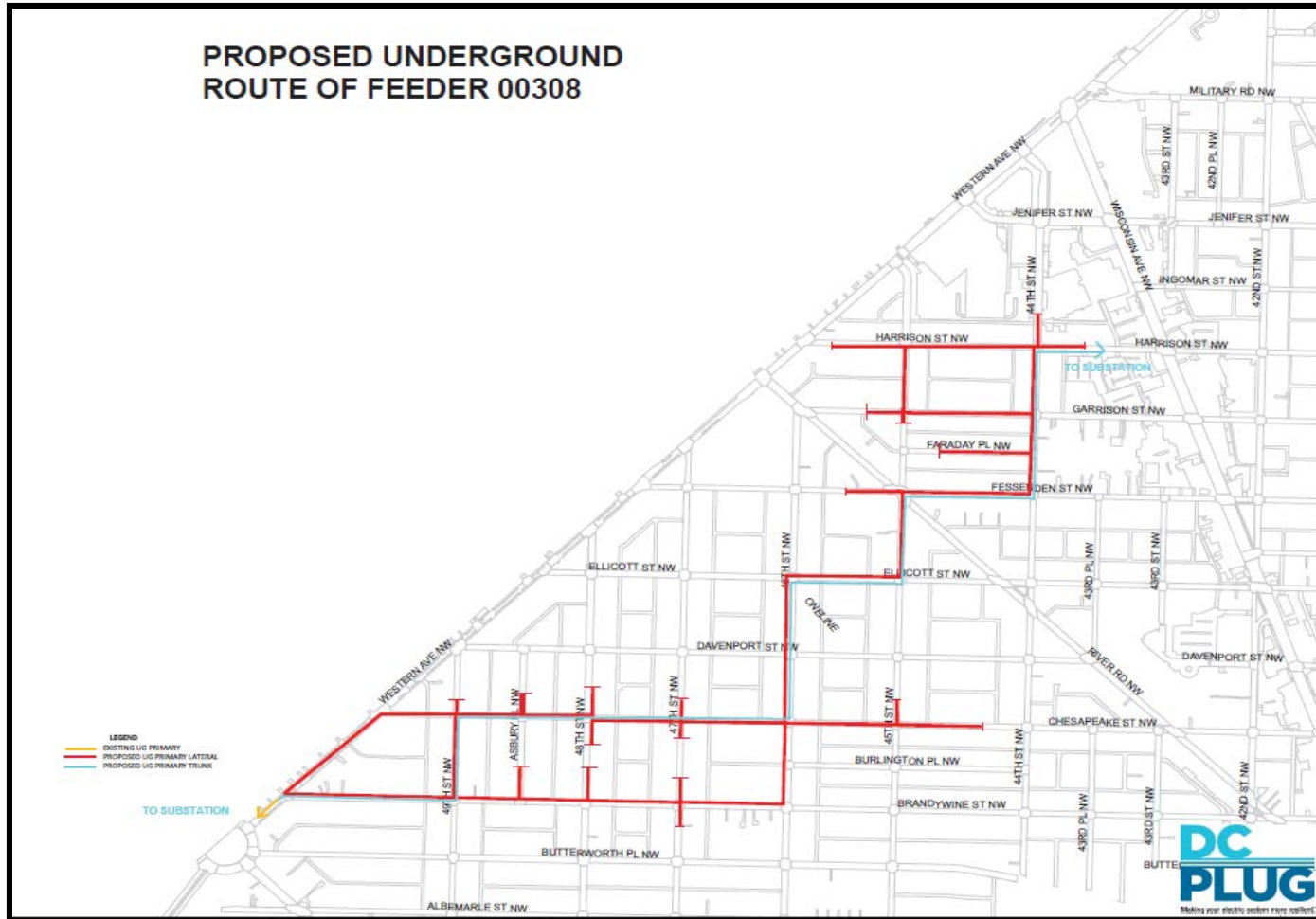
Community Facts – Feeder 308

- Provided are handouts detailing the work to be performed in your Ward, including:
 - Feeder
 - Ward
 - Neighborhoods
 - Description (percent residential/commercial)
 - Length of feeder (percent overhead and percent underground)
 - Number of customers

Proposed Scope of Work- Example Feeder 308:

Material	Quantity
Manholes	111
Underground Tapholes	18
Duct Bank/ Trench	5.4 miles
Transformers	48
Switches	5
Mainline Cable	1.3
Lateral Cable	5.9

One Line Diagram - Feeder 308



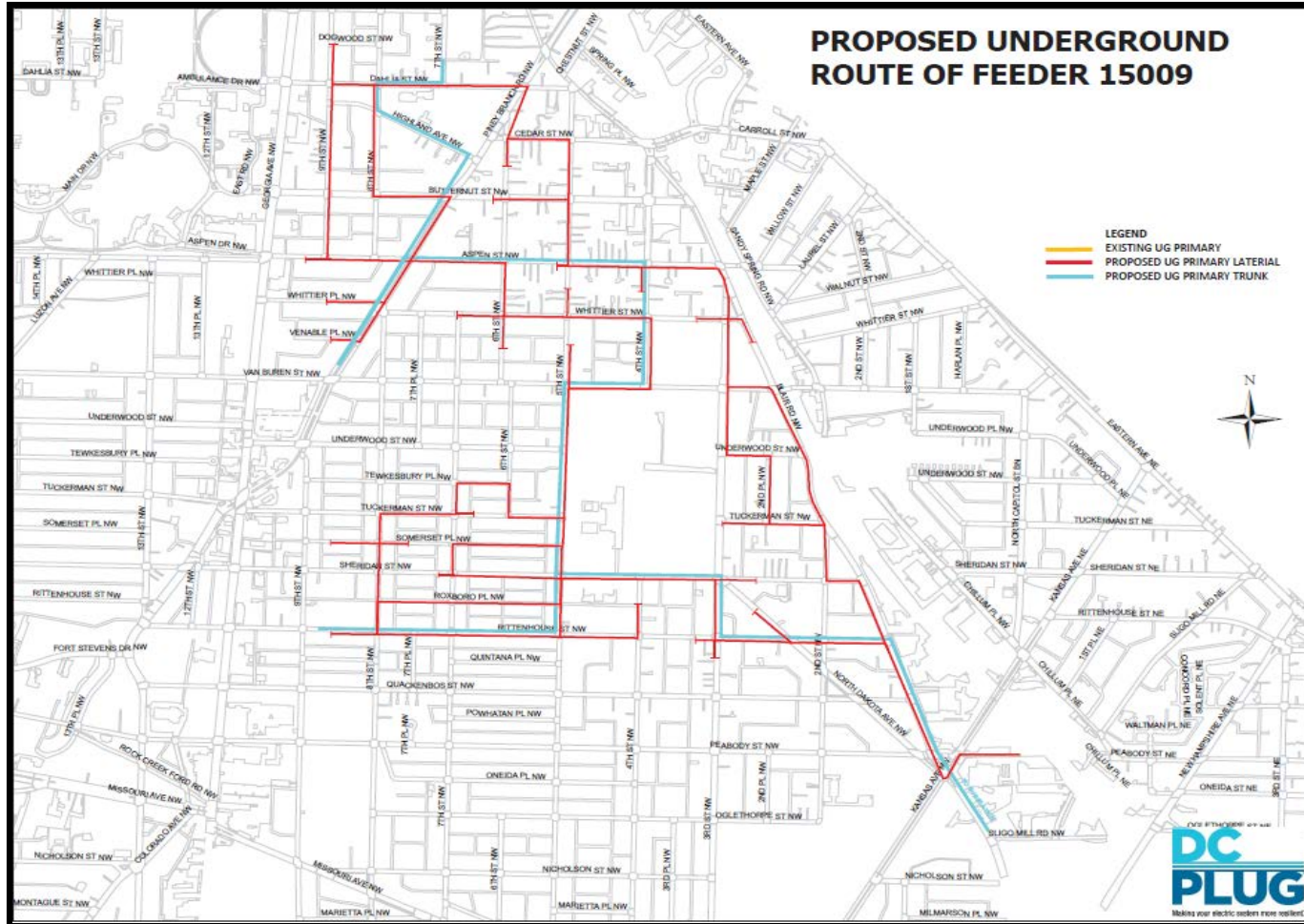
Community Facts – Feeder 15009

- The handouts describe the work to be performed in your Ward, including:
 - Feeder
 - Ward
 - Neighborhoods
 - Description (percent residential/commercial)
 - Length of feeder (percent overhead and percent underground)
 - Number of customers

Proposed Scope of Work- Example Feeder 15009:

Material	Quantity
Manholes	142
Underground Tapholes	68
Duct Bank/ Trench	8.9 miles
Transformers	109
Switches	8
Mainline Cable	2.7
Lateral Cable	9.7

One Line Diagram - Feeder 15009



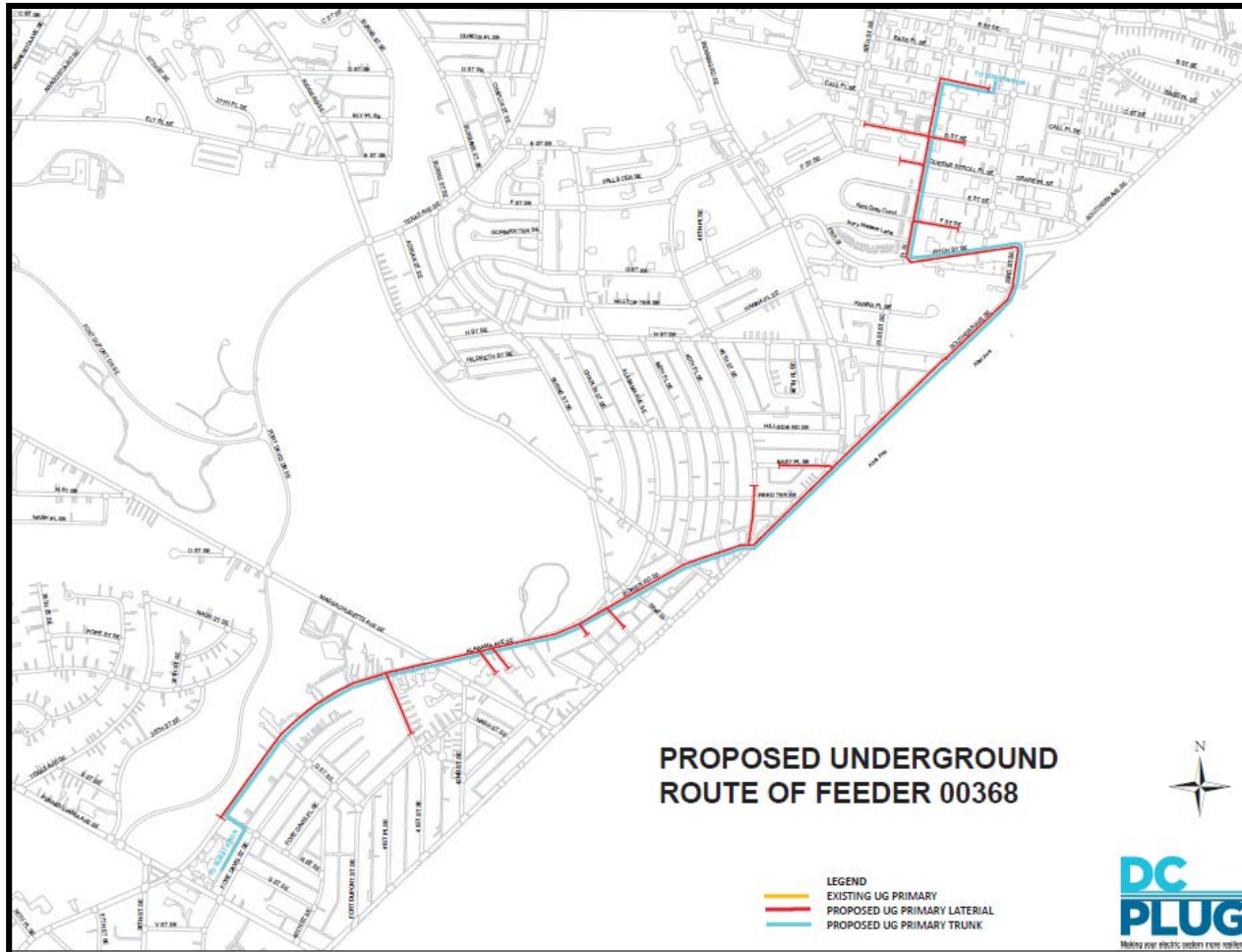
Community Facts – Feeder 368

- The handouts describe the work to be performed in your Ward, including:
 - Feeder
 - Ward
 - Neighborhoods
 - Description (percent residential/commercial)
 - Length of feeder (percent overhead and percent underground)
 - Number of customers

Proposed Scope of Work- Example Feeder 368:

Material	Quantity
Manholes	62
Underground Tapholes	35
Duct Bank/ Trench	4.7 miles
Transformers	44
Switches	6
Mainline Cable	2.5 miles
Lateral Cable	2.1 miles

One Line Diagram - Feeder 368



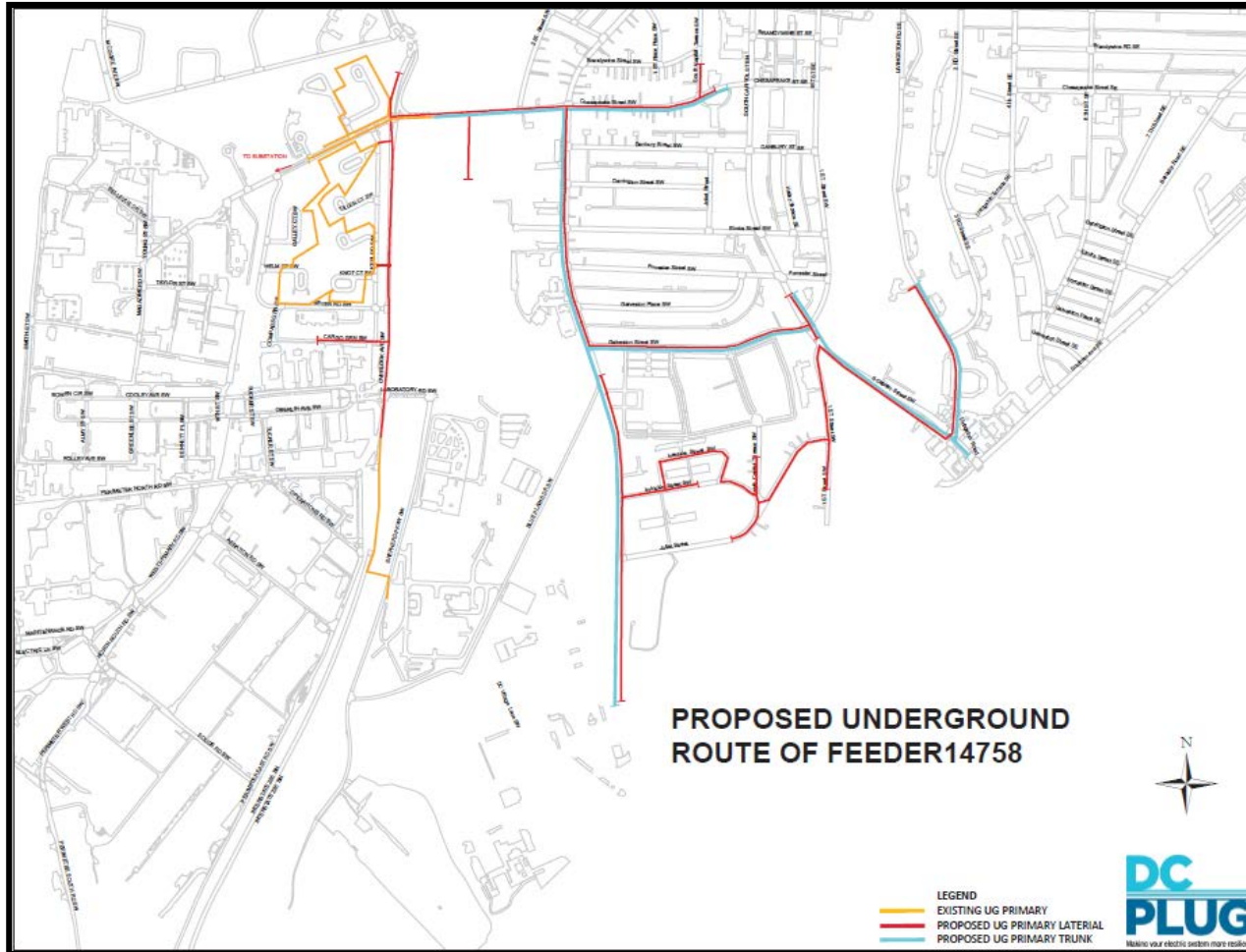
Community Facts – Feeder 14758

- The handouts describe the work to be performed in your Ward, including:
 - Feeder
 - Ward
 - Neighborhoods
 - Description (percent residential/commercial)
 - Length of feeder (percent overhead and percent underground)
 - Number of customers

Proposed Scope of Work- Example Feeder 14758:

Material	Quantity
Manholes	94
Underground Tapholes	33
Duct Bank/ Trench	5 miles
Transformers	44
Switches	10
Mainline Cable	1.6 miles
Lateral Cable	6.2 miles

One Line Diagram - Feeder 14758



Community Facts – Feeder 14900

- The handouts describe the work to be performed in your Ward, including:
 - Feeder
 - Ward
 - Neighborhoods
 - Description (percent residential/commercial)
 - Length of feeder (percent overhead and percent underground)
 - Number of customers

Proposed Scope of Work- Example Feeder 14900:

Material	Quantity
Manholes	28
Underground Tapholes	8
Duct Bank/ Trench	2.4 miles
Transformers	16
Switches	2
Mainline Cable	0.4 miles
Lateral Cable	2.8 miles

One Line Diagram - Feeder 14900

