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## PEPCO RELIABILITY ENHANCEMENT PLAN SUMMARY

Pepco has announced the development of a six-point reliability plan that advances work on existing programs as well as initiates new activities. These programs are intended to increase substantially the reliability of the distribution system across Maryland by reducing both the frequency and duration of outages for our customers. The total cost of this work over the next five years is estimated to be in excess of a quarter billion dollars and increases our expenditures by \$100 million over the next five years. Improving the reliability of the electric system is critically important to everyone at Pepco. We will continue to improve our performance and work with our customers to address their concerns.

### Summary - Pepco Maryland

*Data is in millions*

	Current Annual	Current Five-Year	Planned Annual	Planned Five-Year
1. Enhanced Vegetation Management	\$4.3	\$21.5	\$7.3	\$36.5
2. Priority Feeders	\$4.5	\$22.5	\$6.5	\$32.5
3. Load Growth	\$12.0	\$60.0	\$12.0	\$60.0
4. Distribution Automation	\$1.2	\$6.0	\$3.0	\$15.0
5. URD Cable Replacement	\$6.3	\$31.5	\$7.5	\$37.5
6. Selective Undergrounding/ Substation Improvements	\$0	\$0	\$15.0	\$75.0
<b>TOTAL</b>	<b>\$28.3</b>	<b>\$141.5</b>	<b>\$51.3</b>	<b>\$256.5</b>

### Plan Description

#### 1. Enhanced Vegetation Management

Enhanced vegetation management includes tree trimming along public rights of way to obtain increased clearance between the overhead electric wires and existing trees. In addition to tree trimming, Pepco also will work with counties, communities and homeowners to remove trees that are dead, in poor health or would damage the distribution system if they were to fall.

#### 2. Priority Feeders

Each year Pepco selects feeders across Maryland that we determine are the least performing feeders. We perform detailed investigations to determine the cause of outages and necessary corrective actions to reduce the number of outages. A feeder is one electric distribution line that supplies electric power to up to 1,100 customers within a specific geographic area. We are expanding this program by 45 percent.



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### **3. Load Growth**

Each year Pepco evaluates the need to add or upgrade feeders in order to reliably supply new customers and support increased usage required by existing customers. This program is part of our long-established system planning process that ensures the continued availability of safe and reliable power for our customers.

### **4. Distribution Automation**

Distribution automation involves installing advanced control systems across the distribution system to allow the electric system to identify faults and perform switching automatically. These technologies will automatically isolate the failed pieces of equipment and restore most of the affected customers within minutes of the failure. Pepco was awarded \$10.25 million in Department of Energy Smart Grid Investment Grants to help fund the advancement of this technology in Maryland.

### **5. Underground Residential Distribution (URD) Cable Replacement**

Pepco has a long-standing project to replace cable that generally was installed during the 1970s. This program replaces cable to prevent future failures and increases the reliability of the distribution system for customers supplied from the underground system. Since 2007, Pepco has upgraded more than 1.2 million feet (230 miles) of underground cable across Maryland at a cost of \$27 million. We are planning to expand this program by 20 percent.

### **6. Selective Undergrounding/Substation Improvements**

As Pepco evaluates the performance of individual feeders, the need to perform more aggressive modification to the system is identified. This approach to improving reliability has obtained significant benefits, but, in some cases, still has not achieved the needed level of reliability. In these limited areas that traditional modifications on the overhead system have not produced desired results, we will evaluate the possibility of selectively replacing the overhead system with an underground system. In addition, measures already are being taken to harden the high-voltage substation supply lines to reduce the number of tree-related outages. By increasing the reliability of the supply lines, we increase the reliability of the substation, which also increases the reliability of 12 to 15 individual distribution feeders supplied by each substation.

### **WHY IS PEPKO IMPLEMENTING THESE PROGRAMS?**

- Despite the generally positive results that we have had reducing outage duration times (CAIDI), we have not had the same result reducing the frequency of outages. These programs will further reduce both the frequency and duration of outages.
- While there are state regulations specifically governing tree trimming and removal along public rights of way, we are confident that by working with state, county and community leaders we will obtain the required permission to perform more aggressive trimming and selective removal.
- Pepco applies best-practice engineering and economic principles to siting and line design according to the characteristics of each project situation.
- This plan will result in substantial improvements over the next five years, and we will continue to make adjustments as necessary, as we implement the plan.