

Dennis P. Jamouneau
Assistant General Counsel

Office 202.872.3034
Fax 202.331.6767
pepco.com
djamouneau@pepcoholdings.com

EP9628
701 Ninth Street NW
Washington, DC 20068-0001

June 12, 2018

Public

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. 766-PIWG Minutes

Dear Ms. Westbrook-Sedgwick:

Pursuant to Order No. 15568, issued October 7, 2009, Potomac Electric Power Company, on behalf of itself, the Office of the People's Counsel, and the Commission's Staff, collectively known as the Productivity Improvement Working Group ("PIWG"), met on May 31, 2018. Enclosed are the Minutes for the May 31, 2018 PIWG Meeting, attendance sheet and the Public portions of the power point presentation of issues discussed at the meeting. Confidential portions of the power point are being provided under separate cover. Portions of the power point presentation deemed Critical Infrastructure Information (CII) have been redacted.

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

Sincerely,



Dennis P. Jamouneau

Enclosures

cc: All Parties of Record



Productivity Improvement Working Group (PIWG) Minutes for May 31, 2018 Meeting

Meeting Commencement

The PIWG meeting convened at 10:20 a.m. on May 31, 2018, at Pepco's Edison Place office in Washington, DC.

Attendees (See Attachment No. 1)

The following people were present:

- Commission Staff: John Howley, Gary Pulliam, Craig Berry, Poorani Ramachandran, Ken Glick
- Office of the People's Counsel: Jason Cumberbatch
- Pepco: Dennis Jamouneau, Ethan Holmes, Dena Jefferson, Daniel Irving, Walter Stefy, Denise Senecal, David Olchowski, Miguel Ortega.

Issues Discussed (See Attachment No. 2)

- Customer Service and Satisfaction Survey
- Benning Area Reliability Plan
- Order 19119

Adjournment

Meeting adjourned at 12:00 p.m.

Synopsis of Issues Discussed

Pepco presented its Customer Service and Satisfaction Survey results to the PIWG. Staff asked whether Pepco's customer notification system can be used to alert customers about construction. Pepco responded it is considering implementing this kind of functionality.

Pepco presented the origin and current status of the Benning Area Reliability Plan. Staff questioned whether this was impacted by Capital Grid Project. Pepco explained that it was not.

The PIWG further discussed Order No. 19119 directives. It was agreed to go ahead with implementation of the GIS outage reporting.



An Exelon Company

Productivity Improvement Working Group

May 31, 2018 Meeting

Attendees

	Name	Affiliation
1	John Howley	DC PSC
2	Craig Bergy	DC PSC
3	Ken Glick	DC-PSC / OGC
4	Walter Steyer	pepco
5	Tenise Serrucal	PePCO
6	Rhonda Jefferson	PePCO
7	John P. P.	PePCO
8	Dennis Janouman	PePCO
9	Gary Polliani	DC PSC
10	Jennifer Graham	PHI
11	Jason Cumberland	OPC
12	Poonari Ramachandran	DC PSC
13	Daniel Irving	PHI
14	DAVID BARRETT	PHI
15	David Oshowski	PHI
16	MIGUEL A. ORTEGA	PHI
17		
18		
19		
20		



Productivity Improvement Working Group Meeting



An Exelon Company

May 31, 2018

Agenda

- Customer Service and Satisfaction Update
- Benning Area Reliability Plan (BARP) Update
- Reliability Update
- Order 19119



Customer Service and Satisfaction Update



An Exelon Company

Initiatives and Results

Customer Satisfaction Ratings

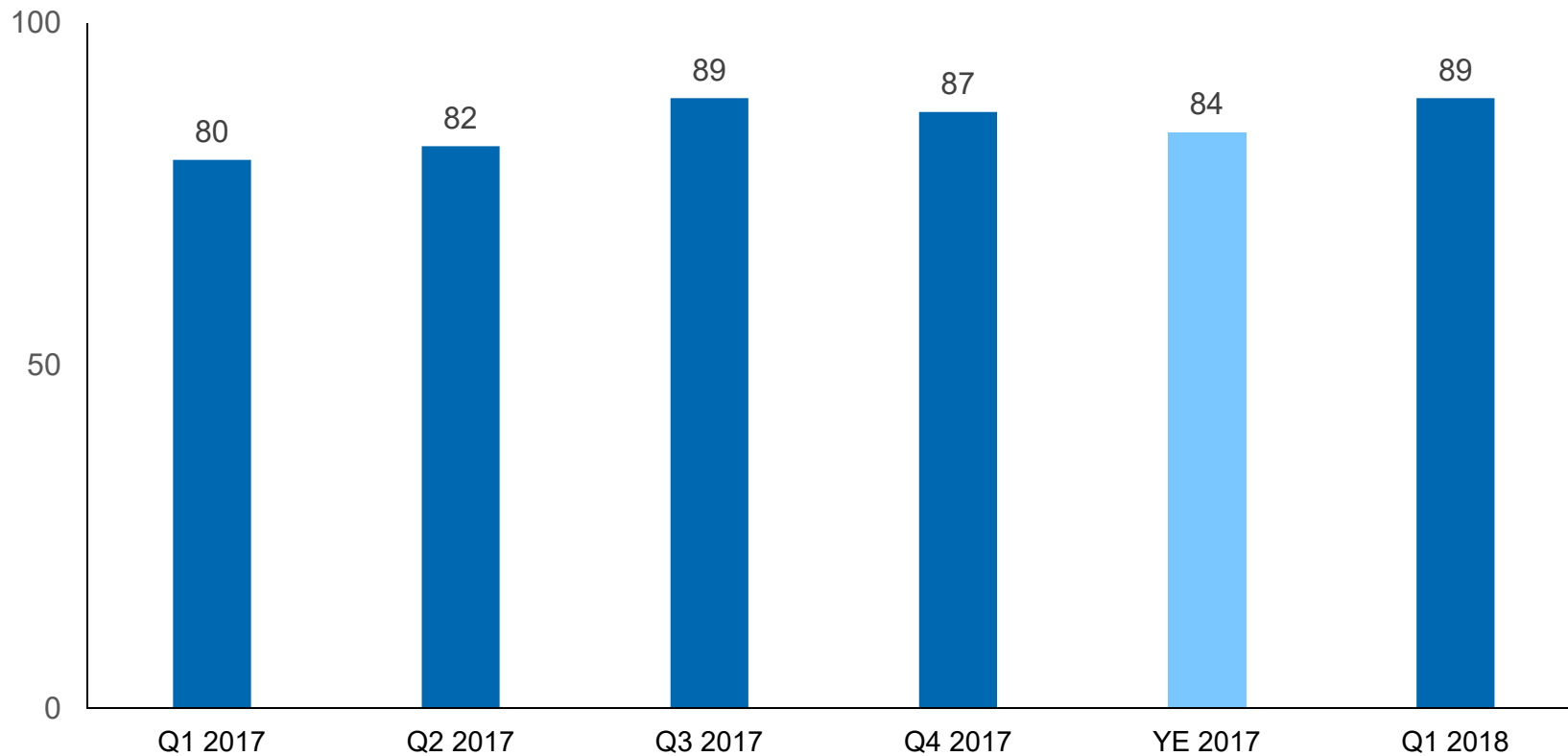
Overview

- Pepco continues to conduct ongoing customer satisfaction studies among DC customers
 - Changes are tracked and investigated in order to make improvements
- Customer satisfaction continues to be a strong focus across Pepco and Exelon
 - Customer journey mapping to improve key customer journeys with cross-functional teams and further customer research
 - Peer groups in key operational areas identify process improvements and highlight performance differences
- DC customer satisfaction continues to be strong with continued positive results in terms of satisfaction with reliability
- Customers who contact the call center have a positive view of their experience
- New tools and capabilities provide new ways to access energy usage information and enhance the customer experience

Overall Satisfaction Among DC Customers

The majority of customers in the District of Columbia stated they were satisfied with Pepco during the past year. Overall satisfaction in Q1'18 (89%) is five points higher compared to Year-End 2017 (84%) and nine points higher than in Q1'17 (80%). Some quarterly variation is typical due to weather, temperatures and other factors.

2017-2018 Satisfaction Among DC Residents

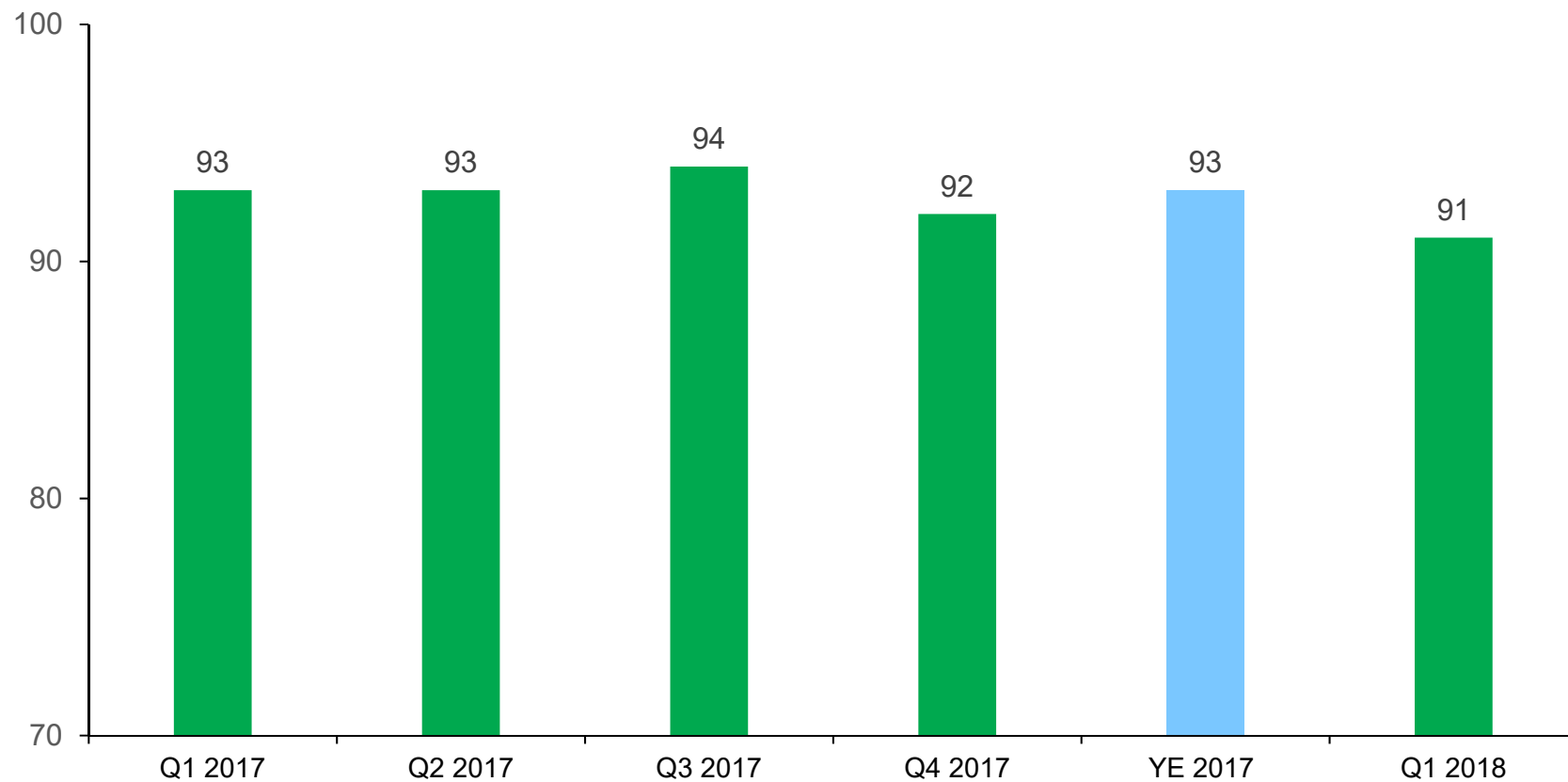


An Exelon Company

Satisfaction with Reliable Electric Service

Among DC customers, satisfaction with reliability is high, with nine-in-ten customers saying Pepco is doing a good job.

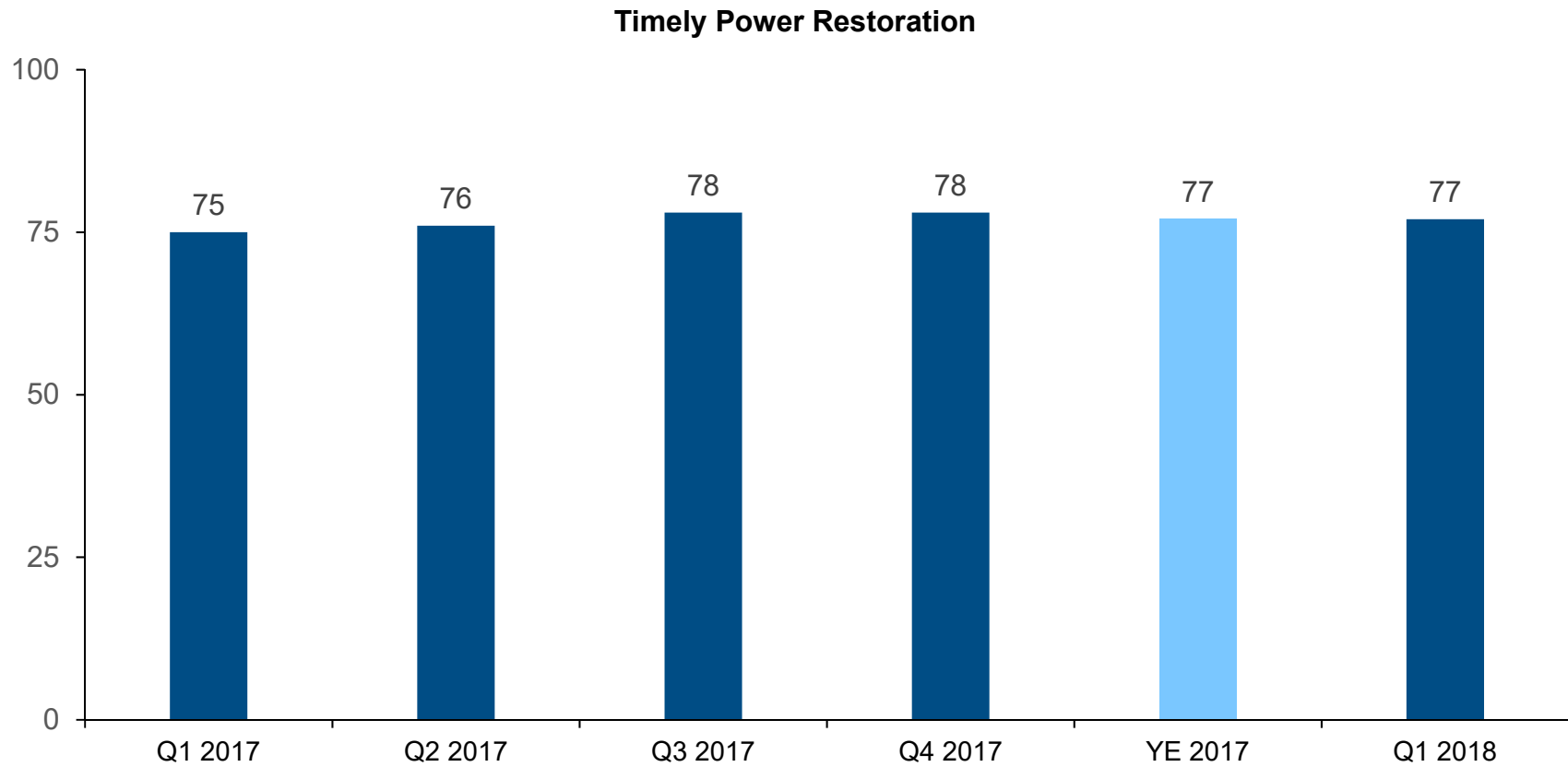
Customer Satisfaction with Providing Reliable Electric Service



An Exelon Company

Power Restoration

More than three quarters of residents in the District of Columbia believe Pepco does a good job in terms of restoring power in timely manner when an outage occurs.



An Exelon Company

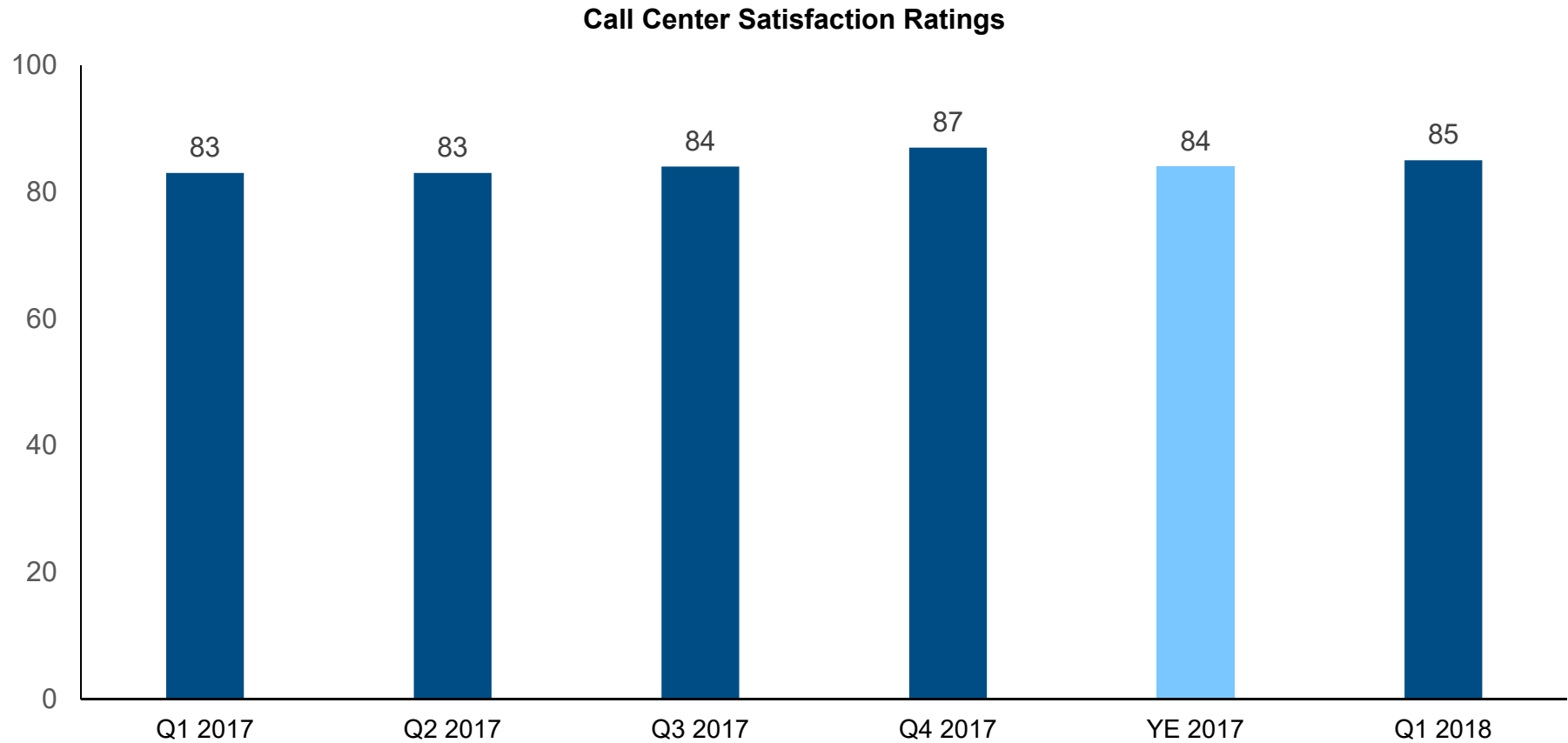
Call Center Satisfaction



An Exelon Company

Call Center Satisfaction

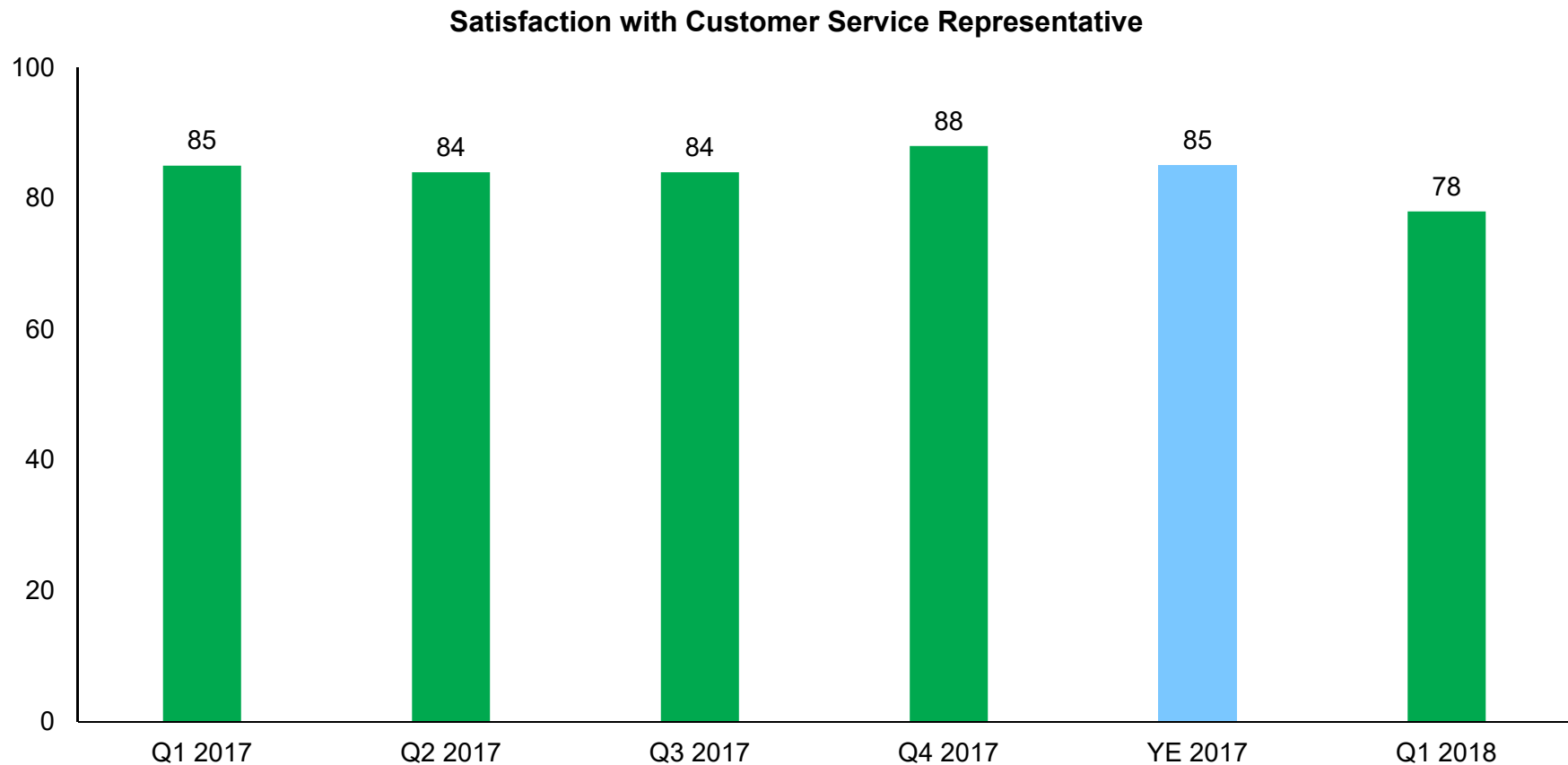
The majority of Pepco customers are satisfied with their interaction with the call center. Call center satisfaction ratings in Q1'18 (85%) are slightly higher compared to ratings in Q1'17 and Q2'17 (Both at 83%).



An Exelon Company

Customer Service Representative Ratings

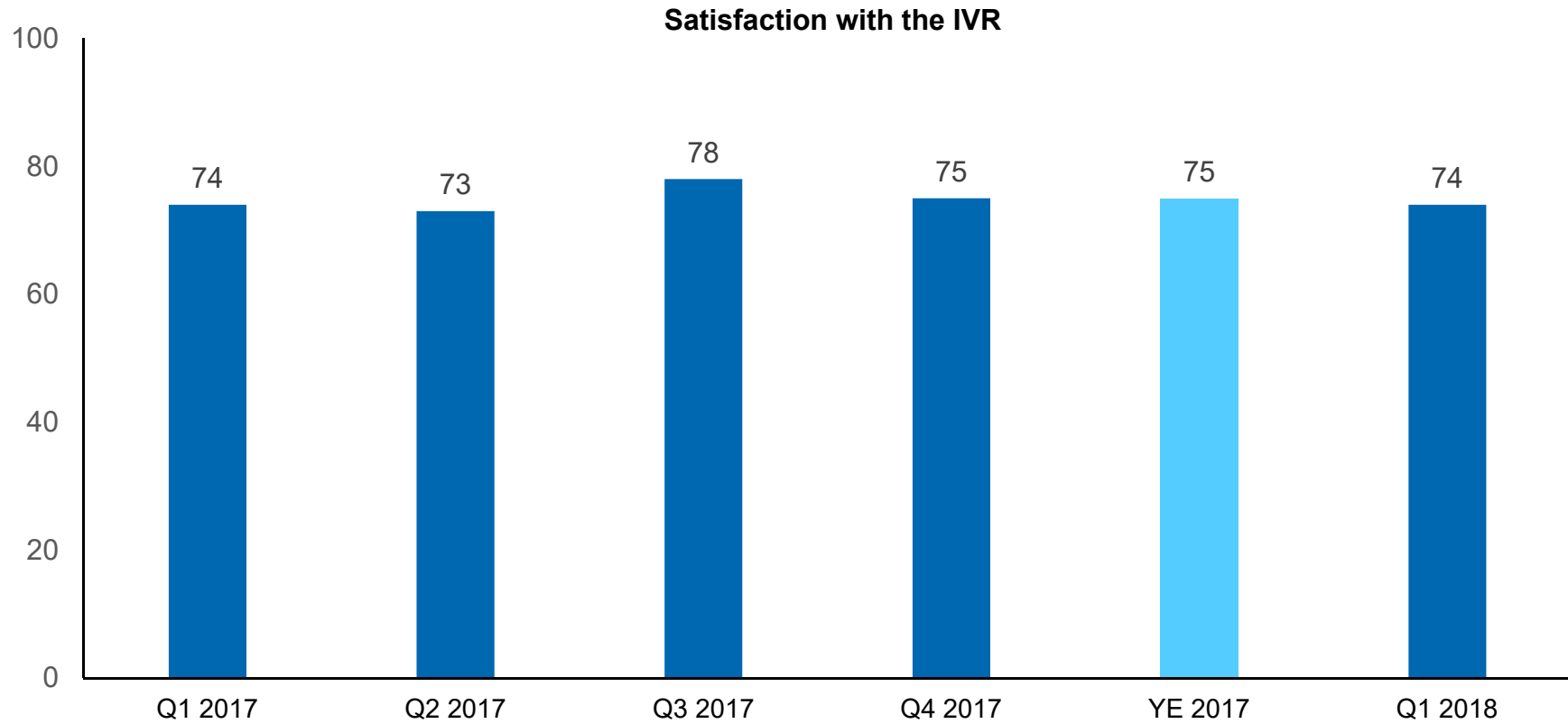
In 2017, more than eight-in-ten Pepco customers stated they were satisfied with their interaction with a customer service representative. The slight decrease in scores is due to an increase in customer billing inquiries due to the colder weather impacting customer bills.



An Exelon Company

IVR Ratings

Overall, the majority of customers are satisfied with the IVR. Satisfaction has been stable over the past year.



Call Center Improvement Initiatives

The call center team continues to focus on improvement, with initiatives and training. Some of the key initiatives include:

First Call Resolution:

Improving first call resolution is a key focus throughout 2017 and 2018. Reducing the number of times a customer needs to call the call center to resolve a specific issue improves service for our customers, and helps reduce call volume and repeat calls. The following activities are part of this initiative:

- Held FCR workshop with internal stakeholders across departments to obtain their feedback
- Employee Engagement: Update sessions with CSRs
- New FCR Mailbox to allow reps to identify FCR related issues
- Modified Quality Monitoring strategy to incorporate data from Speech Analytics: this will enable us to identify common themes and need for improvement

High Bill Season Response

- Additional training to ensure empathy and knowledge
- Modified staffing to handle volume
- Provided “quick tips” regarding Credit Calls and high bill calls

Customer Experience Update

Customer Satisfaction Improvement

Initiatives to influence satisfaction among Pepco customers includes:

Customer Experience

- Outage Alerts
- Journey teams focusing on targeted customer experience improvements

Call Center Satisfaction

- Focus on first call resolution
- New IVR system having positive impact
 - Q1 2018 (89%) call center satisfaction among Pepco customers in the District of Columbia is significantly higher compared to Q1 2017 (80%).

Reliability and Restoration

- Customer focus councils working on targeted areas
- Major reliability projects in DC: plans in place to communicate benefits and impacts for customers

IVR Upgrades

- Pepco is continuing to finetune the upgraded Interactive Voice Response system (IVR) to improve the customer experience

Deployed 2017

Customers spend less time entering information

Predictive Intent capability enables the IVR to anticipate the reason customers may be calling based on account status flags passed from the Customer Information System

- Spanish Billing IVR provides better service for Spanish-speaking customers
Spanish speaking customers can more easily complete their transaction in the IVR without having to hold for a Spanish speaking CSR
- More Self Service options allow customers to access services independently
A greater number of transactions can be handled quickly through self service
- Easy CSR Access allows customers to reach a CSR
Ultimately, service improvements enable more customers to complete their transaction within the IVR, freeing the CSRs to handle the more complex transactions



An Exelon Company

IVR Self-service Capabilities

Self-Service Functionality in New IVR

Account Information
Make Payment
Payment Arrangements
Request Letters
Update phone number

Budget Billing
Meter Reading
Payment Deferral
Stop Service
Outage Reporting

Sample IVR Transaction



PepcoPaymentDue_TScope_Refreshed.wav



An Exelon Company

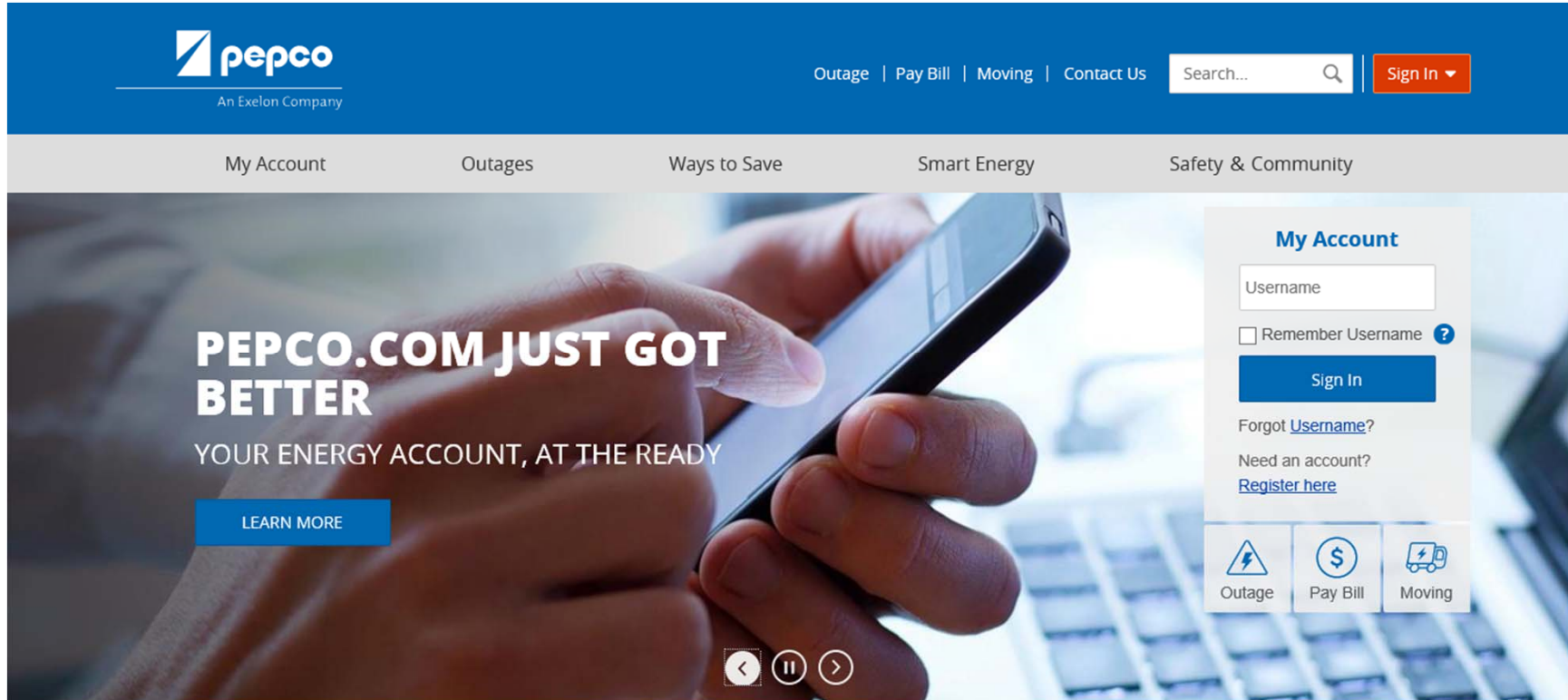
Website Enhancements

New features and enhancements for the new Pepco website include:

- New email and text alerts
 - Bill Due
 - Bill Paid
 - Outages
- Upcoming usage alerts: including high energy use and weekly energy use
- New My Account feature (End of Year 2018)
- Easier online bill payment for non-automated payments

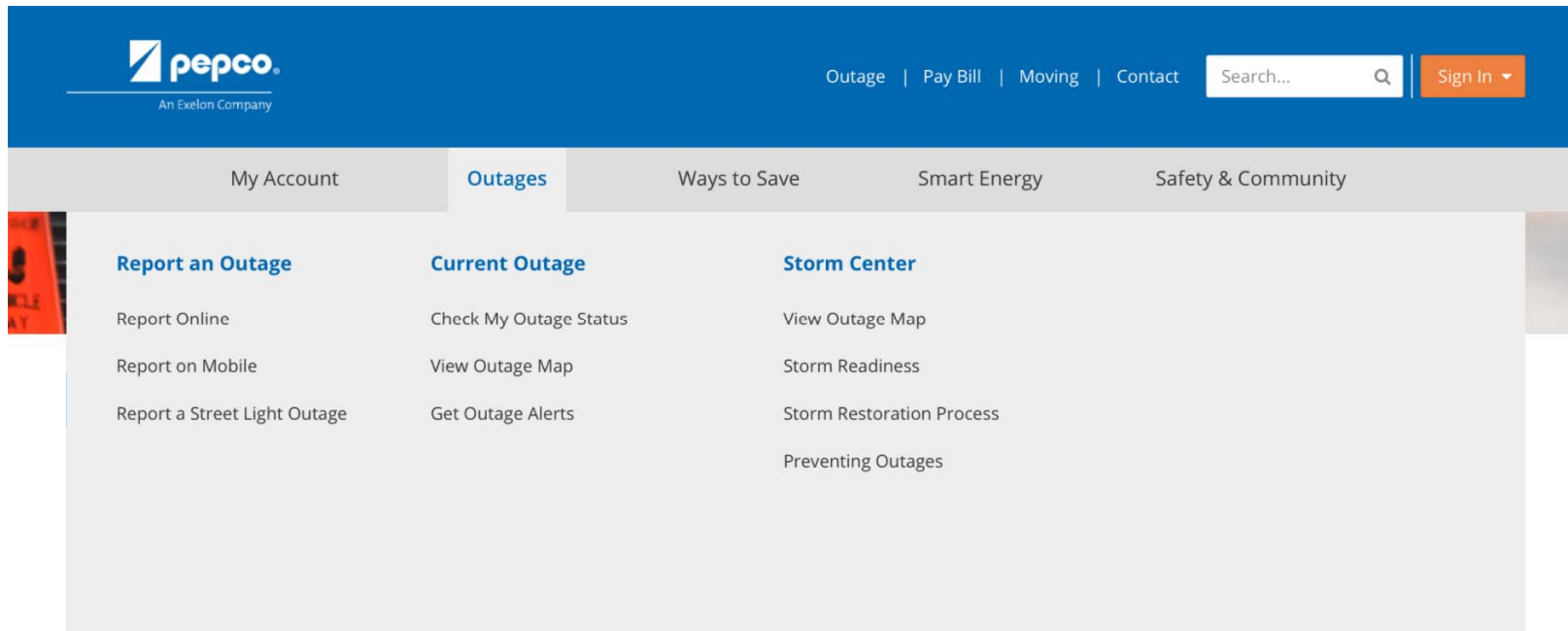
Website Enhancements

In January of 2018, Pepco launched the new website.



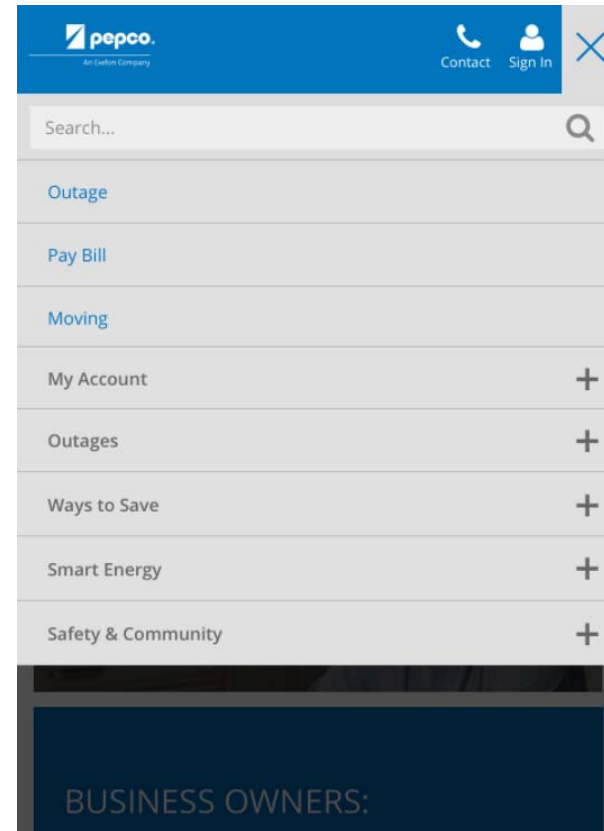
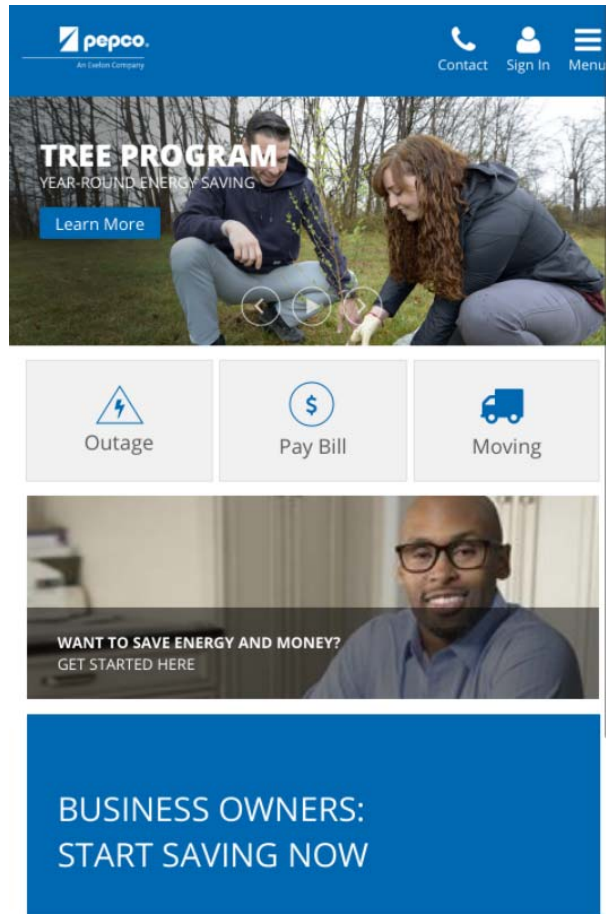
Homepage: Desktop Drop Down Menu

The new website provides easier access to critical information areas and tools.



Mobile Responsive Design

Mobile functionality has improved to offer more streamlined access to key services.



My Account Web Release 2: Deployment Q3 2018

Placing key activities within My Account helps eliminate steps to complete forms/payments.

Current State

Future State

Web Release 2: New Features to Improve Customer Experience

The screenshot shows the PECO website interface. At the top, there is a navigation bar with the PECO logo, links for 'Outage', 'Pay Bill', 'Moving', and 'Contact Us', a search bar, and a 'Sign In' button. Below the navigation bar is a 'My Account' section with a dropdown menu. The account information is displayed as follows:

My Account	Outages	Ways to Save	Smart Energy	Safety & Community
Name: GLOBAL REVIVAL MISSIONS Account #: 9053397013 Status: Active Address: 5800 SPRINGFIELD AV HOUSE PHILADELPHIA, PA 19143	<p>Last Payment: \$179.00 Received: 12/06/2017 Current Bill: 12/15/2017 Due Date: 01/08/2018* Total Amount Due: \$179.00</p>		<p>Past Due Amount: \$179.00 DUE IMMEDIATELY *If you recently changed your energy supplier, a portion of your balance may have an earlier due date. Please view your previous bills and corresponding due dates</p>	<p>Link An Account</p> <p>I want to... -</p>

Below the account information, there is a 'Report an Outage' section with a dropdown menu. The 'Report Online' option is selected. The 'Report an Outage Online' form is displayed, showing the following information:

Report an Outage Online

To report a gas emergency or a downed or sparking power line, please call 1-800-841-4141.

Outage Information

Outage Status: We are not aware of an outage in your area. If you are without service and your home has circuit breakers, turn your circuit breakers off then on again. If your home has a fuse box, check your fuses to ensure they are in good working condition. If this does not resolve the issue, please report an outage. Note: If you reported an outage within the past 15 minutes, it may not yet be reflected on this site.

Account Number: 9053397013
Address: 5800 SPRINGFIELD AVE, HOUSE PHILADELPHIA PA 19143

Outage Issue:

My lights are out My lights are partially out Dim or Flickering lights

Contact Phone Number:

(999) 999-9999 ext:

Confirmation

Want to stay up-to-date on your outage status and estimated restoration time? Click [here](#) to set up your notification preferences.

Customer information will pre-fill when they are signed into their My Account, on all pages such as Start, Stop and Transfer Service.

The screenshot shows the PECO website interface with the 'Forgot Username' page. An 'Account Lookup Tool' popup is displayed over the page. The popup contains the following information:

Account Lookup Tool

Last 4 Digits of Your Social Security Number or Business Tax ID: *

Phone Number: *

The background page shows the 'Forgot Username' form with the following information:

Forgot Username

Account Validation

Phone Number: *

Account Number: *

Can't remember your account number?
Try the [Account Lookup Tool](#)

If customers forget their My Account Username or Password there is a Self – Service Account Lookup tool

Web Release 2: New Features to Automate Processing

The screenshot displays the Pepco website interface. At the top, the Pepco logo is on the left, and navigation links for 'Outage', 'Pay Bill', 'Moving', and 'Contact Us' are on the right. A search bar and a 'Sign In' button are also present. Below the navigation is a horizontal menu with categories: 'My Account', 'Outages', 'Ways to Save', 'Smart Energy', and 'Safety & Community'. The 'My Account' section shows details for 'GLOBAL REVIVAL MISSIONS' with account number 9053397013, status 'Active', and address '5800 SPRINGFIELD AV HOUSE PHILADELPHIA, PA 19143'. The 'Outages' section shows payment information: 'Last Payment: \$179.00', 'Received: 12/06/2017', 'Current Bill: 12/15/2017', 'Due Date: 01/08/2018*', and 'Total Amount Due: \$179.00'. The 'Smart Energy' section shows a 'Past Due Amount: \$179.00' and a 'DUE IMMEDIATELY' warning. The 'Safety & Community' section has a 'Link An Account' button and an 'I want to...' dropdown.

The main content area is titled 'Report an Outage Online'. It includes a sidebar with options: 'Report an Outage', 'Report Online', 'Report on Mobile', 'Report a Street Light Outage', 'Current Outages', and 'Storm Center'. The 'Report Online' option is selected. The main content area contains the following text:

Home > Outages: Report an Outage > Report Online

Report an Outage Online

To report a gas emergency or a downed or sparking power line, please call 1-800-841-4141.

Outage Information

Outage Status: We are not aware of an outage in your area. If you are without service and your home has circuit breakers, turn your circuit breakers off then on again. If your home has a fuse box, check your fuses to ensure they are in good working condition. If this does not resolve the issue, please report an outage. Note: If you reported an outage within the past 15 minutes, it may not yet be reflected on this site.

Account Number: 9053397013
Address: 5800 SPRINGFIELD AVE, HOUSE PHILADELPHIA PA 19143

Outage Issue:

My lights are out My lights are partially out Dim or Flickering lights

Contact Phone Number:

(999) 999-9999 ext:

Confirmation

i Want to stay up-to-date on your outage status and estimated restoration time? Click [here](#) to set up your notification preferences.

Start, Stop and Transfer Forms will be automated directly into system from online tools

Customer Notifications

Pepco is offering new alerts and notifications that customers can sign up for online or through the Call Center. Our customers can decide which notices they would like to receive and how they would like them delivered – by text, email, or phone.

Release 1 – Deployed April 2018

- New My Account screen for customers to sign up
- Streamlined screens for CSRs to set notices for customers
- Notifications available:
 - Payment Reminders
 - Budget Billing
 - Severe Weather Alerts
 - Updates & General News

Release 2 – Q4 2018

- Additional Notifications available:
 - Bill is ready
 - Outage Alerts
 - High usage alerts: usage is higher than same time period a year ago
 - Weekly email with usage
- Enrollment in Notifications via IVR
 - IVR Transaction Confirmation Text Messages



An Exelon Company

My Account Preference Selection



The navigation menu is a green vertical bar on the left side of the page. At the top is the PEPCO logo and the text "An Exelon Company". Below this are twelve icons arranged in a 4x3 grid, each with a corresponding label: a house icon for "MY ACCOUNT SELECTION", a laptop icon for "HOME", a bill icon for "VIEW & PAY BILL", an envelope icon for "PAPERLESS EBILL", a bar chart icon for "ENERGY USE & BILL DATA", a thermostat icon for "PROGRAM YOUR THERMOSTAT", a line graph icon for "PLC VALUES", a wrench icon for "MANAGE MY PROFILE", a bell icon for "MY ALERTS & NOTIFICATIONS", a clipboard icon for "REQUESTED WORK", a sun icon for "NET METERING REQUESTS", and a power button icon for "LOG OFF".

MY ALERTS & NOTIFICATIONS

EMAIL ADDRESS

WALTER.STEFY@PEPCOHOLDINGS.COM

[EDIT](#)

PHONE NUMBERS

302-283-5855

[EDIT](#)

OUTAGE

+ Severe Weather Alerts 0 delivery method selected OFF

PAYMENT

+ Payment Reminder 0 delivery method selected OFF

Energy Saving Tips

0 delivery method selected OFF

NEWS

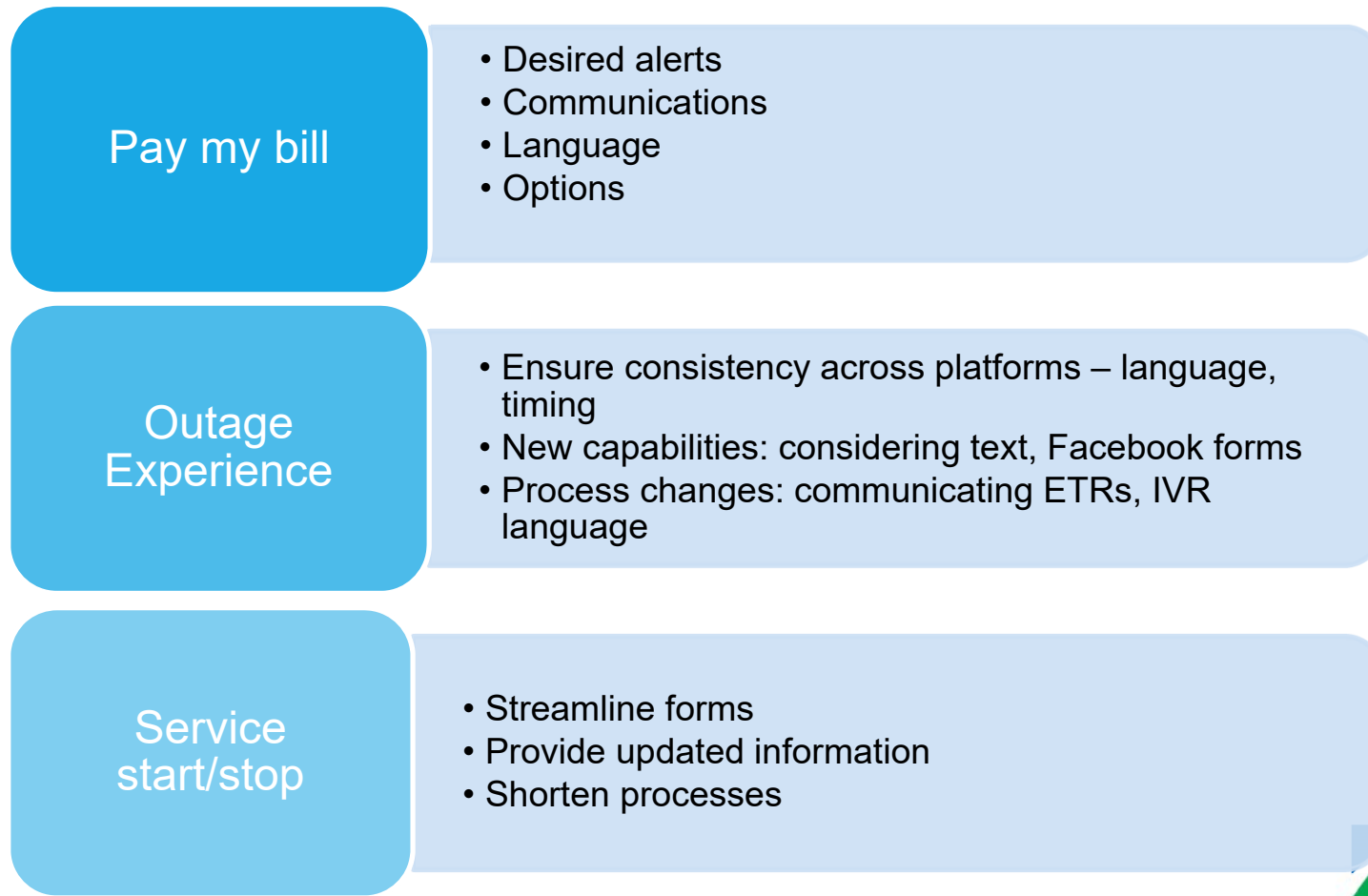
+ Updates & General News 0 delivery method selected OFF



An Exelon Company

Customer Journey Teams

- Cross functional teams are working on process changes, technology enhancements and new capabilities



Benning Area Reliability Plan (BARP)

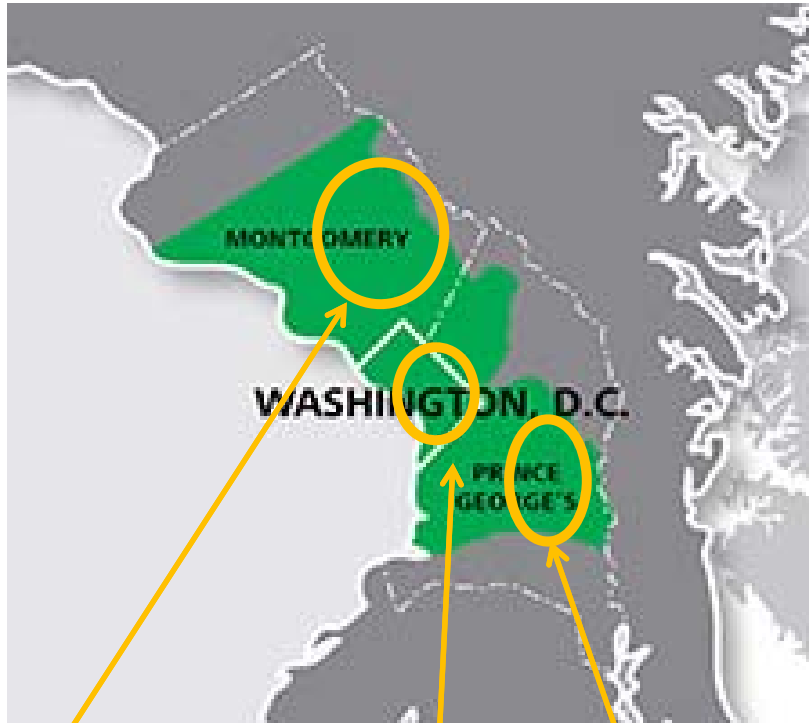
Area Plan Background

- Originated in 2016
- Intent was to look at worst performing “areas”
 - Data-driven: identify worst performing substations at a total CI count for all feeders out of that substation.
 - Identify funding – surplus of dollars from Merger allowed a funding source for large budget projects with focus on reliability
- System-driven solution:
 - ACR saturation & ASR schemes to reduce customer exposure to < 500 customers
 - Feeder reconfigurations / extensions
 - Upgrade aging infrastructure
 - Trip Savers, reconductoring, pole replacements, etc.
- “Area Plan” moniker also looked at adjacent substations, tie opportunities, etc. for wholistic look at area.



An Exelon Company

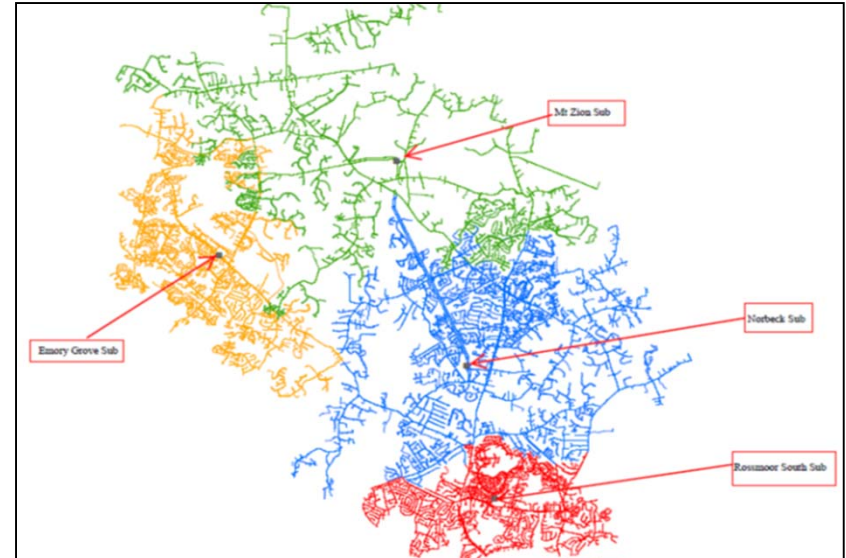
Area Plan Approach



- Norbeck Plan
 - Montgomery County
 - 4 substations, 40 feeders
- Benning Plan
 - Washington, DC
 - 1 substation, 9 feeders
- Crain Highway Plan
 - Prince George's County
 - 3 substations, 22 feeders
- 12th & Irving Plan
 - Washington, DC
 - 1 substations, 15 feeders

- Areas selected that had a high impact on system SAIFI
- Incremental benefits in 2017 and 2018
- Full benefits realized by 2020, when the plans are complete and full distribution automation is implemented

Norbeck:



An Exelon Company

Area Plan Background

1/2014 - 8/2016	Total CI	Total CMI	# Feeder Lockouts
Pepco-DC	331,185	35,532,418	300
Benning A23013 7	71,660	9,053,194	68
Ft Slocum 190	38,186	2,326,916	28
12th Irving 133	37,765	3,789,574	31
Alabama Ave 136	23,713	1,755,596	12
Florida Ave 10	19,216	4,176,303	9
NRL 168	18,473	798,000	15
Anacostia13 8	17,661	1,492,485	34
Van Ness 129	14,693	501,771	16
Walker Mill 15	10,347	640,871	14
Takoma13 27	9,108	1,104,157	11
St Barnabas 59	8,636	552,728	5
Buzzard B13	7,102	702,071	8
New Jersey 161	6,309	985,490	7
Little Falls 77	6,246	403,430	6
Champlain 25	4,825	857,423	1
O Street 2	4,179	4,078,704	1
Harrison13 38	3,571	179,861	2
Suitland 134	3,316	152,534	2
Beech Road 159	2,928	216,386	2
Ft Chaplin 70	2,553	142,362	2
No Capitol 40	2,459	88,555	3
G Street 28	2,182	332,370	9
Chesapeake 181	2,172	39,272	1



An Exelon Company

Area Plan Budgets

Project	State	2017 Budget (\$)	2017 Actuals (\$)	2018 Budget (\$)	2019 Budget (\$)	Total (\$)
Benning Sub Area Plan	DC	\$ 1,750,000	\$ 524,982	\$ 5,250,000	\$ 10,500,000	\$ 16,274,982
12 th & Irving Area Plan	MD	\$ 1,000,000	\$ 332,152	\$ 3,000,000	<i>Currently being evaluated based upon recent reliability performance</i>	\$ 3,332,152
						\$ 19,607,134



An Exelon Company

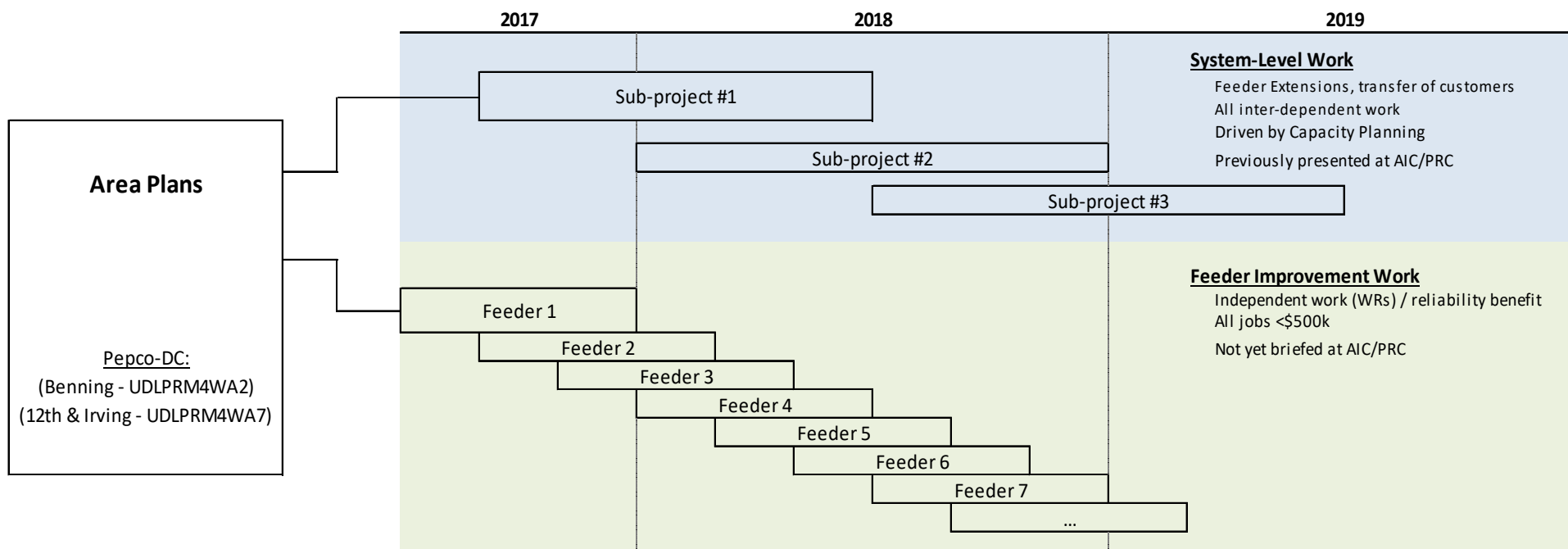
Crain Highway, Norbeck, Benning Area Plans

- **3-year plan which includes:**
- **System Level Reconfiguration :**
 - Maximize the number of feeders from each substation to reduce the customer count on each feeder
 - Reconfigure circuits to minimize exposure due to double circuit pole lines and reconfigure feeders for optimal reliability
 - Upgrade associated substations to fully support distribution automation
 - Recloser saturation/distribution automation scheme installation and upgrade
- **Substation Remediation:**
 - Perform assessment of substation configuration and address any gaps
 - Ensure condition of equipment is adequate
 - Ensure wildlife protection is installed and adequate
- **Individual Feeder Assessment and Remediation :**
 - Installation of single phase reclosing devices (TripSavers) on lateral taps
 - Accelerated vegetation management on plan feeders and spot trimming of trouble areas
 - Fuse coordination and updated fusing based on feeder loading
 - Conversion of armless construction to standard crossarm construction
 - Condition based Infrastructure renewal (transformers, crossarms, etc)



An Exelon Company

Benning Area Plan Implementation



Methodology:

- Area Plan projects identified as all-encompassing solution for pockets of chronic distribution reliability concerns.
- Large dollar projects spread over 2-3 year period.

1) Capacity Planning-driven project solution to:

- Upgrade aging/outdated infrastructure
- Install reclosers to minimize single outage customer impact and move customers to balance feeder customer counts.
- Help optimize ASR schemes
- Accelerated tree trimming

2) Feeder-level Improvement work:

- Ranked and prioritized based upon reliability performance over last three (3) years; addressed in order of worst performance.
- Feeders are worked in zones out from the substation beginning with getaway sections (largest risk)
- Misc. improvement work: reconductoring, installing fuses/reclosers, PILC replacement, capitalized tree trimming, etc.
- Coordination with recloser implementation program so as not to duplicate efforts.

System-level Improvement Work

Benning Area Plan – System-level Reconfiguration #1

Approval Sought

- Phase 3 (Construction) approval in the amount of **\$3M** to construct the extension of feeder 15711 out of Benning substation to redistribute customers from feeder 14717 and 15705 in order to reduce customer counts on these feeders.
 - **Total Cost \$3M (All Capital)**
 - Direct Costs: \$2.3M (including 10% in contingency)
 - Line of Business: Distribution (System Performance / Reliability)

Project Summary

- Improve overall system reliability for Pepco DC (SAIFI and SAIDI) by:
 - Extend one feeder out of Benning substation
 - Use Pre-Assembled Aerial cable for feeder 14717
 - Install automation devices on these feeders (charged under Area Plan) – 3 Normally Closed, 1 Normally Open
 - Using existing UG switch to bring 15711 out of station and use existing 5” PVC conduit under 295
 - 15711 already exists as a backup feeder and currently only serves internal Benning substation facilities, therefore only minor Substation and System Protection (charged to relay/protection project number) work required
 - Redistribute customers from feeders 14717, 15705, and 15711 thereby reducing the number of customers on each feeder to reduce the number of customers impacted
- Reprogram/create ASR schemes for 14717, 15705, 15711 to improve sectionalization capabilities
- Projected In Service Date of Q3 2018

Purpose / Justification

- This project is part of a Benning Area plan which will improve and support Pepco-DC SAIFI reliability merger commitments.
- This project reduces the customer exposure on the affected feeders, and enables more effective DA scheme operations.
- Benning Substation:
 - Worst reliability from a total CI perspective, 2014-2016; 2nd highest had only 53% of CI from Benning
 - Priority Feeders: 1 (2018), 3 (2017), 4 (2016), 1 (2015)



An Exelon Company

Benning Area Plan – System-level Reconfiguration #2

Approval Sought

- Requesting Phase 2 approval in the amount of \$460k to design the extension of feeder 15247 out of Walker Mill substation to redistribute customers from feeder 15706 and 15707 in order to reduce customer counts on these feeders. Total estimated project cost is \$2.1M (\$1.64M Direct and \$460k Design/Engn).
 - **Total Cost \$2.1M (All Capital)**
 - Direct Costs: \$1.64M (including 25%)
 - Design/Engineering: \$460k
 - Line of Business: Distribution (System Performance / Reliability)

Project Summary

- Improve overall system reliability for Pepco DC (SAIFI and SAIDI) by:
 - Extend one feeder out of Walker Mill substation
 - Use Pre-Assembled Aerial cable for feeder 15247
 - Install automation devices on new feeder at transition points – 3 Normally Open, 1 Normally Closed
 - Install NC ACR on Feeder 15247 at transition from PAC to Open Wire where feeder picks up load
 - Install 3 NO ACRs at tie with feeders 15706, 15709, 15130, thus moving customers from 15706 to 15247
 - Redistribute customers from feeders 15706, 15707, and 15247 thereby reducing the number of customers on each feeder to reduce the number of customers impacted
- Reprogram/create ASR schemes for 15706, 15707, 15247 to improve sectionalization capabilities
- Projected In Service Date of Q4 2018

Strategic Fit / Business Case

- This project is part of a Benning Area plan which will improve and support Pepco-DC SAIFI reliability merger commitments.
- This project reduces the customer exposure on the affected feeders, and enables more effective DA scheme operations.
- Benning Substation:
 - Worst reliability from a total CI perspective, 2014-2017 (137,465 CI); 2nd highest was 86,124 CI (Ft. Slocum)
 - Priority Feeders: 1 (2018), 3 (2017), 4 (2016), 1 (2015)



An Exelon Company

Benning Area Plan – System-level Reconfiguration #3 – Prelim. Plan

Project Summary

- Improve overall system reliability for Pepco DC (SAIFI and SAIDI) by:
 - Extend feeder 14806 out of Benning substation (currently used to serve internal facilities)
 - Redistribute customers from feeders 15709, 15710, and 14806 thereby reducing the number of customers on each feeder to reduce the number of customers impacted.
 - Install automation devices on associated feeders.
 - Reprogram/create ASR schemes for 14717, 15705, 15711 to improve sectionalization capabilities
 - Projected In Service Date of Q3 2018

Timeline

- Project is currently slated for 2019.
- Design/Engineering for this projected expected to start late 2018 / Q1 2019
- Expected ISD – Q4 2019
- Overall Benning Area Plan work (both System-level reconfigurations and feeder improvement work) will be completed by the end of 2019



An Exelon Company

Milestones

- Milestones will be updated throughout the execution of the program

	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	a	e	a	p	a	u	u	u	e	c	o	e	a	e	a	p	a	u	u	u	e	c	o	e	a	e	a	p	a	u	u	u	e	c	o	e
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	7	7	7	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	
Pepco-DC Reliability																																				
Benning Area Plan	Plans Designed				TBD reclosers installed, inspections complete, VM complete, and maintenance work complete								Distribution automation schemes activated, feeder reconfiguration complete								Feeder extensions complete, reconductoring complete, full distribution automation complete															



An Exelon Company

Feeder-level Improvement Work

Pepco-MD Feeder Inspection Criteria

- Review and record outage history with all breaker and ACR trips noted on a map.
- Inspect all main trunks.
- Record existing primary, secondary, neutral conductor size and type.
- Record feeder configuration and construction type: Single or double feeder armless, Crossarm single feeder or double feeder over build, PAC, Spacer cable.
- Record any sections of getaway stretch (5 to 10 spans) with double armless construction that could be expressed with PAC and other feeders converted to crossarm.
- Record any areas with tree line or canopy from breaker to first device (ACR in most cases).
- Replace all existing 4/0 ACSR bare wire with 477 ACSR or Tree wire pending any tree line or tree canopy.
- Replace all existing 477 ACSR bare wire with Tree wire in tree line or canopy areas – review for heavier construction if necessary.
- Replace all copper with 477 ACSR bare wire with Tree wire where there is armless two-over-one construction. Replacement consideration is based on outage data plus span length and sag.
- Replace all existing undersized neutral with 4/0 ACSR bare wire and open wire buss with triplex where applicable.



An Exelon Company

Project Benefits (feeder-level)

Area Plan	Benefits (Quantifiable & Non-quantifiable)
Overall:	<ul style="list-style-type: none"> • Improve breaker zone / getaway sections of distribution feeders from poorest performing Pepco substations • Improve SAIFI with overall Area Plan approach by reducing the number of breaker outages (based on average of last 4 years, 2014-2017):
Benning	Pepco: ~ 0.01 Pepco-DC: ~ 0.02

Overall Area Plan potential benefits:

Substation Breaker outage contribution to SAIFI for selected remediated feeders

		2014	2015	2016	2017	Average (2014-2017)
Benning	Contribution to Pepco	0.007	0.006	0.009	0.003	0.006
	Contribution to Pepco-DC	0.022	0.018	0.027	0.009	0.019

Benning Area Plan – Projected Benefits

Area Plan	Benefits (System-level)
Overall:	<ul style="list-style-type: none"> • Improve sectionalization on these feeders, thereby reducing number of customers impacted by outage events • Improve DA restoration scheme effectiveness through increased capacity on the affected feeders • Improve Customer Satisfaction through reduced customer interruptions
Benning	<ul style="list-style-type: none"> • Improve PEPCO DC SAIFI by 0.05 -- 0.06 (based on 2016 data) <i>Savings based on Benning 14717, 15705</i>

Area Plan	Benefits (Feeder-level)
Overall:	<ul style="list-style-type: none"> • Improve breaker zone / getaway sections of distribution feeders from poorest performing Pepco substations • Improve SAIFI with overall Area Plan approach by reducing the number of breaker outages (based on average of last 4 years, 2014-2017):
Benning	<p>Pepco: ~ 0.01 Pepco-DC: ~ 0.02</p>

Overall Area Plan potential benefits:

Substation Breaker outage contribution to SAIFI for selected remediated feeders

		2014	2015	2016	2017	Average (2014-2017)
Benning	Contribution to Pepco	0.007	0.006	0.009	0.003	0.006
	Contribution to Pepco-DC	0.022	0.018	0.027	0.009	0.019



An Exelon Company

Area Plan – Next Steps

- System – level reconfigurations
- Feeder – level work
- Opportunities to align 2019-2023 budget with funds into additional Area Plans or other critical reliability work?
 - Data-driven decision
 - Prioritization of programs if its determined existing Area Plans funding is deemed not necessary (2019 target = remaining system-level work; feeder laterals
 - “Bang for the buck” (ex. \$/ACI)
- Next series of potential Area Plans (Pepco-DC):
 - Buzzard Point (half-loops), New Jersey Ave, Ft. Lincoln, Alabama Ave

Appendix

12th & Irving Area Plan – System-level

Approval Sought

- Requesting Phase 3 approval in the amount of **\$1.6M** to design the extension of feeder 14003 out of 12th & Irving substation to redistribute customers from feeder 14014 and 14016 in order to reduce customer counts on these feeders.
 - **Total Cost \$1.6M (All Capital)**
 - Direct Costs: \$1.26M (includes 10% or \$120k in contingency)
 - Indirect Costs (Design/Engineering): \$340k
 - Actual project spend to date for Phases 1 and 2 are \$0
 - Line of Business: Distribution
- The requested funding is included in the current LRP.

Project Summary

- Improve overall system reliability for Pepco DC (SAIFI and SAIDI) by:
 - Extend one feeder out of 12th & Irving substation
 - Run 800' cable in conduit from 12th & Irving sub to getaway pole
 - Use Pre-Assembled Aerial cable to express feeder 14016 down Rhode Island Ave
 - Reconfigure laterals on feeders along Rhode Island Ave – Feeder 14014 (North); Feeder 14003 (South)
 - Install automation devices on these feeders (charged under Area Plan) – 2 Normally Closed, 2 Normally Open
 - Redistribute customers on feeders 14014, 14016, and 14003 thereby reducing the number of customers on each feeder to reduce the number of customers impacted
- Reprogram/create ASR schemes for 14014, 14016, 14003 to improve sectionalization capabilities
- Projected In Service Date: End of Q2 2018

Strategic Fit / Business Case

Purpose / Justification:

- This project is part of a 12th & Irving Area plan which will improve and support Pepco-DC SAIFI reliability merger commitments.
- This project reduces the customer exposure on the affected feeders, and enables more effective DA scheme operations.
- **12th & Irving Substation:**
 - 3rd worst reliability from a total CI perspective, 2014-2016 (37,765 CI)
 - Priority Feeders: 1 (2018), 2 (2017), 1 (2016), 3 (2015)



An Exelon Company

Area Plan – CEMI overlap (Jan – Oct 2017)

Benning Area Plan CEMI YTD (Jan-Oct 2017)

(Unique customers experiencing multiple interruptions)

Sub	Feeder	3	4	5	6	7	8
Benning	14717	2,444	2,442	1,152	181	146	135
Benning	15709	124	50	0	0	0	0
Benning	15705	83	32	0	0	0	0
Benning	15701	1	0	0	0	0	0
Benning	14713	0	0	0	0	0	0
Benning	15703	0	0	0	0	0	0
Benning	15710	0	0	0	0	0	0
Benning	15707	0	0	0	0	0	0
Benning	15702	0	0	0	0	0	0
Benning	15708	0	0	0	0	0	0
Benning	15711	0	0	0	0	0	0
Benning	14535	0	0	0	0	0	0
Benning	14055	0	0	0	0	0	0
Benning	15706	0	0	0	0	0	0
Benning	14712	0	0	0	0	0	0
Benning	14058	0	0	0	0	0	0
Benning	14538	0	0	0	0	0	0
Benning	14715	0	0	0	0	0	0
	Total:	2,652	2,524	1,152	181	146	135



An Exelon Company

Reliability Performance

Pepco District of Columbia Reliability Performance

Year-End Projections as of May 30, 2018:

- SAIFI - .59
- SAIDI - 68 Minutes

Order No. 19119 Discussion



CERTIFICATE OF SERVICE

I hereby certify that a copy of the public version of the Minutes for the May 31, 2018 Productivity Improvement Working Group Meeting was served this 12th day of June 2018 on all parties in Formal Case No. 766 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 the People's Counsel
1133 15th Street, NW
Suite 500
Washington, DC 20005
smfrye@opc-dc.gov

Bernice K. McIntyre, Esq.
Washington Gas Light Company
101 Constitution Avenue, NW
Washington, DC 20080
bmcintyre@washgas.com

Leroy Hall
1018 Rhode Island Avenue, NW
Washington, DC 20018
lema@rcn.com

Christopher Lipscombe, Esq.
General Counsel
Public Service Commission Of the
District of Columbia
1325 G Street N.W. Suite 800
Washington, DC 20005
clipscombe@psc.dc.gov

Cathy Thurston-Seignious, Esq.
Washington Gas Light Company
101 Constitution Avenue, NW
Washington, DC 20080
cthurston-seignious@washgas.com

Daniel Durbak
Siemens Power Transmission & Distribution, Inc
400 State Street
PO Box 1058
Schenectady, NY 12301
Daniel.durbak@siemens.com



Dennis P. Jamouneau