



An Exelon Company

# **PECO – Lessons Learned June 2020 Derecho Event Preliminary Report**

**July, 2020**

On the afternoon of 6/3/20, the PECO Territory was impacted by an extreme Derecho Event, impacting over 450,000 customers. With minimal warning, the organization responded quickly, bringing on nearly 4000 additional distribution, vegetation, and other support resources.

The Derecho wound up being the 8<sup>th</sup> largest storm in our history, based on customer count.

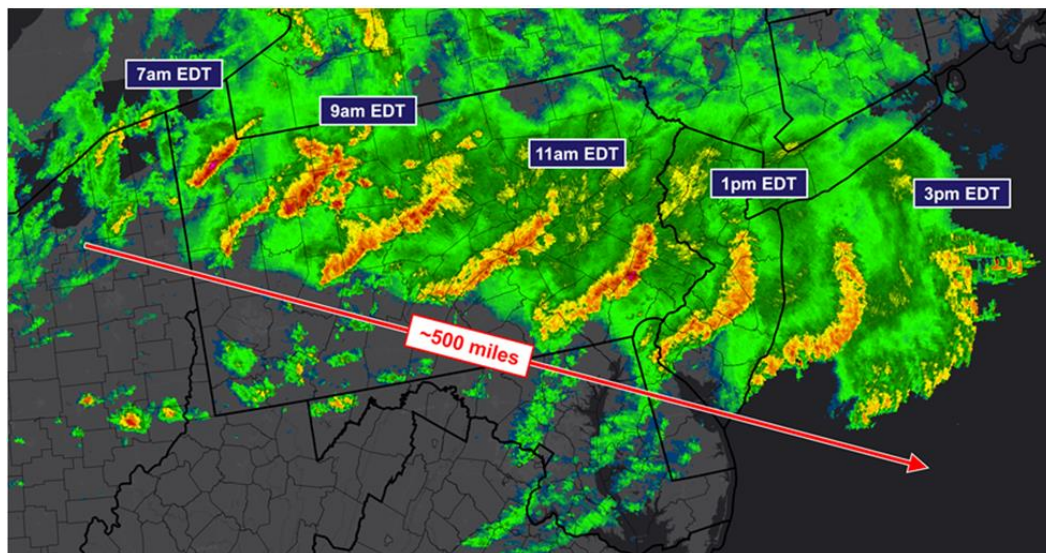
After the event, PECO Emergency Preparedness initiated an extensive Lessons Learned effort. PECO EP conducted numerous organizational and storm role specific calls to elicit the maximum feedback and opportunities to improve.

Organizations and Storm Roles met with included, Storm Leadership (SICs and OPS Section Chiefs), Field Personnel, Government and Large Customer Services, Supply, Primary Operations, Secondary Operations, Operations Control Center, Regional Storm Center roles, Feeder SPOC, and External Crew Mobilization

In total, over 130 Lessons Learned/Suggestions have been collected thus far.

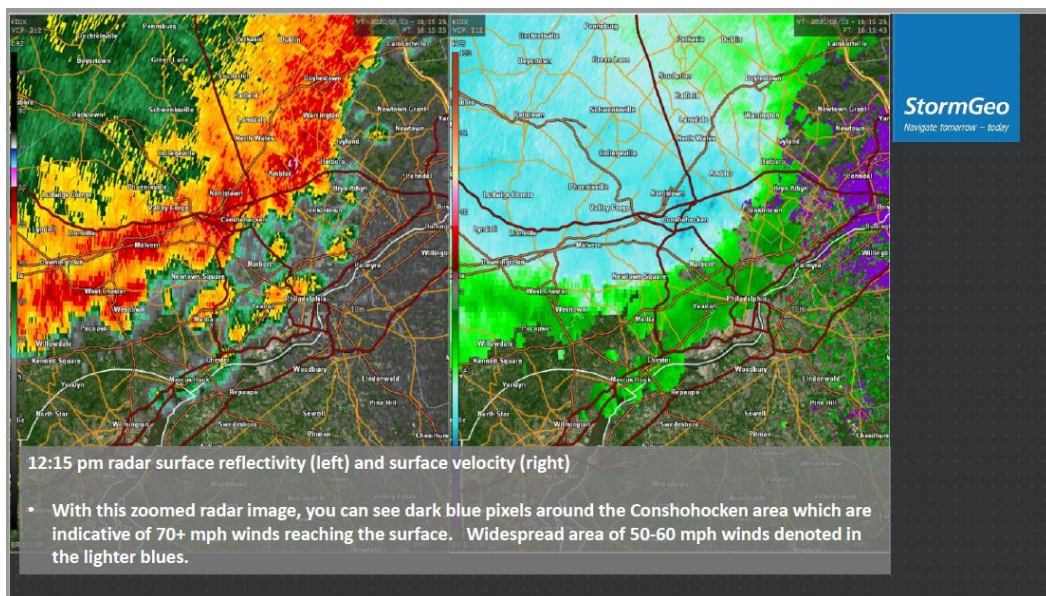
Just to make it interesting, PECO was subsequently impacted by Hurricane Isaias (8/4, over 400,000 impacted customers, our #10 storm - less than two months later), so we're blending those Lessons Learned into our plan as well.

This presentation is focused on the unique impacts of the June Derecho



Event was amazingly fast:

- Disturbance in NW PA between 0700 and 0900
- Traveled across PA, hitting the PECO territory about 1200 – and was gone before 1300!
- Much of the state did not see extensive damage, due to high-velocity winds being higher in the atmosphere
- However when the storm approached PECO, the winds descended to ground level, resulting in one of the worst storms in our history



- Widespread winds in excess of 60 mph, isolated gusts approaching 80mph – Trees in full-leaf
- Over 450,000 customers impacted, despite the storm lasting less than an hour – the #8 Storm in our history, based on customer outages
- Over 3700 Distribution Mechanics brought in from across the country – about the same as the Riley-Quinn Nor Easterns of 2018 – more than for Superstorm Sandy
- CAIDI was 1072 minutes, one of our best Extreme Storm CAIDI results
- Simultaneously dealt with COVID issues and protests in Philadelphia
- Comparable Storm Stats – Lots of damage for about 45 minutes!
  - Poles: >500 (Similar to Ice-Storm Nika)
  - Fuses: >13,800 (Similar to Riley-Quinn)
  - Crossarms: >2860 (Similar to Sandy)
  - Transformers: >310 (Similar to Riley-Quinn)
  - Miles of Wire: 97 (Similar to Ice-Storm Nika)

## What Went Well:

### Storm Support Resources

- The June Derecho event resulted in the second-most external resources in the history of PECO
- 3700 Distribution and Support FTEs from 26 states and Canada supported the effort
- Nearly 300 additional Veg FTEs
- Only Ice Storm Nika in 2014 was a larger mobilization
- Essentially all 3700 Distribution resources were on-system and ready to work Friday, less than 1-1/2 days after the Wednesday afternoon impact

### COVID Response

- Developed and implemented Mutual Assistance Guidelines minimize the risk of exposure
  - Many Back-Office Storm Roles continued to work remotely (some were brought to PECO facilities due to the extreme nature of the storm) to minimize risk of exposure
  - Single Hotel Room Occupancy for external resources
  - Packaged meals (no buffets)
  - Segregation of external crews from PECO and other crews to the extent possible
  - Avoid comingling of crews/personnel while on-boarding and loading materials
  - Portable restrooms crew receiving areas
  - Enforcing use of PPE, social distancing, and following state and CDC guidelines
- Very positive feedback from external personnel regarding how PECO addressed the COVID situation

## What Went Well:

**Two items that went particularly well (for the most part!) were implemented to deal with COVID and minimize exposure risk, which went a bit beyond the ESCC recommendations that we're all using:**

### **1. Remote Dispatching**

- This storm exercised our “remote dispatching” capability to the greatest level yet.
- Developed a few years ago to allow PECO Dispatchers to dispatch work from remote storm centers instead of being limited to hard-wired OMS terminals, this functionality was greatly expanded to allow for Dispatchers to work from home, as well as storm centers.
- This greatly increased the number of Dispatchers we were able to activate beyond any prior storm, increasing the efficiency of the restoration crews.

### **2. Remote 911 Center Support**

- In order to provide the usual level of support to the County 911 Centers, a remote process was developed and communicated prior to the storm.
- 911 Center Liaisons were provided to the 911 Center, and worked from home. Special email mailboxes and email templates were developed, and contact information was exchanged to ensure timely and adequate communications.
- Feedback from the 911 Centers has been positive, despite some initial concerns with the concept.



# Opportunities (highlights)

Category	Opportunity	Fix
<b>ERO/Notifications</b>	Confusion about working from home, versus reporting to a site – due to the extent of the storm, some roles that were planned to work from home due to the pandemic were required to report to work locations, leading to confusion/issues	Reinforce expectations that while many storm roles are able to be executed successfully from home, extreme impact storms may require some of these roles to report to work locations - at the discretion of the SIC
<b>Mutual Assistance/Foreign Crews</b>	A handful of work-quality issues were identified with some contractor work.	Reinforce with contractors and aggregators the need for them improve personnel vetting and oversight of their own crews. Considering adding more oversight by Company Field Resources, as well
<b>IT</b>	Several systems did not function as expected during the storm.	Prior Storm Readiness Testing performed by IT against “extreme storm” scenarios was confirmed, however the “rate” of the inputs caused by the Derecho was not anticipated – Future Testing being developed to address not only extreme volume, but extreme “rates of input” as well
<b>Facilities</b>	Alternate facilities (needed due to protests) for some storm roles working out of our Main Offices were found not to be adequate for intended purposes	Processes being evaluated to allow these roles to be worked from home (reduce COVID exposure and create facility flexibility), investigate/outfit alternate facilities

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<b>Crew Dispatch</b>	Ability for crews to contact OCC dispatchers during busy periods	<ol style="list-style-type: none"><li>1. Evaluate opportunities to increase OCC capacity – phone assistants, former dispatcher/operators, overall staffing, limit crews assigned to OCC</li><li>2. Expand use of “Feeder SPOC” to transfer Operational Control of feeders to Field Personnel</li></ol>
<b>ETRs</b>	Feedback from customers indicate “Too Many ETRs”, “Changing ETRs”, “Late ETRs”...	ETR initiative to benchmark industry practices and review communications, strategies, practices, etc. to improve ETRs and their communication to customers
<b>Communications (Internal and External)</b>	The volume of “inquiries” were exceptionally high, likely driven by state “lock-down” and the number of people at home during the storm. Inquiry volume made it difficult to research each case and provide timely feedback.	Storm roles designed to research and provide this information were over-burdened. Evaluate escalation/prioritization processes, consider additional staffing for these roles, at least for extreme storms