



An Exelon Company

Special Electric Reliability Forum on Hurricane Sandy

**Pennsylvania Public Utility
Commission**

January 10, 2013

Overview of Hurricane Sandy

- ✓ Hurricane Sandy caused widespread damage along the East Coast:
 - Overall, more than 9 million customers lost power during the event
 - More than 850,000 PECO customers lost power during Sandy
 - Sandy was the most damaging storm in company history
- ✓ Sandy caused over 3,500 primary events on the system, 90% more than Hurricane Irene.
- ✓ More than 4,700 employees and contractors (of which 3,700 were working in the field) worked around-the-clock to repair unprecedented damage and restore service to customers.
- ✓ Workers from utilities as far away as Louisiana, Mississippi, Florida, Tennessee, Kentucky and our sister utilities, Chicago-based ComEd and Baltimore-based BGE participated in this effort.
- ✓ Safety is PECO's highest priority, and we worked closely with our local emergency responders and communicated with our customers regarding safety through multiple communications channels.
- ✓ Coordination between PECO and governmental entities is essential to our emergency response strategy. We appreciate the support we received from all levels of government throughout this extremely challenging event.



Lessons Learned from Irene

✓ Repeating Successes

- **Utilization of Established Hurricane Plan**
 - Utilized a 200 point plan updated as a result of Lessons Learned from Hurricane Irene
 - Assigned Leads various actions based on 200 point plan and followed to closure prior to storm
- **Advanced Planning**
 - Activated EOC (Emergency Operation Center) on Thursday morning (10/25) and remained open through 11/16 doing system restoration and recovery work
 - Began requesting external support and assisted with arrangements, accommodations, as well as travel. Set up schedules for extended duration, etc
- **Staging of Crews**
 - Followed Sub Center model, identified, staffed and mobilized storm kits and material as well as provide accommodations
 - Crews were on the ground and ready to mobilize before the storm hit
- **Communications to Employees**
 - Media leads and communications leads double-staffed and followed protocol established during Irene.



Lessons Learned from Irene

✓ Addressing opportunities for Improvement

- Road Closures
 - Dedicated External and Operations Coordinators, and up to 8 field teams. PECO cleared 305 roads (~200% over Irene)
 - Used new system event codes to accelerate ID and dispatch
- Customer Communications Regarding Restorations
 - Use of outbound calls with storm preparation tips and information on how to contact PECO in the event of an outage
 - Proactive outbound calls to most impacted customers
 - Four On-Site Command Centers to provide face-to-face communications opportunities and information sheets for customers in most impacted areas
 - Launched website to provide customers with outage information on mobile devices
- Permitting for Foreign Crews
 - PECO coordinated with PEMA, PennDOT, the Governor's Office and the Turnpike Authorities, as well as officials in other states, to expedite the ability of crews to reach the PECO service territory and support restoration efforts



Outages and Restoration

- ✓ **Specific Issues Impacting Restoration**
 - Flooding
 - High winds resulting in down trees
 - Road closures
 - 40+ MPH winds that required crews to stand down for 5 hours at the peak of the storm
- ✓ ***Physical Damage to Distribution System**
 - Cross Arms – 2,875 (37%)
 - Fuses – 16,522 (31%)
 - Poles – 750 (141%)
 - Transformers – 390 (57%)
 - Wire and Cable – 141 miles (60%)
- ✓ **Responded to almost 2,600 police, fire and wire jobs and cleared 305 roads during the storm**
- ✓ **Polling locations**
 - Approximately 2,100 polling locations had to be verified to determine outage status
 - Numerous site visits were conducted to verify power

*All percentages indicate increase compared to Hurricane Irene



Communication and Outreach

- ✓ **Customers**
 - Direct communication through PECO's automated phone system
 - Web-based information through PECO's Storm Central and for customers with online accounts
 - Proactive calls to customers who experienced the most extended outages
 - Monitored outages for critical care customers
 - No volume issues with Twenty First Century Communications based on fixes post-Hurricane Irene
- ✓ **Media**
 - Conducted more than 770 media interviews to provide information related to storm preparation, outage, and restoration
- ✓ **Elected and Regulatory Officials**
 - Personal calls and outreach regarding storm impact
 - Continued email updates regarding outages and restoration
 - Conference calls with municipal officials
- ✓ **Local Officials and Emergency Responders**
 - Personal calls and outreach to affected municipalities regarding storm impact
 - Continued email updates and text messages regarding outage updates
- ✓ **Employees**
 - Regular updates to all employees from the emergency response organization regarding outages, restoration and employee safety.
- ✓ **Public official on-site briefings**
 - Governor Corbett, Mayor Nutter, PUC Chairman Powelson, PUC Commissioners Coleman and Gardner, U.S. Representatives Schwartz, Fitzpatrick and Meehan, St. Senator Rafferty, PEMA Director Cannon



Lessons Learned from Sandy – Preliminary

✓ **Successes:**

- Utility mutual assistance again played an essential role in ensuring our ability to respond to the event. PECO joined the South Eastern Exchange (“SEE”) after Irene
- The pinging capability of our AMI systems prevented approximately 6,100 truck rolls and accelerated our restoration efforts by 2 to 3 days
- The focused communications on safety were effective. News media also helped set customers’ expectations at realistic level
- Our sourcing strategy fully met our needs. No material issues

✓ **Opportunities for Improvement:**

- Expanding use of social media
- Reviewing policies for provision of Estimated Restoration Times (ERTs) during extreme events
- Further enhancing our Storm Center website
- Annual communications to help municipal and elected officials better understand restoration and ERT processes