

**Testimony before the Senate Veterans Affairs and Emergency Preparedness and  
Consumer Protection and Professional Licensure Committees  
Michael Innocenzo, PECO's Vice President for Distribution System Operation and  
Smart Grid/Smart Meter Project  
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Thank you Chairmen Baker, Solobay, Tomlinson and Boscola for the opportunity to testify at today's hearing on Hurricane Irene.

I am Mike Innocenzo, PECO's Vice President for Distribution System Operations and its Smart Grid/Smart Meter Project. During Hurricane Irene, I served in the role of Emergency Response Director, leading PECO's planning for, and response to, the storm and resulting outages.

Hurricane Irene was one of the worst storms in PECO's more than 100 year history. Looking back at company storm history since 1994, Hurricane Irene ranks as the third worst storm in terms of number of customer outages and the second worst in terms of number of primary sustained events. It was also the most expensive storm in our company's history with a price tag of approximately \$45 million.

The storm, the response it required by our company, and the cooperation received from our customers were unprecedented. PECO strived to meet these challenges through preparation, mobilization, response and restoration.

**Storm Preparations**

PECO started its planning and preparations for Hurricane Irene three days before the storm arrived with a pre-event strategy conference call with Emergency Response teams. The following day, we opened our Emergency Operations Center (EOC) to allow for dedicated staffing and focused planning on the storm. We took an "all hands on deck" approach to staffing – mobilizing for around the clock coverage with company crews and of the EOC and Customer Call Center.

In the days leading up to the storm, we also reached out for assistance and acquired more than 1,500 personnel that included resources from contractors, our sister utility Com Ed in Illinois, and additional utility resources through the Mid-Atlantic Mutual Assistance partnership to supplement company resources for restoration and tree trimming following the storm. These crews were in place in advance of the storm to assist the more than 2,500 PECO operations and support service employees. The assistance from Governor Tom Corbett and his administration – including the Pennsylvania Emergency Management Agency (PEMA) – was invaluable in securing the travel permits needed for some of these crews to come on system.

In addition to internal preparations, PECO conducted briefings and interviews with broadcast, print and online media outlets regarding our preparations for the storm and setting customer expectations about possible outage durations of up to one to two weeks.

These messages were echoed in briefings and communications with the Governor's office and administration, the Public Utility Commission, state legislator offices, municipal



officials and county governments in the days leading up to the storm. Particular attention was paid to the 911 centers in each county and emergency responders – ensuring coordinated preparations and PECO employee staffing at 911 centers before the storm hit.

### **Outages and Restoration**

Hurricane Irene entered PECO's service territory on the afternoon of Saturday, August 27, bringing with it 10 inches of heavy rain and more than 24 hours of sustained high winds with gusts up to 75 miles per hour. The hurricane caused considerable damage throughout our service territory in terms of flooding, downed trees and road closures. On Saturday evening, tornado warnings were issued for our area that forced us to have our crews stand down and suspend restoration efforts until Sunday.

The storm's high winds caused considerable damage to trees and aerial electric facilities. In the days following the storm, PECO made an unprecedented number of repairs to our system, including the replacement of 90 miles of wire and cable, more than 300 poles, and more than 275 transformers. Our crews also responded to more than 3,300 police, fire and wire jobs and opened more than 100 roads throughout the region. These repairs to our system and responses to emergency contacts were record numbers by far.

The damage from Hurricane Irene resulted in sustained power outages for almost one-third of our customers – more than 511,000 outages. Bucks, Chester and Delaware Counties were the hardest hit, with more than 70 percent of our outages occurring in those three counties.

Our strategy for addressing outages was to target restoration to any affected substations and perform any switching that was possible to re-route power to customers. We then worked down the remaining primary outage event list in descending order of the number of affected customers, while also prioritizing "critical care customers" – such as police and fire stations, hospitals, nursing homes and public water and sewer facilities.

We recognize that an outage of any duration can be an inconvenience for our customers, and that the multi-day outages caused by Hurricane Irene placed a particular strain on some of our customers. PECO crews and employees worked around the clock with contractors and other utility mutual assistance support to restore service safely and efficiently. We were able to restore service to 99 percent of affected customers – more than 505,000 customers – within 72 hours of their outages occurring.

The remaining 5,600 customer outages were part of some of the most difficult to restore events that occurred during the storm and required extensive work to clear trees and restore service. Many of those customers were restored over the following two and half days, with service being restored to the final customer affected by Hurricane Irene at 3 p.m. on Saturday, September 3.

### **Communication and Outreach**

In the days following the storm, PECO's emergency response organization coordinated regular outreach and communication to customers and various stakeholders, including



the media, state regulatory and elected officials, municipal and county officials and first responders, and our own employees.

We believe that customer communication before, during and after a storm event is critical. PECO communicates with our customers through a number of channels during storm events. A primary means for customers to receive communication is through our call center and the company's automated phone system. This system provides information on the overall status of the storm and restoration efforts through an up-front Interactive Voice Response – or IVR – message and allows customers to receive an estimated time of restoration for their outage.

Aside from the call center, PECO uses other tools for keeping our customers updated during emergency events. A branded section of our Web site called Storm Central provides updates on restoration and outage numbers by county. Customers with online accounts can access estimated restoration times through our customer Web site. For those expected to experience the most extended outages from the storm, PECO also made proactive calls to alert them to the anticipated outage duration so that they could make any necessary plans.

Another important vehicle for communicating with our customers and other stakeholders was the media. PECO conducted more than 500 media interviews with print, broadcast and online media outlets throughout the storm event, providing updated information on outages and our restoration process through these interviews and news releases.

PECO also maintained close contact with elected and regulatory officials through personal outreach and regular follow up communication. For example, in the first two days following the storm, phone calls were made to each PUC Commissioner's office, each state legislator in our service territory's Harrisburg and district offices and the district offices of Southeastern Pennsylvania members of Congress. This personal outreach was followed up by email communications to these stakeholders providing updates on our restoration efforts.

Special outreach was made to local governments in our service territory and the emergency responders in the local areas. PECO has a text alert system for municipalities that provides the number of overall and municipality-specific outages. These text message updates were provided several times a day during the event, and municipal and county stakeholders also received regular email updates on our restoration efforts.

Finally, PECO's communications effort emphasized continuous contact with our most valuable resource – our own employees. Providing those throughout our organization with regular email and broadcast voicemail updates from our emergency response organization ensured that they were fully aware of the extent of the storm and the restoration process, as well as providing a continual channel to emphasize employee safety.

## **Lessons Learned**

Following each emergency response event, PECO conducts a formal "lessons learned" to evaluate what elements of our planning and response worked well and others that need to be improved.

In our evaluation of Hurricane Irene, we identified strong performance in advance planning and preparations. We had a hurricane response plan in place that served us well as a guide for steps that we needed to take in advance of the storm to prepare our system, our crews and our employees. We also reviewed prior storm response lessons learned documents to help improve our response for Hurricane Irene.

Similarly, we were pleased with the advance preparations to reach out to contractors and mutual assistance networks to secure additional utility resources and to have those crews in place prior to the storm. These additional resources were invaluable in allowing us to hit the ground running with restorations once the storm had passed.

Communications with employees in advance of the storm regarding preparation activities and after the event on restoration efforts were also identified as a strength.

In looking at lessons learned from Hurricane Irene, one key area for improvement is the tracking and management of road closures. Hurricane Irene's damage left a record number of road closures in our region. We struggled at the start of the storm response to manage the number of closure reports coming into the EOC. Responding to these events requires balancing the demands of customer restoration efforts and road clearing work. We have a team at PECO working on formalizing the process for reporting and managing road closures during emergency events and are looking to dedicate a single point of contact within the EOC to manage this process in the future.

Another area for improvement is managing customer expectations for receiving estimated restoration information. Aside from the previously mentioned Twenty First Century IVR issue, the severity of the storm and its more than 24 hour duration raised issues for assessing damage from the storm and developing a restoration strategy, along with accompanying restoration times for customer outages. Customers experiencing an outage expect PECO to provide them with an estimated time for their power to be restored. In preparations for future storms of this severity, PECO will do a better job in its pre-storm event outreach to alert customers to the possibility of restoration information not being immediately available.

Finally, we are working to formalize our process for obtaining vehicle permits for out of state crews brought on system to support storm response. We were fortunate to have support from crews as far away as Florida and Michigan and the opportunity provided a learning experience about the permitting process for getting crews to travel across state lines and within the Commonwealth. Thanks to the support from the Governor's office and PEMA, we were able to navigate similar government offices in the states where the crews were traveling from to get the appropriate releases and permits needed. As this was a unique experience for PECO, we will be formalizing this process as part of our emergency response procedures in case a similar need arises in the future.

While we at PECO were pleased with our employees efforts at restoring over a half million customers within 72 hours of the outages occurring, we are also looking to continuously improve our processes to get our customers restored in an even more safe

and quicker pace. Thank you again for the opportunity to summarize PECO's storm preparations and response, and I would be happy to take any questions.