PECO Energy Company
2012 Summer Readiness Overview
June 5, 2012

Summer is upon us and PECO Energy Company is ready. PECO bases its readiness on its reliability enhancement programs, preventative maintenance programs, capacity planning, as well as its strong summer preparedness programs and procedures and the incorporation of 2011 severe weather events learnings.

1. PECO's Keys to Success

a. Reliability Enhancement Programs

PECO has several reliability enhancement programs that are significant contributors to PECO's successful performance. Under the Top Priority Circuits Program, PECO analyzes at least its 5% worst performing circuits each year and takes steps to improve reliability, including installing reclosers for distribution automation, identifying and repairing problems via visual and thermographic inspections, increasing vegetation management activities, installing and upgrading fuses, and replacing cable and other equipment.

Through Distribution Automation, PECO installed nearly 300 3-phase reclosers in automated loop schemes in the last three years, bringing the total to nearly 1,500 reclosers. These reclosers automatically reduce the numbers of customers affected by outages and restore service to sections of circuits where repairs are not needed. Reclosers were primarily installed in Chester, Delaware, Montgomery and Bucks counties, with selected circuits addressed in Philadlphia and York County.

Additionally, PECO has made several Center City Upgrades that helped to enhance reliability. PECO built the new Peltz Substation and retired the aging Schuylkill Substation, installing new transformers, switchgear, circuit breakers, relays and controls, and communication equipment. The Center City Network was upgraded with the replacement of vacuum circuit breakers. Selected underground cables were replaced to reduce digging and repair costs and reduce cable-related service interruptions.

b. Preventative Maintenance Programs

PECO routinely performs numerous preventative maintenance programs including Vegetation Management, Pole Inspections, Distribution Overhead Line Inspections, Distribution Transformer Inspections, Recloser Inspections, and Substation Inspections. Preventative maintenance programs have been completed every year since the Commission's quarterly reliability reporting began in 2003.

Comprehensive Vegetation Management preventative maintenance programs are completed on distribution circuits on a five-year cycle and on transmission lines on a

four-year cycle, protecting the transmission & distribution system from vegetation-related interruptions. Visual and thermographic inspections of overhead distribution lines lead to identification of items to repair before an outage occurs. Three-phase reclosers are inspected on a regular basis to ensure the distribution automation system is ready to automatically locate and isolate problems and restore service to customers.

c. Capacity Planning

As part of PECO's capacity planning for this year, all circuits were analyzed with data from the previous summer, and 48 projects were designed and completed to address items found in that review. Peak load and possible under frequency conditions were assessed leading to updates to the load shed database and lists of locations to block automatic load transfers. Additionally, training was performed so that employees can take peak day readings at substations where there are no automated load readings.

2. 2011 Storms and Lessons Learned

2011 ranks as one of the hottest, wettest and stormiest years in PECO's history, culminating with Hurricane Irene and the October snow storm. Despite the intense weather in 2011, however, PECO's reliability is very good.

Hurricane Irene ranks as PECO's third worst storm in terms of number of customer outages. The damage from Hurricane Irene resulted in sustained power outages for almost one-third of PECO's customers – more than 511,000 outages. PECO was able to restore service to 99 percent of customers (more than 505,000 customers) within 72 hours of their outages occurring. The remaining 1 percent of customer outages included some of the most difficult events and required extensive work to clear trees and restore service. PECO received the 2011 Emergency Recovery Award from the Edison Electric Institute for exceptional response efforts in restoring power following Hurricane Irene, having executed one of the fastest recoveries on the East coast.

The October snow storm ranks as the worst October storm in PECO history. The wet snow and strong winds damaged trees and electrical equipment, interrupting electric service to more than 275,000 PECO customers. PECO was able to restore service to 90 percent of customers affected by the next day (within 37 hours) and to 99 percent of affected customers within 58 hours.

PECO's service territory experienced other significant weather events, including the February 2011 ice storm, as well as numerous significant weather and wind events.

After every major storm 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. As part of this comprehensive review, PECO conducts outreach to customers and other stakeholders, including municipal and county officials, as well as state elected officials.

In the post-Hurricane Irene review, PECO identified several successes, including our advance planning and preparations of our system, crews and employees; advance planning to contractors and mutual assistance networks to secure additional utility resources and to have those crews in place prior to the storm; and communications with employees in advance of the storm regarding preparation activities and after the event on restoration efforts.

PECO's post-Hurricane Irene review generated several lessons learned, one of which was the need for better tracking and management of road closures due to wires being down. To address this issue, PECO has created a new role in our emergency response organization of Road Closure Coordinator who will be the single point of contact to manage the process in the future. The position's process and checklist is still being finalized. Additionally, reports have been developed that will break down road closures by county to aid restoration efforts. In the near future, PECO will be reviewing the process with the PECO External Affairs Managers for their agreement.

Another lesson learned centered around managing customer expectations for receiving estimated restoration information. In a larger storm, PECO's process includes possible ETR suspension, due to the severe weather conditions and time needed to assess the damage in our territory. As part of this process, PECO has in place a media communication for its customers and stakeholders that speak to suspending ETRs, as well as the overall expectation of duration of restoration efforts. Due to lessons learned from Hurricane Irene, PECO's pre-planning meeting for a severe storm will now include more directed focus on the potential suspension of ETRs, including communication for PECO's Media organization that addresses the severity of the storm and informs customers upfront that ETRs have been suspend until PECO has assessed the damage and has the information needed to re-establish ETRs. If a decision is made during the pre-planning meeting to suspend ETRs, talking points also will be created and given to PECO's Customer Care Center to further inform customers and stakeholders of the suspension of ETRs. The talking points will explain that restoration activity will be taking place while PECO is still assessing the damage. Since the storm, PECO's Communications Lead and the Emergency Response Director's Storm Restoration Process Checklists were updated to provide communications to the media and talking points to the Customer Care Center if ETRs are suspended. PECO's Pre-Event Strategy Conference Call Script was similarly updated.

PECO also learned that it needed to formalize the process for obtaining vehicle permits for out of state crews brought on system to support storm response. PECO received support from crews as far away as Florida and Michigan, providing the 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 a general matter, PECO does not have an issue sending and receiving crews when there is a declared state of emergency. The problem occurred during Hurricane Irene because PECO staged crews prior to the storm hitting Pennsylvania. However, PECO is working

with the Department of Homeland Security to expedite this process in the future. Last fall, PECO hosted a meeting with other Pennsylvania utilities (as well as utilities from other states) to review the various issues with mutual assistance, including this issue. A second meeting is scheduled for June 11, 2012 to review the issues raised at the fall meeting.

PECO immediately began implementing many of the Hurricane Irene lessons learned. As such, when the October snow storm arrived, PECO was in a position to put into practice those lessons.

3. PECO's 2012 Summer Readiness

More than 50 projects have been completed this year that are essential to meeting the increased demand customers place on the electric system to keep their homes and businesses cool. This work includes the installation of substation equipment upgrades and new transmission wires and poles. PECO also has completed projects to increase neighborhood electric supply, inspected circuits and equipment, and numerous additional jobs to ensure reliable service for the company's 1.6 million electric customers this summer.

In addition to larger projects, PECO's summer preparedness program includes inspecting and maintaining aerial and underground electrical equipment, substations and other facilities; upgrading, replacing and repairing equipment to meet customer needs; emergency response drills and other training for employees; and maintenance and testing of various computer and support systems.

a. Capacity Additions

PECO completed numerous capacity addition projects that enhance our summer readiness. Some of our major projects include the following:

- Clay Substation and Transmission Projects: These $38 million projects improve reliability and flexibility of operations and maintenance in southern Chester County through the installation of a new transmission line and substation transformer, with associated circuit breakers and relays, and the replacement of single-circuit towers with dual-circuit monopole structures. The new poles are in place and the second transmission line is scheduled to be in service by June 1, 2013.
- Center Point 500kV Substation: Under this $50 million project, the region's 500 kV – 230 kV transformer capacity and geographic diversity were increased through the construction of a new substation in Worchester Township.
- Chichester and Emilie Substation Upgrades: These $8 million projects support the retirement of Eddystone Unit 2 coal fired generating station and increase the rating of a 34 kV bus tie at Emilie through the installation of a new transformer and reactors at Chichester and the replacement of reactors, circuit breakers and switches at Emilie.

b. Supplemental Vegetation Management Preventative Maintenance Activities

Vegetation management schedules a backshift of tree crews during the summer months (i.e., June through September). These crews are available to respond to emergency situations in a timelier manner during the peak tree growth season. Vegetation Management completes an annual ground patrol of electric transmission lines and completes all identified emergent work before June 1 each year. In addition, distribution corrective maintenance work is identified before June 1 each year for circuits that qualify for mid-cycle and 34kV programs.

c. Employee Preparations

PECO's summer readiness also includes emergency response drills and other training for employees, including but not limited to: training and summer equipment preparations; training for PECO's AC Saver program; employee review of personal protective equipment; inspection of all buildings and substations for summer readiness; and maintenance and testing of various computer and support systems.

d. Event Preparedness

The 2011 lessons learned were incorporated in PECO's Summer Readiness Drills for 2012. All emergency response teams were drilled prior to storm season. The drill included the following elements: (1) Substation fire, with participation by the local Fire Company at Chester Substation; (2) Environmental; (3) Security (suspicious package found in substation); (4) Load Shed; (5) Road closures; (6) A/C smart saver program (a new scenario added to 2012).

e. Transmission and Substation Preparedness

PECO's transmission and substation preparedness includes the following: review of summer readiness procedures with Substation Inspectors; completion of summer readiness preventative maintenance; identification and completion of corrective maintenance at critical substations including generating substations; identification and completion of corrective maintenance on transmission lines; annual sump pump maintenance in substations; verification of spare equipment availability including mobile transformers and portable units; completion of the Summer Operations Task Force Summer Study with PJM; and communication to control room staff the findings of the RFC Summer Resource and Summer Transmission Assessments.

4. Storm Response

a. Storm Preparations

Once a potential storm is identified, PECO initiates its pre-event planning and preparations. PECO's Emergency Preparedness team implements a "graded approach" for crew mobilization as the potential for storm related damage in the service territory increases. For anticipated significant weather events – like Hurricane Irene – PECO initiates pre-event planning and preparations days before the events.

As part of its preparations, PECO identifies the need and secures additional personnel to supplement PECO's resources for restoration and tree trimming. Additional personnel come from the use of contractors, resources through the Mid-Atlantic Mutual Assistance partnership, and, as was the case with Hurricane Irene, PECO's sister utility Commonwealth Edison.

Another key component of PECO's storm preparedness is communication and outreach. PECO conducts interviews and briefings with media to discuss storm preparations, planning and customer outage expectations. Additionally, PECO conducts outreach with elected officials and local governments, state regulatory and elected officials, and municipal and county governments. Particular attention is paid to the county 911 centers and emergency responders to ensure coordinated preparations and PECO employee staffing at 911 centers where appropriate.

b. Outage Restoration Strategy

PECO follows an overall system restoration priority strategy which results in the most effective way to restore service to all customers who are geographically dispersed throughout PECO's territory.

For all severe weather events, PECO's first step in its restoration strategy is to ensure the public and workers are safe. For instance, during Hurricane Irene, PECO suspended restoration efforts while tornado warnings were in effect. PECO's next step for addressing outages is to target restoration to any affected substations and perform any switching that is possible to re-route power to customers. PECO then works 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, public water and sewer facilities, and communication systems. As part of this prioritization, PECO dispatches crews to make repairs to equipment that will restore service to the largest number of customers in the least amount of time. PECO then restores power to smaller neighborhoods and individual services.

c. Communication and Outreach

PECO believes customer communication before, during and after a storm event is critical. As discussed above, a lesson learned was from Hurricane Irene concerned managing customer expectations for receiving estimated restoration information. PECO's pre-planning meeting for a severe storm will now include more directed focus on getting out to the public messages about the potential suspension of ETRs and why they may be suspended and the severity of the storm.

PECO communicates with customers through a number of channels during storm events. A primary means for customers to receive communication is through our Call Center and the 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.

In more severe outage events like Hurricane Irene, PECO makes proactive calls to those customers that are expected to experience the most extended outages. These calls are 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 is the media. For instance, with Hurricane Irene, 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 maintains close contact with elected and regulatory officials through personal outreach and regular follow up communication. For example, in the first two days following Hurricane Irene, 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.

Outreach is made to local governments in PECO's service territory and the emergency responders in the local areas, and PECO employees staff county 911 centers. 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 include continuous contact with our own employees. In Hurricane Irene, PECO found that providing employees 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.