SUMMARY REPORT OF OUTAGE INFORMATION

SUBMITTED BY ELECTRIC DISTRIBUTION
COMPANIES AFFECTED BY WINTER STORM NIKA
FEBRUARY 5-12, 2014

PREPARED BY:
PENNSYLVANIA PUBLIC UTILITY COMMISSION
BUREAU OF TECHNICAL UTILITY SERVICES
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INTRODUCTION

The February 2014 ice storm (Nika[1]) had a significant impact on Pennsylvania and its electric distribution companies (EDCs). It was a complex weather system that primarily affected the southeastern portion of the state. Nika brought significant snow and ice to southeast Pennsylvania as well as high winds throughout the state. Nika began affecting southeastern Pennsylvania during the late evening Feb. 4 and early morning Feb 5. The snow and ice caused more than 800,000 electric customer outages at the peak, which occurred at approximately 4 a.m. Feb. 5. More than 950,000 Pennsylvania electric customers experienced an outage at some point as a result of Nika. The vast majority of customers (93 percent of the peak) were restored by evening Feb. 9 and all customers were restored by Feb. 12. The Pennsylvania Public Utility Commission's (PUC) jurisdictional electric utilities primarily affected by Nika were Metropolitan Edison Co. (Met-Ed), PECO Energy Co. (PECO) and PPL Electric Utilities Corporation (PPL).

The number and duration of Nika-related outages warranted a review of the EDCs' preparation and response by the PUC's Bureau of Technical Utility Services (TUS). This review is based on a combination of the utilities' reports required by Commission regulations, telephonic and email conversations with the EDCs throughout the restoration period, and information from subsequent meetings and communications with EDCs and other stakeholders. This includes two after-action review meetings held by the Pennsylvania Emergency Management Agency (PEMA) and three public input sessions conducted by the PUC. Weather information about both the forecasted and actual impacts of Nika is also included.

This review contains 11 recommendations based on the information, above, as well as the best practices identified in previous reviews[2]. The PUC will follow up on all recommendations. The EDC best practice working group reports to TUS semi-annually on completed or ongoing initiatives. The next scheduled meeting is September 17, 2014. The EDCs will report to TUS on the progress or completion of all recommendations at this meeting.

Some of the recommendations are worth highlighting here. A couple recommendations relate to communication issues with estimated times of restoration. Many customers expressed frustration with inaccurate or changed (longer duration) restoration estimates and the communications received from EDCs indicating that the customer had been restored when this was not the case. These are ongoing problems within the industry that EDCs continue to work on and refine processes around. Other recommendations relate to emergency road closures and coordination between local, county and utility resources. PECO in particular had issues with their processes and coordination with county emergency operations centers. Yet another recommendation relates to EDCs opening customer care centers during major service outage events. This recommendation was made by the southeastern counties after PECO had opened some centers during Nika that customers and counties found beneficial.

[1] While the National Weather Service does not name winter storms, TUS used the name given to the storm by *The Weather Channel* for ease of reference throughout the report and for easier comparison to previous storms.
[2] The PUC reports on the utilities' response to Hurricane Sandy and Irene can be found here: http://www.puc.pa.gov/utility_industry/electricity.aspx.

EXECUTIVE SUMMARY

The dedication and service of all utility workers should be commended as they worked under very difficult circumstances responding to Nika. As with any storm, it is important to review the utilities' preparation and response by looking at what went well and what can be improved. The PUC, PEMA and EDCs were aware of the potential impacts a few days prior to the storm. This review includes key findings and a recommended course of action to address these conclusions. Industry best practices that would benefit other utilities facing such challenges also are noted throughout the report.

Key Findings

The affected EDCs successfully used social and traditional media to communicate with customers before and during the ice storm.

In general, the EDCs worked effectively with elected officials, county emergency management, and local emergency management.

While EDC daily informational conference calls with elected officials and local emergency management continued to be well received, counties in the southeast requested a separate, more operational, conference call specifically for county emergency managers during large-scale storm events.

The staffing of county 911 centers and/or emergency operations centers (EOCs) with EDC liaisons during large-scale events is largely beneficial and has been instituted as a best-practice.

County EOCs and local and state elected officials would like outage and restoration information by township during large-scale events.

All EDCs experienced difficulty managing the estimated times of restoration (ETRs) for customers with longer-duration and embedded outages (small-count or single-customer outages entrenched within a larger outage that has been restored). Many customers received an initial ETR that was changed to a longer duration after the ETR had passed. In some cases, customers would receive changed (longer duration) ETRs over several consecutive days. Also, some PECO customers placed on hold did not hear hold music and believed they were disconnected.

The language in some of PECO's outbound restoration phone calls to customers was problematic because it indicated the customer had been restored, when in fact those customers with embedded outages were not restored.

PECO's emergency road closure procedure implemented after Hurricane Sandy (Sandy) experienced complications due to a lack of training for local responders and communications between the county EOCs and PECO. Also, it was not clear to responders when the emergency road closure procedure was to be implemented.

County EOCs would like more timely communications on when road closures have been cleared of utility facilities so that a road or tree cutting crew can clear the roads.

While EDCs have done much to improve their communication channels, more education is needed for customers to understand the various options and where to find specific information.

PECO opened customer care centers to provide customers with a local facility to find out restoration information for their specific outages, or other reliability issues. The centers were well received; however, consideration should be given to opening the centers earlier.

EDCs were able to bring in mutual aid and contractor assistance before the storm and throughout the restoration period. The EDCs substantially increased their linemen work complements. Due to the unpredictable nature of where significant icing can occur during a storm, mutual aid is more difficult to procure prior to icing events.

TUS Recommendations

Note: Recommendations are followed up in parenthesis with current status update or comments.

Recommendation 1: EDCs should continue to enhance their web and mobile platforms, providing customers additional methods to report outages and learn outage status information.

(In order to address response and communication issues experienced during Hurricanes Irene and Sandy, the EDCs formed a best practice working group for storm response issues. The EDCs are sharing best practices regarding better utilizing social media and other new media platforms.)

Recommendation 2: EDCs should disseminate the available communication and information channels to customers in advance of any expected major service outage events[3] as well as several times a year to remind customers where information can be accessed. Additionally, the main page of EDC websites should have a clear indicator of where outage information can be accessed.

(TUS will task the EDC best practice working group with working on this issue.)

Recommendation 3: EDCs should continue to collaborate on a best practice for managing ETRs, especially during major service outage events.

(The EDC best practice working group continues to work on this issue.)

Recommendation 4: EDCs should continue to improve communications and restoration messaging with customers during major service outage events, working to prevent inconsistencies and inaccuracies. TUS should specifically follow up with PECO on its messaging and hold music issues during Nika.

(The EDC best practice working group is working on this issue and TUS will follow up with PECO on its specific issues.)

[3] Examples of major service outage events include, but are not limited to, hurricanes, tropical storms, major flooding, ice storms, heavy snows, and cybersecurity incidents. This is consistent with the Commission's Policy Statement on preparation and response on service outages at Docket No. M-2013-2382943. 52 Pa. Code § 69.1903(b)(1).

Recommendation 5: EDCs should continue their cooperation and communication with county 911 centers and emergency management agencies (EMA) and continue to offer liaisons for expected major service outage events. EDCs should meet with each county at least yearly to discuss expectations on the liaison program, especially in regards to the expected capabilities of the EDC liaisons.

(The EDC liaison and yearly meeting requirement were memorialized as a best practice by the PUC via a Policy Statement at Docket No. M-2013-2382943.)

Recommendation 6: EDCs should continue to offer regional informational conference calls for major service outage events for state and local elected officials and local and county emergency managers.

(The regional conference calls were memorialized as a best practice by the PUC via a Policy Statement at Docket No. M-2013-2382943.)

Recommendation 7: EDCs should give consideration to offering an operational-focused conference call solely for county EMAs for major service outage events. The calls should be structured similar to the regional conference calls described in Recommendation 6.

(TUS will task the EDC best practice group with working on this issue.)

Recommendation 8: PECO should work with county and local EMAs on improving the emergency road closure procedures, including training and exercising with local and county staff as well as reaching a consensus on when the emergency road closure procedures are to be enacted.

(TUS will follow-up with PECO to ensure this work is done and then shared with the EDC best practice group. TUS will also ensure PECO shares any best practices with the Commission's Critical Infrastructure Interdependency Working Group[4].)

Recommendation 9: EDCs should continue to work on road closure procedures with local and county EMAs and the more timely communication of when road closures have been "cleared" of utility facilities.

(TUS will task the EDC best practice group with working on this issue.)

Recommendation 10: EDCs should give consideration to opening customer care centers in particularly hard-hit areas during major service outage events and should notify the local and state elected officials as well as the county EOCs when opening such centers.

(TUS will task the EDC best practice group with working on this issue.)

Recommendation 11: EDCs should give consideration to providing township-level outage and restoration information to county EOCs and local elected officials during major service outage events.

(TUS will task the EDC best practice group with working on this issue.)

[4] The Critical Infrastructure Interdependency Working Group is a multi-utility and critical infrastructure partner group that was formed as a recommendation in the Commission's Policy Statement at Docket No. M-2013-2382943.

REVIEW

The following information highlights items that are relevant to the discussion of the utilities' preparation and response to Nika. Information such as restoration times, utility crew staffing levels and communication efforts specific to the EDCs and provided to the PUC begin on page 23.

State Preparation

Recognizing Nika's potential to be a serious threat to the Commonwealth, PEMA began issuing National Weather Service (NWS) briefings on Jan. 31, which continued through Feb. 4. State agencies were encouraged to be forward-leaning and formulate staffing plans for the State Emergency Operations Center (SEOC). On Feb. 3, the NWS reported Nika was going to affect south central and southeastern Pennsylvania with snow, ice and high winds with the main impact forecasted for Feb. 4 and Feb. 5. PEMA activated the SEOC to an Enhanced level, meaning Emergency Preparedness Liaison Officers (EPLOs) from various state agencies, including the PUC, were on duty. The PUC and other key agencies reported at 10 p.m. Feb. 4.

On Feb. 5, the Governor's Office and PEMA held a special planning session with state agencies such as the PUC, Pennsylvania Department of Transportation (PennDOT), Pennsylvania State Police (PSP), Department of Military and Veteran's Affairs (DMVA), the Turnpike Commission (Turnpike), Department of Public Welfare (DPW), Department of Health (DOH), and the Red Cross. As a result, the Governor's Office issued an emergency declaration enabling the use of state resources to aid Pennsylvania citizens and critical infrastructure. PEMA, through the SEOC and state agencies present, coordinated the state response efforts and resource requests.

PUC Preparation

The PUC's Lead EPLO coordinates the emergency response actions of the PUC and is responsible for staffing the SEOC with PUC EPLOs as required. The PUC has 11 staff members, including the Lead EPLO, who are qualified as EPLOs. The Lead EPLO also ensures communications regarding any regulated utility service interruptions or emergencies flow between the utilities, SEOC and key PUC staff such as Commissioners and their staffs, bureau directors, managers and supervisors.

For Nika, the Lead EPLO emailed the EDCs, as well as the large water/wastewater and telephone utilities, on Feb. 3, to provide information from the NWS briefing and requested that utilities provide information on their preparations.[5] The email also asked the utilities to ensure that their contacts for county EMAs, 911 centers and critical/special needs customers were current and encouraged utilities to proactively contact those entities to go over response and restoration expectations.

On Feb. 4, the Lead EPLO updated the PUC EPLOs and created a staffing plan for a potential SEOC activation. The Lead EPLO also emailed the utilities the current NWS update predicting a very high probability of impact for Pennsylvania. In that same email, the Lead EPLO provided the PUC EPLO contact information for the SEOC and asked utilities to ensure they had activated their communications

[5] The PUC also includes the Pennsylvania Rural Electric Association (PREA) in emails to jurisdictional utilities. While the PUC does not regulate PREA members, the PUC and PREA regularly exchange information during severe weather events and other incidents as necessary.

plans as they related to the public, EMAs, and elected officials. The Lead EPLO also emailed all Commissioners and key PUC staff on Feb. 4 about the potential impacts of Nika. On Feb. 4 the Lead EPLO notified the EDCs via email that the SEOC, including PUC staff, was being activated and asked if the EDCs had any unmet needs that could be met by the state.

Throughout the response, the Lead EPLO asked the EDCs for information on the expected internal and external personnel resources, including linemen, forestry crews and assessors that were expected to be available to respond. The summary of the EDC preparation information is presented below. The response shows the EDCs had already planned on significantly increasing their staffing of both internal and external sources. The PUC provided the EDC preparation information to PEMA for a Feb. 4 planning session.

PUC EPLOs worked 12-hour shifts to maintain a continued a presence at the SEOC until 10 a.m. Feb. 14, when the activation level of the SEOC was lowered and the additional state EPLOs were demobilized. During the SEOC activation, the PUC EPLOs monitored and reported on utility service interruptions while addressing any critical customer outages such as hospitals and water treatment plants. Fortunately, no large-scale water service interruptions occurred due to power loss. Some localized landline telephone outages occurred due to storm damage, but there were no significant outages.

From Feb. 4 to Feb. 12, the PUC Chairman and Vice Chairman also held daily conference calls with utility presidents and operational directors. The Governor's Office as well as DEP and PEMA participated in some of the calls. Participating utilities included EDCs and water utilities in the affected areas. The calls focused on sharing outage information and restoration status. Utilities also noted any unmet needs or obstacles to restoration the state could possibly address. These conference calls were a best practice instituted during the Sandy response.

Utility Preparation

Below are highlights of the steps taken by the affected EDCs before Nika impacted Pennsylvania.

Met-Ed

- Met-Ed began holding conference calls on Feb. 3 to plan for the response and to request additional personnel. Met-Ed implemented a pre-storm strategy which involved calling its internal employees, planning logistics and making additional preparations such as:
  - preparing site staging locations;
  - reserving hotel rooms for outside resources;
  - completing repairs of their fleet vehicles and;
  - making arrangements for fleet mechanics to be available 24x7 in case of needed repairs.
- On Feb. 4, FirstEnergy requested mutual aid assistance, securing more than 800 additional linemen from other utilities and contractors. A staging site was established at the York County Fair Grounds on Feb. 5 for the workers who were expected to arrive during the next several days.
- The following Med-Ed storm organizations were operational at midnight on Feb. 5: line-shop support, dispatchers, storm analysts, hospitality, hazard responders, hazard

dispatchers, public protectors, forestry, forestry dispatchers, contact center, external affairs, government affairs and corporate support.

PECO

- PECO began storm preparations on Feb. 4, opening its EOC that evening. Mutual-aid assistance was contacted and put in place. PECO had 180 line contractors in place Feb. 4 and an additional 305 line personnel (contractors and mutual aid) available on Feb. 5. PECO continued to request mutual assistance throughout the event. By Feb. 9, PECO had more than 3,700 line personnel. PECO arranged for 24 hour coverage at the EOC as well as additional field staff. By the evening Feb. 5, PECO had 94,438 customer outages and crews were in place and responding.
- PECO began communications to critical care customers, elected and regulatory officials, media, and customers on Feb. 4 via phone, email, Internet and in-person briefings as well as media interviews.

PPL

- PPL was monitoring forecasts for Feb. 5 as well as a possible storm Feb. 10 to estimate the weather-related outages. The model was updated as the forecast evolved.
- Several coordination calls were conducted early morning Feb. 5, including PPL's system personal and dispatch personnel as well as with the Director of System Emergency, the on-call Emergency Command Center team, and the Regional Emergency Managers. Individual coordination calls were made with each Regional Emergency Manager to discuss the staffing strategy for the expected cases of trouble.
- Three Regional Command Centers (RCCs) were opened when cases of trouble reached the threshold level and the Emergency Command Center (ECC) was also opened. A System Call was conducted at 1 p.m. to update all personnel on the status of restoration and the restoration strategy.
- PPL contacted Lancaster, York, Chester and Berks county EMAs to review plans for warming stations. PPL also increased staffing with troublemen, customer service representatives and dispatchers. Additionally, PPL contacted line and electrical contractors to determine availability and placed them on notice for deployment.
- PPL placed field personnel, including storm damage assessors and auxiliary support personnel, on notice to prepare for deployment. PPL opened the ECC and the RCCs in each of the six regions at 6 a.m. on Feb. 5. PPL had 279 contractor line workers in place for Feb 4 and Feb. 5 and was able to secure an additional 306 mutual aid line workers for Feb 6.

Nika Impacts

The snow, sleet and ice from Nika made a substantial impact on parts of south central and southeast Pennsylvania. Pages 47 through 49 show the threat for substantial freezing rain was originally forecast for the higher elevation regions in south central Pennsylvania. The forecast shifted the threat to the southeast the morning of Feb. 4. Pages 50 through 52 show heavy icing of up to a half inch or more occurred on already snow-covered trees and utility facilities in the southeastern counties (Bucks, Chester, Delaware, Montgomery) as well as some south central counties (Adams, Lancaster, York). This caused

severe damage to EDC facilities in those regions due to fallen trees, tree branches, and the weight of the snow and ice on utility facilities. The fallen trees also caused several hundred road closures in these areas such as more than 600 road closure jobs in the PECO territory.

The travel and work of EDC restoration crews was impacted due to the numerous road closures and freezing conditions. The EDCs worked to coordinate road openings with the county staff so crews could get to the downed lines. The snow, ice and road conditions delayed restoration efforts several hours to days as utility crews could not work on overhead lines or travel to remote outages safely.

Overall, the forecast enabled the EDCs to prepare several days ahead of the storm. Uncertainty in the forecast regarding area and severity of impact meant multiple utilities in Pennsylvania and surrounding states had to prepare for possible ice storm damage. This limited the available mutual aid in the days leading up to the storm. More mutual aid resources became available as impacts of the storm became clearer, as can be seen in the EDC staffing charts on pages 48 through 50.

Utility Restoration Response

Below are summaries of each EDC's response and observations of PUC staff based on the EDCs' reports and telephonic and email conversations with the EDCs throughout the restoration period. It also includes information from subsequent meetings and communications with EDCs and other stakeholders. More information may be found in the subsequent sections "Key Information Reported on the Report of Outage Form" and "Summary of Requested Additional Information." The summaries reference information that is contained in those sections.

Met-Ed

- Restoration Efforts
  - After 72 hours, Met-Ed restored about 88 percent of customers of the peak number of outages (as reported to the PUC). Met-Ed restored more than 99 percent of customers of peak after 96 hours.
  - Met-Ed had full restoration by Feb. 9 at 9 p.m., which was about 4.8 days after the initial storm-related outage. By comparison, Met-Ed was fully restored in 10 days after Sandy.[6]
  - Automated restoration time was suspended for approximately 24 hours, beginning at 3:36 a.m. Feb. 5. All of Med-Ed's service areas resumed the normal ETR process by Feb. 9.
  - As compared to similar storms from historical events, Met-Ed ranked Nika fifth in terms of number and duration of outages, with about 26 percent of customers experiencing a sustained outage. In comparison, about 54 percent of Met-Ed customers experienced a sustained outage in Sandy.
  - Page 22 shows physical damage to Met-Ed's infrastructure was far greater in Sandy than in Nika, although still substantial.

[6] Sandy had a large impact on Pennsylvania and its EDCs as well as most of the states in the Mid-Atlantic and New England on Oct. 29 and Oct. 30, 2012. About 1.79 million Pennsylvania electric customers experienced an outage at some point as a result of Sandy.

- Met-Ed offered liaisons to the affected counties, but only Bucks County accepted the liaison. However, Met-Ed provided a direct point of contact to the other affected counties.
- Met-Ed held daily local and state elected official conference calls Feb. 5 through Feb. 7 to provide restoration status and other information. These were well received by the officials.

- Media Use
  - Met-Ed used social media (Twitter and Facebook) in addition to traditional media resources to provide information and restoration messaging before and during Nika. Met-Ed's Twitter followers increased 9 percent and Facebook "Likes" increased more than 100 percent.
  - Information provided on social media included: company preparation plans; how to report outages; downed power line safety reminders; and storm preparation tips.
  - Throughout the restoration process media information included: ongoing updates on the number of customers restored; estimated restoration times; storm damage photos; outage reporting reminders; downed power line safety reminders and how to report them; lists of shelters and warming stations; tips of safely operating a generator and lists of water and ice locations.
  - Met-Ed's outage website provides a graphical map showing the number of current outages as well as summary data tables that show outages by county and by town/municipality. State and county emergency managers indicated they find the FirstEnergy outage website valuable during large storm events and also for everyday use.
  - The 24x7 Power Center map at FirstEnergy had approximately 214,000 views between the mobile and web versions, which included over 150,000 unique page views between Feb. 4 and Feb. 9. The storm information page had 72 page visits, which included 36 new visitors.
- Call Center Performance and Restoration Messaging
  - Page 34 shows Met-Ed's percentage of outage calls not answered/abandoned was much lower during Nika than Sandy. The percentage of calls that received a busy signal was slightly higher during Nika than Sandy.
  - Met-Ed had far lower informal complaints and inquiries on ETRs and inadequate information than from Sandy.
- Personnel Resource Management
  - Met-Ed expected about 260 linemen to be available at the start of the storm. Through contractors and mutual aid, Met-Ed increased its total linemen complement to a peak of approximately 1,024. By comparison, Met-Ed peaked at 1,064 linemen in Sandy, which was a far worse storm for Met-Ed.
  - In addition to an increase of lineman, Met-Ed had more than 1,300 various other workers, which included: hazard responders; forestry/vegetation management workers; contractor forestry/vegetation management workers; assessors; wire guards; electricians; substation workers; company supporting staff; and mutual aid/contractor supporting staff.

PECO

- Restoration Efforts
  - After 72 hours, PECO restored about 79 percent of customers from the peak number of outages (as reported to the PUC). PECO restored more than 91 percent of customers from the peak after 96 hours.
  - PECO had full restoration by 12:29 p.m. Feb. 12, which was about 7.6 days after the initial storm-related outage. By comparison, PECO was fully restored in nine days after Sandy.
  - As compared to similar historical storms PECO ranked Nika second in terms of the number and duration of outages, with about 42 percent of customers experiencing a sustained outage. In comparison, about 54 percent of PECO customers experienced a sustained outage in Sandy.
  - PECO had 8,915 outage cases with 6,047 of those lasting more than six hours in Nika as compared to 4,674 outage cases in Sandy lasting more than six hours.
  - Page 22 shows the physical damage to PECO's infrastructure in Nika was very close to that of Sandy. The only substantial difference was the lower number of replaced poles during Nika. It should be noted that the weather conditions after Sandy were far less impactful than during Nika as the cold continued and icing delayed restoration due to safety reasons.
  - PECO offered liaisons to all of the counties before Nika hit the region. Bucks, Delaware, and Montgomery counties accepted. Philadelphia and York counties declined a liaison, but kept in close communication with PECO. Chester County requested a liaison after the storm impacted the area.
  - PECO held daily local and state elected official calls from Feb. 5 through Feb. 11 to provide specific restoration information to local areas and municipalities. Those calls were well received by elected officials.
  - While PECO had developed a road closure process prior to Nika, county EOCs had difficulty transmitting the road closure information to PECO (See "PEMA After-Action Review Meetings" below). Local responders also were not adequately trained on the information needed by county EOCs about the road closures. This caused some issues for PECO in locating specific road closures. County EOCs also requested more timely communication on when road closures were "cleared" by PECO (meaning utility facilities were removed from the obstruction, or that the utility facility was identified as other than PECO's). Bucks County had the most success in integrating the PECO liaison for the purposes of coordinating road closures by stationing the PECO liaison with PennDOT and county roads liaisons.
- Media Use
  - PECO utilized traditional media (TV, radio, newspaper) and its outage webpage to disseminate information and restoration messaging before and during Nika. PECO utilized its Twitter and Facebook channels to keep customers, government leaders and key stakeholders informed about restoration efforts and customer

safety during the storm. The company also provided similar updates and information on its mobile website.

- PECO more successfully utilized social media during Nika than during Sandy. PECO's Twitter followers increased more than 110 percent and Facebook "Likes" increased more than 111 percent. PECO's Twitter had more than 256,000 impressions during Nika and PECO's Facebook had more than 90,000.
- PECO's homepage had about 1,296,681 unique visitors and 4.6 million page views between Feb. 4 and Feb. 12.

- Call Center Performance and Restoration Messaging
  - Page 34 shows PECO's percentage of outage calls not answered/abandoned was slightly lower during Nika than Sandy. The percentage of calls that received a busy signal was slightly higher during Nika than Sandy.
  - PECO had a minimal increase in informal complaints and inquires than they did during Sandy.
  - Several days into the response, PECO opened a number of customer-care centers where customers could walk or drive to for information specific to their outages. These were well received by local and state legislators and local communities. However, the county EOCs requested that they be made aware of when and where the centers are opened.
- Personnel Resource Management
  - PECO expected about 974 line workers to be available at the start of the storm. Through contractors and mutual aid, PECO increased its total linemen complement to a peak of approximately 4,234 on February 9. This is over 8 times the complement of 489 company linemen. By comparison, PECO peaked at 2,523 linemen in Sandy.
  - In addition to an increase of lineman, PECO had over 1,600 other workers, which included: troublemen; contractor forestry/vegetation management workers; assessors; wire guards; electricians; substation workers; company supporting staff; and mutual aid/contractor supporting staff.

PPL

- Restoration Efforts
  - After 72 hours, PPL restored more than 98 percent of customers from the peak number of outages (as reported to the PUC). PPL customers were fully restored 96 hours after peak.
  - PPL had full restoration by 10 p.m. Feb. 8, which was about 3.8 days after the initial storm-related outage. By comparison, PPL was fully restored in nine days in Sandy.
  - As Nika did not affect more than 10 percent of PPL's customers, it did not rank as one of PPL's most damaging storms.
  - PPL was primarily impacted in Lancaster County. PPL did not send a liaison to the county, but PPL and the county were in constant communication.

- PPL conducted daily informational conference calls for Lancaster area local and state elected officials and emergency management personnel on Feb. 5 and Feb. 6, which were well received.

- Media Use
  - PPL utilized traditional media (TV, radio, newspaper) and its outage webpage to disseminate information and restoration messaging before and during Nika. PPL also utilized Twitter, Facebook and Google+ channels to keep customers, government leaders and key stakeholders informed about restoration efforts and customer safety during the storm. Customers could also receive personal notifications by utilizing PPL Alerts (customers can receive their choice of calls, texts or emails).
  - PPL successfully utilized social media during Nika much as they did during Sandy. PPL's Twitter followers increased more than 3 percent and Facebook "Likes" increased more than 2 percent. PPL's Twitter posts were retweeted 240 times and PPL's Facebook had over 111,000 impressions with over 36,000 unique users.
  - PPL's outage page had about 312,504 unique visitors and 483,095 page views between Feb. 4 and Feb. 12.
- Call Center Performance and Restoration Messaging
  - Page 34 shows PPL's percentage of outage calls not answered/abandoned were significantly higher during Nika than in Sandy. This may be due to customers relatively quickly hanging up (abandoning) before reaching a customer service representative as the average answer time in seconds was far lower in Nika than in Sandy. The percentage of calls that received a busy signal was lower during Nika than in Sandy.
  - PPL had far lower PUC informal complaints and inquires than during Sandy.
- Personnel Resource Management
  - PPL expected about 607 line workers to be available at the start of the storm. Through contractors and mutual aid, PPL increased its total linemen complement to a peak of approximately 946 on Feb. 6. By comparison, PPL peaked at 2,274 linemen in Sandy, which was a far worse storm for PPL.
  - In addition to an increase of lineman, PPL had over 1,070 various other workers, which included: troublemen; contractor forestry/vegetation management workers; assessors; wire guards; electricians; substation workers; company supporting staff; and mutual aid/contractor supporting staff.

PEMA After-Action Review Meetings

Governor Corbett tasked PEMA, in cooperation with the PUC, with leading an after-action review (AAR) of the preparedness and response of the state agencies as well as the electric utilities. PEMA held two AAR meetings with the affected counties, electric utilities and the PUC (Feb. 27 in Montgomery County; March 17 in York County). PEMA is preparing an AAR Report based on the feedback from the two meetings. However, certain observations and best practices identified in those meetings are worth discussing in this report.

The Feb. 27 meeting included representatives from Bucks, Chester, Delaware, Montgomery and Philadelphia counties as well as the PUC, PEMA and PECO. The following key observations and best practices were discussed:

Road closures were identified as an area for follow-up as well as a best practice going forward.

The counties appreciated the communications with PECO and the PECO liaisons at the EOCs.

Improvements are needed on how road closures are reported from the field (local responders) to the county emergency management and then to the utility.

Local responders need more training on what information is required for PECO to prioritize the road closures. Counties also would like to be able to submit the road closure priority lists electronically to the utility.

PECO should communicate to the counties when it does not concur with the prioritization tier of a road closure.

PECO should communicate as soon as possible when its crews have made road closure areas safe for debris removal, or have determined the utility facilities are not PECO's.

PECO appeared to have a good road closure prioritization classification system for large-scale emergency events, but it was observed that no clear delineation exists for when PECO goes from "normal" road closure protocols to the "emergency" protocols.

PUC staff tasked PECO with continuing to work the road closure issues through the EDC best practices group as well as with the counties.

The county emergency managers said PECO EOC liaisons should continue as a best practice and consideration should be given to activating the liaisons earlier.

Local officials and state legislators appreciated the daily informational conference calls by PECO.

County emergency managers were concerned that operational issues would be discussed in the local official and state legislator calls.

PECO agreed to keep the local official and state legislator calls informational and to provide daily operational calls for the county Emergency Management Directors, if desired.

The county emergency managers said customer care centers opened by PECO in certain locations were beneficial and consideration should be given to opening centers earlier. The county emergency managers were not directly notified when and where PECO opened the care centers. The emergency managers asked to be informed of this information before the centers open in the next event.

Road closures and communications were also addressed in the March 17 meeting. The March 17 meeting included representatives from Adams, Lancaster and York counties as well as PEMA, PUC, Met-Ed, PECO, PPL, Pennsylvania Rural Electric Association and Adams Electric Cooperative. The following additional key observations and best practices were discussed:

The county emergency managers said communication on road closures was excellent with the utilities and no major issues existed.

County emergency managers would like more timely communications when utilities and local responders have cleared roads of hazards.

The Adams County emergency manager said information provided by Met-Ed on how customers can prepare for and deal with service outages was very helpful and should continue and be sent to all county EOCs before large-scale storm events.

PUC Public Input Sessions

The Commission held the Public Input Sessions (March 24 – Montgomery County Community College; March 26 – Tredyffrin Township Building, Chester County; April 7 – Penn Township Community Room, Chester County) to create a forum for consumers as well as local and state elected officials to provide feedback on the utilities' storm response and communications.

The March 24 session had participation from a local community executive board, State Rep. Kate Harper, and area consumers. The feedback centered on communications from PECO during the restoration as well as local tree trimming concerns. Several consumers also had individual reliability issues that the PUC and PECO documented for follow-up. A summary of the concerns expressed at the session follows:

Several consumers were upset with the phone calls from PECO during the restoration telling them their service had been restored when it had not.

Several consumers said they had received multiple inaccurate ETRs when they called in to the PECO automated telephone system.

State Rep. Harper said she appreciated the communications from PECO and asked that PECO continue the phone calls to consumers while addressing the messaging. She also noted that PECO should communicate better with customers, letting them know if they receive a call that power has been restored and it has not, consumers should call PECO immediately.

State Rep. Harper also said PECO should not forget traditional customer communications such as television and radio while expanding communication channels to include social media.

During the March 26 session, consumers participated as well as State Rep. Warren Kampf, Tyler Arkatin from State Sen. Andy Dinniman's office. Rep. Kampf and Mr. Arkatin echoed consumer concerns about inaccurate ETRs and the frustrations of receiving phone calls from PECO indicating power had been restored when it had not. Several consumers also had individual reliability issues that the PUC and PECO documented for follow-up. A summary of the concerns expressed at the session follows:

Rep. Kampf asked PECO when the installation of smart meters would be able to address the issues of inaccurate ETRs and embedded outages and if PECO would consider targeted undergrounding of certain circuit sections as many areas of his district are heavily wooded and susceptible to tree-caused outages.

Rep. Kampf also said a need exists for better coordination between utilities, local responders and county emergency management on road closures during large-scale outage events.

Rep. Kampf asked PECO to provide circuit-by-circuit, or township-by-township outage data to county and local emergency managers during large-scale outage events.

Mr. Arkatin asked PECO to consider infrastructure improvements in areas that experience long-duration outages during large-scale outage events as well as better tree trimming in the wooded areas of Chester and Montgomery counties.

Mr. Arkatin said West Norriton, Montgomery County, needs some preventive maintenance work done to help with repeated outages in the area.

Consumers said PECO's website should have an alert on the main page to direct consumers to outage and restoration information.

Consumers also suggested forming a taskforce to look at electric infrastructure issues such as storm hardening and utilizing smart grid technology to mitigate outages.

On April 7, consumers echoed concerns about inaccurate ETRs and the frustrations of receiving phone calls from PECO indicating power had been restored when it had not. During the session, State Rep. John Lawrence, Mr. Arkatin, Penn Township Board of Supervisors Chairman Curtis Mason, Penn Township Board of Supervisor Ben Finnen, Lower Oxford Township Board of Supervisors Chairman Ken Hershey, West Grove Borough Council President Mark Johnson, and area consumers spoke. A few consumers also had individual reliability issues that the PUC and PECO documented for follow-up. A summary of the concerns expressed at the session follows:

Mr. Mason said townships, utilities and the state pass ordinances requiring a minimum set-back for vegetation near main roadways and utility rights-of-way. He said this could prevent many of the outages and road closures caused by tall trees adjacent to rights-of-way that utilities are currently not permitted to trim without property-owner permission.

Mr. Hershey echoed these remarks and said more aggressive tree trimming is needed by PECO and other utilities.

Mr. Arkatin, who spoke on behalf of Sen. Dinniman, repeated the concerns about incorrect ETRs and restoration phone calls from PECO.

Mr. Finnen is concerned that communications utilities are not trimming vegetation from their facilities and that there are several areas in Penn Township where tree trunks are leaning on, or supported by, communications cables.

Consumers said customers need more direct information from utilities and suggested more information should be provided in advance of storms.

CONCLUSION

Several key findings were made after reviewing the EDCs' outage reports as well as their preparation for and responses to Nika. The PEMA AAR meetings and PUC Public Input Sessions also informed the review and provided findings. The findings are noted below with the recommendations based on those findings in the next section. Overall, utility crews and support workers all performed admirably, under a difficult situation, to restore a large portion of affected customers in a relatively short period of time.

Findings

All EDCs

1. The affected EDCs successfully used social and traditional media to communicate with customers before and during the ice storm.

2. In general, all EDCs worked effectively with elected officials, county emergency management and local emergency management.

3. The EDC daily conference calls with local and state elected officials were received well and beneficial to all stakeholders. However, a conference call for County EMA directors should be considered to offer a forum for operational issues to be discussed.

4. Offering counties the option of staffing county 911 centers and/or EOCs with EDC liaisons is largely beneficial and has been instituted as a best-practice.

5. County EOCs and local and state elected officials would like outage and restoration information by township during large-scale events.

6. County EOCs would like more timely communications on when road closures have been "cleared" of utility facilities so that a road or tree cutting crew can clear the roads.

7. While EDCs have done much to improve their communication channels, more education is needed for customers to understand the various options and where to find specific information.

8. EDCs were able to bring in mutual aid and contractor assistance before the storm and during the restoration period. The EDCs substantially increased their linemen work complements. Due to the unpredictable nature of where significant icing can occur during a storm, mutual aid is more difficult to procure prior to icing events.

9. The daily conference calls held by the Commission with the utility presidents and operational staff were informative and beneficial.

10. PECO and Met-Ed experienced fewer issues handling peak call volume during Nika as compared to their performance in Sandy.

Met-Ed

1. Met-ED effectively used traditional and social media to communicate with customers during the response to Nika.

2. Met-Ed had lower informal complaints and inquiries on ETRs/inadequate information than from Sandy, but should continue to work on the issue of ETRs with the EDC Best Practices Group.

PECO

1. PECO effectively used traditional and social media to communicate with customers, which is an improvement from Sandy.

2. PECO experienced difficulty managing the ETRs for customers with longer-duration and embedded outages (small-count or single-customer outages associated with a larger outage job that has been completed). Many customers would receive an initial ETR that would be changed to a longer duration after the ETR had passed. In some cases, customers would receive changed (longer duration) ETRs over several consecutive days.

3. PECO's outbound restoration phone calls were problematic due to the language in the calls, which indicated that the customer had been restored, when in fact customers with embedded outages were not restored.

4. PECO's emergency road closure procedure implemented after Sandy experienced difficulties due to a lack of training of local responders and communications between the county EOCs and PECO. Also, it was not clear to responders when the emergency road closure procedure is to be implemented.

5. PECO had a slight increase in PUC informal complaints and inquiries related to inaccurate ETRs and/or incorrect restoration information than they had in Sandy. PECO should continue to work on the issue of ETRs and outage communication to customers through the EDC best practices group

6. One PUC informal complaint said not all customers may hear music when on hold for a customer service representative. In the answer to the complaint, PECO noted a corrective action was going to be implemented to fix this issue.

7. PECO opened customer care centers to provide customers with a location they could walk or drive to and find out restoration information for their specific outages, or other reliability issues. These were well received.

PPL

1. PPL effectively used traditional and social media to communicate with customers during the response to Nika.

2. PPL had lower informal complaints and inquiries on ETRs/inadequate information than from Sandy, but should continue to work on the issue of ETRs with the EDC Best Practices Group.

TUS Recommendations

Note: Recommendations are followed up in parenthesis with current status update or comments.

Recommendation 1: EDCs should continue to enhance their web and mobile platforms, providing customers additional methods to report outages and learn outage status information.

(In order to address response and communication issues experienced during Hurricanes Irene and Sandy, the EDCs formed a best practice working group for storm response issues. The EDCs are sharing best practices regarding better utilizing social media and other new media platforms.)

Recommendation 2: EDCs should disseminate the available communication and information channels to customers in advance of any expected major service outage events as well as several times a year to remind customers where information can be accessed. Additionally, the main page of EDC websites should have a clear indicator of where outage information can be accessed.

(TUS will task the EDC best practice working group with working on this issue.)

Recommendation 3: EDCs should continue to collaborate on a best practice for managing ETRs, especially during major service outage events.

(The EDC best practice working group continues to work on this issue.)

Recommendation 4: EDCs should continue to improve communications and restoration messaging with customers during major service outage events, working to prevent inconsistencies and inaccuracies. TUS should specifically follow up with PECO on its messaging and hold music issues during Nika.

(The EDC best practice working group is working on this issue and TUS will follow up with PECO on its specific issues.)

Recommendation 5: EDCs should continue their cooperation and communication with county 911 centers and emergency management agencies (EMA) and continue to offer liaisons for expected major service outage events. EDCs should meet with each county at least yearly to discuss expectations on the liaison program, especially in regards to the expected capabilities of the EDC liaisons.

(The EDC liaison and yearly meeting requirement were memorialized as a best practice by the PUC via a Policy Statement at Docket No. M-2013-2382943.)

Recommendation 6: EDCs should continue to offer regional informational conference calls for major service outage events for state and local elected officials and local and county emergency managers.

(The regional conference calls were memorialized as a best practice by the PUC via a Policy Statement at Docket No. M-2013-2382943.)

Recommendation 7: EDCs should give consideration to offering an operational-focused conference call solely for county EMAs for major service outage events. The calls should be structured similar to the regional conference calls described in Recommendation 6.

(TUS will task the EDC best practice group with working on this issue.)

Recommendation 8: PECO should work with county and local EMAs on improving the emergency road closure procedures, including training and exercising with local and county staff as well as reaching a consensus on when the emergency road closure procedures are to be enacted.

(TUS will follow-up with PECO to ensure this work is done and then shared with the EDC best practice group. TUS will also ensure PECO shares any best practices with the Commission's Critical Infrastructure Interdependency Working Group)

Recommendation 9: EDCs should continue to work on road closure procedures with local and county EMAs and the more timely communication of when road closures have been "cleared" of utility facilities.

(TUS will task the EDC best practice group with working on this issue.)

Recommendation 10: EDCs should give consideration to opening customer care centers in particularly hard-hit areas during major service outage events and should notify the local and state elected officials as well as the county EOCs when opening such centers.

(TUS will task the EDC best practice group with working on this issue.)

Recommendation 11: EDCs should give consideration to providing township-level outage and restoration information to county EOCs and local elected officials during major service outage events.

(TUS will task the EDC best practice group with working on this issue.)

APPENDIX

KEY INFORMATION REPORTED ON THE REPORT OF OUTAGE FORM

Summary of EDC Outage Data

Below is a summary of Winter Storm Nika statistical information provided by the EDCs. PECO was the most significantly affected since Nika directly impacted its entire service territory. Met-Ed and PPL only had a few counties of the service territories that were significantly impacted. Some Sandy statistics are included for comparison.

Number of customers affected and as a percentage of total customers:

	Customers Affected Nika 2014	% of Total Customers Nika 2014	Customers Affected Sandy 2012	% of Total Customers Sandy 2012
Met-Ed	144,000	26.0%	298,300	54.0%
PECO	723,681	42.0%	845,703	54.2%
PPL	92,283	7.0%	523,936	37.5%
Total	**959,964**	**26.3%**	**1,667,939**	**45.7%**

Date and time of first information of a service outage (time is 24-hour format):

	Date of First Outage	Time of First Outage
Met-Ed	2/5/2014	1:16
PECO	2/5/2014	0:01
PPL	2/5/2014	1:45

Date and time that service was restored to the last affected customer (time is 24-hour format):

	Date of Final Restoration	Time of Final Restoration	Nika 2014 Duration (days)	Sandy 2012 Duration (days)
Met-Ed	2/9/2014	21:06	4.8	10
PECO	2/12/2014	14:29	7.6	9
PPL	2/8/2014	22:00	3.8	9

Outages six or more hours in duration:

	Nika 2014 ≥6 Hour Outage Cases	Nika 2014 Total Outage Cases	Sandy 2012 ≥6 Hour Outage Cases	Sandy 2012 Total Outage Cases
Met-Ed	1,729	1,756	2,422	2,473
PECO	6,047	8,915	4,674	4,540
PPL	610	841	2,948	3,819
Totals	**8,386**	**11,512**	**10,044**	**10,832**

Rank of Sandy compared to a comparable storm event:

	Sandy Rank	Sandy Outages	Sandy Duration (days)	Nika Rank	Nika Outages	Nika Duration (days)
Met-Ed	1	298,300	10	5	144,000	4.8
PECO	1	845,703	9	2	723,681	7.6
PPL	1	523,936	9	*	*	*

* PPL did not experience outages of over 10% of customers, which is the threshold for reporting the comparison

Description of physical damage to utility infrastructure:

Nika 2014					
	Poles Replaced	**Transformers Replaced**	**Miles/Spans of Wire**	**Crossarms Replaced**	**Fuses/Cutouts**
Met-Ed	174	115	31	526	460
PECO	520	307	100	2,559	14,554
PPL	53	61	29	236	433
Totals	**747**	**483**	**160**	**3,321**	**15,447**

Sandy 2012					
	Poles Replaced	**Transformers Replaced**	**Miles/Spans of Wire**	**Crossarms Replaced**	**Fuses/Cutouts**
Met-Ed	1,040	550	113	2,530	3,400
PECO	750	398	141	2,875	16,522
PPL	619	601	76	1,494	966
Totals	**2,409**	**1,549**	**330**	**6,899**	**20,888**

SUMMARY OF REQUESTED ADDITIONAL INFORMATION

The PUC requested that EDCs provide additional information and answer questions regarding storm preparation and storm response to Nika. The following questions and EDC responses are summarized below and focus specifically on: storm preparation, media use, call center performance, restoration messaging, and personnel resource management. The questions will be listed in order followed by a brief summary of the individual EDC response.

Preparation

1. Describe how your utility prepared for the storm, including the following: what planning measures were taken and when; what pre-deployment of assets occurred and specifically when and where; and what type of outside resources (personnel or equipment) were requested and received and when.

Met-Ed

On Feb. 3, Met-Ed began holding conference calls with company leadership, operations personnel and others to plan service restoration efforts. This included participating in the FirstEnergy preparation calls. Through internal leadership calls, Met-Ed implemented its pre-storm strategy which involved calling out its internal employees such they would be mobilized and engaged prior to storm's impact.

Met-Ed also began planning logistics and making additional preparations which included:

- Preparing staging site locations.
- Reserving hotels in anticipation of significant outside resources arriving.
- Taking inventory of materials that would be needed to make repairs and made aarrangements for spot delivery if materials were needed.
- Making arrangements for fleet garages and mechanics to be available 24X7 in case there was a need for repairs to any of the vehicles being utilized during the storm. The Company evaluated the need for additional mutual assistance on these initial calls and put plans in place to seek outside assistance from FirstEnergy affiliated companies, outside utility companies associated with various mutual assistance organizations, and line contractors.

On Feb. 4, initial resource planning was finalized. The plan called for 24x7 coverage with the majority of internal and external crews working daylight hours, while a smaller contingent of crews worked overnight. On Feb. 4, FirstEnergy requested assistance from North Atlantic Mutual Assistance Group (NAMAG) and Southeastern Electric Exchange (SEE). Met-Ed secured 260 linemen through these mutual assistance organizations which included linemen from PREA. They also received commitments for over 290 linemen from FirstEnergy-affiliated companies and 300 linemen from on-property line contractors.

Based on forecasts and projected impact areas, Met-Ed pre-staged line contractors, FirstEnergy affiliated line workers, service personnel and hazard responders within Pennsylvania in preparation of the storm on Feb. 4. Also, hazard responder teams and forestry crews were pre-deployed on Feb. 4 in the Hanover, York, Lebanon, Reading, Boyertown, Easton and Stroudsburg districts.

Met-Ed restoration crews were assembled at midnight Feb. 5 in preparation for the approaching storm. In addition, at approximately noon on Feb. 5, a staging site was established at the York County Fairgrounds for the large volume of workers expected to arrive. The following Met-Ed storm organizations were operational at midnight Feb. 5: line shop support; dispatchers; storm analysts; hospitality; hazard 2 responders; hazard dispatchers; public protectors; forestry; forestry dispatchers; contact center; external affairs; government affairs; and corporate support.

PECO

A pre-event call was scheduled for Feb. 2 to prepare for the snow storm. The pre-event call finalized arrangements to activate the EOC and ensure key positions were in place the morning of Feb. 3 due to travel conditions, as well as to ensure regional field resources were available to work storm response for the Operations Control Center (OCC).

PECO pre-arranged regional field resources to be available the morning of Feb. 3 to work storm response for the OCC. Crews were assigned to work directly for the OCC at the beginning of shift on Feb. 3. The EOC and storm centers opened at noon on Feb. 3. PECO contacted local contractors on Feb. 2 to assess availability and determine resource potential for the pending storm. These crews were activated midday Feb. 3. The EOC activated and remained open overnight Feb. 3 to Feb. 4. PECO and contractor resources continued work on Feb. 4 to finish working on the last remaining outages, non-outage events and system configuration issues.

For the Feb. 5 ice storm, PECO's EOC and storm centers remained activated from the weather event on Feb. 3. The PECO crews, as well as 180 local contract line workers (FTEs), remained on shift. In addition, PECO began to ramp up its outside resources and obtained another 305 contractor FTEs for a total over 485 FTEs on February 5. PECO's weather forecast for February 4 to Feb. 5 was for a wintry mix with some potential for damage due to ice.

PECO arranged for conference calls with SEE and NAMAG on Feb. 4 to seek additional line resources. These resources were acquired from PHI through SEE and scheduled to arrive the morning of Feb. 5.

At 1 a.m. Feb. 5, the forecast indicated a slight increase in possible ice accumulations. After 2 a.m., PECO began to see a significant increase in outage events. PECO immediately began to increase resources by leveraging the following channels: additional mutual assistance calls, additional contractor outreach, sister utility exchanges, and acquiring resources redirected from unaffected utilities. Through these means, personnel resources working storm restoration increased each day as follows (including PECO back office support and support functions):

- Feb. 5: 2,700
- Feb. 6: 4,900
- Feb. 7: 5,400
- Feb. 8: 6,200
- Feb. 9: 6,800

On Feb. 5, PECO took an "all hands on deck" approach to staffing, mobilizing for around the clock coverage with company crews, the EOC and Customer Call Center. Leads were assigned to execute and track to closure each point prior to the storm.

The EOC and storm centers remained activated from Nika for the anticipated snow event on Feb. 13. PECO's weather forecast for Feb. 13 and Feb. 14 indicated a potential for system damage due to wet snow and wind gusts. PECO and contractor resources continued work on Feb. 12 by finishing the last remaining outages, non-outage events and system configuration issues. Any and all outage events that were created as a result of the snow event were completed by 8 p.m. Feb. 14. All remaining supplemental resources were released the following morning. The EOC and storm centers closed at 10 p.m. Feb. 14.

PPL

On Feb. 3, the PPL storm team held two pre-storm calls to discuss possible impending weather event and overall storm restoration strategy. On Feb. 4, PPL Electric conducted the following pre-storm activities:

- Planning Measures:
  - Conducted system outage modeling based on weather forecast.
  - Conducted two planning calls with key emergency personnel to discuss weather forecast, storm model outage predictions, and a staffing strategy.
  - Contacted county EMAs to review warming station plans for those counties forecasted to receive icing (Lancaster, York, Chester and Berks).
  - Began monitoring social media and posted storm preparation information to the PPL website.
  - Increased troubleman staffing for the overnight period.
  - Increased overnight coverage of customer service representatives.
  - Increased dispatcher staffing.
  - Verified PPL line and electrical personnel availability and cancelled discretionary activities (e.g. training, personal time). Contacted line and electrical contractors to determine availability and placed them on notice for deployment.
  - Placed field personnel, including storm damage assessors and auxiliary support personnel, on notice to prepare for deployment.
  - Decided to proactively open the Emergency Command Center (ECC) and the Regional Command Centers (RCCs) in each of the six regions at 6 a.m. Feb. 5.

- Pre-Deployment Measures:
  - 279 contractor personnel were notified to start preparations for the event. Based on predicted possible impacts across the entire PPL service territory, these crews were directed to stay within their normal working locations.

- Outside Resource Management:

- 100 distribution crews were requested through NAMAG.
- 384 distribution and support personnel were committed by Southern Co. (Alabama and Georgia Power), with an expected arrival of Feb. 6.
- 41 distribution personnel from Campbell Electric were committed with an expected arrival of Feb. 5.
- 35 distribution and support personnel from Duquesne Light were committed with an expected arrival of Feb. 6.
- All foreign crews were directed to PPL's Lancaster region as they became available.

2. Detail what proactive outreach to special-needs populations occurred and how those messages were disseminated; what proactive outreach to county and local emergency management agencies occurred and what proactive outreach to local and state elected officials occurred and how those messages were disseminated. Provide the dates and times of those outreach efforts.

Met-Ed

Met-Ed worked closely with all local, county and state officials as well as EMAs and American Red Cross Chapters. In preparation of the event, telephone contacts were made to the EMAs serving Adams, Berks, Bucks, Cumberland, Dauphin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Pike and York counties. External Affairs provided information regarding the anticipated storm, expected lengthy outages, and the need for customers to prepare. An emphasis was placed on how Met-Ed is preparing for and monitoring the weather. During these conversations, plans for opening and staffing county EOCs were also discussed. Finally, points of contact were certified.

As the event progressed, communication continued. The groups listed above were informed regularly by email and/or text messages four times a day (early in the morning; early afternoon; early evening; and late evening). Initially, communications concentrated on the outages being reported, along with the general location (county, city, area) of any major damage/outages and numbers of customers affected. Once the storm passed through the territory and major restoration efforts were underway, the information in the communications became more detailed. The more in-depth communications contained information on partial circuits or areas that should be restored, along with general information on the restoration status of the remaining affected Met-Ed districts. Locations of various Redner's and Giant stores that were distributing water and ice to customers without power were also included in these updates. Additionally, Met-Ed provided staffing to the Bucks County EMA on Feb. 5, at the EMA's request.

Met-Ed also participated in four scheduled calls with "public officials" that took place with the officials from York County, Met-Ed's hardest hit area. Met-Ed's external affairs team followed up on all inquiries from legislators regarding issues with specific customers and assisted elected officials in posting information on their official and government websites.

PECO

PECO's effort to communicate with all included direct communication through the following means: PECO's automated phone system; web-based information through PECO's Storm Center

and Mobile enhanced Websites and for customers with online accounts; use of the company's social media channels; proactive calls to those customers who experience most extended outages; as well as direct communication with essential customers.

PECO conducted nearly 550 media interviews to provide information related to the company's efforts to prepare for the storm, and the response to restore service to customers. PECO also communicated with elected and regulatory officials through the following means: coordinated, scheduled briefing conference calls; personal phone calls and outreach regarding storm impact; and continued email updates regarding outages and restoration. For local officials and emergency responders, PECO also performed personal calls and outreach to affected municipalities regarding storm impact and continued email updates and text messages regarding outage updates. All PECO employees, contractors and support personnel also were provided regular updates from the Emergency Response Organization regarding outages, restoration and safety. PECO also conducted public official on-site briefings with Governor Corbett, PUC Chairman Powelson, PEMA Director Glenn Cannon, and others.

In those geographic areas that experienced the most damage and had more extended outages, PECO opened proactive customer care centers where customers could go to receive up-to-date restoration information and interact face-to-face with PECO representatives.

PPL

Outreach to special-needs populations was coordinated through county EMAs. Any EMA may notify the company of a concern and request escalation of an issue to designated PPL Electric representatives.

PPL's Key Account Managers contacted or visited EMAs/and or 9-1-1 operations centers in Lancaster, Chester, Berks, and Lebanon counties. Calls were initiated on Feb. 5 and communications continued via phone and electronic means throughout the event. Issues such as current outage statistics, customer outreach, estimated restoration times, safety considerations, and updates regarding shelters and warming stations were discussed.

Proactive outreach to local officials, community leaders and the media began on the evening of February 4 with an email containing information about storm preparations. This email was sent by PPL Electric's regional affairs directors (RADs). The Lancaster RAD provided two restoration updates each day during the storm via email. A separate email was sent to invite local officials to conference calls that were held at 4:30 p.m. Feb. 5 and Feb. 6. Throughout the event, issues such as current outage statistics, customer outreach, estimated restoration times, safety considerations, and updates regarding shelters and warming stations were discussed.

Media Use

1. Describe how your utility utilized both traditional (print/radio/TV) media and social media (Twitter/Facebook/Texts/Website) before the storm and throughout the restoration process.

Met-Ed

Through social media, media relations and web postings, Met-Ed emphasized safety messages and provided updates on the storm preparation and restoration process to customers. Met-Ed issued news releases and media advisories leading up to the ice storm and throughout the duration of the restoration process.

Apart from these traditional media resources, Met-Ed took advantage of opportunities to reach customers through web-based means. Met-Ed utilized its website and social media to share pre-storm information as well as updates throughout the restoration process. Met-Ed's primary social media accounts include Facebook and Twitter.

Pre-storm information shared on social media included:

- Company preparation plans with messaging consistent with the information included in news releases.
- How to report power outages.
- Downed power line safety reminders.
- Storm preparation tips.

Updates throughout the restoration process included:

- Ongoing updates on the number of customers restored out of the total number impacted.
- Estimated restoration times.
- Storm damage photos.
- Outage reporting reminders.
- Downed power line safety reminders and how to report them.
- Lists of shelters and warming stations.
- Tips of safely operating a generator.
- Lists of water and ice locations.

On the FirstEnergy website, key storm information was shared on the Company's online newsroom and on the Storm Information web page, located at www.firstenergycorp.com/storminfo. A banner on Met-Ed's homepage directed customers to the dedicated storm page. Met-Ed also offers its 24x7 Power Center outage map, which is updated approximately every 15 minutes with restoration information. This provided information such as the number of customers affected, as well as causes and estimated restoration times when they became available.

Based on lessons learned from the storm review of Sandy, Met-Ed is continuing its focus on ways to provide accurate information to the community. Enhancements to the website, mobile application (app), and technology after Sandy include:

- The app and website provide customers with easy, on-the-go access to information and services regarding their electric accounts.
- Customers can subscribe to receive alert notifications via email or text message which contain information about four invoices, weather conditions that may impact electrical service, or updates on reported outages.

- Customers can use text messaging to report outages, request updates on restoration efforts, and make inquiries about their accounts.
- Customers can view their personal outage status – including the best-available ETR and cause of outage – by logging in to the full website or the mobile website.

PECO

PECO used traditional media to inform customers, government leaders and key stakeholders about customer outages, PECO's restoration efforts and customer safety. This information, which was distributed to the media through news releases and face-to-face interviews, communicated insights on causes of outages and outage reporting, restoration efforts, and customer safety.

PECO used its Twitter and Facebook channels to keep customers, government leaders and key stakeholders informed about restoration efforts and customer safety during the storm. This included proactive posts, as well as posts responding to customers with questions related to safety and emergencies.

PECO activated the Storm Center portion of the company's Website within 4 hours from when the storm began to impact the region. The site was used to provide customers with information about the company's efforts to restore service and provided tips to help ensure customer remained safe around downed power lines and with use of generators. The site was updated every 4 hours as the company made progress with service restoration. The company also provided similar updates and information on its mobile site.

PPL

PPL utilized a variety of media methods prior to and during this storm. As detailed in the responses, below, the company provided email updates to the media, conducted over 100 interviews and utilized social media (Facebook, Twitter and Google+). In addition, customers who signed up for PPL Alerts received notifications about their outage and estimated restoration time.

2. Document any earned media coverage and provide any instances of media buys, if any.

Met-Ed

Media was not purchased in the Met-Ed territory in advance of the ice storm. FirstEnergy Corporate Communications conducted daily interviews with radio and TV stations during the storm including in-studio, at Met-Ed in York, and over the phone. A Google News search for terms including our spokespersons and "Met-Ed" resulted in 462 hits by the evening of Feb. 6.

PECO

PECO conducted more than 500 media interviews (print/radio/TV) during the storm. PECO also supported the coordination of Governor Corbett's restoration site tour and press conference, which included participation from the PUC, as well as state and elected officials. PECO made no media buys.

PPL

A total of 102 media interviews with local and national media were conducted by RADs and Corporate Communications staff between Feb. 4 and Feb. 8. A log was not kept of the exact times of these interviews, but they occurred regularly starting the day before the storm with an emphasis on preparation and continuing regularly through Feb. 7 with an increased emphasis on restoration updates.

3. Provide the dates and times that media releases and/or media interviews occurred, and the subject matter.

Met-Ed

Met-Ed conducted daily media releases and interviews with print, TV, and radio from Feb. 3 through Feb. 9. Additionally, several news releases and media advisories were issued through PR Newswire during the event by FirstEnergy Corporate Communications on behalf of Met-Ed.

PECO

PECO conducted daily media releases and interviews with print, TV, and radio from Feb. 3 through Feb. 12. The subject matter of those releases included:

- Outages
  - Total system impact
  - Number of outages remaining
  - How customers can report outages
  - Causes of outages (e.g., weather conditions, downed trees, etc.)
  - System damage overview
- Restoration efforts
  - Number of crews
  - Restoration times (and changing restoration times)
  - Nested outages
- Customer safety
  - Downed power lines, equipment and tree limbs
  - Proper use of generators

PPL

Proactive outreach to the media began the evening of Feb. 4 with an email from RADs. As the storm quickly focused on the Lancaster area, outreach to area media occurred daily via email and increased throughout the event. There were no media buys during this storm.

4. Describe how your utility utilized social media – direct response to customer tweets or Facebook posts, Facebook and Twitter updates, updated messaging on outage websites, etc.

Met-Ed

Met-Ed utilized Facebook and Twitter to provide key information to customers related to pre-storm and storm restoration efforts. Met-Ed also responded directly to customer inquiries on both platforms. Beginning Feb. 4, 16 Facebook posts were shared and approximately 140 tweets were published on Twitter.

Met-Ed's dedicated storm information page was updated with the most current storm restoration information daily. This page was used to support news releases and acted as a hub of information related to the storm with direct access to:

- Current restoration information.
- Lists of available shelters and warming stations.
- Lists of water and ice locations.
- Information on how to report a power outage or downed power line.
- Safety information and tips on how to prepare for and manage.

PECO

PECO's social media team worked 24x7 throughout the storm. Facebook and Twitter platforms were updated every 2 to 4 hours, and more often when additional information became available, to provide information about outages, restoration efforts and customer safety.

Proactive updates were provided every four hours on the public platforms, and more often when additional information became available. This included important safety information, how to report an outage or other emergency, restoration updates and explanations of nested outages. It also provided the global estimated restoration time, and included communication about how/why these times could change as damages were assessed and repairs were made. PECO also utilized its Facebook and Twitter channels to provide photos of storm damage and crew restoration work.

During the storm, PECO responded to public and private customer inquiries on Twitter and Facebook surrounding emergencies (e.g., gas odors, downed trees and power lines), giving them information on how to immediately report these issues to PECO through our emergency hotline. For customers submitting photos through Twitter and Facebook, the social media team elevated those issues to the Emergency Response Director to help assess situation and help guide restoration efforts, and then a response was provided to those customers. Individual restoration times were not provided through Twitter and Facebook.

PPL

PPL updated customers and other stakeholders though proactive social media messaging and active customer engagement pre-storm, during the storm, and post-storm. PPL used the social media channels Facebook, Twitter and Google+. Social media coverage was provided around the clock from 8 a.m. Feb. 4 through 9 p.m. Feb. 7, at which time social activity was minimal. However, staff continued to monitor social media for urgent or critical matters through Feb. 9.

Social messaging and graphics included: ways to prepare for the storm; how to report outages; restoration progress reports; availability of outage alerts for specific status information; and outage safety information. Specific messages regarding the availability of free ice/water and shelter/warming station facilities for Lancaster County customers were geo-targeted on Facebook for the Lancaster area only. The company website also carried the same pre-storm, during storm, and post-storm information.

PPL Electric commonly engages consumers directly in two-way communications via social media. This includes responding to customer "comments" on public page posts and private messages via Facebook; @mentions and direct messages on Twitter; and response to comments on Google+.

5. Provide information on traffic to the company's outage website – both the numbers of unique users and the number of page visits.

Met-Ed

The 24x7 Power Center map had about 214,000 views between the mobile and web versions, which included over 150,000 unique page views between Feb. 4 and Feb. 9. The storm information page had 72 page visits which included 36 new visitors.

PECO

PECO's homepage had 1,296,681 unique users and received over 4.6 million page views from Feb. 4 through Feb. 12.

PPL

PPL's Outage Center page on its website received 483,095 page views and 312,504 unique page views from Feb. 4 through Feb. 12.

6. Provide the number of followers on the company's Twitter page before Feb. 4 and after Feb. 12.

Met-Ed

Prior to Feb. 4, the Met-Ed Twitter page had 2,296 followers. After Feb. 9, the Met-Ed Twitter page had 2,492 followers, which is an increase of nearly 9 percent.

PECO

On Feb. 3, 2014 PECO had 2,139 Twitter followers and on Feb. 14, 2014 PECO had 4,494 Twitter followers, which is an increase of over 110 percent.

PPL

The number of Twitter followers increased by 282. Total community size following the event was 8,735, or an increase of 3.3 percent.

7. Provide the number of "Likes" on the company's Facebook page before Feb. 4 and after Feb. 12.

Met-Ed

Prior to Feb. 4, the Met-Ed Facebook page had 429 "Likes." After Feb. 9, the Met-Ed Facebook page had 943 "Likes," which is an increase of more than 100 percent.

PECO

On Feb. 3, 2014 PECO had 1,335 Facebook "Likes" and on Feb. 14, 2014 PECO had 2,820 Facebook "Likes," which is an increase of over 111 percent.

PPL

The number of Facebook "Likes" increased by 332. Total community size following the event was 18,060, or an increase of about 2 percent.

8. Provide the number of impressions for both Twitter and Facebook between Feb. 4 and up to and including Feb. 12.

Met-Ed

Twitter does not include impressions in their analytics. However, between Feb. 4 and Feb. 9, Met-Ed Twitter account received 227 mentions and 84 re-tweets.

The Met-Ed Facebook page received 58,886 impressions from Feb. 4 through Feb. 9. This includes all content associated with the page. Posts published during this timeframe received 28,713 impressions.

PECO

PECO provided the following Twitter impressions information:

- Pre-storm (Jan. 26 – Feb. 2): 63,840
- During storm (Feb. 3 – Feb. 10): 256,883
- After storm (Feb. 11 – Feb. 18): 57,960

PECO provided the following Facebook impressions information:

- Pre-storm (Jan. 4 – Feb. 2, 2014): 4,038
- During storm (Feb. 3 – Feb. 10): 90,149
- After storm (Feb. 11 – Feb. 18): 28,609

PPL

PPL had 111,108 total daily impressions on its Facebook page with 36,587 unique users. PPL Electric's posts were shared 194 times, receiving 761 "Likes" and 158 comments. There were 51 customer-generated posts to the timeline. This does not include private messages or additional engagement (comment threads) for customer-generated posts.

PPL's Twitter posts were retweeted 240 times and @PPLElectric was mentioned 241 times. This does not include private messages. PPL Electric currently does not have a tool to report historical data on the number of impressions or potential number of impressions in a given time period.

Call Center Performance

1. Provide the following information for each day from Feb. 5 thru Feb. 12:

   Number of outage and hazard calls received.
   Number of calls answered.
   Average answer time in seconds.
   Number of calls not answered.
   Number of calls that received a message indicating all lines are busy and please call back.

The following tables represent the combined answers from the EDCs identified in this report and provides a comparison to the performance in Sandy:

Nika 2014 - Call Center Performance February 5, 2014 to February 12, 2014

	Outage Calls Received	Outage Calls Answered	Outage Calls Not Answered/ Abandoned	% Outage Calls Not Answered/ Abandoned	Outage Calls Receiving Busy Signal	% Total Outage Calls Receiving Busy Signal	Average Answer Time - Seconds
Met-Ed	82,783	82,103	680	0.8%	1,175	1.40%	5
PECO	1,017,346	982,687	34,590	3.4%	48,696	4.57%	17
PPL	20,647	16,860	3,787	18.3%	87	0.42%	1
Totals	**1,120,776**	**1,081,650**	**39,057**	**3.5%**	**49,958**	**4.27%**	**23**

Sandy 2012 - Call Center Performance October 28, 2012 to November 8, 2012

	Outage Calls Received	Outage Calls Answered	Outage Calls Not Answered/ Abandoned	% Outage Calls Not Answered/ Abandoned	Outage Calls Receiving Busy Signal	% Total Outage Calls Receiving Busy Signal	Average Answer Time - Seconds
Met-Ed	165,145	156,610	8,535	5.2%	5,283	3.06%	16
PECO	1,177,427	1,133,600	43,827	3.7%	33,117	2.74%	17
PPL	436,408	417,517	18,891	4.3%	6,280	1.42%	141
Totals	**1,778,980**	**1,707,727**	**71,253**	**4.0%**	**44,680**	**2.45%**	**174**

The tables below summarize and compare the information regarding inquiries and informal complaints received by the PUC's Bureau of Consumer Services (BCS) during the response to Nika and Sandy in 2012. TUS also noted the number of informal complaints related to inaccurate ETRs and/or inadequate restoration information.

Nika 2014			
	Complaints	**Inquiries**	**Complaints Related to ETRs/Inadequate Info**
Met-Ed	6	27	3
PECO	12	35	8
PPL	1	1	1
Totals	**19**	**63**	**12**

Sandy 2012			
	Complaints	**Inquiries**	**Complaints Related to ETRs/Inadequate Info**
Met-Ed	70	171	33
PECO	12	29	4
PPL	14	58	9
Totals	**96**	**258**	**46**

Restoration Messaging

1. Describe how your company managed ETR messaging by providing a general description of your company's process.

Met-Ed

The process of determining restoration times is constantly reviewed and monitored by Met-Ed throughout the storm event. The storm management team sets the global ETR of when service will be restored to the majority of customers within Met-Ed affected by

the event, and then informs the regional dispatch office (RDO) and the Customer Contact Center. Met-Ed customers receive ETR information from live agents, IVR Messages, and the information that is provided on the outage website.

PECO

PECO determines an ETR using a tiered structure, depending on the length of the storm, total number of customers impacted, and the estimated work/jobs on the system. For instance, all jobs impacting 1,000 or more customers will be restored by X time on X date, all jobs impacting 500 customers or more will be restored by X time on X date, and so forth. PECO assigns a more specific ETR for the job when a crew is dispatched and a more accurate ETR is known. In some cases, ETRs need to be adjusted due to nested outages, where after the initial damage is repaired, additional damage is found impacting that particular customer or group of customers.

PPL

PPL manages all ETRs using their outage management system (OMS). The ETRs are communicated in five ways: a messaging system called PPL Alerts; IVRs; customer service representatives; outage website; and social media.

2. Describe whether your company suspended automated restoration estimate messaging and if so, provide the dates and times the messaging was suspended and the date and time when it was resumed.

Met-Ed

Met-Ed suspended ETRs in the York and Hanover operating areas at 3:36 a.m. on Feb. 5 and the ETRs in the remaining districts were disabled at 5:36 a.m. Within 24 hours of the start of the storm ETRs were systematically brought back on in stages, beginning with geographically specific restoration estimates for all Met-Ed districts 9:28 p.m. Feb. 5. The Easton and Stroudsburg areas had ETRs restored 10:40 a.m. Feb. 6. The Reading and Boyertown areas followed at 10:49 p.m. Feb. 7. The impacted western districts which included Gettysburg, Dillsburg, Hanover, Lebanon, and York resumed the normal ETR process at 8:49 p.m. Feb. 9.

PECO

Due to the significant impact this storm had on PECO's system, the company suspended ETRs at 5:15 a.m. Feb. 5. During this time, PECO did not provide customers with ETRs through any channel. Messages were placed on the company's phone system (IVR), website, mobile site and social media channels to tell customers that ETRs would not be available until the company could perform an initial assessment of the storm's damage. ETR messaging resumed at 5 a.m. Feb. 6.

PPL

Estimate Restoration Time (ERT) Suppression applies during periods of inclement weather or any significant operating event where it is difficult to immediately determine an accurate ERT. Generally, the director of system emergency (DSE) and/or the/system support director (SSD) considers suppressing ERTs if weather is expected to result in more than 50 cases of outages in a specific region, or if the storm model predicts a possible scenario of over 250 cases system-wide. Suppression is considered for the entire service territory one hour prior to the expected time that

weather damage will begin. Based on current weather conditions, weather forecasts, and system outage modelling the ERT suppression is either maintained or updated during an event.

During Nika, the Northeast, Central, and Susquehanna regions remained in automatic ERT calculation modes for the duration of this event (i.e. no ERT suppression in these regions).
ERTs were suppressed in the following regions at the following times:
2:41 a.m. Feb. 5 in the Lancaster region.
4:25 a.m. Feb. 5, in the Harrisburg region.
7:33 a.m. Feb. 5, in the Lehigh region.
ERT suppressions were lifted in the following regions at the following times:
1:25 p.m. Feb. 5, in the Harrisburg region.
1:25 p.m. Feb. 5, in the Lehigh region.
4:27 p.m. Feb. 5, in the Lancaster region.

3. Provide the dates and times that your company began to provide initial restoration estimates to customers calling into the customer service line and whether those initial estimates were global (system-wide), or geographically specific and whether customers could access those restoration estimates via the IVR, or customer service representatives, or both.

Met-Ed

See response to Restoration Messaging question 2, above. The FirstEnergy Pennsylvania Contact Center provides information to customers through the IVR and customer service representatives. Customers may receive global IVR messaging (all Met-Ed customers) and area IVR messaging (customers within a specific district). When updated messaging becomes available, the IVR is updated with the most recent information. The updated information is also passed on to customer service representatives to share with customers. This helps ensure that consistent messages are being provided across all communications channels. All ETR information provided to customers via IVR or live agent mirrors the information that is provided on the outage website.

PECO

ETRs were available to customers beginning at 5 a.m. Feb. 6. Initially, customers were provided with a global ETR. PECO then adjusted the ETR as additional information regarding the outage became available and crews were assigned to the work. Once ETR messaging resumed, customers could receive the ETR through the IVR or by speaking with a customer service representative. These ETRs also were available on the company website and mobile site. PECO also provided high level/global ETR messaging on social media (Facebook, Twitter).

PPL

PPL did not use global ERTs in this event. ERTs were developed for each region of PPL Electric's service territory as they were available. All ERTs were available to customers via PPL Electric's IVR, the self-service website, PPL Alerts, and customer service representatives. Updates to individual customer outages by both dispatchers and field crews superseded regional estimates and were made available to customers as they became available.

4. Provide the dates and times that your company began to provide customer-specific restoration estimates to customers calling in to the customer service line and whether customers could access those restoration estimates via the IVR, or customer service representatives, or both.

Met-Ed

See response in Restoration Messaging question 2 and 3, above.

PECO

Global ETRs were populated on all outages and then adjusted as additional information regarding the outage became available and crews were assigned to the work. Customer specific restoration estimates were made available as early as 5 a.m. Feb. 6 for those customers whose outage jobs were going to be dispatched that day. These estimates were accessible through the IVR, customer service representatives, company website and mobile site.

PPL

Customer specific restoration estimates were active in the Northeast, Central, and Susquehanna regions for the duration of this event. At 11:28 a.m. Feb. 6, area ERTs were removed for the Lehigh and Harrisburg regions and estimates reverted to customer specific ERTs. At 8:18 p.m. Feb. 6, area ERTs were removed for Lancaster region and estimates reverted to specific ERTs.

5. Provide the dates and times that your company began providing restoration estimate messaging on your outage websites and indicate whether the initial estimates were global or geographically specific. Provide the dates and times the restoration messages on your outage websites were updated and the date and time geographically specific restoration estimates were provided.

Met-Ed

At 9:25 p.m. Feb. 5 ETRs were updated on the outage website as follows:

- 9:25 p.m. Feb. 5, Easton
- 9:26 p.m. Feb. 5, Boyertown, Hamburg, Lebanon, and Reading
- 9:27 p.m. Feb. 5, Dillsburg, Gettysburg, Hanover, and York
- 9:28 p.m. Feb. 5, Stroudsburg
- 5:37 p.m. Feb. 7, Lebanon
- 4:36 p.m. Feb. 8, Dillsburg, Gettysburg and Hanover
- 7:41 p.m. Feb. 9, York

Additionally, ETRs were provided in two news releases. See response to Media Use question 3, above.

PECO

ETRs were available to customers on the PECO website starting at 5 a.m. Feb. 6 at 5 a.m. Consistent with other channels, initially the global ETR was provided and then adjusted as additional information regarding the outage became available and crews were assigned to the work. The customer also could receive this information on the company's mobile site.

PPL

Between 1:25 p.m. and 4:27 p.m. Feb. 5, restoration estimates were available on PPL's website. These were regional estimates which were refined to specific estimates as detailed above.

Personnel Resource Management

Provide the number of all personnel; whether company employees, contractors, mutual aid contractors, affiliate mutual aid, or foreign mutual aid that worked each day during the restoration effort from Feb. 4 up to and including Feb. 12. Provide this information by each individual work day and not in the aggregate. Also list the personnel by specific job function, such as linemen, troublemen, damage assessors, forestry, flagmen, etc.

A summary of the EDCs' responses are below:

Lineman Personnel Amount - All Utilities*

Total Linemen Resources	Met-Ed	PECO	PPL	Total
(Company, Contractor and Mutual Aid)				
2/4/2014	466	669	607	1,742
2/5/2014	595	974	607	2,176
2/6/2014	793	2,625	946	4,364
2/7/2014	856	2,978	946	4,780
2/8/2014	1,024	3,814	946	5,784
2/9/2014	1,024	4,234	0	5,258
2/10/2014	0	3,690	0	3,690
2/11/2014	0	3,690	0	3,690
2/12/2014	0	3,690	0	3,690
Company Linemen				
2/4/2014	260	489	328	1,077
2/5/2014	305	489	328	1,122
2/6/2014	435	489	328	1,252
2/7/2014	492	489	328	1,309
2/8/2014	508	489	328	1,325
2/9/2014	508	489	0	997
2/10/2014	0	489	0	489
2/11/2014	0	489	0	489
2/12/2014	0	489	0	489
Contractor Resources				
2/4/2014	206	180	279	665
2/5/2014	206	223	279	708
2/6/2014	252	257	279	788
2/7/2014	252	257	279	788
2/8/2014	276	257	279	812
2/9/2014	276	257	0	533
2/10/2014	0	257	0	257
2/11/2014	0	257	0	257
2/12/2014	0	257	0	257
Mutual Aid (including Mutual Aid Contractors)				
2/4/2014	0	0	339	339
2/5/2014	84	262	339	685
2/6/2014	106	1,879	339	2,324
2/7/2014	112	2,232	0	2,344
2/8/2014	240	3,068	0	3,308
2/9/2014	240	3,488	0	3,728
2/10/2014	0	2,944	0	2,944
2/11/2014	0	2,944	0	2,944
2/12/2014	0	2,944	0	2,944

*These numbers represent workers actually working that date and not the available number of workers as some may have been on rest, etc.

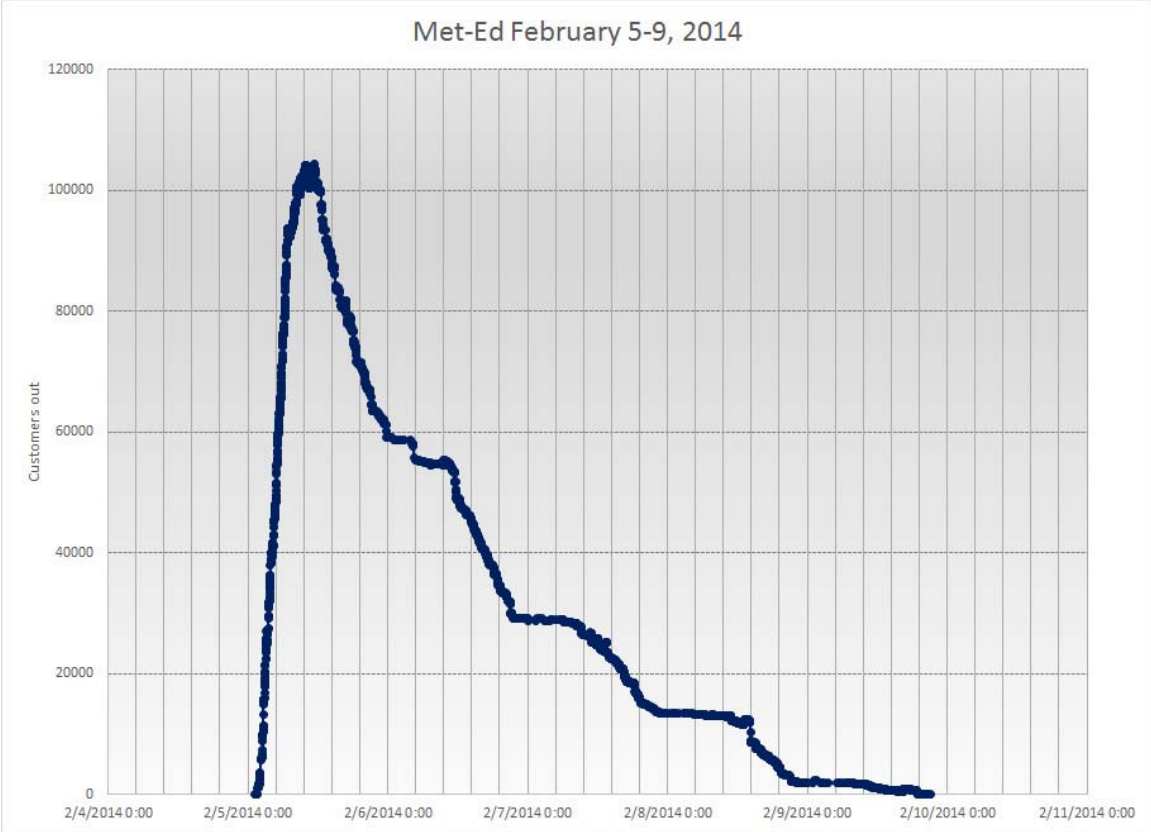
Met-Ed									
	2/4/2014	2/5/2014	2/6/2014	2/7/2014	2/8/2014	2/9/2014	2/10/2014	2/11/2014	2/12/2014
Linemen Resources									
Company Linemen	260	305	435	492	508	508			
Contractor Linemen	206	206	252	252	276	276			
Mutual Aid Linemen	0	0	17	17	26	26			
Mutual Aid Contractor Linemen	0	84	89	95	214	214			
Total Linemen Available	466	595	793	856	1024	1024			
Other Resources									
Hazard Responders	72	115	292	344	167	34			
Mutual Aid Hazard Responders	0	0	0	0	0	0			
Troublemen	0	0	0	0	0	0			
Mutual Aid Troublemen	0	0	0	0	0	0			
Forestry/Veg Management Workers	0	0	21	21	21	21			
Contractor Forestry/Veg Managemer	0	366	389	380	378	309			
Assessors	0	0	0	0	4	2			
Contractor Assessors	0	0	0	0	0	0			
Wire Guards	0	2	16	38	33	0			
Contractor Wire Guards	0	0	0	0	0	0			
Electricians	5	31	142	145	149	80			
Contractor Electricians	0	0	0	0	0	0			
Energy and other Technicians	0	0	0	0	0	0			
Substation Workers	0	2	3	16	15	1			
Company Supporting Staff	176	259	348	354	324	239			
Mutual Aid/Contractor Supporting Sta	24	32	33	33	45	45			
Total Other Resources	277	807	1244	1331	1136	731			
Total Resources	743	1402	2037	2187	2160	1755			

PECO									
	2/4/2014	2/5/2014	2/6/2014	2/7/2014	2/8/2014	2/9/2014	2/10/2014	2/11/2014	2/12/2014
Linemen Resources									
Company Linemen	489	489	489	489	489	489	489	489	489
Contractor Linemen	180	223	257	257	257	257	257	257	257
Mutual Aid Linemen	0	0	291	491	575	671	592	417	417
Mutual Aid Contractor Linemen	0	262	1588	1741	2493	2817	2352	2527	2527
Total Linemen Available	669	974	2625	2978	3814	4234	3690	3690	3690
Other Resources									
Hazard Responders									
Mutual Aid Hazard Responders									
Troublemen	102	102	102	102	102	102	102	102	102
Mutual Aid Troublemen									
Forestry/Veg Management Workers									
Contractor Forestry/Veg Management Workers	195	195	645	801	801	960	960	960	960
Assessors									
Contractor Assessors									
Wire Guards	0	20	76	129	115	117	118	105	103
Contractor Wire Guards									
Electricians									
Contractor Electricians									
Energy and other Technicians	200	200	200	200	200	200	200	200	200
Substation Workers									
Company Supporting Staff	228	228	228	228	228	228	228	228	228
Mutual Aid/Contractor Supporting Staff									
Total Other Resources	725	745	1251	1460	1446	1607	1608	1595	1593
Total Resources	1394	1719	3876	4438	5260	5841	5298	5285	5283

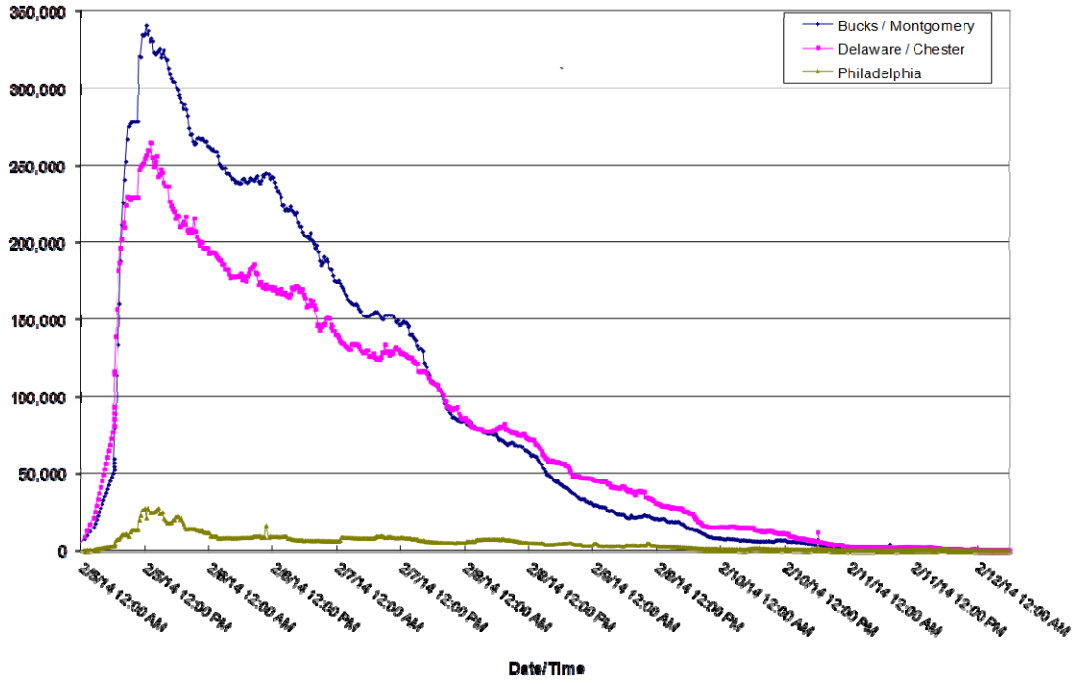
PPL									
	2/4/2014	2/5/2014	2/6/2014	2/7/2014	2/8/2014	2/9/2014	2/10/2014	2/11/2014	2/12/2014
Linemen Resources									
Company Linemen	328	328	328	328	328				
Contractor Linemen	279	279	279	279	279				
Mutual Aid Linemen	0	0	306	306	306				
Mutual Aid Contractor Linemen	0	0	33	33	33				
Total Linemen Available	607	607	946	946	946				
Other Resources									
Hazard Responders	0	0	0	0	0				
Mutual Aid Hazard Responders	0	0	0	0	0				
Troublemen	49	49	49	49	49				
Mutual Aid Troublemen	0	0	0	0	0				
Forestry/Veg Management Workers	0	0	0	0	0				
Contractor Forestry/Veg Management Workers	474	474	474	474	474				
Assessors	147	147	147	147	147				
Contractor Assessors	0	0	0	18	0				
Wire Guards	44	44	44	44	44				
Contractor Wire Guards	0	0	0	0	0				
Electricians	5	5	5	5	5				
Contractor Electricians	0	0	0	0	0				
Energy and other Technicians	0	0	0	0	0				
Substation Workers	26	26	26	26	26				
Company Supporting Staff	186	186	186	186	186				
Mutual Aid/Contractor Supporting Staff	0	0	121	121	121				
Total Other Resources	931	931	1052	1070	1052				
Total Resources	1538	1538	1998	2016	1998				

Outage Restoration Graphs

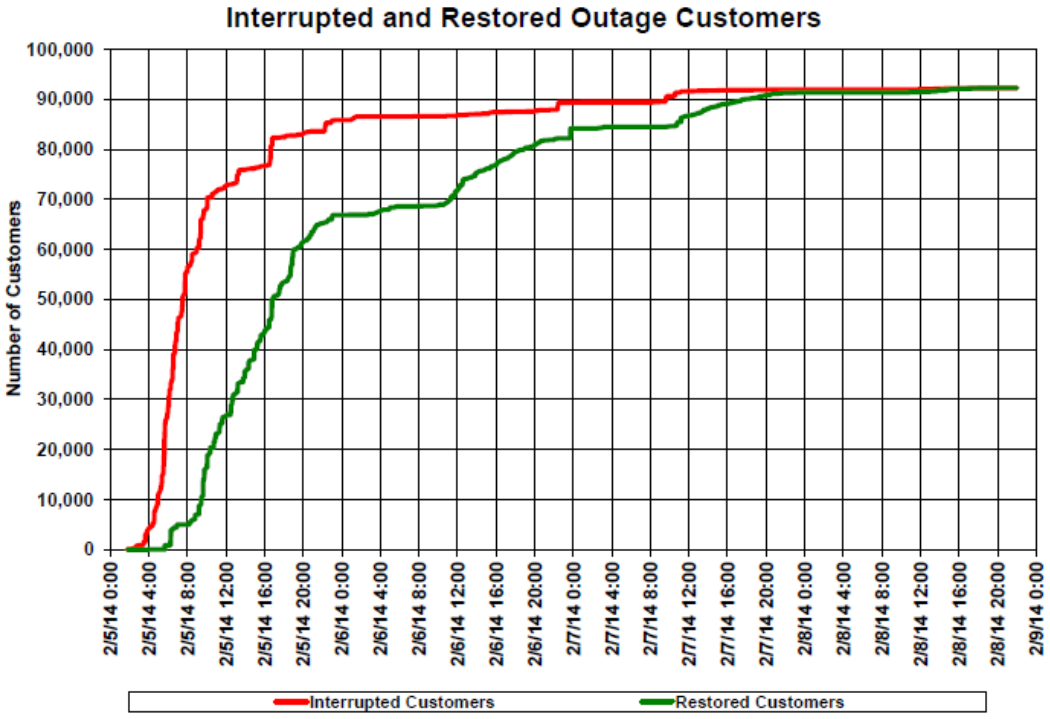
Met-Ed:



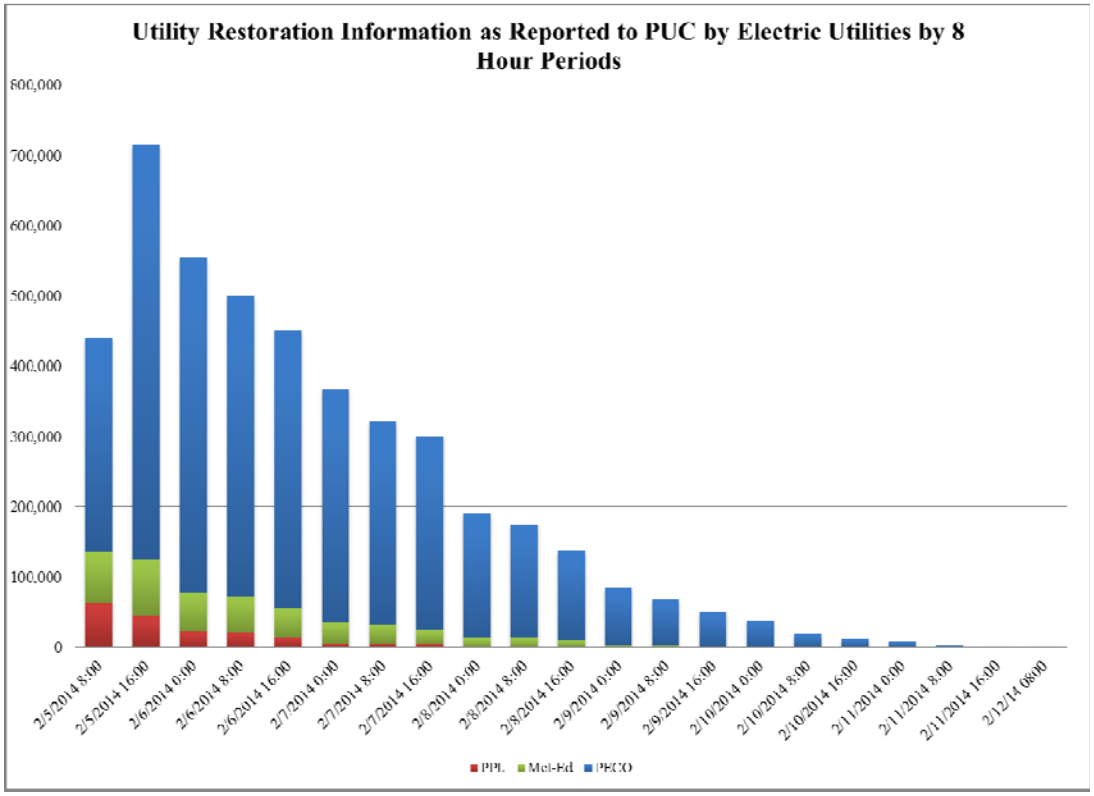
PECO Electric:

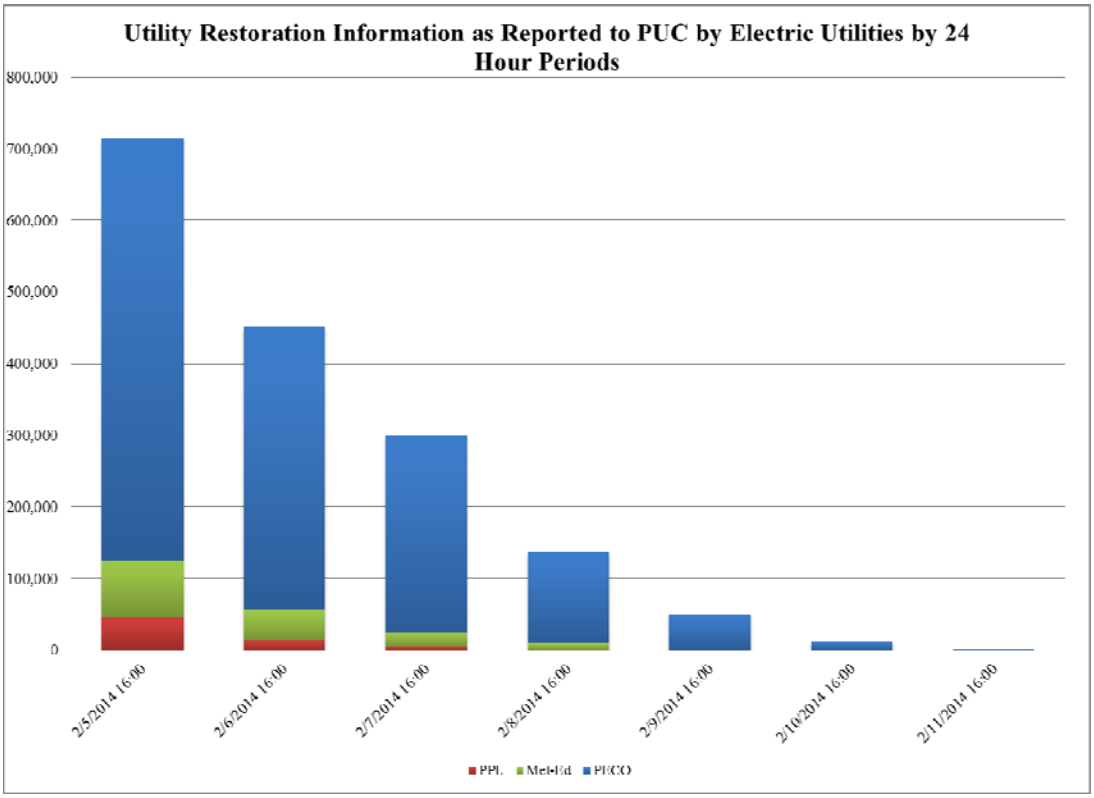


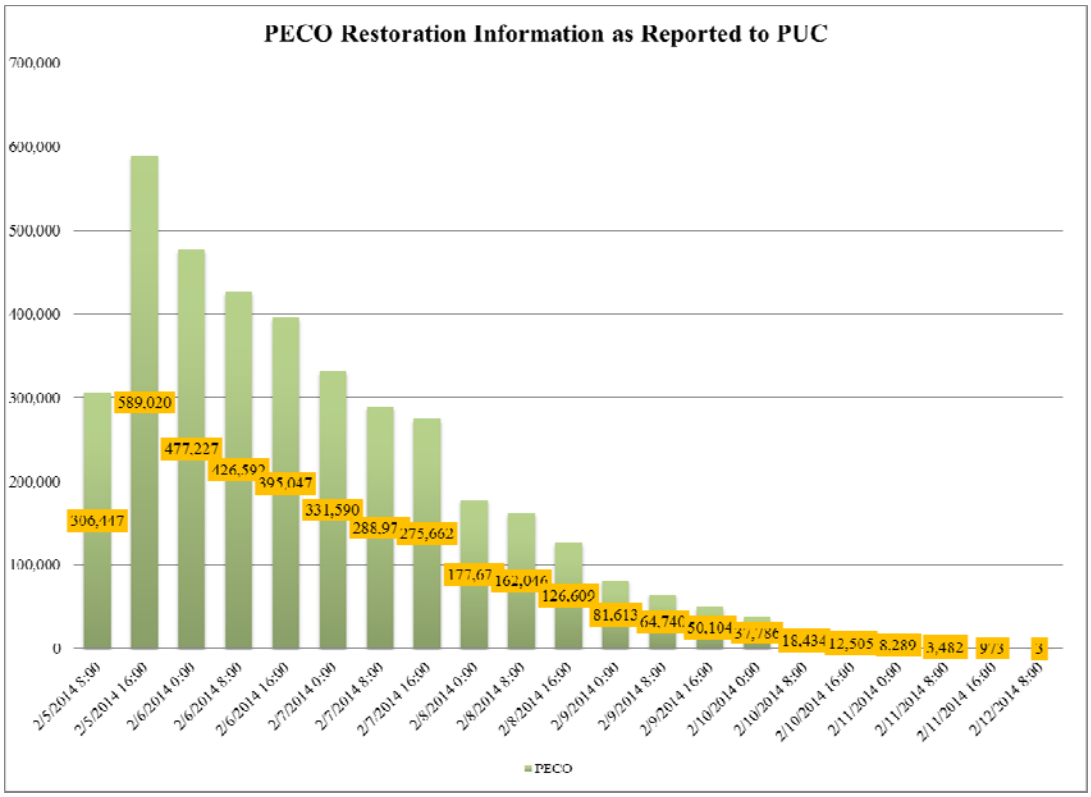
PPL Electric:

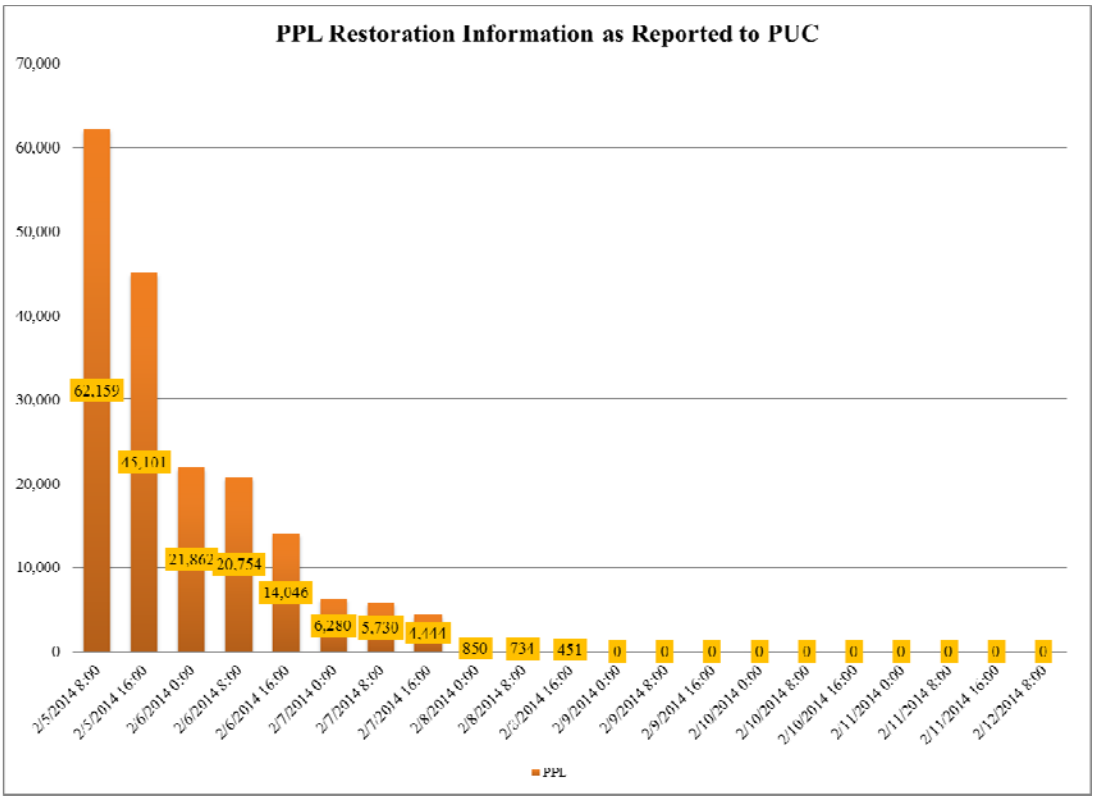


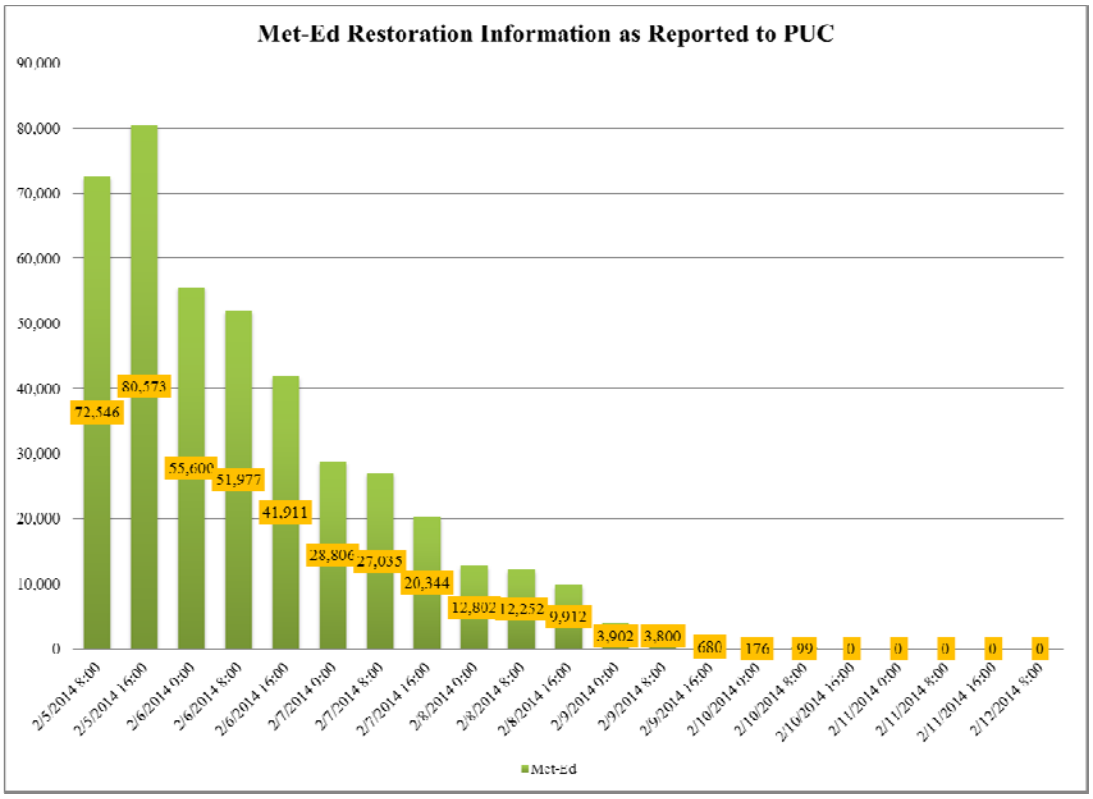
Outage Restoration Progress as Reported to PUC by EDCs During Restoration





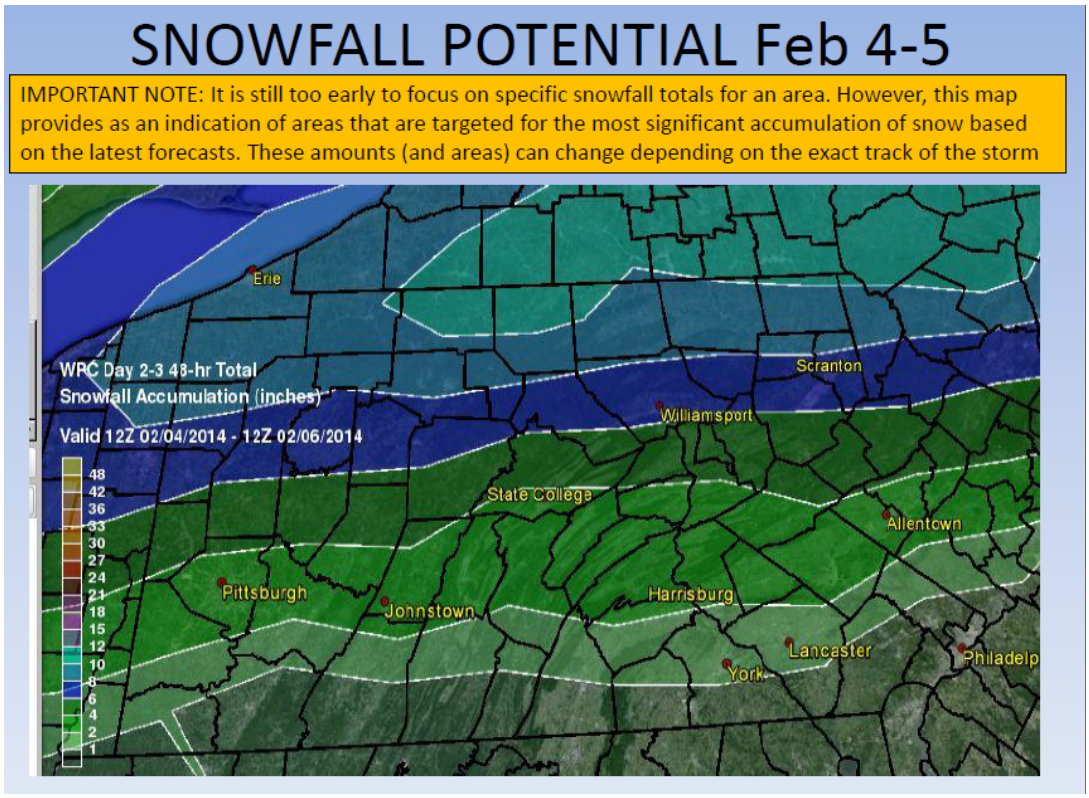

PECO Restoration Information as Reported to PUC
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
306,117
589,020
477,227
426,593
395,047
331,590
288,97
275,662
177,67
162,016
126,609
81,613
64,740
50,104
18,434
12,505
8,289
3,482
PECO


PPL Restoration Information as Reported to PUC
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
62,159
45,101
21,862
20,754
14,046
6,280
5,730
4,111
850
731
451
0
PPL

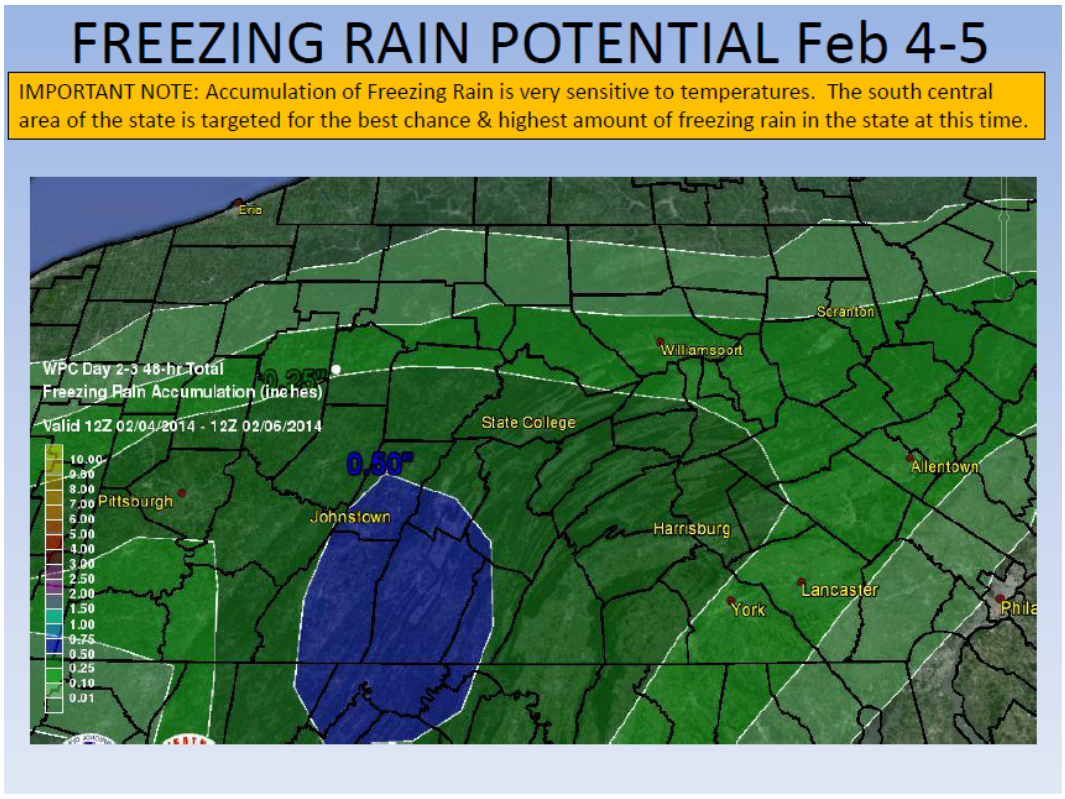

Met-Ed Restoration Information as Reported to PUC
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
72,546
80,573
55,600
51,977
41,911
28,806
27,035
20,344
12,802
12,252
9,912
3,902
3,800
680
176
99
0
0
0
0
0
2/5/2014 8:00
2/5/2014 16:00
2/6/2014 0:00
2/6/2014 8:00
2/6/2014 16:00
2/7/2014 0:00
2/7/2014 8:00
2/7/2014 16:00
2/8/2014 0:00
2/8/2014 8:00
2/8/2014 16:00
2/9/2014 0:00
2/9/2014 8:00
2/9/2014 16:00
2/10/2014 0:00
2/10/2014 8:00
2/10/2014 16:00
2/11/2014 0:00
2/11/2014 8:00
2/11/2014 16:00
2/12/2014 8:00
Met-Ed

FORECAST AND ACTUAL IMPACTS OF NIKA

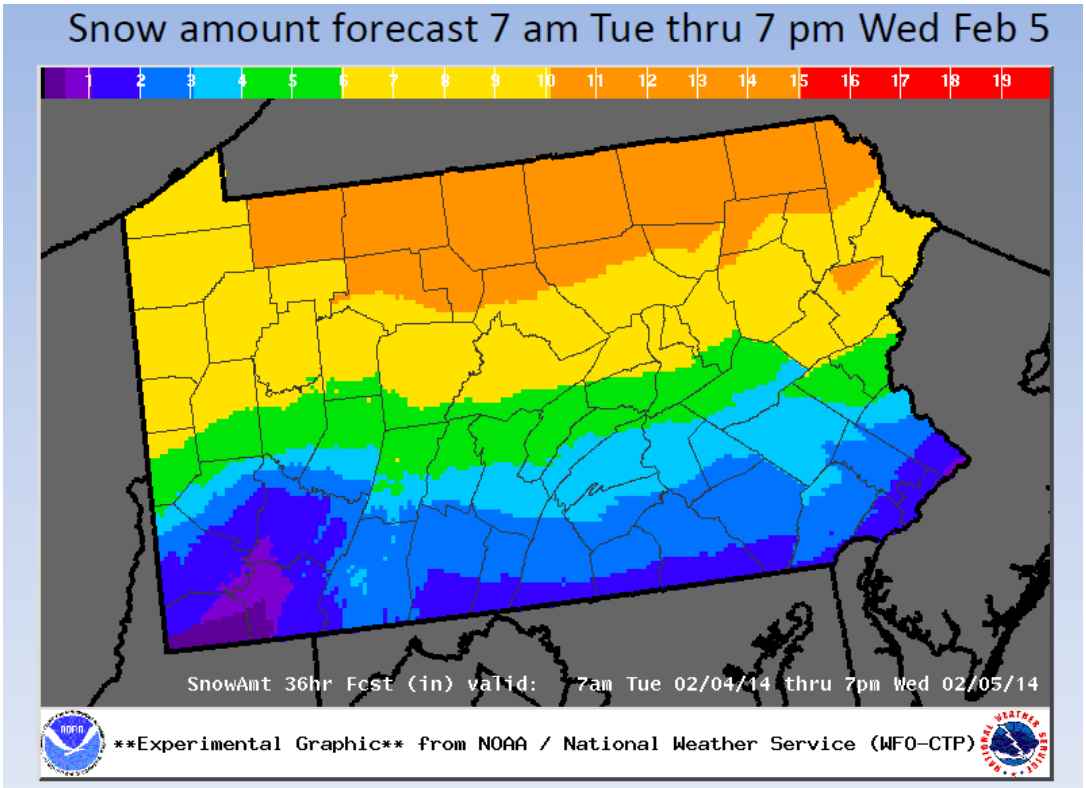
NWS Feb. 3 forecast for snow:



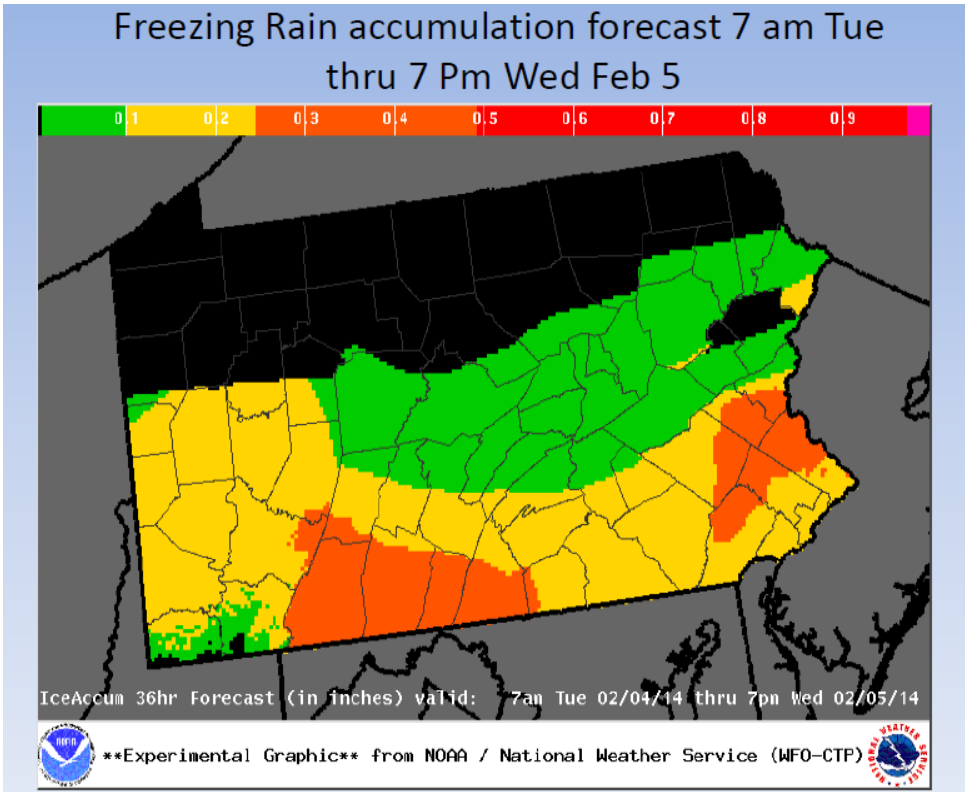
NWS Feb. 3 forecast for ice/freezing rain:



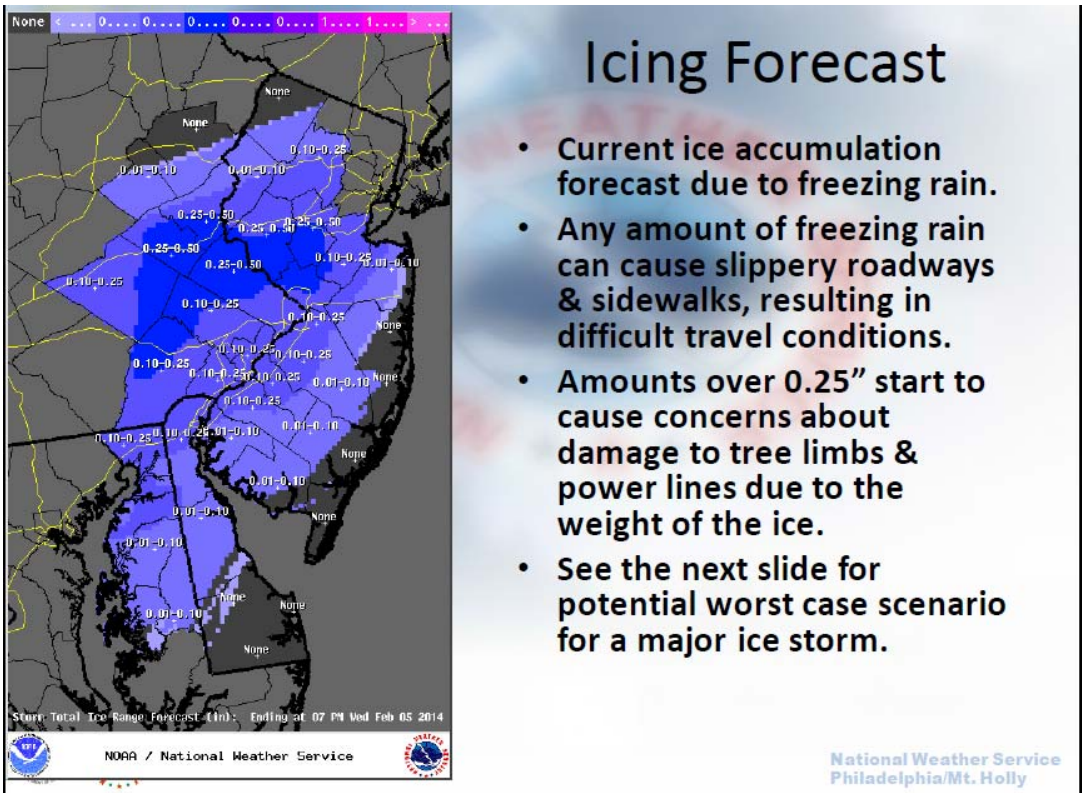
NWS State College Feb. 4 late morning forecast for snow through 7 p.m. Feb. 5:



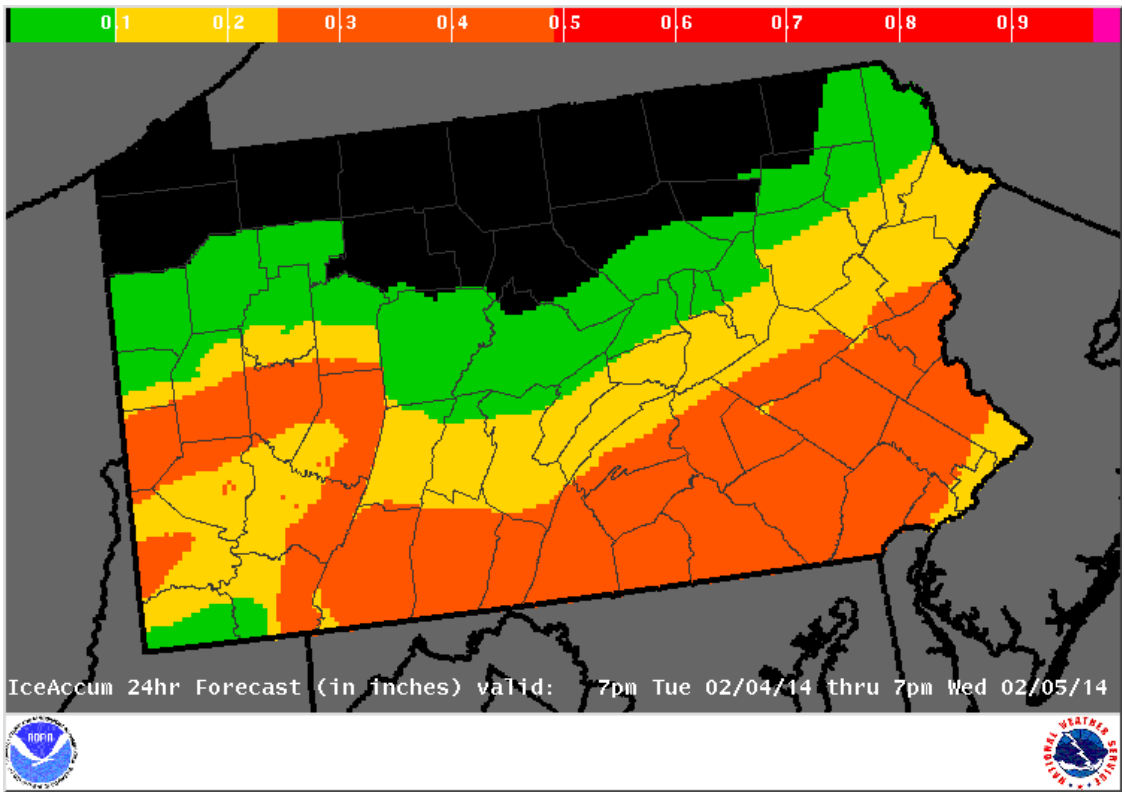
NWS State College Feb. 4 late morning forecast for ice/freezing rain through 7 p.m. Feb. 5:



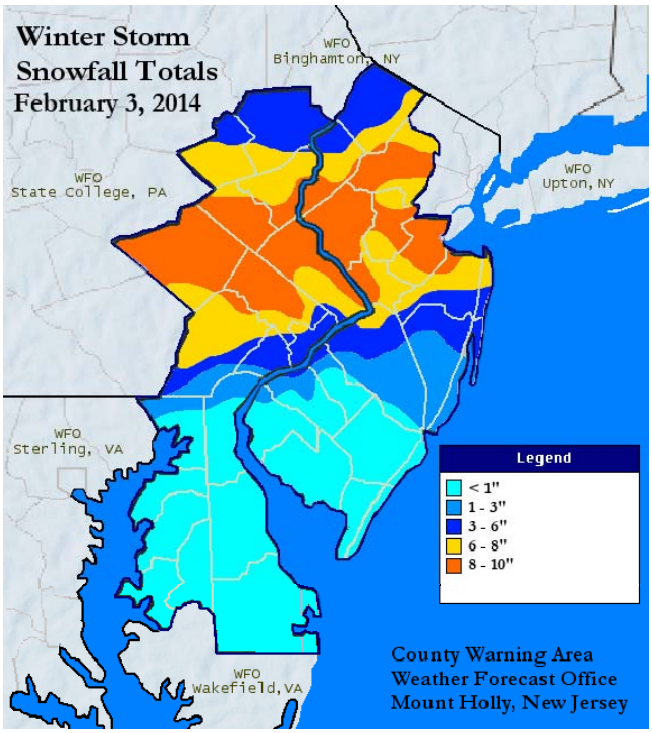
NWS Philadelphia/Mt. Holly Feb. 4 early afternoon forecast for ice/freezing rain through 7 p.m. Feb 5:



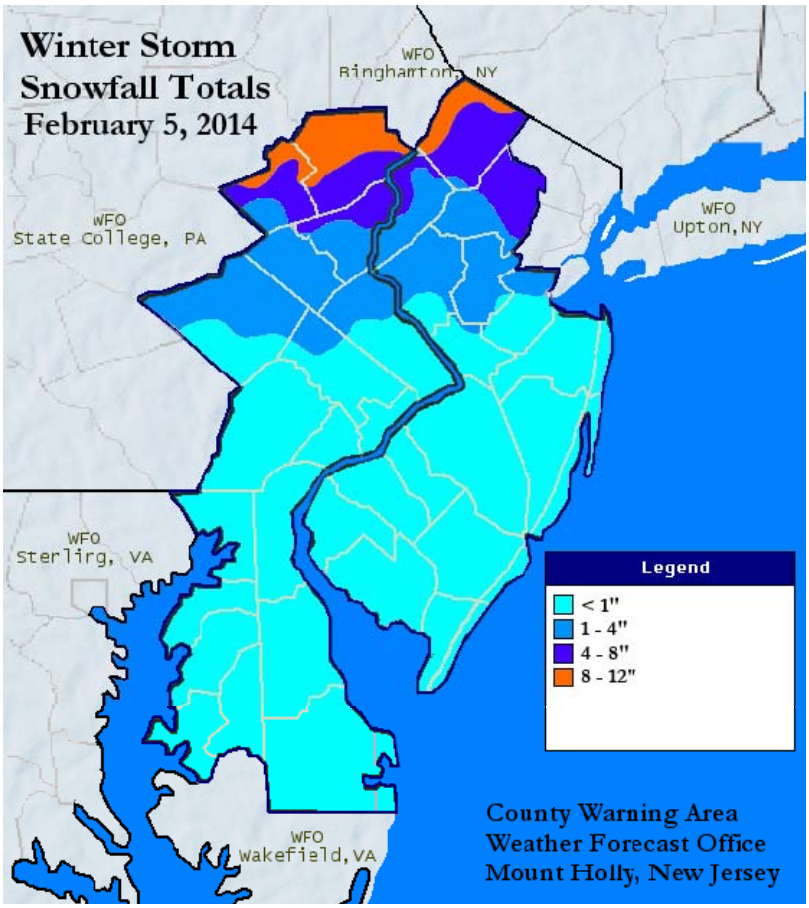
NWS Feb. 5 morning forecast for 24-hour ice accumulation potential from 7 p.m. Feb. 4 through 7 p.m. Feb. 5:



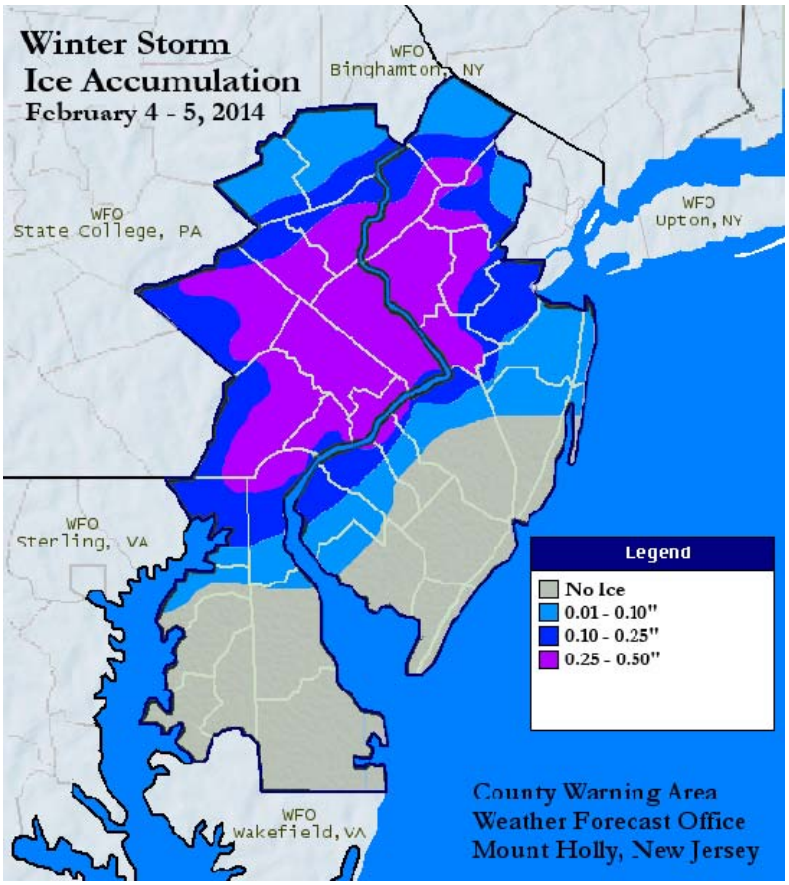
Actual snow accumulations reported by NWS Philadelphia/Mount Holly for the Feb. 3 Snowstorm:



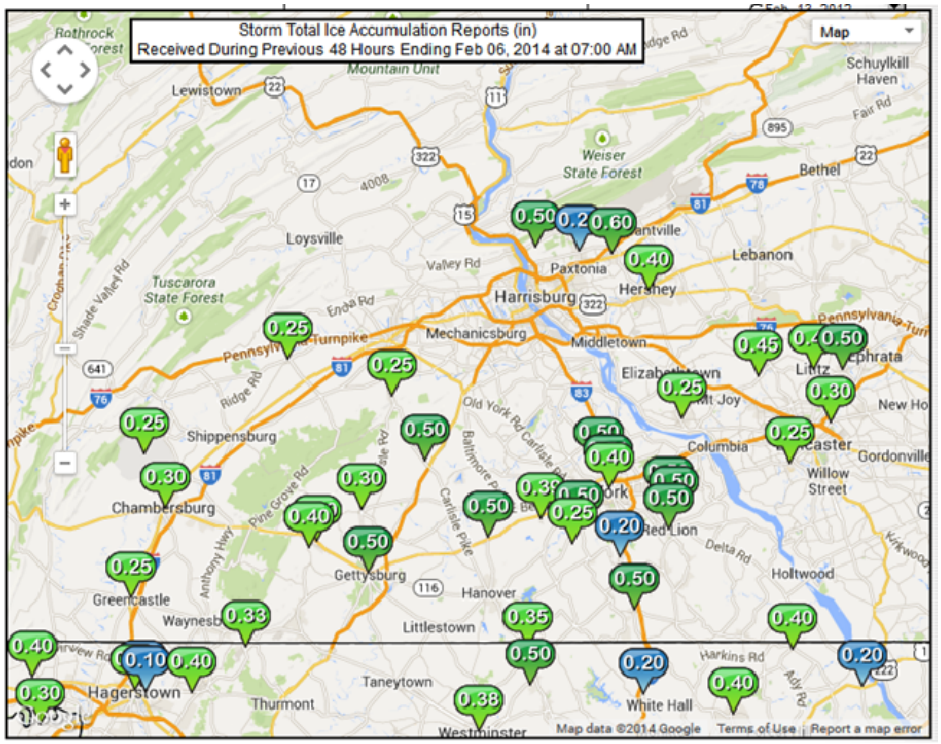
Actual snow accumulations reported by NWS Philadelphia/Mount Holly for the Feb. 5 snowstorm:



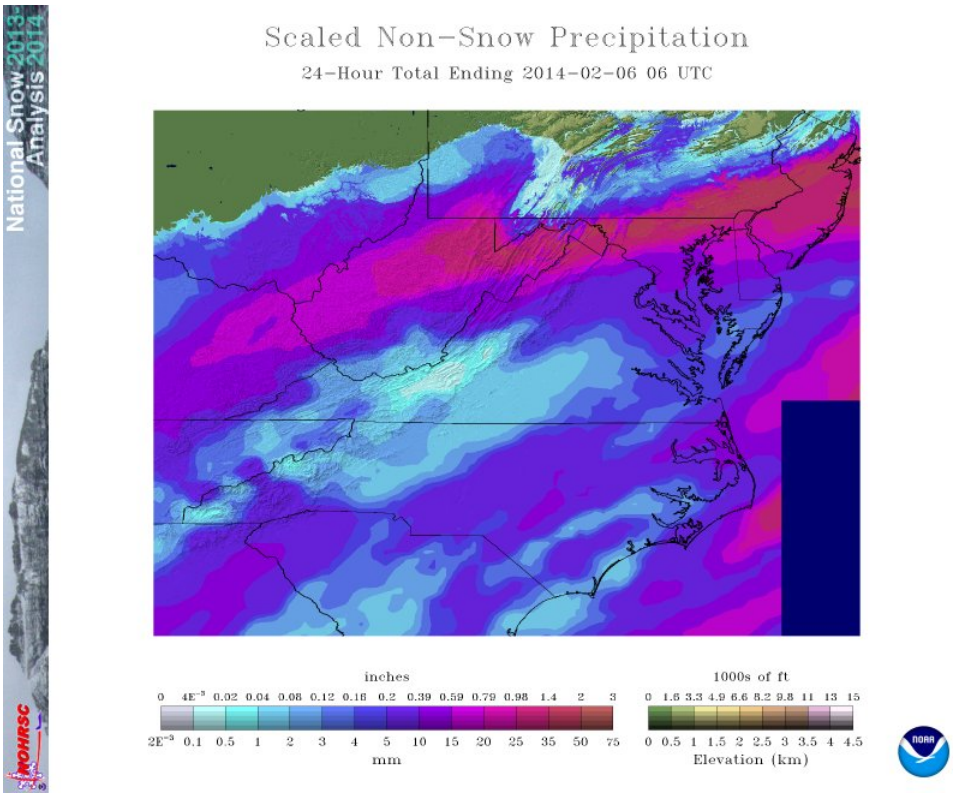
Actual ice accumulations reported by NWS Philadelphia/Mount Holly for the Feb. 5 ice storm:



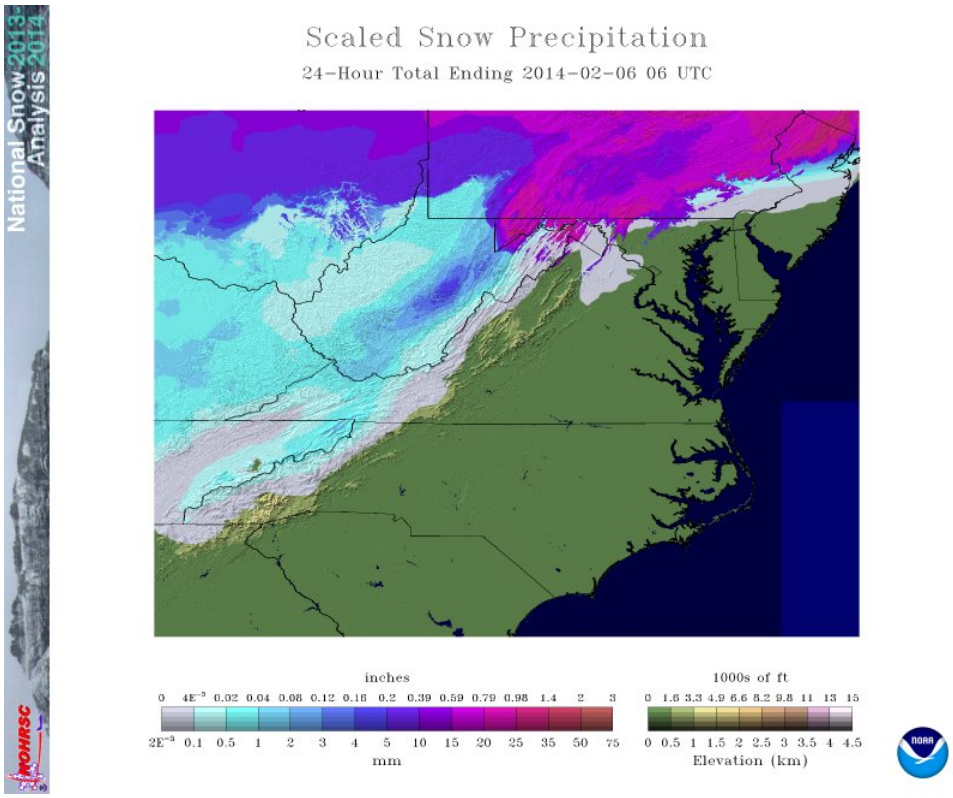
NWS State College ice amounts reported for Feb. 4 and Feb. 5:



NWS National Snow Analysis measured snow precipitation for Feb. 5:



NWS National Snow Analysis measured non-snow precipitation for Feb. 5:



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