



WINTER STORM

February 5 to February 15, 2014

AFTER ACTION

REVIEW

May 19, 2014

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Section I. Introduction

A winter storm system impacted the Commonwealth of Pennsylvania beginning Monday, February 3, 2014. This storm continued as a series of winter weather events over the following several weeks. The storms brought up to 12 to 18 inches of snow in some areas, freezing precipitation, and ice accumulations on trees/vegetation and power lines with interruptions to electric power throughout the south central and southeastern regions of the commonwealth.

As a result of the extensive power disruptions and the significant impact to residents and businesses, Governor Corbett directed the Pennsylvania Emergency Management Agency (PEMA) to lead an After Action Review (AAR), examining what worked best and incorporate those practices into standard operating procedure for all future emergencies. The Governor also requested the examination of those areas that need to be improved to better serve Pennsylvanians in response to future weather events.

Section II. Overview**A. Event Summary**

Beginning on the morning of Monday February 3, 2014, a winter storm system impacted the Commonwealth of Pennsylvania with snow, which created an increase in transportation hazards including various road closures. The fast moving low pressure system brought snow to the southern and eastern half of the state during the morning hours. The heaviest snow fell during the morning commute and those driving in the Harrisburg, York, Lancaster, Lehigh Valley and the southeastern areas were advised to prepare for hazardous winter weather driving conditions. A stronger and more dynamic winter storm was predicted to impact the area from Tuesday night, February 4 into Wednesday, February 5, 2014 with the potential for significant snow and ice. Another winter storm system was also predicted for the weekend (February 8 to 9, 2014) and into the next week (February 10 to 15, 2014).

At the worst time during the storm, 849,000 customers were without power in the southeastern and south central Pennsylvania regions, with numerous road closures due to fallen trees, often with entangled wires, more than during Hurricane Sandy, and emergency responders were hampered in their ability to quickly provide assistance. The utility company's field crews and their mutual aid support worked very hard under difficult weather conditions responding to thousands of system-wide problems.

B. Significant Events

1. The National Weather Service reported that a significant winter weather system was to impact the Commonwealth beginning Monday, February 3,

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2014. “A fast moving low pressure system will bring snow to the southern and eastern half of the state this morning. The heaviest snows will fall during the morning commute lasting through the morning hours. Those driving in the Harrisburg, York, Lancaster, Lehigh Valley, and the South East areas will need to prepare for hazardous winter weather driving conditions this morning... A stronger and more dynamic winter storm system will impact the area from Tuesday night into Wednesday with the potential for significant snow and ice.”
2. Governor’s Disaster Emergency Proclamation. On Wednesday, February 5, 2014, Governor Corbett signed a Disaster Emergency Proclamation to help assist with recovery operations. The proclamation would free up funding as well as state and federal assets (including the Pennsylvania National Guard) for recovery operations.
 3. Presidential Disaster Declaration. On Thursday, February 6, 2014, a Presidential Disaster Declaration for Direct Federal Assistance was signed by President Obama, authorizing FEMA to provide the Commonwealth of Pennsylvania with equipment and resources necessary to alleviate the impacts of the emergency. This declaration covered Bucks, Chester, Delaware, Lancaster, Montgomery, Philadelphia, and York counties.
 4. The Pennsylvania Department of Revenue issued an Emergency Declaration Waiver of IFTA Requirements for Pennsylvania on Friday, February 7, 2014. The waiver ensured the expeditious restoration of utilities to Pennsylvania residents in areas impacted by this weather emergency.
 5. Governor Corbett directed PEMA on Friday, February 21, 2014, to lead a thorough AAR.
 6. U.S. Small Business Administration Economic Injury Disaster Loan Declaration was issued on Wednesday, April 2, 2014. Chester and Montgomery counties met the primary counties economic injury threshold for small business loan assistance for the severe winter storms event. As a result, additionally, the contiguous Pennsylvania counties of Berks, Bucks, Delaware, Lancaster, Lehigh, and Philadelphia also became eligible for small business disaster assistance loans under the program.

Section III. After Action Review Process

Acting upon the direction of Governor Corbett, PEMA organized a meeting in the southeastern region of the commonwealth on Monday, February, 27, 2014. The meeting was attended by representatives of Bucks County, Chester County, Delaware County, Montgomery County, the City of Philadelphia, PECO, and the Pennsylvania PUC.

A meeting was also scheduled Monday, March 17, 2014 in the south central region of the commonwealth with representatives of Adams County, Lancaster County, York County, Met-Ed, PECO, PPL, Rural Electric, and Adams Electric, as well as the Pennsylvania PUC.

An additional follow-up webinar was conducted on Monday, March 24, 2014 with the southeastern counties of Bucks, Chester, Montgomery, and the City of Philadelphia to clarify previous meeting points.

Further review and comment was received by the counties during the week of April 14, 2014, with additional follow-up comments by PECO representatives the week of April 21, 2014. All of these follow-up reviews were intended to produce the best defined understandings of the utilities, as well as the emergency management community, with regard to the February, 2014 events. The desire was to develop the best balanced document possible that would produce the most useful information to lead the overall improvement process going forward.

These meetings and webinars, as well as other communications and conference calls, were intended to provide an open platform for information exchange between the counties and the utilities in furtherance of developing mutual understanding of the strengths that were determined, the areas for improvement identified, the lessons learned during the event, best practices identified, and finally, recommendations.

This Report is intended to be an introspective opportunity for the counties and the utilities to identify those areas and items that can be studied by the counties and/or utilities as a road map for maintaining best practices and improving upon lessons learned for implementation and application in future events. It is also intended to serve as the foundation for their collaboration in developing a mutual Improvement Plan for updates to policies, procedures, and processes to be implemented in future events.

Section IV. Event Review

A. Southeastern Pennsylvania EMA Offices (Bucks, Chester, Delaware, Montgomery, Philadelphia)/Pennsylvania Public Utility Commission (PUC)/Utility (PECO) Observations:

1. Strengths

- a. County EMAs and PECO developed and continue to have a good working relationship that fosters open lines of communication.
- b. Counties and PECO pre-positioned and staged resources prior to the event and quickly built up more resources to meet needs.

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- c. Bucks County had the Pennsylvania Department of Transportation (PennDOT) and the utility crews working together on roads to clear downed power lines and trees.
 - d. Chester County had a large contingent of chain saw personnel staged in their parking lot allowing for quick response times. They were able to get fallen trees and wires off roadways and out of the way. The Pennsylvania Department of Conservation and Natural Resources, the Pennsylvania Game Commission, and Rubicon (a volunteer organization) provided chainsaw crews to Chester County.
 - e. Montgomery County stated that the use of social media by PECO was helpful for customers.
 - f. The utility company increased the functionality of the PECO EOC assigned staff to provide information on power outages. Priorities were assigned to the established PECO contact for the county. PECO has pre-established resources to support operation sub-centers and Customer Support Centers. However, the utility would consider using county resources if existing resources exceeded the capability to staff utility resources.
 - g. The PECO Customer Care Centers were helpful.
 - h. The PECO Elected Officials conference calls were helpful for the participants.
2. Best Practices
- a. The Philadelphia Office of Emergency Management (OEM) has developed a data management system to track various types of infrastructure damage during EOC activations. The system builds on efforts by PECO to prioritize and track incidents involving damage to electricity infrastructure that result in road closures (e.g., downed wire on the road). PECO refers to this as the “Road Closure Process”. During the recent winter weather EOC activation (February 12 to 14, 2014), Philadelphia successfully implemented the system to track reports of downed wires, downed trees, building damage, street infrastructure damage, and road closures.
 - b. PECO indicated that this was their second largest power outage, with 723,681 customers without power. They had 3,900 wire job restorations throughout six (6) counties and 900 road closures,

which was three (3) times more than during the Hurricane Sandy event. PECO prepared two (2) days before the impending storm and had 2,700 workers on February 5, and within 24 hours had 4,900 workers available. Over the course of the storm, the crew complement increased to 6,800 workers. PECO indicated that all their preparations were due to lessons learned from the Hurricane Sandy storm.

- c. PECO work safety practices are credited for the very few minor injuries to restoration workers during the event. Only four (4) minor injuries were attributed to the work effort.

3. Areas for Improvement

- a. Chester County indicated that they believed there were some IT issues related to computer equipment and software with PECO EOC Liaison staff assigned to the Chester County EOC, resulting in initial difficulty connecting with the PECO network/system, which hindered coordination functions.
- b. Chester County suggested that PECO Liaison staff should be consistently assigned, and employees who are residents of the county should be utilized to leverage local knowledge and build familiarity on both sides.
- c. Philadelphia would like to work with PECO to develop a real-time and amendable list of pending jobs, priorities assigned to those jobs, and a status reporting process through PECO EOC liaisons. This may improve data quality and result in superior coordination.
- d. Philadelphia indicated that there was a lack of communication with PECO on one emergency issue.
- e. Philadelphia stated they had insufficient information from their PECO Liaison. PECO EOC liaisons are typically unable to provide detailed information concerning the status of incidents. Information is generally only provided when directly requested and is limited to notice that a crew has been dispatched, and again when the incident is complete. Estimated restoration times were not provided; no information was given concerning the timeframe for a crew to be dispatched. This information would be particularly useful for the Philadelphia Fire Department and the Philadelphia Police Department in determining allocation of limited resources during a major damage-causing event.

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- f. Some counties believed it is important to have the PECO liaison(s) in the EOC at the beginning of the incident to ensure that the common operating picture between the county and PECO exists from the start of the event. The PECO liaison would provide information and coordination on road closures and emergency conditions that affect actual and potential life safety situations.
 - g. Operational coordination: Some of the counties stated they believe that one issue affecting coordination and communication was the lack of a common operating picture between those counties and PECO. The counties suggest PECO needs to provide greater real time operational data with the counties in order to appropriately coordinate the response resources.
 - h. A training program that focuses on the county's EOC operation should be developed and provided to PECO's liaisons. PECO and counties should jointly develop procedures and training materials for county EOC and PECO liaisons to ensure all parties fully understand the roles, responsibilities, policies, and limitations of each entity.
 - i. The PECO customer care centers were helpful; however, some counties may not have had timely information regarding the locations and hours of operation. The counties should receive timely information on the locations and hours of operation.
 - j. Operational conference calls to emergency management personnel should be separate from informational conference calls to elected officials.
 - k. The Road Closure System resulted in confusion regarding the process. In some counties, PECO was hesitant to accept the counties' form versus using the PECO form. PECO and the counties should conduct further training on the Road Closure process to ensure all entities understand process. Common forms should be agreed upon for transference of information.
 - l. Data Collection and Interoperability: There are no Computer Assisted Dispatch (CAD) to CAD relationships between the counties and PECO, and collaboration would be beneficial. EOC CAD data could not be directly submitted electronically to the utility CAD; power outage data needed to be manually transcribed to the utility form. If CAD interfaces are not possible, look at options using Knowledge Center (KC) accounts for the utility to create a common operating picture with the counties.

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- m. The counties stated that PECO should contact organizational positions within the EOC, not a specifically named person.
 - n. The projection of restoration times to the customers presented challenges due to the severity of the damage to the system.
 - o. Counties had an issue with road closures. Roads were identified, but it was hard to keep up with the information. Counties were not receiving information from either the local responders or the utilities when the roads reopened.
4. Lessons Learned
- a. Chester County identified an issue with the response effort related to resources (line crews and tree chain saw crews). Chester County developed a solution that worked to streamline operations and provide for a coordinated response between the resources related to road closures (county, state, and PECO).
 - b. Data collection, reporting, and forms used at the county level (PECO Road Closure process) should be standardized, and procedures for the Road Closure Process should be redistributed to the municipalities with an understanding that road closures are provided to the county and communicated to PECO with the appropriate prioritization.
 - c. Social media provided a wide range of media outlets to keep residents informed throughout the counties. It is useful for PECO to use social media more during events to post an effective public message in regard to the power restoration efforts, how to report power outages, when customers can expect power to be restored to their homes, and what to do until their power is restored (i.e., keep calling PECO every 8 to 12 hours in order to stay in the queue).
 - d. County expectations regarding the repair and restoration information received from PECO needs to be managed through the County EOC. PECO should not unilaterally downgrade requests for response without first consulting with the requesting county in order to provide the county an opportunity to discuss the potential downgrade (for example, to determine if additional information would prevent the downgrade). Philadelphia would like to work with PECO to develop a real-time and amendable list of pending jobs, priorities assigned to those jobs, and a status reporting process through PECO EOC liaisons. This may improve data quality and result in superior coordination. PECO's position on

these suggested processes may not be in alliance with the counties, and all parties should further discuss in any improvement planning meeting recommended as a follow-up to this report.

- e. PECO did offer a liaison to the counties at the onset of the storm; some counties did accept the offer and they had no issues. There were issues with the counties that did not take the offer and later requested a liaison from PECO, but by that time, restoration operations were already behind, compounding other processes.
 - f. Some counties stated they need to have a professional working relationship with PECO's operational engineers to develop operational communications that ensure the capacity for timely communications in support of situational awareness and operations of all response efforts. PECO's position is that the relationship between the counties and PECO is to coordinate on road closures and emergency conditions that affect actual and potential life safety situations.
 - g. In some cases, when the counties requested real-time operational data from PECO, they received general public information. The counties need to know job status, stating what jobs are active, pending, and completed. Also, the counties need to know the status of power restoration to Critical Infrastructure and Key Resources (CI/KR). The counties must have this type of information from PECO in order to appropriately coordinate all of their response resources.
 - h. During the event, PECO provided only informational data to the counties and used their power grid sections, not geographical locations. For example, outage numbers on the PECO website are provide for "Phila North" (435,200 customers) and "Phila South" (264,400 customers). Philadelphia would like far greater granularity with respect to outages occurring in the City. This could be done by zip code, police district, etc.
- B. EOC/Emergency Management (Adams, Lancaster, York)/Pennsylvania Public Utility Commission (PUC)/Utilities (PECO, Met-Ed, PPL, Rural Electric, and Adams Electric) Observations.
- 1. Strengths
 - a. Overall, the south central counties praised the utilities for doing a good job throughout their counties, and lessons learned from Hurricane Sandy were very helpful.

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- b. Utilities Safety Program: processes were put in-place based upon lessons learned from past events; the utility companies' priority was safety. They were happy to report no serious injuries or deaths to the public or their workers.
 - c. Communications between the counties and utility companies were excellent; the liaison personnel worked extremely well and there were no issues/unmet needs. They always had direct contact with the utility liaisons to address any issues.
 - d. The counties in south central Pennsylvania kept in constant communication with each other regarding situational awareness, making it easier to assist one another.
 - e. The electric utilities' websites with power outage continuous update capability was helpful to the counties.
 - f. Sharing information between utilities as an industry, as opposed to each individual entity, worked well.
 - g. Use of social media by utilities and counties was a great benefit.
 - h. All electric utilities conducted daily conference calls with local officials and state legislators, and had direct interface with county emergency management directors. They received valuable feedback during the calls.
 - i. PPL used geo-targeted Facebook messaging for the first time, and it worked well.
 - j. Met-Ed emailed customers on how to prepare for outages.
 - k. Met-Ed provided a daily newsletter to each of the dispatch crew centers, so that utility crews would have information on the overall scale of the mission and provide them with talking points for interaction with members of the public.
 - l. PPL sent federal, state, county, and municipal officials' status updates via emails and outage information at regular intervals.
 - m. Met-Ed appreciated the use of the York County Fairgrounds for staging resources.
 - n. One county EOC reported using a WebEOC Status Board to identify county power status by color. It was large enough for

everyone in the EOC to see, and it kept them informed of the status of all of the counties with a quick glance.

- o. The electric utilities had a Best Practices Team working on experiences from previous storms to identify lessons learned and best practices, which were implemented during this event.
- p. Estimated response times provided by utilities were somewhat better for this event than in previous storms.
- q. Electric utilities gave the option of having a representative at the counties, and some of the counties elected to have a representative present in their EOC.
- r. Met-Ed used their pre-plan checklist, and it was helpful.
- s. Met-Ed checked in with crews at the end of the day for a status report. If a utility crew did not finish its job at the end of the day, PPL called those customers to inform them they were first on the list for the following day.
- t. Electric utilities have conducted five (5) best practice meetings over the past two (2) years, which were helpful in creating many of the best practices utilized during Hurricane Sandy and the ice storm.
- u. Tree crews and line crews worked together to get to customers without power.
- v. PUC commented that local and state legislative calls were well received, and commended the dedication of the utility work crews in the field working in austere conditions to restore power to their customers.
- w. Overall, everyone praised the utility company for doing a good job throughout their counties.
- x. PPL initiated a pilot program named Smart Grid Device. In the early 90's, they introduced auto meter reading, which enables the utility company to recognize if their customer has power. The next generation is SMART readers, which will notify the utility company when a customer is out of power. The SMART readers will take a few years to implement.

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- y. PPL noted a 43 percent decrease in vegetation management outages since last year and a 40 percent improvement in the Harrisburg area.
 - z. Met-Ed faced difficulties with housing guest crews due to the demand on local hotels/motels by residents without power at their homes.
2. Best Practices
- a. Coordination between the counties and utilities throughout the event ran smoothly.
 - b. The utility's efforts to ensure a safe response proved to be outstanding, with no serious injuries or deaths throughout the event to utility crews or the customers. With PPL's "My Alerts" system, customers sign up for emails, phone, and/or text messages regarding power outages, job dispatch, crew on scene, estimated time restorations, and when power is restored. This is helpful in reporting; if a customer receives a text saying his/her power has been restored and it hasn't, this would be a good indication to call back and inform PPL.
3. Areas for Improvement
- a. An opportunity for improvement regarding incident reporting and resource request procedures between municipalities, counties, and the state was identified by York County.
 - b. Power restoration was challenging in the counties' rural areas due to unplowed roads.
 - c. Communications between the counties and the utility companies went well, but there is room for improvement to ensure all customers receive the most updated information with regard to power restoration, what the customers' responsibilities are, and what they should do.
 - d. Nuclear power plant sirens were affected by the power outages, but they had back-up battery power that worked well. Exelon did have a plan in place in the event the power outage went longer. They were prepared to take spare batteries to any siren that was without power.

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- e. Spontaneous warming shelters need to be tracked better (location, times of operation, etc.).
 - f. There were issues and concerns with special needs individuals being dropped off at shelters. The shelters were not equipped with staff prepared to handle special needs. Assisted living centers were notified and a determination made about their level of care capability. Depending on the disability, a facility may not be able to care for certain special needs categories and levels of care.
4. Lessons Learned
- a. York County noted three (3) assisted living facilities had no power on Queen Street in York City. They had generators, but these were not powerful enough. PEMA received a direct request from the facility for generators, and York County was informed. Power was restored just in time and evacuation of residents was not required. These facilities were made aware they needed to contact the county first rather than going directly to PEMA.
 - b. Met-Ed has a dedicated department for assisted living facilities. This department works on getting more detailed information on power restoration to those facilities affected, in order to plan more accurately. This capability assists in estimated time restoration; as soon as it is predicted that power to a facility cannot be restored in a timely manner, then relatives may be called or evacuation may be considered.
 - c. The PECO Road Closure Management System tracked major road closures and allowed the individual counties and municipalities to report secondary road status.
 - d. Adams Electric COOP noted that many rural roads are owned by property owners but may have public lines running along them. It created a big challenge because the rural roads were not plowed.
 - e. Lancaster County noted that Sun Valley Nursing and Rehabilitation Center in Columbia Borough had an issue with unplowed roads and power restoration. Power was finally restored and the residents did not have to evacuate.
 - f. Met-Ed noted that low temperatures created a hardship, but they worked through it. They also mentioned the terrain in York County creates challenges and at times it was hard to maneuver.

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- g. Adams County recommended the electric utility company continue to provide outage preparation information to county EOCs and customers to keep them informed. This would work for those who have smart phones that receive emails. Adams County found the information helpful to be able to provide to residents who called the county. Electric utilities should continue to improve use of social media to communicate with and receive information from customers.
 - h. The utilities should continue to remind customers about basic storm safety practices through newsletters mailed with their bills, emails, etc. PECO indicated that they had scheduled 13 workshops within the region regarding the power restoration process.
 - i. The good nature of community organizations and faith-based organizations was evident as spontaneous shelters opened across the impacted area. Most of the shelters were not tracked as to their locations, hours of operations, or when they closed. The counties could not track them because they were not recognized American Red Cross shelters, and the people operating them may not have known the reporting procedures or who to contact at the county to report their hours of operation, location, and how long they were planning to operate.
 - j. Met-Ed brought in guest crews from out of state to assist with the power restoration efforts; however, they faced difficulties with housing the guest crews due to many of the local hotels/motels being filled by residents without power at their homes. Very few power outage customers chose to stay in Red Cross shelters. Instead, most went to nearby motels. Some motels assisted by giving courtesy discounts to those affected by the storm. It was suggested the utility form a Letter of Agreement with nearby motels to give discounted stays to affected customers for future events.

C. Recommendations

- 1. PEMA, or the state agency that regulates long term care facilities or has oversight for such facilities (Department of Health or Department of Public Welfare), should facilitate a meeting between assisted living facilities, hospitals, etc., counties, and the utility companies to educate them on generator usage, maintenance, re-fueling, and testing. The meeting should also include suggestions for site power assessment options and possibly look at resiliency of the facility's power to prevent power loss in the future.

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2. The counties and municipalities should review and coordinate resources to ensure roadways are cleared during storms for public safety access for recovery operations such as power restoration. Private roads are the responsibilities of the property owner; however, it is recommended that a workgroup be formed between the property owners, municipalities, and county to review options available to coordinate efforts to ensure the roads are cleared.
 3. The utility companies should continue to provide outage preparation information to county EOCs and customers to keep them informed, and continue to improve use of social media to communicate with, and receive information from, customers.
 4. The utility companies should continue to educate the customers regarding their responsibility to prepare for possible power outages, notify their customers through newsletters mailed with their bills, email, etc., and continue to have Town Hall Meetings with an open house-style forum.
 5. Exelon should test/exercise their plan to take spare batteries to any siren that was without power and replace the dead battery, to ensure it can be accomplished during different scenarios.
 6. The counties/municipalities should hold town hall meetings with all of the faith-based/community organizations that may wish to open a shelter in time of need to provide information on what they need to do when they decide to open a shelter. Information packets should be available to distribute during these meetings to the organizations regarding who and what information is needed by the county/municipality.
 7. If not already occurring, the electric utility companies should develop a plan to house guest crews in the future. Identify their needs, available hotels/motels in the surrounding areas, and protocols for when to arrange housing prior to the crews arriving; possibly make pre-event agreements with hotel/motel owners.
 8. A working group with both county and utility representation should be established for each of the areas (Southeastern and South Central) to review this After Action Report and collaborate to develop an Improvement Plan.
 9. Pending further review, analysis, and planning, Philadelphia encourages PECO Liaisons to work closely with their EOC to receive accurate information with regard to job status (pending, active, and completed), and updates to critical infrastructure and key resources, especially schools, nursing homes, and hospitals. PECO should also work closely with the

counties to develop a mapping system that would provide far more granularity with respect to outage information and status on both a daily basis and during emergencies. The counties will also work closely with PECO on a shared system for managing reports of all types of infrastructure damage, including electricity infrastructure. PECO agrees they need to continue to improve on the detail of information provided to the counties on road closures and emergency conditions that affect actual and potential life safety situations and are currently looking at greater detail of outage information for each county.

10. Recommend the counties review their operations policies/procedures and discuss with PECO the “triggers” for PECO to have their Liaison report to the county EOC. PECO and counties should jointly develop protocols for activation of PECO Liaison at county EOC.
11. PECO should conduct “blue sky day” quarterly communication conference calls between the counties and the PECO representative, who would lead the power restoration operations in their respective county during large scale power outages. The communication should provide an opportunity for each organization to update the other on the review/changes of processes and organizational initiatives. During emergencies, Philadelphia recommends daily coordination calls with PECO.
12. PECO and the counties should plan tabletop exercises in each county to drill road closure processes with county and emergency managers which can improve communications with the county, elected officials, and township officials.
13. Philadelphia and Montgomery counties both agree with keeping county operations separate from Elected Official updates by PECO. Counties should have a conference call for operation-specific information and an Elected Officials’ call for information sharing.
14. PECO needs to be clear on when to call what number and the succession sequence. At the same time, the counties need to know who in PECO to contact during emergencies to receive pertinent information on estimated restoration times (e.g., PECO provided Philadelphia with a list of numbers but did not inform them of which to call in sequence during an emergency).
15. When a significant event happens or there is a reliable forecast for such an event, the utilities should coordinate with the County Emergency Management Coordinator the dispatch of utility personnel to the EOC, including an Operations Coordinator and Staff Liaison to work in

collaboration with EOC staff to assess situations, and input all emergency information into the PECO system or other utility systems as applicable. Levels of staffing would be determined on a case-by-case basis with consideration provided to the impact of the storm or emergency event.

16. PECO and the county EOC IT departments need to work together to resolve IT differences. This would facilitate the county's ability to assist the PECO EOC Liaison in connecting. Standardized IT connection instructions should be provided to the PECO Liaisons. PECO and county EOC IT personnel should continue to work together to address connectivity issues and periodic testing of connectivity is recommended.
17. Whenever possible/practical, PECO Liaisons should be consistently assigned to their county of residence to leverage local knowledge and build familiarity on both sides.

Section V. Summary and Conclusion

A. Summary

As a result of the comments collected from the utilities and the counties, several themes emerged during the review. Those themes included systems for real-time data management and tracking of outages to establish response priorities and monitor the progress of restoration by the utilities; the essential need for communication and collaboration between the utility EOC and the county EOCs, along with the critical need to embed utility operational as well as informational liaisons in the county EOCs; the interoperability and interconnectivity of systems to assist in creating a common operating picture for everyone; and the need for ongoing training and tabletop exercises to test processes and interactions between the entities.

It is clear that the primary focus of both the emergency management officials and the utilities must be the identification of road closures and emergency conditions that affect actual and potential life safety situations. The utility with their emergency operations centers and personnel, as well as their liaisons, must work closely with the county EOC personnel to quickly identify those locations where priority responses are necessary.

The utilities and the counties must continue a collaborative approach to building upon the strengths and best practices identified in this review process, as well as work together to resolve any issues impeding progress to developing solutions to the recommendations identified in this AAR.

B. Conclusion

The Winter Storm that occurred between Monday, February 3, 2014 and Saturday, February 15, 2014 was the most significant weather event that has occurred in many years in the southeast and south central regions of the commonwealth. One utility reported that they deployed one third more resources for this storm event than they did for Hurricane Sandy, and experienced three times as much work as a result of the weather-related power outages. With 849,000 electric customers collectively impacted at the height of the event, it is clear that the sheer magnitude and volume of the impact created major challenges for the utilities as well as the emergency operations centers at both the municipal and county levels.

This Report acknowledges the spirit of the event response and the dedicated efforts of the utilities, emergency management personnel, elected officials, and everyone involved in the efforts to respond to the power outages and emergency conditions, all the while working steadfastly toward restoration. At the same time, it must be acknowledged that during these events, despite everyone's best efforts, there are always strengths, areas needing improvement, and lessons learned that can be identified. Further, in a number of areas, best practices emerge that can become the foundation of managing severe weather events and other such emergencies in the future.

It is believed that the recommendations mentioned at the conclusion of this Report should provide the foundation for the utilities and counties to continue their ongoing communication and collaboration in developing processes individually and collectively to address the concerns discussed in this report. Their collective dedicated efforts in working to improve the response capabilities and interactions will only make the emergency management of the restoration process stronger through their mutual cooperation.