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June 28, 2013

Mr. Daniel Searfoorce Pennsylvania Public Utility Commission P.O. Box 3265 Pittsburgh, Pa., 17105-3265

RE: Summer Reliability Outlook

Dear Mr. Searfoorce,

In your email dated June 17, 2013 you had requested information related to each of the Electric Distribution Company's 2013 summer preparedness and reliability efforts. Duquesne welcomes the opportunity to share information about its 2012 electric system reliability efforts and performance as well as Duquesne's 2013 summer readiness efforts, as discussed in the attached document.

If you would like additional information on any of the items discussed, please do not hesitate to contact me.

Sincerely,

Timothy F. Kuruce

Vice President, Operations

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Attachment

cc: via Email with Attachment

David Washko (Pennsylvania Public Utility Commission)

Vern Edwards (Duquesne Light Company)



# The Pennsylvania Public Utility Commission's 2013 Summer Reliability Outlook

2012 Storm Response

and

2013 Summer Readiness

Duquesne Light Company (Duquesne Light or Company) provides safe and reliable electric service to more than 588,000 customers in southwestern Pennsylvania, including the City of Pittsburgh. The Company uses more than 45,000 miles of overhead lines, 212,000 utility poles and 103,000 transformers to bring that electric service to our customers' homes and businesses.

Although Duquesne Light customers experience electric service relability that is among the best in Pennsylvania, severe weather and other emergency events occur, and service interruptions are unavoidable. When those interruptions occur, Duquesne Light relies on its comprehensive service restoration program to restore service safely and timely. Some of the more significant reliability efforts expended to insure this high level of service reliability are detailed below.

## **Keys To Success**

# Reliability Enhancement Programs

We continue work on our conversion of submersible Underground Residential Distribution (URD) transformers to pad mounted and also replacing the cable, bushing junctions and associated equipment. The focus is on converting URD plans that have experienced higher than average outages caused by equipment failures.

In an effort to improve reliability and improve public safety, Duquesne Light has been replacing aged underground network transformers within downtown Pittsburgh. These transformers are principally located in sidewalk vaults and may have large pedestrian traffic in the area. Since 2002, a total of 205 network transformers have been replaced throughout the network areas. In 2012, Duquesne Light replaced 29 of these network transformers. Duquesne Light is planning to replace 42 additional units for 2013, and to date, has completed replacement of 29.

## Preventative Maintenance Programs

Duquesne Light's Asset Management Group continues to perform ongoing analysis of reliability indices, root cause analysis of outages, and tracking and monitoring of other reliability performance measures. The Asset Management Group uses this data to monitor and develop new overhead, substations and underground maintenance programs, which includes:

- 1. Manhole and underground vault inspections.
- 2. An Infrared Inspection Program that systemically identifies circuit and substation problems for remedial action in advance of failure.
- 3. An ongoing long-term Sectionalizer Maintenance and Replacement Program which serves to refurbish and maintain reliable operation of all automatic and remotely controllable switches on Duquesne Light's automated distribution system, including replacement of those that are no longer operating efficiently.
- 4. A comprehensive substation maintenance program that includes the inspection and testing of transformers, breakers, switches, relays, regulators and other equipment.

These specific programs, procedures, and ongoing preventative maintenance activities support Duquesne Light's commitment to service reliability.

#### 2012 Storms and Lessons Learned

Hurricane Sandy was the most destructive hurricane of the 2012 Atlantic hurricane season, as well as the second-costliest hurricane in United States history. Although not directly affected by the severe weather impacts of Hurricane Sandy, Duquesne Light actively participated in peer utility "lessons learned" presentations and best practice discussions provided by those utilities impacted by Hurricane Sandy's severe weather, ensuring that Duquesne Light's storm response efforts continue to improve. From those discussions with peer utilities, Duquesne Light heard clearly the importance of being prepared for and having a restoration plan that could handle the unique challenges of restoring service following a large scale catastrophic event. As such, Duquesne Light developed and implemented enhancements to its Storm Plan for use when recovering from catastrophic events. Related, other process improvements that Duquesne Light implemented this year include the development of pre-storm communications to our customers for when severe weather is forecasted and severe damage to our facilities is anticipated. Additionally, Duquesne Light continues to make improvements to its social media plan that includes leveraging social media outlets (Twitter, Facebook and cellular phone text messaging) to better provide timely storm restoration updates to our customers. Lastly, Duquesne Light added additional dedicated storm resources responsible for executing a new process that facilitates timely communications with local municipalities and elected officials through the use of email or webinars, based on the severity of the event.

As in years past, Duquesne Light Company continues its process to hold internal storm review meetings following all major outage events. These meetings bring representatives from each of the areas involved in the restoration effort together to openly discuss the successes and improvement opportunities of the most recent emergency service restoration effort. Following these storm review meetings, any identified service restoration process improvements are then implemented, as needed, to continually improve response time and restoration effectiveness.

#### 2013 Summer Readiness

Capacity Additions

Over the past 3 years Duquesne Light has completed many projects that have upgraded overall system capacity while also enhancing operational performance and reliability and alleviating overloaded conditions. A listing of these projects include the following:

- 4kV substation elimination and conversion to 23kV
- 4kV stepdown conversion to 23kV
- Increasing capacity for 23kV feeder ties
- Network Transformer replacement
- Upgrade of SCADA devices to Intellirupters
- Aerial Cable replacement

Additionally, Duquesne Light has completed significant upgrades to key substations that added load capacity within our territory, including upgrades to the Midland, Arsenal, Forbes and Carson substations.

#### Transmission Preparedness

Duquesne Light participated in PJM's Summer Emergency Procedures Drill which is conducted to assess the readiness of system operations personnel during emergency conditions. The objectives of the drills are to ensure that the following occurs:

- 1. PJM personnel and member companies understand emergency procedures.
- 2. Communication facilities are adequate between PJM and member companies.
- 3. PJM and member company personnel demonstrated effectiveness of corporate / governmental affairs communications.
- 4. PJM RTO, LCCs and MOCs provided adequate information to governmental agencies.

Duquesne Light's Transmission Plannng group, along with PJM, continues to evaluate Duquesene Light's transmission system to identify system enhancement projects. Recent transmission upgrade projects includes the addition of 138kV and 345kV circuits in and around the City of Pittsburgh.

#### **Event Preparedness**

Continuing for 2013, Duquesne Light also prepares for heat or storm related outages through a number of proactive iniatives, which includes:

- 1. Equipping service vehicles with spare transformers during summer months to enable quick replacement of overloaded transformers.
- 2. Maintaining respected memberships in the Mid Atlantic (MAMA) and Great Lakes (GLMA) Mutual Assistance groups.
- 3. Maintaining a subscription to Accuweather, a premier weather forecasting service, that provides customized forecasts twice a day, severe weather alerts and 24x7 availability to an Accuweather forecaster.
- 4. Continuing interaction with local and regional emergency management oganizations to improve communications during emergency events.

# Preventative Vegetation Management Maintenance Activities

Duquesne Light Company's professional Vegetation Management Department continues to develop and implement a comprehensive Integrated Vegetation Management Program (IVM) which provides for the safe and reliable operation of Duquesne's electrical system. Encroaching vegetation in and along rights-of-way is selectively managed on a scheduled and cyclic basis, applying industry-best IVM practices involving manual, mechanical, chemical, and cultural means to achieve specific objectives.

#### **Storm Response**

# Storm Preparations

Duquesne Light Company maintains a comprehensively written Storm Plan, which is updated at least annually. The purpose of the Storm Plan is to provide guidelines and procedures for managing response to service interruption events that result from any cause. As mentioned earlier in this report, the Storm Plan was enhanced for 2013 to include an expanded Social Media Plan as well as the new roles and responsibilities to support the processes implemented this year related to the communication of restoration efforts provided to local municipalities and elected governmental officials.

Also, Duquesne Light Company conducts Storm Preparedness Training each year for employees serving roles on the Storm Restoration Team. Duquesne's most recent Storm Drill/Training session was conducted on Monday, March 13, 2013. During these training sessions, simulated outage scenarios are presented to the Storm Restoration Team, who prepare and simulate responses to recover the system specific to the scenario. This drill enables the Storm Team members to become highly efficient should actual events occur.

Each year, Duquesne Light performs a test of the Alternate Operations Center (AOC). The annual test includes two parts, a full functional test of the AOC systems and technology, and a test of the emergency staffing plan for all critical facilities, which would be implemented upon the loss of SCADA.

# Outage Restoration Strategy

When the extent of storm damage to the electrical system is severe and widespread throughout the Duquesne service area, restoration activities must be prioritized. In all situations, the safety of the public, as well as those working to restore service, is always the overriding and highest priority. Duquesne Light follows these restoration priorities, which are generally universal throughout the electrical utility industry.

## 1. Public Safety Hazards

Our first priority is to quickly address public safety hazards, such as wires that are down across major highways, burning wires or equipment or building fires. While downed power lines are being handled, company personnel continue to assess the total damage to the electrical system's infrastructure and begin restoring service.

# 2. Public Health and Safety Facilities (Critical Customers)

Repair work that restores power to essential facilities that provide emergency services is a high priority. This includes hospitals, police, fire and emergency facilities, water and sanitary authorities, nursing homes and assisted living facilities, etc.

# 3. Major Circuits

Duquesne Light continues rebuilding its system by next focusing on major circuits as it strives to restore power to the greatest number of customers as quickly as possible.

#### 4. Small Neighborhoods/Individual Homes

Once major circuits have been repaired, restoration efforts focus on smaller neighborhoods and groups of customers served by a single transformer. Finally, service to individual homes and businesses is restored as crews repair "service drops," which are the wires that bring electricity from the nearest pole to an individual building.

Duquesne Light has placed more detailed information regarding its restoration priorities on its website, which can be found at <a href="https://www.duquesnelight.com">https://www.duquesnelight.com</a>, then clicking on the tabs "For Your Home" then "Outages and Safety".

#### Communications and Outreach

Duquesne Light continues to work hard in keeping our customers informed and prepared for each year's summer storm season. In May of this year, the Company ran its annual "Summer Storm Season Preparation" article in its customer newsletter, which is delivered to approximately 525,000 customers. The article discusses how the Company prepares in advance of storms or severe weather, what the Company does during storms, and lastly, encourages customers to be prepared for service interruptions by assembling a storm emergency kit which includes the materials and supplies that customers would need to deal with a prolonged service outage.

During major outages and storms, Duquesne Light utilizes a variety of methods to keep customers informed of outages and restoration efforts. Those communications methods include regular updates to local media outlets, postings on the company's Twitter, Facebook and corporate web page, text messages to customers, and updates to the local Emergency Management Agencies.

Again this year, Duquesne Light Company will provide an outage map that is utilized as part of the company's Power Restoration Update Center (PRUC) website. The PRUC is activated when the company experiences a severe storm event.

Materials and supplies recommended include: flashlights and extra batteries, battery-powered or hand-crank radio (NOAA Weather Radio if possible), battery-powered or wind-up clock, portable heater, portable generator, cell phone and charger, bottled water, nonperishable food, manual can opener, paper plates and plastic utensils, multi-purpose tool (such as a Swiss Army Knife), first aid kit and prescription medications, sanitation and personal hygiene items, special needs items for children, elderly and/or disabled family members, blankets and/or sleeping bags, warm clothes, sturdy shoes and heavy gloves, games, activities and reading materials for children and adults, pet supplies, emergency telephone numbers for family members, police, fire department and Duquesne Light, extra cash, extra set of keys, copies of important documents such as insurance policies, bank account information and identification cards, all stored in an easily accessible portable container.