STATE OF NEW YORK

PUBLIC SERVICE COMMISSION

Case 09-E-0428 – **Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service Reliability Performance Mechanism – Major Outage Metric**

INITIAL REPORT OF CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. CONCERNING NETWORK AND LOAD AREA OUTAGES RESULTING FROM SUPERSTORM SANDY

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I. Introduction

Superstorm Sandy was the largest tropical cyclone ever observed in the Atlantic Ocean, with a wind diameter extending nearly 1,000 miles.[1] The storm's impact on Con Edison's service territory was two-fold: powerful wind gusts up to 90 miles per hour brought down trees and power lines, and an unprecedented 14-foot storm tide breached shorelines and available flood-protection measures, inundating facilities and underground equipment. The toll the storm took on the Company's electric systems was astounding. Five transmission substations and 4,000 megawatts of generation shut down. In total, 13 Manhattan networks, one Brooklyn network, and three Staten Island area substations were shut down. The overhead systems were devastated by wind and tree damage leaving nearly 70 percent of those served by the overhead systems without power. Overall, the storm caused more than one million Con Edison customers to lose electric power – five times the previous record of 204,000 customer outages during Hurricane Irene.

The Electric Service Reliability Performance Mechanism ("RPM") approved by the Public Service Commission in Case 09-E-0428, contains a "Major Outage" metric. A Major Outage is an incident that interrupts service for three hours or more to 15 percent or more of the customers in any network ("network major outage") or to at least 70,000 customers in the radial (non-network) system ("radial major outage"). Under this metric, the Company is subject to a revenue adjustment ranging from $5 million to $15 million for the occurrence of a network

[1] Approximately 8.5 million customers throughout the eastern U.S. lost power during Sandy.

major outage, depending on the duration of the outage, and $10 million for the occurrence of a radial major outage.[2]

The RPM establishes several exclusions applicable to operating performance under the RPM. When an exclusion is applicable, the operating performance related to the conditions giving rise to the exclusion is excluded in considering whether a revenue adjustment is applicable. The RPM's exclusions applicable to operating performance are as follows:

a) Any outages resulting from a major storm, as defined in 16 NYCRR Part 97 (i.e., at least 10% of the customers interrupted within an operating area or customers out of service for at least 24 hours), except as otherwise noted; this includes secondary network interruptions that occur in an operating area during winter snow/ice events that meet the 16 NYCRR part 97 definition (the "major storm" exclusion).
b) Heat-related outages are not a major storm. However, the Company may petition the Commission for an exemption for an outage if the Company can prove that such outage, whether heat-related or not, was beyond the Company's control, taking into account all facts and circumstances.
c) Any incident resulting from a strike or a catastrophic event beyond the control of the Company, including but not limited to plane crash, water main break, or natural disasters (e.g. hurricanes, floods, earthquakes) (the "beyond Company control" exclusion).
d) Any incident where problems beyond the Company's control involving generation or the bulk transmission system is the key factor in the outage, including, but not limited to, NYISO mandated load shedding. This criterion is not intended to exclude incidents that occur as a result of unsatisfactory performance by the Company ("generation/bulk transmission" exclusion).

The RPM provides for the Company to file an interim report upon the occurrence of a major outage incident. The report is to provide information pertinent to determining whether a revenue adjustment for the event is applicable, and should include a request for applicable exclusions. This is Con Edison's interim report on the applicability of a revenue adjustment and description of exclusions applicable to the major outage incidents resulting from Superstorm Sandy.

[2] The revenue adjustment for a network major outage lasting more than 12 hours is $15 million. The maximum revenue adjustment in any year for major outage incidents is $30 million.

II. Overview of Major Outage Incidents Resulting from Superstorm Sandy

The Company incurred four Major Outage incidents as a result of Superstorm Sandy as follows:

- Preemptive shutdown of two networks in low-lying areas of lower Manhattan and one network in Brooklyn, to prevent flood damage to customer and Company equipment ("preemptive network shutdowns")
- Shutdown of eleven networks in Manhattan due to flooding impacts at the East 13th Street and the East River transmission substations and the Seaport area substation
- The loss of three area stations in Staten Island and associated load areas, due to flooding and wind impacts at the Goethals and Fresh Kills transmission substations in Staten Island
- The widespread interruption of power to customers supplied from non-network, radial (overhead) load areas, due to equipment damage caused by wind gusts up to 90 miles per hour.

None of the four major outage incidents are subject to RPM revenue adjustment because exclusions established in the RPM are applicable to each incident. Each major outage incident and applicable exclusions are discussed below.

III. Preemptive Network Shutdowns

A. Description of Outage Incident

Con Edison's Corporate Coastal Storm Plan identifies low-lying network areas and electric equipment locations that are subject to tidal flooding during storms that produce tidal surges. In advance of the arrival of Superstorm Sandy, the Company installed sandbags at underground transformer vault locations in these flood zones. Immediately before the storm, the Company assigned observers to critical and strategic network areas to monitor flooding impacts of the storm.

Sandy's actual storm surge of 14.06 feet (above Mean Low Level Water ("MLLW")) at the Battery was substantially higher than the prior reported storm tides by at least three feet and exceeded the 11.7 forecast for the storm.[3] As the tides surged onto land in the afternoon and evening of October 29, 2012, the network-location observers reported that the water levels were rising above the protective barriers installed at transformer vaults. At that point, the Company

[3] The unofficial and unconfirmed storm tide record is 11.2 feet at the Battery reported in the historical accounts of a storm in 1821. The method of measurement for that 1821 tide level is not known. The storm tide at the Battery due to the December 11, 1992 Nor'easter was 9.55 feet (MLLW), which was 4.51 ft below the 14.06 ft MLLW measured at the Battery during Superstorm Sandy. The storm tide at the Battery from Hurricane Irene on August 28, 2011was about 9.5 feet (MLLW).

preemptively shut down three networks to prevent extensive customer and network equipment damage and to reduce the time that might otherwise be required to replace or repair equipment necessary to restore power to the networks.[4] The shutdown and restoration of each network was as follows:

- The Bowling Green network in lower Manhattan was preemptively shut down on October 29, 2012 at 18:42 hours and restored to service on November 3, 2012 at 01:33 hours.
- The Fulton network in lower Manhattan was preemptively shut down on October 29, 2012 at 19:00 hours and restored to service on November 3, 2012 at 15:03 hours.
- The Brighton Beach network in Brooklyn was preemptively shut down on October 29, 2012 at 19:54 hours and restored to service on October 31, 2012 at 16:13 hours.

B. Applicability of RPM Exclusions

Two RPM exclusions – the "major storm" exclusion and the "beyond Company control" exclusion – are applicable to exclude operating performance associated with the three incidents of preemptive network shutdown. As such, a revenue adjustment is not applicable for the major outages in the Bowling Green, Fulton, and Brighton Beach networks.[5]

The "major storm" exclusion exempts "any outages resulting from a major storm, as defined in 16 NYCRR Part 97 (i.e., at least 10% of the customers interrupted within an operating area or customers out of service for at least 24 hours)." The three preemptive network shutdowns each resulted from the tidal flooding impacts of a major storm – Superstorm Sandy – that interrupted service to customers for at least 24 hours.

The "beyond Company control" exclusion exempts "any incident resulting from ... a catastrophic event beyond the control of the Company, including but not limited to … natural disasters (e.g. hurricanes, floods, earthquakes)." The three preemptive network shutdowns each resulted from wide scale flooding of unprecedented levels caused by a natural disaster beyond the Company's control, i.e., Superstorm Sandy.[6]

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[4] Con Edison's Electric Tariff, Schedule for Electricity Service, P.S.C. No. 10 – Electricity, Leaf 117, states:

> Notwithstanding any other provision of this tariff, the Company may withhold, suspend, curtail or disconnect service to a building, unit or piece of equipment, at any time, only when: a. an emergency may threaten the health or safety of a person, the surrounding area, or the Company's generation, transmission or distribution systems … .

[5] On October 29, 2012 at 21:05 hours, the Company shut down the supply to the high-tension services at the World Trade Center site, at the customer's request due to flooding of customer equipment. Power was restored on November 4, 2012 at 01:16 hours when the customer was ready to have the services energized.

[6] On October 30, 2012, President Obama issued a Disaster Declaration covering areas within the State of New York, including the five Boroughs of the New York City, see http://www.fema.gov/disaster/4085/notices.

IV. Shutdown of Eleven Networks in Manhattan

A. Description of Outage Incident

Severe flooding at the East 13th Street transmission station and the East River transmission station, located adjacent to the East River in Manhattan, caused the shutdown of both stations and resulted in the loss of all load supplied from these stations.[7] These substations suffered a tremendous amount of tidal flooding that damaged critical equipment, particularly the various components of the protective relaying and dielectric systems.

The East 13th Street transmission station supplies 21 sub-transmission transformers and/or feeders that energize five area substations in lower Manhattan – Avenue A, Cherry Street, East 29th Street, East 36th Street, and West 19th Street. The East River transmission station supplies seven sub-transmission feeders that energize two area substations in lower Manhattan – Leonard Street 1 and Leonard Street 2. Each of the seven area substations energize one or two networks in lower Manhattan as follows:

Area Substation	Network
W19 St.	Chelsea
Avenue A	Cooper Square
Cherry Street	City Hall
East 29 St.	Madison Square
East 36 St.	Greeley Square and Kips Bay
Leonard St. No. 1	Greenwich and Sheridan Square
Leonard St. No. 2	Park Place and Canal

This loss of power to these ten networks occurred between 20:27 and 20:38 hours on October 29, 2012. Network restoration occurred on November 2 and November 3, 2012 as follows:

[7] The top of the foundations at the East 13th Street transmission station is typically at elevation 10.6 feet (MLLW) and the lowest elevation of critical equipment in the station is at elevation 11.2 feet (MLLW). A Nor'easter on November 25, 1950 produced the highest water mark elevation of 10.1 feet (MLLW) observed at the East 13th Street station prior to Superstorm Sandy. Hurricane Irene produced an estimated high water mark elevation of 9.0 feet (MLLW) at the facility. The September 21, 1938 Hurricane produced a high water mark of elevation 7.3 feet (MLLW). The highest forecast of predicted water levels at the Battery for Superstorm Sandy was up to elevation 11.7 feet (MLLW) which would produce an estimated high water level of approximately 11.1 feet (MLLW) at the East 13th Street transmission station. The Company installed temporary measures to protect the critical equipment up to elevation 13.6 feet (MLLW) at the East 13th Street transmission station. The actual water level at the Battery was elevation 14.06 (MLLW). The flooding at the East 13th Street transmission station reached an elevation of 13.8 feet (MLLW) and exceeded the elevation of the temporary measures put in place.

- At 16:51 hours, the Cooper Square network was restored to service.
- At 17:44 hours, the Chelsea network was restored to service.
- At 18:55 hours, the City Hall network was restored to service.
- At 19:03 hours, the Madison Square network was restored to service.
- At 00:55 hours, the Kips Bay network was restored to service.
- At 03:56 hours, the Greenwich network was restored to service.
- At 04:00 hours, the Park Place network was restored to service.
- At 04:23 hours, the Sheridan Square network was restored to service.
- At 04:40 hours, the Canal network was restored to service.
- At 05:03 hours, the Greeley Square network was restored to service.

One additional network – the Cortlandt network – was shutdown on October 29, 2012 at 20:46 hours as a result of tidal flooding. The Cortlandt network is energized by the Seaport No. 1 area substation, which is located within a city block of the East River. Flood-water intrusion in the relay cabinets caused the substation circuit switchers to open and de-energize the network. The network was restored to service on October 31, 2012 at 13:53 hours.

B. Applicability of RPM Exclusions

Two RPM exclusions – the "major storm" exclusion and the "beyond Company control" exclusion – are applicable to exclude operating performance associated with the de-enegerization of these eleven networks. A third RPM exclusion – the "generation/bulk transmission" exclusion – is applicable to exclude operating performance associated with the de-enegerization of the ten networks supplied from the East 13th Street and the East River transmission stations. As such, a revenue adjustment is not applicable for the major outages in the eleven networks.

The "major storm" exclusion exempts "any outages resulting from a major storm, as defined in 16 NYCRR Part 97 (i.e., at least 10% of the customers interrupted within an operating area or customers out of service for at least 24 hours)." The eleven network shutdowns resulted from the tidal flooding impacts of a major storm – Superstorm Sandy – that caused the shutdown of transmission stations and area substations resulting in the interruption of service to customers for at least 24 hours and the interruption of service to more than 10 percent of customers in the Manhattan operating area.[8]

The "beyond Company control" exclusion exempts "any incident resulting from ... a catastrophic event beyond the control of the Company, including but not limited to … natural disasters (e.g. hurricanes, floods, earthquakes)." The eleven network shutdowns each resulted

[8] The shutdown of the eleven networks in lower Manhattan interrupted service to approximately 223,113 of the 723,199 (30.8%) customers in the Manhattan operating area (numbers reflect customer counts as of December 31, 2011).

from wide scale flooding of unprecedented levels caused by a natural disaster beyond the Company's control, i.e., Superstorm Sandy.

The "generation/bulk transmission" exclusion exempts "any incident where problems beyond the Company's control involving generation or the bulk transmission system is the key factor in the outage, including, but not limited to, NYISO mandated load shedding." The East 13th Street transmission station and the East River transmission station are components of the bulk transmission system.[9] The shutdown of the East 13th Street transmission station and the East River transmission station due to tidal flooding beyond the Company's control were the key factors in the loss of sub-transmission feeder supply to the seven lower Manhattan area substations and the de-energization of the ten lower Manhattan networks

V. Loss of Three Area Substations and Associated Load Areas in Staten Island

A. Description of Outage Incident

All of Staten Island is fed from three 138 kV transmission stations: Greenwood, Fox Hills, and Fresh Kills. Supplies into these three stations include six transmission feeders: four from transmission stations in other boroughs and two from a transmission station in Staten Island. Other supplies into these three 138 kV transmission stations include generation: Arthur Kill Unit 2 and Arthur Kill Unit 3 (Arthur Kill 3 was in a long term outage at the time of the storm), six barges of gas turbines and four other small generators. These three 138 kV transmission stations feed Staten Island load by stepping voltage down to 33 kV and 13kV, and supplying five area substations: Fresh Kills, Fox Hills, Wainwright, Willowbrook, and Woodrow.

By the time the height of Superstorm Sandy had passed, flood and wind damage from the storm resulted in Fresh Kills 138 kV and Fresh Kills 345 kV transmission stations being out of service and de-energized. As a result, three area substations and the load areas that these area

[9] The East 13th Street and East River transmission stations are connected to and fed from three 345 kV transmission stations. Eight 345 kV feeders from these three stations supply East 13th Street transmission station. At the East 13th Street transmission station, seven of these eight feeders connect to seven 345 to 138 kV transformers. These transformers, in turn, supply seven 138 kV feeders to the East 13th Street transmission station ring bus. The East 13th Street ring bus is comprised of 12 bus sections. These 12 bus sections feed 21 sub- transmission transformers and/or feeders to five area substations (Avenue A, Cherry Street, East 29th Street, East 36th Street, West 19th Street).

The 12 East 13th Street bus sections also feed five transmission feeders that supply the East River transmission station through a series of five 138 to 69 kV transformers and four phase angle regulators. The eighth 345 kV feeder at East 13th Street (which is fed from the external 345 kV stations) supplies another transformer that feeds a 345 kV to 69 kV transformer and, in turn, a 69 KV feeder directly to East River transmission station. These combined six feeders into the East River transmission station supply nine bus sections in the East River ring bus. The nine bus sections and six feeders feed seven sub-transmission feeders to two area substations (Leonard Street No. 1 and Leonard Street No. 2).

substations supply were out of service – Fresh Kills 33 kV area station, Wainwright 13 kV area station and Woodrow 13 kV area station. Multiple automatic operations on the Fresh Kills 138KV bus led to the interruption of customers supplied by Fresh Kills 33 kV, Woodrow 13 kV and Wainwright 13 kV area substations. Goethals, Fresh Kills 345 KV and Fresh Kills 138 KV transmission stations were subsequently de-energized by switching out the last in-service 345KV feeder supplying those facilities. This was done to protect the equipment from further damage due to high voltage, corrupted telemetry and switches that were operating uncontrollably. Additionally, most of the generation supplies in this load pocket were unavailable. Arthur Kill 2 had tripped offline; Arthur Kill 3 was in a long term outage; five of the six barges were unavailable due to site flooding; the sixth barge was in a long term equipment outage, and two of the four small generators were unavailable.

The Woodrow, Wainwright, and Fresh Kills load areas were shut down on October 29, 2012 at 21:43 hours due to loss of transmission supply at Fresh Kills substation. These load areas were restored to service as follows:

- Woodrow was restored to service on October 30, 2012 at 05:59hrs
- Wainwright restored to service on October 30, 2012 at 13:00hrs
- Fresh Kills restored to service on October 30, 2012 at 11:20hrs.

B. Applicability of RPM Exclusion

Three RPM exclusions – the "major storm" exclusion, the "beyond Company control" exclusion, and the "generation/bulk transmission" exclusion – are applicable to exclude operating performance associated with the de-energization of the Woodrow, Wainwright, and Fresh Kills area substations and load areas. As such, a revenue adjustment is not applicable for the major outages in these load areas.

The "major storm" exclusion exempts "any outages resulting from a major storm, as defined in 16 NYCRR Part 97 (i.e., at least 10% of the customers interrupted within an operating area or customers out of service for at least 24 hours)." The three load area shutdowns resulted from the impacts of a major storm – Superstorm Sandy – that caused the shutdown of transmission stations and area substations resulting in the interruption of service to customers for at least 24 hours.

The "beyond Company control" exclusion exempts "any incident resulting from ... a catastrophic event beyond the control of the Company, including but not limited to … natural disasters (e.g. hurricanes, floods, earthquakes)." The three load area shutdowns resulted from wide scale flooding of unprecedented levels and high winds caused by a natural disaster beyond the Company's control, i.e., Superstorm Sandy.

The "generation/bulk transmission" exclusion exempts "any incident where problems beyond the Company's control involving generation or the bulk transmission system is the key

factor in the outage, including, but not limited to, NYISO mandated load shedding." The Goethals, Fresh Kills 345 and Fresh Kills 138 KV transmission stations are components of the bulk transmission system. The shutdown of these transmission stations due to tidal flooding and damages caused by high winds beyond the Company's control were key factors in the loss of sub-transmission feeder supply to the Woodrow, Wainwright, and Fresh Kills area substations and the de-energization of the associated load areas.

VI. Interruption of Power to Customers Supplied from the Non-Network, Radial (Overhead) Load Areas

A. Description of Outage Incident

The Company's overhead system was devastated by wind and tree damage interrupting service to 604,603 (about 70%) of the 868,347 non-network customers in the Bronx, Brooklyn, Queens, Staten Island, and Westchester County operating areas. The overhead system suffered a loss of nearly 1000 utility poles, more than 900 transformers, and approximately 140 miles of cable. In comparison to Hurricane Irene, ten times as many poles, five times as many transformers, and more than four times as many miles of cable were replaced.

B. Applicability of RPM Exclusion

The RPM's "major storm" exclusion is applicable to exclude operating performance associated with the radial major outage to the overhead system. As such, a revenue adjustment is not applicable for the radial major outage in the overhead system.

The "major storm" exclusion exempts "any outages resulting from a major storm, as defined in 16 NYCRR Part 97 (i.e., at least 10% of the customers interrupted within an operating area or customers out of service for at least 24 hours)." The outages in the overhead system resulted from the impacts of a major storm – Superstorm Sandy – that caused extensive damage to the overhead system infrastructure resulting in the interruption of service to customers for at least 24 hours in each of the Company's overhead operating areas and the interruption of service to more than 10 percent of customers in each operating area.

VII. Conclusion

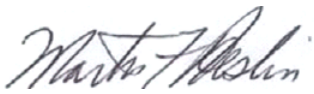
None of the four major outage incidents during Superstorm Sandy are subject to a RPM revenue adjustment because exclusions established in the RPM are applicable to each incident.

Dated: December 13, 2012

Respectfully submitted,

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

By its Attorney:



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