



STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

ANDREW M. CUOMO
Attorney General

March 2, 2007

Hon. Jaclyn A. Brillling
Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

RE: Case 06-E-0894 – Proceeding on Motion of the Commission to Investigate the Electric Power Outages in Consolidated Edison Company of New York, Inc.'s Long Island City Electric Network.

Dear Secretary Brillling,

Enclosed please find an original and ten copies of the "Comments of the Office of the Attorney General of the State of New York, Andrew M. Cuomo, on Public Service Commission Staff Report," in the above-entitled matter. A hard copy and a copy by email are also being sent today to Administrative Law Judge Eleanor Stein, Commission Staff Assistant Counsels Kimberley A. Harriman and Guy R. Mazza, and all Active Parties to the proceeding.

Thank you very much.

Sincerely,

Mary Ellen Burns
Special Counsel

Email: maryellen.burns@oag.state.ny.us
Phone: 212.416.8333

cc: ALJ Eleanor Stein
Kimberley A. Harriman
Guy R. Mazza
Active Parties

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

----- x
Proceeding on Motion of the Commission
to Investigate the Electric Power Outages
in Consolidated Edison Company of New
York Inc.'s Long Island City Electric Network
----- x

Case No. 06-E-0894

**COMMENTS
OF THE OFFICE OF
THE ATTORNEY GENERAL OF THE STATE OF NEW YORK,
ANDREW M. CUOMO,
ON PUBLIC SERVICE COMMISSION STAFF REPORT**

New York Attorney General's Office
120 Broadway
New York, NY 10271

Mary Ellen Burns
Special Counsel
Phone: 212.416.8333
Email: maryellen.burns@oag.state.ny.us

Charlie Donaldson
Assistant Attorney General
Environmental Protection Bureau
Phone: 212.416.8334
Email: charlie.donaldson@oag.state.ny.us

Of Counsel

March 2, 2007

TABLE OF CONTENTS

BACKGROUND 1

INTEREST OF THE ATTORNEY GENERAL 2

INTRODUCTION 2

DISCUSSION 5

I. The Staff Report Demonstrates That Con Edison Was Not Properly Maintaining Its Network Prior To The LIC Network Outages. 5

 A. Con Edison Did Not Follow Through On Critical Commission Recommendations Made Following The 1999 Washington Heights Blackout. .. 5

 1. Network Modeling And Remote Monitoring of Conditions In the Network. .. 6

 2. Cable and Joint Failures and Replacement 6

 3. Con Edison Still Uses Hi-Pot Testing of Primary Feeder Cables. 7

 4. Con Edison Has Not Enhanced Its Secondary System Modeling. 7

 B. Transformer Damage 8

 C. Con Edison Did Not Have An Adequate System In Place In The LIC Network For Estimating How Many Customers Were Out Of Service. 10

 D. Con Edison Did Not Heed The Lessons Of Its Own Prior Training Drills. 10

 E. Con Ed’s Protocols For Handling Contingency Situations Are Inadequate. 11

 F. Broken Equipment Contributed To The Initial Failures On July 17. 11

II. The LIC Network Outage Demonstrates The Failure Of Corporate Leadership. 12

 A. Con Edison Did Not Have Any Idea How Many Customers Or People Were Out of Service or Experiencing Low Voltage. 14

 B. Con Edison’s Senior Management’s Failures To See The Whole Picture Led To The Destruction Of Major Portions Of Its LIC Network’s Secondary System. 15

 C. Con Edison Failed To Recognize Or Ignored The Zonal Nature Of The Outages. . . 17

D.	Con Edison Failed To Discern That Much Of The Demand Reduction It Observed Was Not Due To Voluntary Efforts But To Customers Losing Power. . .	18
III.	Con Edison’s Load Reduction Program and Load Reduction Management Are Inadequate And Proved Inadequate During The LIC Outages	18
IV.	Con Edison Failed To Communicate In An Accurate And Timely Way With Network Residents.	23
V.	The Size of the LIC Network And Its Previous Record of Problems Should Have Alerted Con Edison And The Commission To Needed Changes.	27
VI.	Con Edison Has Downplayed Its Failures With Respect To The LIC Network.	28
VII.	Residents And Businesses Should Receive Full Restitution For Economic Losses Suffered As a Result Of The LIC Outages.	29
VIII.	Ratepayers Should Not Foot The Bill For Any Expenses Incurred, Capital Or Otherwise, To Address The Damage Caused To The LIC Network.	30
IX.	Con Edison Has Failed To Carry Out Many Of The Recommendations Made in The Attorney General’s Washington Heights Blackout Report.	31
X.	The LIC Network Outages Demonstrate That The Commission Has Failed In Its Obligation To Oversee Con Edison And Ensure The Safety And Reliability Of Electric Service.	33
XI.	The Staff Report Should Have Provided More Detail On Critical Matters.	34
	ATTORNEY GENERAL’S RECOMMENDATIONS	35
	CONCLUSIONS.	38

BACKGROUND

The Office of the Attorney General of the State of New York respectfully submits these comments in response to the Notice issued February 13, 2007, in this proceeding.

For a total of nine days beginning on Monday, July 17, 2006, approximately 174,000 people in the neighborhoods of Long Island City (“LIC”), Astoria, Sunnyside, Woodside and Hunters Point, all receiving electric power for homes or businesses from the Consolidated Edison Company of New York, Inc. (“Con Edison” or “the Company”), suffered through numerous and extensive power failures. These outages, in Con Edison’s Long Island City network, caused significant human suffering and economic losses. The power emergency was not brought under significant control until Sunday, July 23. Residents and businesses were without power for even more days thereafter, because of damage to parts of the network. During all this time, even while its workers were endeavoring to restore service, Con Edison provided incomplete and inaccurate information to the affected communities and did not even know how many customers were being impacted or the extent of the failures. To this day, Con Edison does not have a complete grasp of the extent of the damage to its network.

Following an investigation, the Staff of the Public Service Commission (“Commission”) issued a draft report on January 17, 2007¹ and a final Staff Report on February 9, 2007.² The

¹ “Department of Public Service Draft Staff Report On Its Investigation Of The July 2006 Equipment Failures And Power Outages In Con Edison’s Long Island City Network In Queens County, New York, January 2007” (“draft report”).

² “Department of Public Service Staff Report On Its Investigation Of The July 2006 Equipment Failures And Power Outages In Con Edison’s Long Island City Network In Queens County, New York, February 2007” (“Staff Report” or “final report”).

Commission has solicited comments on the Staff Report.³

INTEREST OF THE ATTORNEY GENERAL

The Attorney General is charged with enforcing consumer protection and environmental laws, and advocates in Commission proceedings on behalf of consumer and small business interests, in support of clean energy policies, and the public interest generally. The Attorney General's office has participated as a party to the Staff's investigation of the Con Edison Queens power failures, including filing information requests, receiving copies of responses to Staff's and other parties' information requests, and participating in technical conferences at which Con Edison witnesses were examined.

The Office of the Attorney General submitted comments on the Staff's draft report.⁴ This constitutes the Office of the Attorney General's comments on the final Staff Report.

INTRODUCTION

The Staff Report demonstrates that the extensive Queens power outages resulted from Con Edison's inept and grossly negligent performance and its failure to operate reliably, maintain, and manage its system, and to respond effectively to an escalating emergency. The Staff Report supplies detailed information from which only one conclusion can be reached: that Con Edison's mismanagement caused the cascading outages that severely damaged a good portion of its network and caused unnecessary suffering and economic losses to residents and businesses. Con Edison's mismanagement included its failure to act before July 17 to prevent

³ Case No. 06-E-0894, Notice of Comment Schedule (issued February 13, 2007).

⁴ "Comments of the New York State Attorney General's Office on the Con Edison Queens Outages of July 2006," January 31, 2007.
<http://www.oag.state.ny.us/telecommunications/AGcommentsConEDoutage131.pdf>

the conditions that made the LIC network event possible and its poor handling of the LIC network emergency when it occurred. Con Edison's explanations for the outages as the coincidence of a few random equipment failures is tantamount to saying "stuff happens," and does not go to the root causes of the outages.

In addition to crucial actions and responses required of Con Edison in the wake of its failures, as detailed herein, several key regulatory actions must flow from the information uncovered in the investigation and the conclusions to be drawn therefrom. First, because Con Edison was grossly negligent, residents and businesses affected by the outages should receive full compensation, not only for the loss of food spoilage and medicine losses, but also for damage to property, such as computer equipment, due to low voltage or power failure, as well as consequential damages such as loss of business. The Staff Report responds to the Attorney General's criticism of the draft report by moving up the time line for consideration of this issue and indicating that the Commission should undertake to consider it, not just leave it with Con Edison or the next rate case. Staff Report at 5. The Commission should move quickly to institute a proceeding to make a finding of gross negligence, to examine the types of individual damages suffered by residents and businesses, to take testimony, and to order Con Edison to pay appropriate damages for economic losses suffered in excess of the amounts and types of recovery in Con Edison's existing tariffs.

Second, because of Con Edison's utterly deficient performance, as demonstrated by the Staff Report, ratepayers must not bear any of the costs that Con Edison has incurred and is continuing to incur to repair the damage that it caused to its network, nor should the ratepayers bear the capital cost of upgrades to replace damaged equipment. As called for by the Staff

Report, the Commission should begin a prudence proceeding immediately to ensure this result.⁵

Third, the Washington Heights blackout, in the summer of 1999, over seven years ago, sounded the alarm that Con Edison's distribution system had been neglected and was in dire need of substantial investment and upgrading. Yet the Staff Report demonstrates that many of the recommendations that it made following the blackout have not been heeded by Con Edison. In addition, it is clear that recommendations made by the Office of the Attorney General in its own report on the Washington Heights blackout also have not been heeded.⁶ As detailed further herein, the Commission must move to ensure speedy compliance with these recommendations.

Fourth, a glaring question still remains unanswered in the final report, which the Attorney General's office raised in its comments on the draft report: where was the Commission? Where was the regulatory agency charged with oversight of Con Edison's safe and reliable provision of electric service during the prior years leading up to the outages and during the outages themselves? The report sheds little light on this question, but the residents and businesses of northwestern Queens and the public deserve an answer.

The Commission must be vigilant and unceasing in its oversight and monitoring of Con Edison and must force the Company into the 21st century. An electric power utility must not ever again be in the position in which it must choose either to shut down an entire network or else

⁵ In this regard, it must be noted that Con Edison is receiving returns "well in excess of the level envisioned by the Commission in establishing the company's [current] rates," according to the Staff draft report. The report notes returns on equity of 12.5%, 15.25%, 12.74%, 11.89%, 8.63%, and 10.95% for the calendar years 2000-2005 respectively. Staff Report at 135.

⁶ See "Con Edison's 1999 Electric Service Outages, A Report to the People of the State of New York from the Office of the Attorney General," (March 9, 2000). <http://www.oag.state.ny.us/telecommunications/blackout/coned.pdf>

destroy a major part of it in order to handle cascading equipment failures. That is not an acceptable choice in New York in 2007.

DISCUSSION

I. The Staff Report Demonstrates That Con Edison Was Not Properly Maintaining Its Network Prior To The LIC Network Outages.

The LIC network was not being properly maintained by Con Edison in the years leading up to the events of mid-July 2006. This conclusion is clear from the fact that many of the Commission recommendations made after the 1999 Washington Heights blackout have not been followed by Con Edison. Moreover, a great deal of data on the infrastructure of the LIC network was uncovered after the July 2006 LIC network outage in the course of surveying the extent of the damage. The Staff Report concludes in many places that the data collected could be indicative not just of damage to the network due to the outage but also of disrepair before the outages. This raises the questions of whether and to what degree the same or similar poor conditions are present elsewhere in Con Edison's system.

A. Con Edison Did Not Follow Through On Critical Commission Recommendations Made Following The 1999 Washington Heights Blackout.

The Commission made 44 recommendations for Con Edison improvement in maintaining and operating its system after the Washington Heights blackout. However, the Staff Report on the LIC outages states that work on eight recommendations has not been completed, including at least four items that can be identified as having a negative impact on the LIC network outages.⁷

These crucial four are:

⁷ The Staff Report still does not specify the other four incomplete items and should do so, as this office recommended in our comments on the draft report.

- improved modeling techniques;
- elimination of paper-insulated lead-covered (PILC) cable and joints;
- alternative test to hi-pot testing of primary feeder cables; and
- monitoring of the secondary system.

1. Network Modeling And Remote Monitoring of Conditions In the Network.

Con Edison has a number of means to monitor its network in real time and to use the information received to create computer models that attempt to simulate the actual events occurring, thereby providing pertinent information on what is happening or likely to happen with the network as a result of certain inputs and variables. The Staff Report reveals that Con Edison's current modeling capabilities do not work accurately in circumstances where the network is being stressed by multiple primary feeder cable failures, which is exactly when accurate modeling could be extremely useful. Staff Report at 101-102.

Moreover, Con Edison's current system for monitoring network transformers and associated switches was in poor shape in the LIC network immediately before the July 2006 outages: only 79.9% of the monitoring units were operating and transferring data to Con Edison's control room on July 17. Staff Report at 101. Con Edison's own operating procedures require that 95% be operating and that the "minimal threshold" for reliable information is 85% operational. The LIC network had the lowest percentage of total monitoring units operating of any network. This is unacceptable. The required Commission oversight must be brought to bear.

2. Cable and Joint Failures and Replacement.

The failure of cables and joints due to overheating of certain old-fashioned "paper insulated lead covered" ("PILC") cable, was identified as a significant problem in the wake of the

Washington Heights blackout. This type of insulated cable and the joints used to connect it to other equipment were implicated in the LIC network outages as well. Con Edison is supposed to replace PILC cable system-wide by 2024 and to phase out PILC joints. Con Edison is also supposed to replace all PILC joints in the LIC network by this coming summer. Staff Report at 79. However, while the draft report called for Con Edison to replace all PILC cable in the LIC network by 2009, the final report extends the deadline to 2012, without adequate explanation. Con Edison's efforts should be stepped up and the Commission should ensure that it does not take another twenty years to remove these antiquated cables and joints from its entire system.

3. Con Edison Still Uses Hi-Pot Testing of Primary Feeder Cables.

After the 1999 Washington Heights blackout, the Commission directed Con Edison to develop a different means for testing its primary feeder cables than direct current high-potential testing, also known as "hi-pot" testing. In "hi-pot" testing, a feeder cable is subjected to high voltage for a specified period of time to determine whether any failures can be detected. It has typically been used to test cables before the summer high demand season, but was used in the LIC network to test cables being restored to service. The hi-pot test can itself cause damage and stress to primary cables, hence the concern to find a better test. Con Edison has not developed one and the Commission has not effectively monitored the Company to ensure that it does.

4. Con Edison Has Not Enhanced Its Secondary System Modeling.

The secondary system is the intricate part of the network which connects to each building or residence after the power has been stepped down from the primary feeder cables, which carry power at greater voltage. One can think of the primary cables as the arteries of the network, and the secondary system as the capillaries. After the Washington Heights outage, the Commission

recommended that Con Edison develop a program to enhance its ability to model the secondary systems in its networks. This requires developing computer programs that can take various monitoring data from the system and simulate conditions in real time. It would permit decision makers to understand what is going on in the secondary system and what the consequences of various actions or inactions might be. Such a capability would have been extremely helpful during the LIC network outages.

But the Staff Report states that there has apparently been “little real improvement” since 1999 in developing such a model. The report concludes that the Company’s “progress. . . has been insufficient and it appears that it has not been given sufficient priority.” Staff Report at 91. Especially given the extraordinary damage to the secondary system during the LIC network outage as a result of Con Edison decision making and the lack of information they apparently had about that damage, the neglect of this modeling is a grave error. Moreover, the Commission must monitor Con Edison’s developmental efforts more closely to ensure that they happen and happen in a timely fashion.

B. Transformer Damage

Transformers are the equipment that step down electric power from the primary feeder cables to the secondary cables that connect to individual buildings and homes. Transformers that are out of service put stress and load on other nearby transformers, whose overheating can lead to cable failures. As the Staff Report notes, “every time a transformer fails due to overloading or overheating it causes a fault, and the associated primary feeder circuit breaker opens, putting the primary feeder out-of-service and causing the contingency level to increase.” Staff Report at 95.

During the LIC network outages, 13 transformers in the network failed.⁸

In the examination of the LIC network transformers after the outages, two of the transformer failures were found to be the result of corrosion. Con Edison has been inspecting its LIC network transformers since the outage, with a total of 842 transformers inspected through December 7, 2006. The Staff Report states that, as a result of inspection, 81 transformers were targeted for replacement and seven for repair, while 91 were placed on a watch list. Staff Report at 97. Of the transformers targeted for replacement, over half the number were “due to corrosion issues.” Staff Report at 97. The Staff Report states that “the high quantity of transformers found to have corrosion is alarming” and suggests that Con Edison’s previous inspections must have been inadequate. Staff Report at 97. Moreover, such widespread corrosion suggests that the problem is not simply within the LIC network, but likely is a system-wide problem.

Con Edison inspects its transformers on a schedule, but the Staff Report states that “it appears that past methods for transformer inspections are inadequate.” Staff Report at 125.⁹ While Con Edison replaces about 3% of the transformers in its system each year, post-outage it has been replacing 11% of LIC network transformers. Staff Report at 125. It may well be that transformers in other parts of Con Edison’s system need replacement at a rate higher than the rate at which Con Edison is replacing them. Con Edison needs to improve its transformer inspections and to determine the reasons for the high degree of corrosion damage found on the LIC network.

⁸ Staff Report at 94. The LIC network had 1198 transformers, of which 25 were out of service before the events of July 17. Staff Report at 93.

⁹ The Staff’s draft report stated that Con Edison’s *existing* methods are inadequate. Draft Report at 119. [emphasis added.] No explanation appears for the change of wording from “existing” to “past” in the final report. If Con Edison has new and better methods for inspecting transformers, that should be detailed.

The Company has been remiss and the Commission must monitor transformer inspections more diligently.

C. Con Edison Did Not Have An Adequate System In Place In The LIC Network For Estimating How Many Customers Were Out Of Service.

Con Edison has not deployed in its Brooklyn/Queens operating area a computer-based program, the STAR program, that might enable it to use information gathered from customer calls and elsewhere to estimate more accurately the number of persons out of service in real time. However, this program was designed for use in radial systems, not networked systems, and it is questionable whether it is an adequate foundation upon which to estimate customer outage counts in a networked system. Appropriate tools must be developed, especially since Con Edison failed so abysmally to understand how many customers were actually out of service in the LIC network. The fact that it was not aware of the number of people impacted by the power outages indicates a tremendous lack of preparedness by the Company and a lack of oversight by the Commission.

D. Con Edison Did Not Heed The Lessons Of Its Own Prior Training Drills.

Con Edison conducted training drills in 2004, 2005, and 2006 to simulate emergency events in, *inter alia*, Queens County. These drills “highlighted the need to quickly identify customer outage counts and geographic boundaries of the affected area,” according to the Staff Report. Staff Report at 62. But Con Edison apparently took no action or inadequate action to address the failures indicated by the drills. Moreover, in 2005 in Queens, when the drill simulated a situation in which six out of 12 feeders went out, the drill participants determined to shut the system down in order to avoid cascading failures and damage to the secondary system.

It is unclear what, if any, effect these drills had on any actual decision-making during the LIC network outages or any other network emergencies. It is also unclear what role, if any, the Commission was playing in overseeing Con Edison's emergency preparedness efforts. Con Edison and the Commission must do better.

E. Con Ed's Protocols For Handling Contingency Situations Are Inadequate.

The Staff Report reveals that Con Edison's written protocols for handling "contingency" situations, in place at the time of the LIC outages, are "vague" on the decision-making criteria to be used to determine when to shut down a network. More astonishingly, the current protocol was created after the Washington Heights blackout, and replaced a prior protocol which the Staff notes was "clearer," and that apparently identified concrete conditions to consider in making such a decision. Staff Report at 65-66. The question arises how the Commission could have permitted a change in protocol that seems to have provided less rather than more guidance for emergency situations such as occurred in LIC. The Company's emergency protocols should be revised to provide as much clear direction and guidance as necessary to be effectual and useful.

F. Broken Equipment Contributed To The Initial Failures On July 17.

Con Edison had previously failed to repair broken equipment that was implicated in the initial failures that led to the LIC outages. These oversights demonstrate how disrepair to the network can have drastic consequences. In the first instance, the Company could not reduce load on the network on Monday, July 17, by instituting an immediate 8% voltage reduction because it had not repaired some circuitry at the substation essential to enabling voltage reductions to go into effect automatically, even though the equipment had failed a test in Spring 2006.

The voltage reduction had to be implemented manually, so that what should have been

instantaneous took almost an hour, with likely consequences to the overloading of the system during that time. Staff Report at 117. What is the point of preparing for the summer season by testing equipment if that which is found to be defective is not repaired? Con Edison must fix equipment prior to the summer season.

In the second instance, the LIC network leaped from a second to a fifth contingency on Monday, July 17, because two other pieces of faulty and defective equipment at the substation had either gone unnoticed or had been ignored by Con Edison. Staff Report at 103-104. These failures to fix broken substation equipment suggest, not a coincidence of random events, as the Company insists, but rather a deeper failure to maintain equipment properly.

II. The LIC Network Outage Demonstrates The Failure Of Corporate Leadership.

The Staff Report responds in part to the Office of the Attorney General's comments on the draft report that the draft contained no detail as to who among Con Edison's senior management, if anyone, was making decisions during the course of the outages, at what point in time and with what information. Staff Report at 66. Thus, the final report identifies by title certain senior managers who were "present during" the 10th contingency events on July 18 and July 19, and who "would have been" responsible for making a shut-down decision, or who were "involved with the discussions and decisions." Staff Report at 66. However, the final report is still deficient and vague in its account, and simply cites Con Edison as saying that the decision not to shut down the network "was not made by a single person, but was a collaborative decision" Staff Report at 66. Moreover, the Staff Report appears totally focused on the question of decisions about whether or not to shut down the network, and does not probe the entire extent of senior management decision making during the event, including providing more specificity about

who was deciding what at what point and with what information.

What remains clear is that the senior management team was flying blind, without accurate or adequate information or a clear understanding about what was happening to its network. First, senior management did not know how many customers or actual people did not have power. Second, senior management did not know or ignored the extent of the damage that its efforts were causing to the secondary system. Third, senior management did not understand that the problems were focused in one part of the network, a point vital for good decision making. Finally, senior management did not grasp that much of the load reduction that it was seeing was not a sign that the Company's efforts to achieve voluntary customer reductions had been successful but rather was the result of power outages and low voltage conditions due to damage to its network.

According to the Staff Report, Con Edison waited until Thursday July 20, a full four days into the outages, before it "elevated" the crisis to a "full Company response" and opened its "Corporate Emergency Response Center." Staff Report at 1. This certainly suggests that senior management at a corporate-wide level was not involved during the first four days of the outage. If so, that is wholly unacceptable, especially as Con Edison was operating at a fifth contingency on Day 1 and the emergency had rapidly escalated on Day 2 and Day 3 to an unprecedented tenth contingency level on each day.

The conclusion can only be drawn that Con Edison did not look at the big picture of the events occurring in its network, but rather was narrowly focused on the effort to restore a continuing cascade of failing primary feeder cables. The Company ignored or did not seek vital information on the effect of these primary feeder cable failures on the secondary system or other

information that would have indicated the magnitude of the crisis.

A. Con Edison Did Not Have Any Idea How Many Customers Or People Were Out of Service or Experiencing Low Voltage.

The Staff Report demonstrates what has been apparent since the time of these outages: that while it was grappling with restoring feeder cables, Con Edison did not have a clue about how many people were being affected by the outages. In fact, the Company did not even try to find out how many were out until four days into the event, Thursday, July 20, “after extensive comment by the press and public officials.” Staff Report at 23. Con Edison did not revise its “official” estimate of 1800 customers out of service until Friday, July 21. Staff Report at 26. Con Edison ultimately upped its count to 25,000 customers, translating somehow into 100,000 people.¹⁰ Even so, the Staff Report indicates that the Company’s revised figure is far too low.

As noted earlier, the Brooklyn/Queens operating area had the least sophisticated customer outage count system. However, the Commission has estimated, based on its own survey, that some 174,000 persons were affected by the outages, including those experiencing low voltage. Staff Report at 2.

Con Edison relied on consumer calls to determine the extent of the outage, and generally relies on such calls as a first line of information. But people do not necessarily call to report an outage, unless they have reason to believe it is confined to their own home or business. People quite reasonably see an outage affecting a neighborhood, or a block, and assume that Con Edison knows about it. Moreover, people do not necessarily distinguish between a total power outage and low voltage problems, which can lead to some appliances or lights working and others not

¹⁰ This four-to-one ratio of customer accounts to actual people does not appear to have any great factual justification and it is unclear what it is based on.

working in a home or business.

The Staff Report finds that many Con Edison customers were receiving power at extremely low voltage during some parts of the outage.¹¹ Such voltage can provide minimal power, but not enough to use air conditioners or keep refrigerators running. Low voltage is a sign that the secondary system is being stressed and damaged and is unable to carry the load. Moreover, low voltage counts as an “outage” for purposes of customer reimbursement and for purposes of determining customer impact. Yet such customers were not counted for outage purposes and Con Edison did not factor low voltage into its decision making during the crisis.

The fact that Con Edison finally resorted to deploying personnel to go from street to street counting lighted windows to get a handle on the problem is astonishing in the 21st century in New York City. That Con Edison to this day has no accurate count of who was affected by the outages is equally unacceptable.

B. Con Edison’s Senior Management’s Failures To See The Whole Picture Led To The Destruction Of Major Portions Of Its LIC Network’s Secondary System.

Con Edison’s 57 networks are designed to operate when two primary feeder cables are down; however, during the LIC network event, Con Edison tried to keep the system running when as many as ten primary feeder cables out of a total of 22 were out. The Company let almost 50% of the primary feeder cables fail at the same time without taking steps to protect the secondary level of its distribution system. This caused enormous damage to the secondary system that brings power to individual homes and businesses. The outages were extensive and lengthy as a result. The Staff Report shows that the severe damage to the secondary system has

¹¹ This low voltage refers to voltage levels below intentional voltage reduction levels, such as the 8% reduction Con Edison instituted Day 1, and below Commission standards.

still not been rectified completely, nor is the extent entirely known.¹²

The LIC network was operating at or above a fifth contingency starting the first day of the outages, Monday, July 17, and was at a tenth contingency on Tuesday, July 18 and again on Wednesday, July 19. But Con Edison did not elevate the crisis to a Company level or open its “Corporate Emergency Response Center” until Thursday afternoon, July 20.

Moreover, the Staff Report notes that there were 141 manhole “events” (fire or smoke) during the outage, including 85 manhole events on the second and third days of the outage. Manhole events are mostly caused by secondary cable failures resulting in smoke, fire, or explosion. The Staff Report states that they are an indicator of “more widespread failures” in the secondary system. Con Edison stated that these manhole events were not severe, a conclusion that the Commission Staff finds “inexplicable.” Staff Report at 68.

Con Edison has said that it was constantly analyzing the situation and “deduced” that there was no need to shut down the network, but the Staff Report finds that “operators stated that the number of manhole events was cascading out of control and that . . . the managers did not have the fortitude to shut the network down.” Staff Report at 71. The Staff Report states that it was indeed managers, not the operators, who made the “decision” to keep going without a network shutdown, a decision made by the “seat of the pants,” not by “calculated and rational decision.” Staff Report at 75. But however graphic these words are, and even with the addition of details regarding titles of managers “present” or “involved” at points during the outages, the

¹² According to the Staff Report, Con Edison continues to make repairs “to this day” and “it is likely that some long term damage exists that will only be discovered over time.” Staff Report at 6. Con Edison had identified, as of the end of last year, 985 sections of secondary cable to be replaced or repaired, “well above the 775 originally estimated.” Staff Report at 127.

Staff Report is still vague in its narrative on management decision making. Moreover, it is still unclear whether Con Edison's senior management failed to comprehend the magnitude of the damage being caused to the secondary system by the primary system problems, whether it simply ignored it in an effort to avoid shutting down the network, or whether there is some other explanation for senior management's actions and inactions.¹³

The Commission should obtain much more information and detail on the question of who was in charge, so as to be able to apportion responsibility and to draw conclusions about what changes in structure and procedures need to be made at the Company to deal with emergency situations. The public has a right to this information.

C. Con Edison Failed To Recognize Or Ignored The Zonal Nature Of The Outages.

The Staff Report does not pay enough attention to a very important fact that senior management apparently failed to see: that the network was not equally affected by primary feeder failures. Rather, the primary feeder cables were failing in an area concentrated in the eastern side of the network. This concentration put inordinate stress on that part of the network, where most of the customer outages turned out to be.

Feeders in the LIC network are organized in pairs delivering power to specific subareas, or "zones." Losing both feeders in a zone, as occurred, is more significant than losing two feeders that serve widely separated zones. Feeder and manhole outages were concentrated in the eastern third of the LIC network. As the Staff Report notes, "the loss of primary feeders within the same contiguous area, also known as feeder bands or zones, means that secondary cables

¹³ In a nutshell, the Staff concludes: "the Company failed to understand or acknowledge the impact of the primary feeder problems on the secondary system and consumers and then failed to take appropriate actions to minimize such impacts." Staff Report at 22.

have to carry power further to meet continuing demand.” Staff Report at 69. These facts go a long way towards explaining why the emergency was concentrated in the secondary system and why most customer outages were in the eastern third of the LIC network.

However, Con Edison’s senior management apparently ignored or were unaware of the pattern of distribution of the feeder cable failures, manhole events, and customer outages and thus were not in a position to take this information into account in handling the emergency.

D. Con Edison Failed To Discern That Much Of The Demand Reduction It Observed Was Not Due To Voluntary Efforts But To Customers Losing Power.

Con Edison reported that appeals to customers to reduce demand and to use emergency generation led to 71 megawatts of load being removed from the network (over an unclear time period). Staff Report at 117. But Con Edison failed to see that in fact, as the Staff Report notes, “it is clear that a large component of the reduction was due to consumers losing service.” Staff Report at 118. Again, this management failure to get the right facts and draw the right conclusions contributed to the extent and length of the outages and the drastic damage to the secondary system.

III. Con Edison’s Load Reduction Program and Load Reduction Management Are Inadequate And Proved Inadequate During The LIC Outages.

During an emergency, stress on a power distribution system can be reduced by cutting back on nonessential use of electricity and by reducing the voltage on a distribution system. In addition to general appeals to the public to use less power, Con Edison has three system-wide programs that could make it possible for the Company to cut electricity use, *i.e.*, provide "load relief," where load relief would be most effective. Con Edison has neglected the two load relief programs that offer the best means of targeting load relief where it can do the most good.

During the LIC network outages, Con Edison did not make effective use of its load relief programs and could not identify where load relief was most needed. In addition, rather than being quickly implemented automatically, voltage reduction on the LIC network had to be implemented manually, which took almost an hour. This neglect and mismanagement threw away any opportunity to minimize damage to the network by optimizing load reduction.

The Con Edison load relief program that has the most potential for providing the Company with an effective tool for responding to distribution emergencies is the Distribution Load Relief Program for customers who use large amounts of power. Large use customers agree to reduce power usage when Con Edison asks them to do so.

The second Con Edison load relief program is the Direct Load Control program. Under Direct Load Control, customers who have central air conditioning systems using 100 kW or less of power install a thermostat that enables Con Edison to turn off the customer's air conditioning using controls at Con Edison.

Customers who sign up for either Distribution Load Relief or Direct Load Control receive financial consideration and Con Edison supplies the thermostats installed under the Direct Load Control program.

Despite their potential usefulness in a power emergency, Con Edison has sadly neglected both Distribution Load Relief and Direct Load Control. Con Edison began its Distribution Load Relief program in 2001 and Direct Load Control in 2002. Yet when the LIC network power emergency started, system-wide Con Edison had signed up only 20% of the Distribution Load

Relief potential and 7% of the Direct Load Control potential.¹⁴ Within the LIC network, Con Edison was even less prepared, with only 11% of the Distribution Load Relief potential and 4% of the Direct Load Control potential signed up as of July 1, 2006.¹⁵

Con Edison reported that it achieved only 1 megawatt of load reduction due to its Distribution Load Relief Program in the LIC network during the outages. Staff Report at 117. This is all that was achieved in a network with 400 megawatts of load, including 300 megawatts of commercial load, which is typically large-use customer load. Con Edison attributed only 0.6 megawatts of load reduction to its Distribution Load Relief program. Staff Report at 117. This is not acceptable.

The third Con Edison load control program is a direct appeal to identified large power customers to make voluntary reductions in power use. Con Edison indicates that it maintains this large customer list with appropriate contact information as the Emergency Operating System, for convenience usually referred to as "EMOPSYS." Customers who voluntarily reduce their power use receive no compensation.

Con Edison indicates that within an hour of the first primary feeder failure at 3:50 p.m. on July 17, 2006, it began calling large customers on the LIC network to ask for voluntary load reduction. The effectiveness of Con Edison's appeals to customers on the EMOPSYS list is entirely unclear.

On July 17, Con Edison also began instituting a network-wide voltage reduction, which is

¹⁴ Case No. 06-E-0894, Con Edison Responses to Attorney General's Information Requests Nos. 17 and 18.

¹⁵ *Ibid.*

a way of decreasing load. Due to the failure of the automatic voltage reduction equipment, Con Edison did not complete reducing voltage on the LIC network for almost an hour.

Con Edison did not invoke its Distribution Load Relief program until 8:00 a.m. on Tuesday, July 18 and did not invoke its Direct Load Control until an hour and a half later. However, these two programs controlled so little load (1.6 MW of a 400MW network) that it is unclear that invoking these programs earlier would have made a difference in the course of the LIC network emergency. In any event, Con Edison had no idea at that time how many customers had lost service or where the network was most stressed.

It is clear that on July 17, 2006, Con Edison was completely unprepared to make the best use of its various load control programs on July 17, 2006. Not only were the Company's own voltage reduction efforts delayed, but the Company had signed up only a small fraction of the load relief potentially available through Distribution Load Relief or Direct Load Control. The Company had also completely ignored the potential for load control from central air conditioning that uses more than 100kW and from other technologies such as industrial coolers.

It is also clear that Con Edison did not effectively use its EMOPSYS voluntary load reduction potential. There is no indication in Con Edison's chronology of its attempts to contact large customers on the network that the Company had any priority in the customers called, *e.g.*, call the customers with the largest potential to shed load first. Nor is it clear how quickly all the customers were called or even that the Company called every LIC network customer on EMOPSYS. This chronology also contains many entries along the lines of "called - no answer." Moreover, by the Company's own admission, Con Edison had no idea how much load the EMOPSYS customers it called actually shed.

Obviously Con Edison could make better use of its load relief programs. For starters, automatic voltage control should work when needed. More customers should be brought into the Distribution Load Relief and Direct Load Control programs. Con Edison should also develop priorities for determining which large customers to call for voluntary load relief and a means of determining how much load its customers have voluntarily shed.

But the greatest potential for using load relief to prevent power emergencies is to combine load relief with rapid and accurate identification of the extent and location of customer outages and other indications of network stress so that load relief can be best put to use.

The Staff Report does recommend that Con Edison increase participation in demand reduction and energy efficiency programs “available throughout its service territory.” Staff Report at 118. The Attorney General’s Office supports this recommendation. Moreover, Con Edison’s customers served through networks with high load or a history of service problems such as the LIC network would benefit in particular from targeted energy efficiency programs. Targeted efficiency programs would reduce the load, and therefore the stress, on such networks by assisting customers to switch to more energy efficient lighting, appliances and equipment, thus receiving the same level of services from less electricity.

Customers served through problematic networks would also benefit from a targeted Con Edison program to assist such customers to install clean distributed generation, such as photovoltaic cells, to produce some of the power they use.

A reduction through greater investment in energy efficiency and clean distributed generation in the amount of power that the LIC network had to move might or might not have prevented the emergency, but reducing the power demand would have made load relief and

voltage reduction more effective, and might have reduced the damage to secondary equipment after primary feeders failed. Less damage to the secondary system might have reduced the number of customers who lost service or were affected by extremely low voltage. Less damage to secondary equipment would also have reduced the time required to restore customers to adequate service.

For these reasons, the Commission should direct Con Edison to expand both its demand reduction and energy efficiency programs generally to help to avoid further power failures throughout its service territory, and to target such expanded programs at networks, such as the LIC network, with particularly high loads or a history of service problems.¹⁶

IV. Con Edison Failed To Communicate In An Accurate And Timely Way With Network Residents And Businesses.

The Office of the Attorney General's March 2000 Report on the Washington Heights blackout recommended that

Con Edison should improve its policies and procedures for alerting and informing its customers, government, institutions and the public during outages and when there is a serious risk of an outage.

Office of the Attorney General's Report at 73. But six years after that report, during the LIC network outages, Con Edison still did not have an effective means of communicating with its customers, government, institutions and the public during a serious risk of an outage.

Much of the breakdown in Con Edison's communication during the LIC network

¹⁶ Indeed, Con Edison's 2005 rate order directed the Company to establish a targeted program to use energy efficiency and distributed generation to reduce load on constrained networks. Case 04-E-0572 - 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, *Order Adopting Three-Year Rate Plan* (issued and effective March 24, 2005), p. 59.

emergency was based on the Company's gross misjudgement of the extent and nature of the damage to the network and the number of customers and individuals without service at a given time.

Individuals and customers reported difficulty getting through to Con Edison. Affected institutions and public officials complained of lack of response from the Company. Customers complained that they were not given information about the extent or duration of the outage. They were literally and figuratively left in the dark. Individuals who called and got through complained of getting lost in Con Edison's voice mail, a problem that the Company did not fix until a week into the emergency. Individuals and officials complained that the information they did get from Con Edison was inaccurate.

The Staff Report indicates that instead of reliable information, Con Edison representatives told individuals that their power would be back "soon" or even that the outage was the customer's responsibility and the customer should hire an electrician. Staff Report at 37. A public official related being told by Con Edison that the power was on at a senior center when the only thing working was a single lightbulb. Staff Report at 38.

These failures to communicate must not continue. Con Ed needs to develop better protocols for reaching out to customers, both residential and business, to community leaders and elected officials, and to find other ways to ensure it is getting good information and providing good information. It owes the community no less.

Additionally, Con Edison needs to develop a better means of identifying individuals who use electrically-powered life support equipment. Commission regulations require electric utilities to contact such individuals during electrical emergencies and respond to their needs, such

as by contacting medical assistance or seeking priority repairs. Con Edison states that at the time of the LIC network emergency it had identified 58 individuals using electrically-powered life support equipment dependent on the network. The Staff survey of LIC network residents after the emergency indicates that Con Edison's failed to identify many more such individuals.

Con Edison also does not effectively use its website to communicate with the public or individuals vulnerable to power outages. The Company's website does contain some information about life support equipment and medical emergencies but this information is buried several layers below the Company's home page and the links that would take an interested individual to this information are not obvious. As to complaints or reports of service problems, Con Edison's website contains no provision for informing the Company, much less a means of providing the public or individuals information beyond press releases.

The Company must also be able to contact individuals served through a meter in another name, not only those with life support equipment, but also the large number of people who live in apartments and pay for electricity in their rent or through a master meter. Con Edison should identify vulnerable individuals regardless of whether the individual or someone in the same household has a Con Edison account.

Further, the mobility impaired and the blind who live in buildings with elevators depend on those elevators for access, not just to be able to leave the building for medical care and other purposes but to get back to their apartments if a power loss happens while they are not home. Yet Con Edison indicates that the Company did not begin addressing the effect of the Long Island City emergency on buildings with elevators until July 22, five days after the emergency began. This is not acceptable in New York City.

The LIC network outages underscore deficiencies in Con Edison’s emergency plan. The relevant state regulations, 16 NYCRR Part 105 - Electric Utility Emergency Plans, require that electric utility emergency plans include the means to “survey damage and implement measures to ensure timely, efficient and safe restoration for service.” 16 NYCRR §105.4(b)(7). The regulations also require electric utilities to have “procedures and facilities for establishing and maintaining external communications exchanges regarding damages and restoration progress with customers in general” as well as other parties such as government and the media. 16 NYCRR §105.4(b)(10). A utility must also have a list of “all life support and other special needs customers.” 16 NYCRR §§105.4 (b)(5)(iii). “Special needs customers” include “the elderly, the vision-impaired, the hearing and speech-impaired, [and] the mobility-impaired.” 16 NYCRR §105.4(b)(9). A utility must make such contact within 24 hours of the beginning of an emergency and must have policies to respond to the needs of such customers. Con Edison had no list of “all life support and other special needs customers” at the beginning or at any time during the LIC emergency and does not have one now.

Part 105 is itself deficient in that it is designed to address outages caused by storms in areas with few elevator buildings and in which most of the distribution system is above ground. The regulation is not focused on the situation in New York City, where most of Con Edison’s service territory exists, and does not require that emergency plans address elevator buildings. Emergency plan regulations must be devised to be responsive to the widespread existence of big apartment buildings in New York City, and to Con Edison’s underground networked system, which is subject to stressors different from and in addition to storms.

V. The Size Of The LIC Network And Its Previous Record Of Problems Should Have Alerted Con Edison And The Commission To Needed Changes.

The LIC network has qualities compared to other networks in Con Edison's system that should have merited particular attention by the Company. With a peak load of 395 MW, it has the "highest capacity and demand of any Con Edison network," the third highest number of metered customers and the third highest number of primary feeder cable miles in Con Edison territory. Staff Report at 16.

The Staff Report notes that the performance of LIC network equipment and primary feeders has been among the 10 worst in the system for last five years. Staff Report at 18.

The LIC network's load is divided between around 300 megawatts of commercial demand and 100 megawatts of residential load. This commercial demand includes critical infrastructure and major facilities such as LaGuardia airport, the Long Island Railroad, major subway lines, Rikers Island, and city wastewater treatment plants.

As a result of the LIC network outages, Con Edison is planning to add two more feeder cables by Summer 2007 and ultimately to break the network in two by adding a new substation. The Staff Report indicates that Con Edison has a target date of 2013 for completion of such a substation. Staff Report at 109. Adding two more feeder cables is simply a "short-term fix" that will not reduce the length of the existing feeder cables, which contributes to stress on each cable. The work on the substation should be moved up from its projected completion date of 2013, as this office recommended in our comments on the draft. The Staff Report does recommend that Con Edison provide within 90 days an analysis of the feasibility and incremental costs of accelerating the completion date. Staff Report at 110. The Commission must continue to press

on this vital matter.

The Office of the Attorney General took note in its report on the Washington Heights blackout that the LIC network had experienced serious feeder cable failures during the same time period, without leading to a blackout. That was in 1999. Con Edison needs to do much more to attack the reliability issues in this network. Likewise, it needs to take a look at other networks of a large size or poor performance record to ensure that burgeoning problems do not lead to catastrophic failures in future. For example, the Staff Report notes that only the Jamaica and Flushing networks have more customers and miles of primary feeder cable than the LIC network. Staff Report at 16. Other networks may have experienced feeder cable failures that did not lead to outages during the time frame of the LIC network. All those networks should be examined to determine whether to reduce the size, to add reinforcements, or otherwise address any incipient problems.

VI. Con Edison Has Downplayed Its Failures With Respect To The LIC Network.

In its report on the event, Con Edison seeks to blame a random set of coincidental events, and downplays the seriousness of the problems leading up to and exposed by the outage. The Staff Report successfully challenges this interpretation and demonstrates that it was the Company's systemic and operational failures that produced a catastrophic result.

One subject area stands out in the Company's efforts to divert attention. It seeks to blame a phenomenon of electrical systems called "inrush" for its inability to restore the primary cables more quickly.¹⁷ But in fact, the Staff Report, and Con Edison's own report, identifies inrush as

¹⁷ Inrush refers to a surge of current many times a primary feeder's normal maximum load and can occur at the instant when a de-energized feeder (*e.g.*, a feeder that has failed) is first reconnected to power. The current surge is drawn by the transformers connected to the feeder.

responsible for problems restoring only four cables out of 54 failures, only three of which occurred during a significant time period. The Staff Report characterizes some of the Company's statements on inrush as "misleading" and concludes that inrush was not a major factor in the LIC outages. Staff Report at 105.

The Staff Report notes that inrush is a well known issue in electrical engineering and utility system operations, not a new phenomenon. In fact, Con Edison experienced 73 "cut in open autos"¹⁸ (which implicate inrush) in the LIC network from January 1, 2003 to August 1, 2006. By comparison, the next largest network experienced 26 such cut in open auto events over the same time period. Staff Report at 105. Inrush can be related to the geographic size of a network, along with high load, high number of feeders and high demand per feeder.

The Staff Report's conclusion that Con Edison does not understand the causes and effects of inrush on its networked system and that the Company has not offered much analysis of the issue demonstrates yet another way in which the Company has fallen down on the job.

VII. Residents And Businesses Should Receive Full Restitution For Economic Losses Suffered As a Result Of The LIC Outages.

Con Edison has reimbursed affected LIC network residents up to \$350 for spoiled food and medicine and businesses up to \$7000. However, Con Edison is not planning to reimburse residents for more than that amount, or for other economic losses, such as damage caused to electronic equipment by low voltage or a power failure. This is not acceptable. Especially as the Company was grossly negligent here, Con Edison should provide full restitution, including

Staff Report at 103-108.

¹⁸ "Cut in open autos" refers to the automatic disconnection of a de-energized feeder virtually instantaneously after it is reconnected to power.

for consequential damages.

The Staff's draft report suggested waiting until the next Con Edison rate case to address some of these issues. The Office of the Attorney General's comments on the Staff's draft report argued that such an approach demonstrated a lack of urgency. The final Staff Report now urges that the Commission examine the issue with a goal of having Con Edison modify its tariff by Summer 2007. Staff Report at 60-61. While an improvement over the draft report, the language is still not clear enough. Instead, as the Office of the Attorney General urged in its comments on the draft report, the Commission should institute a proceeding immediately to make a finding of gross negligence, to examine the types of individual damages suffered by residents and businesses, to take testimony, and to achieve a result whereby Con Edison pays appropriate damages for economic losses suffered in excess of the amounts and types of recovery in Con Edison's existing tariffs. These amounts should be provided retroactively, to cover the losses suffered as a result of the LIC outages. Residents and businesses should not suffer economic losses while the Company which caused them and its shareholders reap large earnings.¹⁹

VIII. Ratepayers Should Not Foot The Bill For Any Expenses Incurred, Capital Or Otherwise, To Address The Damage Caused To The LIC Network.

Because of Con Edison's scandalously deficient performance, the ratepayers should not bear any of the cost Con Edison that has incurred and is continuing to incur to repair the damage it caused to its network, nor should the ratepayers bear the capital cost of upgrades to replace damaged equipment. The Commission should begin a prudence proceeding immediately to

¹⁹ See footnote 5.

ensure this result.²⁰ Pending the outcome of a prudence proceeding, the Commission should ensure that Con Edison does not receive rate increases in its next rate case.

The Staff Report estimates that recovery costs, to repair and replace damaged equipment and so forth in the LIC network, will likely exceed \$100 million. Staff Report at 69. It is also likely that further damage will be discovered over time, as Con Edison inspects more and more of the network. In many instances, Con Edison made temporary repairs. And, as the Staff Report notes, secondary system damage, weakening the affected parts, can remain undetected underground. Staff Report at 126. Con Edison's actions, in operating equipment over emergency ratings, could decrease the remaining life of the equipment, even if it has not been destroyed. The cost of replacing and repairing the network could grow greater in the months and years to come, due to this insidious effect. None of this cost should be borne by the ratepayers.

IX. Con Edison Has Failed To Carry Out Many Of The Recommendations Made in The Attorney General's Washington Heights Blackout Report.

The Office of the Attorney General's Washington Heights blackout report made a number of recommendations for action by Con Edison or the Commission. While some of those recommendations have been responded to, others having bearing on the LIC network outages have not:

- The Office of the Attorney General urged that Con Edison change its accounting and reporting systems so that all expenses for capital investment, operation and maintenance are disaggregated by network. The Company keeps such records borough by borough, which

²⁰ In this regard, as noted in footnote 5, it should be stressed that Con Edison is receiving returns "well in excess of the level envisioned by the Commission in establishing the Company's rates." Staff Report at 135.

provides insufficient granularity. The Attorney General also urged that all data regarding dispatch of work crews be similarly separated out by network. Only in this way is it possible to determine with specificity where and how the Company is spending its resources among its 57 networks. Nonetheless, Con Edison has never made this change and as a result, it is still not possible to tell how much attention the Company was paying to the LIC network prior to the outage compared to other networks.

- The Office of the Attorney General urged that Con Edison develop a test to identify equipment in its underground systems with impaired ability to resist heat. This would enable the Company to identify, during normal temperatures, the weak links in its system. For example, feeder cable joints that are hotter than the surrounding area indicate stress and possible greater likelihood of failure under high load conditions. Con Edison has yet to develop such a test.

- The Office of the Attorney General urged that Con Edison ensure that repairs to underground systems can be carried out quickly to avoid outages as much as possible. This involves developing technology so that the Company can sense cable failures without having to go physically manhole to manhole to try to determine where along the line the fault has occurred. Con Edison has not developed such a technology, and so went manhole to manhole during the LIC network outages. Such an approach lengthens the time a fault endures and can lead to other outages the longer the fault goes undiscovered and unrepaired.

- The Office of the Attorney General urged that Con Edison improve its policies and procedures for communicating with customers, government, the public and institutions during an outage and when an outage is threatened. Con Edison did not do so and the result was the disastrous lack of communication during the lengthy LIC outages.

- The Office of the Attorney General urged that Con Edison expand its reimbursement tariff to increase the amount of compensation for any outage and to expand the definition of “losses” to include damage to customers’ electrical equipment and other property damages.

While Con Edison did increase the monetary amount of reimbursement, it did not expand the tariff to cover losses other than foodstuffs and medicine.

- The Office of the Attorney General urged that the Commission review its service quality standards for Con Edison and to consider amending them. While the Commission did a cursory review and made some tweaks, the resulting standards have not improved the reliability of the system.

Con Edison and the Commission must move immediately to take on and complete these recommendations made seven years ago before yet more crippling power failures affect New York City.

X. The LIC Network Outages Demonstrate That The Commission Has Failed In Its Obligation To Oversee Con Edison And Ensure The Safety And Reliability Of Electric Service.

The Staff Report demonstrates that the Commission has failed to monitor adequately Con Edison’s progress after the Washington Heights outage and has failed in the numerous ways described in these comments to ensure that the Company’s systems are reliable and up-to-date in every respect. The Commission needs to take seriously its duty to oversee this Company.

In addition to immediately ramping up its monitoring efforts, including setting clear deadlines for performance, the Commission should carefully scrutinize the independent audit anticipated to be undertaken and draw from it necessary lessons about future oversight of the Company. The Commission should immediately revisit its performance quality standards for the

Company to determine whether they are providing any meaningful incentive or penalty and whether they are even providing meaningful data. The Commission should consider revising and strengthening these standards so that they have teeth.

We cannot forget that, even in the age of electric power restructuring, Con Edison and the state's other utilities remain regulated distribution monopolies. They cannot reap the benefits of that status while at the same time shortchanging customers and jeopardizing their health and well being when the temperatures rise, as they do every summer. It is up to the regulators to ensure that Con Edison and the state's other electric utilities provide safe and reliable service, not blackouts.

XI. The Staff Report Should Have Provided More Detail On Critical Matters.

As noted earlier, the Staff Report still inadequately conveys the details of senior management decision making. The Staff Report indicates in several places that senior management failed or refused to comprehend or ignored the magnitude of the damage on the secondary system, but is still rather vague on the details.

As urged in the Office of the Attorney General's comments on the draft report, as part of a fuller exploration of the role of senior management, a description should have been provided of Con Edison's emergency response organization by title and role, function and authority, in the nature of an organization chart or other easy-to-grasp graphic representation.

Again as urged in the Office of the Attorney General's comments on the draft report, the final report should also have included a time line to make it easier to follow the numerous events that were occurring at the same time. This could have consisted of a chronology of each primary feeder failure and return-to-service event history, showing in parallel by time interval or

significance: (1) status of the secondary distribution system, (2) information available to Con Edison management, (3) questions Con Edison was considering and decisions the Company made, (4) what Con Edison was telling customers, the public and public officials, and (5) number and locations of customer outages.

As also urged in the Office of the Attorney General's comments on the draft report, the final report should have more clearly identified and discussed Staff's analysis as to when the secondary system started to become affected by the primary feeder failures, how the damage unfolded, and what the nature and extent of the ultimate total damage is (recognizing Staff's point that the damage is not entirely known even now).

ATTORNEY GENERAL'S RECOMMENDATIONS

In summary, the Office of the Attorney General makes the following recommendations to the Public Service Commission:

- The Commission should institute a prudence proceeding immediately to determine the full extent of Con Edison's mismanagement and the remedies needed to prevent another network power emergency. Ratepayers should not bear the burden of Con Edison's failures.
- The Commission should move quickly to open a proceeding to provide increased compensation for losses caused by the LIC network outages, including retroactive reimbursement and reimbursement for damaged electrical equipment. Such restitution should be provided even if the individual who suffered the loss was not a direct Con Edison customer but was an affected resident or business within the LIC network.
- The Commission should require Con Edison to amend its reimbursement tariff to provide enhanced reimbursement to reflect the duration of a particular outage.
- The Commission should change Con Edison's performance standard measurements to count each household that loses service, not just each "customer," to address the issue of single-metered multiple dwellings.

- The Commission should revise its regulations for electric utility emergency plans, 16 NYCRR Part 105, to incorporate provisions that specifically address emergencies not caused by storms. In particular, the regulations should address power emergencies affecting urban areas with concentrations of buildings with elevators and should provide for active and ongoing Commission participation in evaluating specific utility emergency plans and followup to problems identified during exercises and actual power emergencies.
- The Commission must take up its statutory role as Con Edison's regulator and must hold Con Edison to each of the recommendations made in its Staff Report and to the recommendations made here. The Commission should impose deadlines for compliance, as well as for progress reports, and should be looking over Con Edison's shoulder every step of the way. The people of the State of New York deserve no less.
- The Commission should ensure that Con Edison moves quickly and vigorously to implement and expand as necessary a targeted program to use the full potential for energy efficiency and clean distributed generation to relieve the load on constrained networks, including the LIC network.
- Con Edison must comply on a system-wide basis with the remaining recommendations made by the Commission in its report on the Washington Heights outage in an expedited fashion and the Commission must ensure timely and diligent compliance. These recommendations include: developing and implementing the most technologically up-to-date, accurate, and reliable network monitoring and modeling in realtime; replacement of paper-insulated lead-covered cables and joints; replacement of hi-pot testing with more advanced means of testing feeder cables; and developing and implementing modern secondary system monitoring and modeling capability.
- Con Edison must comply with the recommendations set forth in the Office of the Attorney General's Washington Heights report, as detailed in Section IX above and the Commission must ensure timely and diligent compliance.
- Con Edison must revise its voluntary load reduction procedure so that the Company can effectively communicate with the large customers that can provide the most significant load relief during a power emergency.
- Con Edison must vigorously promote participation in its demand reduction programs in all parts of the Company's distribution network.
- Con Edison must look behind the "customer" to the number of individuals affected by any power emergency and develop emergency responses that take into

consideration the fact that losing power at a 100-unit apartment building served through a single meter affects more than a single household.

- Con Edison must do a better job of identifying vulnerable individuals that specific power outages would affect. In particular, the Company must do a better job of identifying individuals who depend on electrically-operated life support equipment such as breathing apparatus, the elderly and other mobility impaired who depend on elevators, and those vulnerable to overheating.
- Con Edison should as quickly as possible examine all its transformers system-wide for evidence of corrosion and other defects.
- Con Edison should give priority to examining its substations system-wide for as yet unidentified vulnerabilities that could knock out several primary feeders or even an entire substation at the same time.
- Con Edison should pay more attention to demand increases within specific networks and other factors indicating that a network is particularly vulnerable to a power emergency and should take steps to upgrade reliability in such networks.
- Con Edison should identify other networks with characteristics similar to the LIC network, such as those with long primary cables, large geographical size, large or increasing demand, and a comparatively large number of primary feeder contingencies in the period from 1999-2006, and should develop programs to analyze any deficiencies or potential for overload and action plans to correct such problems.
- Con Edison should develop and apply programs and technologies to increase its monitoring and communications capability with respects to all aspects of its system.
- Con Edison must quickly implement solutions to deficiencies identified during Company emergency drills.
- Con Edison should undertake a program to educate customers about what they can do to protect their equipment from damage during power emergencies and offer interest-free loans to customers unable to install such protection.
- Con Edison should consider compartmentalizing its networks so that faults in one portion of a network can be isolated and prevented from harming the remainder of a network.
- Con Edison should consider separating primary feeder cables to reduce the

likelihood that a single malfunction, such as the secondary system fire that initiated the LIC network emergency, would knock out both feeders serving a particular part of a network.

CONCLUSION

The Commission should adopt the Staff Report, as modified and expanded by the Office of the Attorney General's comments and recommendations urged herein, and should move quickly to ensure that the recommendations are implemented by the Commission and by Con Edison in a thorough, vigorous, timely and efficient fashion.

Dated: March 2, 2007
New York, New York

Respectfully submitted,

ANDREW M. CUOMO
Attorney General of the State of New York

By:

Mary Ellen Burns
Special Counsel

New York Attorney General's Office
120 Broadway
New York, NY 10271

Mary Ellen Burns
Special Counsel
212.416.8333
maryellen.burns@oag.state.ny.us

Charlie Donaldson
Assistant Attorney General
Environmental Protection Bureau
212.416.8334
charlie.donaldson@oag.state.ny.us

Of Counsel