

BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of
Consolidated Edison Company of New York, Inc.

Case 07-E-0523

September 2007

Prepared Testimony of:

Staff Infrastructure Panel

Kin Eng
Utility Analyst 3
Office of Electric, Gas, and Water

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New York State
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Jason Pause
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New York State
Department of Public Service
Three Empire State Plaza
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1 Q. Please state your names, employer, and business
2 address.

3 A. Kin Eng, Nicola Jones, Jason Pause, and Leka P.
4 Gjonaj. We are all employed by the New York
5 State Department of Public Service (Department).
6 Mr. Eng and Ms. Jones are both located at 90
7 Church St., New York, New York 10007. Mr. Pause
8 and Mr. Gjonaj are located at Three Empire State
9 Plaza, Albany, New York 12223.

10 Q Mr. Eng, what is your position at the
11 Department?

12 A. I am a Utility Analyst 3 assigned to the
13 Distribution Systems and Generation Section in
14 the Office of Electric, Gas, and Water.

15 Q. Please describe your educational background.

16 A. I graduated from New York Tech with an Associate
17 in Applied Science Degree in Electrical
18 Technology in 1986.

19 Q. Please describe your responsibilities with the
20 Department and professional experience.

21 A. I joined the Department in 1981. My
22 responsibilities include: monitoring utility
23 operations to determine if facilities are

1 operated and maintained in accordance with
2 appropriate codes and safe operating practices;
3 ensuring that utilities are adequately prepared
4 to respond to emergencies by reviewing
5 utilities' electric emergency plans and
6 attending annual emergency drills; and
7 monitoring utility operation and maintenance
8 activities to ensure acceptable electric service
9 reliability. I have also been involved in many
10 investigations of electric utility service
11 disruptions, including the Westchester Outages
12 in January 2006, the Long Island City Network
13 outages in 2006, the Jodie Lane fatality, the
14 August 2003 Blackout, the September 11th
15 terrorist attack in 2001, and the Washington
16 Heights outages in 1999.

17 Q. Have you previously testified before the
18 Commission?

19 A. Yes. I testified in Case 04-E-0572 regarding
20 Con Edison's infrastructure investment.

21 Q. Ms. Jones, what is your position at the
22 Department.

23 A. I am a Utility Engineer 1 assigned to the

1 Distribution Systems and Generation Section in
2 the Office of Electric, Gas, and Water.

3 Q. Please describe your educational background.

4 A. I graduated from Rensselaer Polytechnic
5 Institute with a Bachelor of Science Degree in
6 Civil Engineering and a Bachelor of Science
7 Degree in Management in 2003.

8 Q. Please describe your responsibilities and
9 professional experience with the Department.

10 A. I joined the Department in 2005. My
11 responsibilities include: monitoring electric
12 utility safety and reliability cases;
13 investigating the cause and response level of
14 the utilities after emergency events; monitoring
15 electric distribution projects; and monitoring
16 utility compliance with electrical codes and
17 with electric service and safety standards.

18 Q. Have you previously testified before the
19 Commission?

20 A. No.

21 Q. Mr. Pause, what is your position at the
22 Department.

23 A. I am a Power System Operations Specialist 4

1 assigned to the Distribution Systems &
2 Generation in the Office of Electric, Gas, and
3 Water.

4 Q. Please describe your educational background. I
5 received a Bachelor of Science degree in
6 Electrical Engineering from Merrimack College in
7 1998.

8 Q. Please describe your professional experience and
9 responsibilities with the Department.

10 A. I have been employed by the Department since
11 November of 2004. My responsibilities include:
12 monitoring utility operations to determine if
13 facilities are operated and maintained in
14 accordance with appropriate codes and safe
15 operating practices; ensuring that utilities are
16 adequately prepared to respond to emergencies by
17 reviewing utilities' electric emergency plans
18 and attending annual emergency drills; and
19 monitoring utility operation and maintenance
20 activities to ensure acceptable electric service
21 reliability. For the past year I have been
22 involved in and responsible for the Long Island
23 City Network outages investigation and

1 monitoring efforts. Prior to joining the
2 Department I worked in the consulting
3 engineering field on both commercial and
4 industrial projects. This included building
5 power, lighting, and systems design, along with
6 mission critical facilities design.
7 Additionally I was involved in both overhead and
8 underground medium voltage systems design work
9 before joining the Department.

10 Q. Have you previously testified before the
11 Commission?

12 A. Yes, I testified in Case 06-E-1433, Orange and
13 Rockland Utilities - Electric Rates.

14 Q. Mr. Gjonaj, what is your position in the
15 Department?

16 A. I am employed as a Power Transmission Planner 4
17 in the Bulk Transmission Section of the Office
18 of Electric, Gas, and Water.

19 Q. Please state your educational background and
20 professional experience.

21 A. I hold a Bachelor of Science degree in
22 Mechanical Engineering from Clarkson University
23 and a Master of Science in Mechanical

1 Engineering degree from Rensselaer Polytechnic
2 Institute. I am also a licensed Professional
3 Engineer in New York State. Before joining the
4 Department in November 1990, I was employed by
5 General Electric as a Manufacturing Engineer in
6 its Defense Systems Division. I was responsible
7 for designing, implementing, and recommending
8 manufacturing and quality control equipment
9 needed for the production of highly specialized
10 United States Naval components and systems.

11 Q. Please describe your duties with the Department
12 of Public Service.

13 A. My areas of responsibility include and have
14 included electric system computer simulations,
15 review of power plant siting (Article X),
16 wholesale market matters, cyber security,
17 review and analyses of utility fuel budgets,
18 purchased power contracts, depreciation and rate
19 base, operating and maintenance expenses, and
20 cost of service determination.

21 Q. Have you previously testified before the
22 Commission?

23 A. Yes. I have testified in Commission proceedings

1 on seven occasions, covering a broad range of
2 topics including: review of construction
3 budgets; depreciation and rate base; rate design
4 matters; purchased power and utility fuel
5 budgets/targets; independent power producer
6 contracts; and electric production computer
7 simulations.

8 Overview

9 Q. What is the purpose of the Panel's testimony?

10 A. The purpose of this testimony is to address the
11 capital budget and Operations and Maintenance
12 (O&M) expenses proposed by Consolidated Edison
13 Company of New York, Inc. (Con Edison or the
14 Company) for the areas of electric transmission,
15 substation, and distribution.

16 Q. In this testimony, will the Panel refer to, or
17 otherwise rely upon, any information produced
18 during the discovery phase of this proceeding?

19 A. Yes. We have relied upon numerous responses to
20 Staff Information Requests, some of which we
21 will reference in our testimony. They are
22 attached as Exhibit__(SIP-1).

23 Q. Please briefly describe what Con Edison has

1 identified for the electric infrastructure
2 investment it proposes to undertake during the
3 rate year.

4 A. Con Edison has identified numerous projects to
5 increase electric Transmission and Distribution
6 (T&D) capacity to address the economic growth in
7 its service territory, reinforce its
8 transmission and distribution system, and
9 enhance public safety related to the Company's
10 electric facilities.

11 Q. What other projects has the Company proposed to
12 improve its electric infrastructure?

13 A. The Company has also proposed projects to
14 mitigate the effects of storm and heat related
15 events, enhance its computer technology programs
16 to assist in operations and engineering
17 decisions, and improve operating efficiencies by
18 streamlining its processes.

19 Q. Please continue.

20 A. A major undertaking proposed in this proceeding
21 is the Company's construction and upgrade of
22 several substations throughout its service
23 territory. This includes the establishment of

1 138/13-27 kV area substations, installation of
2 additional transformer banks, and new primary
3 feeder positions. Three major substation
4 projects, Parkview, Astor, and Rockview, are
5 scheduled to go into service during the rate
6 year. Our analysis of these projects focused on
7 capital expenditures projected for the rate
8 year, but we also examined the appropriateness
9 of in-service dates for infrastructure projects
10 beyond the rate year. Additionally, in response
11 to an increasing number of public safety issues
12 and poor response to customer outages, Con
13 Edison has proposed new projects including the
14 replacement of distribution equipment, an
15 increased mitigation of hazardous facilities to
16 address public safety, and the implementation of
17 new processes and procedures to improve its
18 emergency responses.

19 Q. Have you prepared a summary of the Company's
20 overall budget sheet and historical spending?

21 A. Yes. The Overall Budget Summary sheet in
22 Exhibit__(SIP-2), Page 1 of 6, shows the
23 Company's budgeted and actual amounts spent for

1 Transmission, Substations, and Distribution
2 capital expenditures between 2004 and 2007, with
3 the 2007 actual amount updated as of July 2007.
4 In addition, the exhibit shows the Company's
5 expected spending for the rate year compared
6 with Staff's proposed rate year allowance. This
7 Panel's total transmission, substation, and
8 distribution capital adjustment reduces Con
9 Edison's capital budget by approximately \$218
10 million, from \$1.795 billion to \$1.576 billion.
11 Specific details of these adjustments are
12 included in Exhibit____(SIP-2).

13 Q. Have you reviewed the Company's Operations and
14 Maintenance (O&M) expenses for Electric
15 Operations?

16 A. Yes, we have reviewed the Company's Operations
17 and Maintenance (O&M) expenses for Electric
18 Operations, and based on that review propose no
19 adjustments in this area. However, we have
20 concerns with the programmatic structure of some
21 of these O&M programs, which will be discussed
22 later in our testimony.

23 Q. How do you propose variations between rate year

1 allowances approved in this proceeding and
2 actual T&D expenditures be addressed?

3 A. The impact of the Company's proposed T&D budget
4 on rates demonstrates the need to ensure that
5 the Company is held accountable for its rate
6 allowance for electric infrastructure
7 improvements. Con Edison should be required to
8 file with Staff a quarterly report providing
9 detailed information comparing, by project,
10 actual construction progress to Con Edison's
11 projected schedules and actual expenditures with
12 rate year allowances. Justification should be
13 provided for any discrepancies on a project by
14 project basis, as well as an aggregate for all
15 projects. If the year-end review of these
16 expenditures reveals that the Company has spent
17 less than what was allowed in its rates, we
18 propose that the Company be required to defer
19 such variations between rate allowance and
20 actual expenditures as a ratepayer credit, with
21 interest accruing at an appropriate rate.

22 Infrastructure Investment

23 Q. What is your overall assessment of Con Edison's

1 electric infrastructure investment proposal?

2 A. Overall, the electric infrastructure
3 improvements are necessary to maintain a safe
4 and reliable system. Economic growth has been
5 gradually increasing, and the Company's aging
6 transmission and distribution system justifies
7 the need for significant targeted capital
8 investment. Without such investment, there is a
9 reasonable expectation that system performance
10 will further deteriorate and the risk to public
11 safety will increase.

12 Q. How does economic growth in Con Edison's Service
13 Territory affect its infrastructure?

14 A. During the past three years, the electric demand
15 on the Company's system has steadily increased.
16 This is due to new business growth, the
17 increased use and installation of technology
18 equipment, as well as air conditioning ownership
19 and usage. We examined the Company's peak
20 electric load between 2004 and 2006. During
21 this period, the actual load increased for both
22 the network and area substation levels. We also
23 compared the Company's 2002 forecasted peak

1 loads with the actual peak loads experienced
2 from 2004 to 2006 for each of the area
3 substations. This data shows that the actual
4 peak loads either reached or exceeded the
5 Company's 2002 projections at both the
6 substation and network levels. This is
7 important because substations need to maintain a
8 level of electric capability in order to meet
9 the demand of customer load. To achieve such
10 capability, the Company needs to provide
11 sufficient capacity at the substation level.
12 Once demand tied to a particular substation
13 exceeds its capacity, the system cannot supply
14 adequate electricity to its customers. There
15 are several ways the Company can address this
16 issue. Through energy efficiency or demand
17 response efforts, overall load demand can be
18 reduced and the need for additional equipment
19 and capacity deferred for some time.
20 Additionally, it can install additional
21 equipment to supplement the substation's maximum
22 design capacity, or it can reduce the size of a
23 network, or it can, build new substations to

1 meet the demand.

2 Q. Why is it imperative that Con Edison invest in
3 the transmission and distribution
4 infrastructure?

5 A. The Company's transmission lines average
6 approximately 40 years in age. Con Edison's
7 aging transmission and distribution equipment
8 needs to be reinforced and upgraded to meet both
9 its Public Service Law requirements and its
10 customers' expectations for a safe and reliable
11 system. The Company proposes to address this
12 situation through the projects proposed in its
13 filing. For example, Con Edison has proposed
14 replacing feeders 69M43/44. These specific
15 feeders have been in-service for approximately
16 55 years and are some of Con Edison's oldest
17 transmission feeders. Such advanced age, when
18 coupled with the numerous dielectric fluid leaks
19 that have occurred, necessitate the replacement
20 of those particular feeders. The Company
21 proposes replacing those feeders with solid
22 dielectric cable (i.e., no fluid) operating at
23 138kV to permit increased transfer capability.

1 Additionally, much of Con Edison's underground
2 and overhead distribution equipment, such as its
3 transformers, secondary mains, and service
4 cables, has also degraded, with some equipment
5 still in-service having reached its life
6 expectancy. This is a problem because normal
7 equipment degradation over time can result in
8 equipment failures and customer outages.

9 Q. How does such degradation result in equipment
10 failures and customer outages?

11 A. An example of degradation would be cable
12 insulation breakdown. Insulation breakdown can
13 occur when a cable is constantly subjected to
14 heat (loads) over a period of time. Eventually,
15 the conductor becomes exposed due to melting of
16 the insulation. This exposure can cause a fault
17 on the cable which, in turn, could lead to the
18 interruption of electric service. Specifically,
19 Staff has been tracking the causes of Con Edison
20 manhole incidents for the past 5 years and found
21 an alarming rate of secondary burnouts
22 associated with cable failures like those
23 described above. Another way insulation breaks

1 down is through exposure to a harsh environment.
2 Such exposure occurs from the cable shifting
3 underground due to vibration, contractor
4 digging, or even winter salt accumulation. The
5 Company's equipment has an age limitation. Wear
6 and tear, as well as abuse while in-service,
7 will shorten the equipment's useful life.

8 Q. Please discuss the specific areas of your
9 analysis and review.

10 A. The Company presented its proposed capital
11 expenditures under the following categories: 1)
12 Support Economic Growth - Capital; Substations,
13 Transmission and Switching Stations,
14 Distribution, 2) Improve System Reliability
15 Capital; Substations,
16 We will provide our analysis following the same
17 basic categories.

18 **Support Economic Growth - Capital**

19 **Substations**

20 Q. Where there any proposed expenditure changes to
21 the Company's original electric rate case filing
22 of May 4, 2007?

23 A. Yes, On August 8, 2007 the Company provided

1 Staff an addendum to the original electric
2 filing. Within this addendum, the Company
3 identified several proposed expenditure changes
4 for the rate year on the following projects
5 listed under Support Economic Growth -
6 Substations - Capital: Parkview, York, Elmsford,
7 Newtown, Woodrow, and the West 49th Street
8 Generator Interconnection projects. However,
9 the Company did not provide any work papers,
10 detailed cost breakdown, or justification for
11 the proposed expenditure changes within this
12 addendum for the projects listed above. In
13 order to fully understand these proposed
14 changes, we sent out an information request
15 (DPS-498) to obtain this additional information.
16 On August 30, 2007 the Company responded to DPS-
17 498 with some additional work papers, but the
18 information provided was limited and lacked the
19 detailed justification and cost breakdowns we
20 had requested. Given the timeframe in which we
21 received this information and the lack of
22 information provided, we proceeded with our
23 testimony, not taking into account the proposed

1 expenditure changes submitted in August, but
2 instead relying on the proposed expenditures
3 originally filed back in May.

4 Q. Please briefly describe some of the major area
5 substation capital projects included in the
6 "Support Economic Growth" category that the
7 Panel reviewed.

8 A. We reviewed and examined the following major
9 projects for which in-service dates are
10 projected to be within the rate year.

11 1. Parkview substation: This substation will
12 provide load relief to the upper Manhattan area,
13 specifically the area around the West 110th St.
14 substation. This particular substation area is
15 projected to experience overloads beginning in
16 2008. The Parkview substation will be supplied
17 from the Mott Haven Switching Station and is
18 scheduled to be in-service in May of 2008.

19 2. Astor substation: This substation will
20 provide load relief to the West side of
21 Manhattan, specifically the West 42nd St. #2
22 substation and the West 65th St. #2 substation.
23 These substations are projected to experience

1 overloads beginning in 2009. The Astor
2 substation will be supplied from the West 49th
3 St. switching station and is scheduled to be in-
4 service in the Spring of 2009.

5 3. Rockview substation: This substation will
6 provide load relief to several Westchester
7 County substations that are projected to
8 experience overloads beginning in 2009. The
9 Rockview substation will be supplied from the
10 existing Dunwoodie switching station and is
11 scheduled to be in-service in May of 2008.

12 Q. Did your review reveal any other area substation
13 projects in the Support Economic Growth -
14 Capital that are projected to be in-service in
15 the rate year?

16 A. Yes.

17 1. Mott Haven area substation: This 13 kV area
18 substation project was constructed
19 simultaneously and at the same location as the
20 Mott Haven 345 kV transmission switching station
21 project. Both projects initially went into
22 service in June 2007. An additional \$8 million
23 is budgeted for the Spring 2008 final completion

1 of both projects.

2 2. Cedar Street Substation: This project
3 involved the installation of a third transformer
4 and a 138kV feeder at the Cedar St. area
5 substation. The substation initially went into
6 service in May 2007, and an additional \$2.4
7 million is budgeted for the final construction
8 completion by Spring 2008.

9 3. Fox Hills Substation:
10 This project involves the installation of two
11 new 33kV feeder positions at the Fox Hills
12 substation at a budget of \$1.6 million and a
13 scheduled completion date of May 2008.

14 4. Fresh Kills Substation:
15 This project involves the installation of a new
16 30 MVAR capacitor bank at the 33kV Fresh Kills
17 substation at a budget of \$2 million and a
18 scheduled completion date of Spring 2009.

19 Q. Has the Company justified the need for the
20 proposed major area substation and other area
21 substation projects in the Support Economic
22 Growth - Substations category?

23 A. Yes. To confirm that each of these proposed

1 programs is needed and justified, we analyzed
2 and reviewed the Company's 10-year load relief
3 program. We also examined the Company's work
4 papers, project schedules, and current working
5 construction estimates for each project that is
6 placed in rate base and/or scheduled to be in-
7 service in the rate year. Based on our review,
8 we determined that each of these projects is
9 needed and justified for Con Edison to meet its
10 load requirements.

11 Q. Are there any other projects or areas within the
12 Support Economic Growth - Substation category
13 that you would like to discuss?

14 A. Yes, there are several other area substation
15 projects and programs identified by the Company
16 that they do not go into service or do not
17 affect rate base within the rate year, for which
18 the Company forecast expenditures in the rate
19 year. For example, the Newtown substation's
20 current in-service date was accelerated from
21 2015 to 2011 due to reliability concerns that
22 were exposed in the aftermath of the 2006 Long
23 Island City Network outages. In total, the

1 Company identifies approximately \$20 million of
2 such expenditures in 2008. Based on our review
3 of the budgeted amounts, the Company's load
4 relief program, work papers, and project
5 schedules, we determined that the proposed
6 expenditures are reasonable and recommend no
7 adjustment.

8 **Transmission and Switching Stations**

9 Q. Are you proposing adjustments to the Company's
10 Transmission and Switching Station budget
11 category?

12 A. Yes.

13 Q. Please explain.

14 A. In response to DPS-466, the Company provided the
15 table shown on Exhibit__(SIP-1) page 143 of
16 190. The table indicates that since 2004 the
17 Company has been over-budgeting this category
18 compared to actual expenditures. In fact, the
19 discrepancy appears to be getting larger in the
20 years since 2004, as shown on Exhibit__(SIP-1)
21 page 143 of 190.

22 Q. Do the Company's figures indicate a similar
23 pattern in its other major budget categories?

1 A. No. Based on the same Exhibit____(SIP-1) page 143
2 of 150, the budget forecasts and actual
3 expenditures for other major budget categories
4 are more closely aligned.

5 Q. Please describe your proposed.

6 A. We propose an adjustment to this category based
7 on the relationship between the Company's actual
8 and forecast expenditures for years 2004 through
9 2006.

10 Q. Did you include 2007 actual expenditures data?

11 A. No. The actual expenditure data for 2007 is
12 incomplete and cannot, therefore, be properly
13 compared to its corresponding budget data.

14 Q. Please describe your proposed adjustment.

15 A. Column C of Exhibit____(SIP-2) page 5 of 6 shows
16 ratios of actual expenditures and budgeted
17 amounts for the years 2004 through 2006. We
18 averaged those ratios to obtain the 58.44%
19 factor in Column D. The Company's proposed
20 allowances were then reduced by this factor to
21 develop revised allowances for years 2008 and
22 2009 (Column F) and the rate year (Column G).

23 Q. What is the net result of your adjustment?

1 A. The net result is a decrease of approximately
2 \$108.5 million to the Company's forecast for the
3 Transmission and Switching Station budget
4 category.

5 **Distribution**

6 Q. What major distribution projects under the
7 category of Support Economic Growth have you
8 reviewed?

9 A. We examined distribution load relief projects
10 associated with area substations. The following
11 projects constitute the major load relief work
12 addressed in the Company's filing:

- 13 1. Establish a third transformer at the Cedar
14 St. area substation;
- 15 2. Transfer 30 MW of load from White Plains to
16 Rockview;
- 17 3. Transfer 55 MW of load from Granite Hill to
18 Rockview;
- 19 4. Transfer 120 MW of load from W110St. No. 1
20 to Parkview;
- 21 5. Primary Feeder Relief; and
- 22 6. Distribution Substation Transformer
23 Purchases.

1 Q. Has the Company justified the need for the above
2 projects?

3 A. Yes. The load transfer projects are necessary
4 to relieve the loads in the designated areas and
5 are supported by the construction of the new
6 substations. Primary Feeder Relief work
7 involves the reinforcement of feeders that are
8 projected to operate at or above their normal or
9 emergency loadings. Such work entails replacing
10 smaller capacity cables with new larger capacity
11 feeders, or transferring load via the re-
12 arrangement of feeder cables. The Long Island
13 City Network outage produced overloads on the
14 network which resulted in 54 feeder outages.
15 For all of these outages, the feeders involved
16 experienced a variety of faulty operating
17 conditions that included bus trips, transformer
18 failures, and cable and joint failures. We also
19 examined the historical system-wide failure
20 performance of Con Edison's primary feeders for
21 2005 and 2006. (DPS-385) Our analysis revealed
22 that cable sections and joints were the main
23 cause of the system-wide failures. These

1 findings were consistent with the failures in
2 the Long Island City Network outages. In our
3 judgment, the reinforcement of primary feeders
4 to the networks would increase loading capacity
5 and allow for future growth in the networks.
6 Therefore, we determined that these projects are
7 necessary.

8 Q. Are there other reasons to support the Panel's
9 conclusion that the projects are necessary?

10 A. Yes. Underground network transformers and their
11 associated equipment, such as network protectors
12 and Remote Monitoring System (RMS) units, are
13 part of the reinforcement work needed to provide
14 load relief and allow for future growth. Our
15 assessment of the transformer failures in the
16 Long Island City Network outage investigation
17 revealed that 81 out of the 842 transformers
18 inspected failed, and these failures occurred
19 because of corrosion, overheating, failed
20 pressure tests, and defective housings. In
21 addition, a review of the number of transformer
22 replacements since 2003 suggests the Company has
23 experienced a steady increase in the number of

1 transformer failures. Staff has become gravely
2 concerned about the Company's ability to sustain
3 adequate electric capacity given the
4 deterioration of its infrastructure. For the
5 Company to avoid future outages similar in scope
6 to that experienced in 2006 in Long Island City,
7 Con Edison needs to continue to improve and
8 update its infrastructure.

9 **Improve System Reliability - Capital**
10 **Substations**

11 Q. Have you reviewed the projects and programs
12 listed under the category Improve System
13 Reliability - Substations?

14 A. Yes. We reviewed the Company's exhibits and work
15 papers specific to those projects and also
16 compared the Company's past budgets to its
17 actual expenditures and related that information
18 to the Company's proposed budgets (DPS-466).

19 Q. Are there any system reliability projects or
20 programs proposed by the Company the Panel found
21 were not justified or that warrant adjustments?

22 A. Yes. While we support many of these programs,
23 either based on a comparison of past

1 expenditures to budgeted amounts for certain
2 existing programs, or the Company's lack of
3 justification for its proposed budgeting on
4 certain of its new programs, we propose budget
5 adjustments to several of the Company's proposed
6 programs. Although the Company is accelerating
7 many of its existing programs and adding new
8 programs in an effort to address its aging
9 infrastructure, load demand, growth and system-
10 wide reliability, the Company has known about
11 these major issues for several years. For this
12 reason, this, our specific recommendations are,
13 in part, made to ameliorate rate impacts while
14 allowing the Company to address its system-wide
15 problems.

16 Q. Please discuss the specific programs.

17 A. The programs are as follows:

18 1. Obsolete Transformer Replacement Program:

19 Although this program is justified, we recommend
20 that the \$17.2 million budgeted for 2008 be
21 reduced to \$15.0 million based on the Company's
22 historic under-spending compared to its budget
23 from the program's inception in 2005. In 2005,

1 the Company's actual expenditures were \$2
2 million below its projected budget, and in 2006
3 the Company under-spent its budget by almost \$3
4 million. Furthermore, we note the Company has
5 only budgeted \$10.3 million for this program in
6 2007. Therefore, the \$15.0 million recommended
7 herein not only addresses the Company's past
8 budget versus expenditures experience, it would
9 still provide the Company with significantly
10 greater funding than is budgeted for this
11 program in the current year. (DPS-121)

12 2. Spare Transformer Program:

13 As noted, on August 8, 2007 the Company
14 provided Staff an addendum to its initial
15 filing. In this addendum, the Company increased
16 the Spare Transformer Program's proposed
17 expenditures from \$16.5 million to \$21.2 million
18 for the rate year. Staff sent out information
19 request DPS-498 to which the Company responded
20 on August 30, 2007. The response, however, was
21 limited and did not provide any new information
22 pertaining to the rate year justifying the
23 proposed expenditure increase, or adequately

1 supplement information received in response to
2 our prior information request, DPS-440.
3 Therefore, we have not considered the proposed
4 expenditure changes submitted in August.
5 Although this program is justified, we recommend
6 that the \$16.5 million budgeted for 2008 be
7 reduced to \$14.0 million. Our adjustment is
8 based on the Company's expected future
9 expenditures, which decline from \$16.5 million
10 in 2008 to \$12.0 million in 2009 and 2010. Our
11 adjustment to the \$14.0 million level for 2008
12 averages out future expenditures while still
13 allowing program acceleration as compared to the
14 Company's historic expenditure levels. (DPS-292)

15 3. Category Alarms Program:
16 Although this program is justified, we recommend
17 that the \$2.25 million budgeted for 2008 be
18 reduced to \$1.0 million. Our recommendation
19 here is based on the Company's failure to
20 achieve its budgeted amounts for the last
21 several years. Additionally, the Company did
22 not spend more than \$812,000 in any of the past
23 three years. Because of the lower historic

1 expenditure levels and the lack of a Company
2 justification as to how it expects spending in
3 this program area to almost triple, we recommend
4 a budgeted level of \$1.0 million, which is still
5 above the recent historic experience. (DPS-123)

6 4. Remote Terminal Unit (RTU) Replacement
7 Program:

8 Although this program is justified, we recommend
9 that the \$3.0 million budgeted for 2008 be
10 reduced to \$2.0 million. Our recommendation
11 here is based on the fact that the Company
12 budgeted \$1.0 million in 2006 and 2007, made no
13 actual expenditure in 2006, and its 2007
14 expenditures are currently unknown. Given the
15 absence of any expenditure experience, we
16 recommend an allocation of \$2.0 million, which
17 is below the Company's amounts, but takes into
18 consideration the lack of data regarding any
19 historic expenditure levels. (DPS-123)

20 5. Substation Loss Contingency Program

21 Although this program is justified, we recommend
22 that the \$2.0 million budgeted for 2008 be
23 reduced to \$1.0 million. Our adjustment is

1 based on the Company's historic expenditures
2 which were less than \$300,000 in 2004 and
3 subsequently reduced to \$0 in both 2005 and
4 2006. Our \$1.0 million allocation recognizes
5 that the Company may in the past have needed to
6 divert money from those budgeted amounts
7 elsewhere. (DPS-123)

8 6. Enhancing Substation Reliability Program
9 Although this program is justified, we recommend
10 that the \$12.5 million budgeted for 2008 be
11 reduced to \$10.0 million. Our recommendation is
12 based on the Company's 2008 budget being more
13 than double its 2007 \$6.1 million budget, and
14 despite the fact that its 2007 budget was lower
15 than its actual 2006 expenditure of \$7.75
16 million. Our recommendation essentially
17 recognizes that historic expenditures and
18 budgets have remained well short of the \$10.0
19 million we propose herein, thereby making an
20 allowance for program acceleration. (DPS-124 and
21 DPS-145)

22 7. Facility Improvement Program:
23 We recommend that the \$6.0 million budgeted for

1 2008 be eliminated. This program appears to be
2 redundant with the Company's Small Capital
3 program. Both programs include structural
4 improvements, paving, heating, lighting,
5 flooring, and other similar improvements.
6 Moreover, the Company's response to DPS-145
7 provided examples of projects in this category
8 that were more appropriately placed in other
9 programs. For example, the Company's high
10 voltage test sets for Parkchester and fire
11 protection system upgrades at Dunwoodie would
12 more appropriately fit under the new High
13 Voltage Tests Set program and Transmission
14 Capital, not under Substation Facility
15 Improvements. Without further justification or
16 the refuting of double counting, we recommend no
17 allocation for this proposed program at this
18 time. Inasmuch as the Company provided no
19 historical spending or budgeting data for this
20 area. We have no basis on which to make any
21 adjustment other than elimination. (DPS-125 &
22 145)

23 **Distribution**

1 Q. Have you reviewed the distribution programs
2 under the category of Improve System
3 Reliability?

4 A. Yes. Our review was informed by Staff's Long
5 Island City/Westchester outage investigations
6 which revealed many areas in both the Company's
7 underground and overhead networks that are in
8 need of reinforcement work or equipment
9 replacement. The Company proposes the following
10 major programs to improve its distribution
11 reliability.

12 **Primary feeders**

13 This program is similar in nature to that of the
14 distribution primary feeder load relief work.
15 This reliability program, however, deals with
16 the emergency replacement of 4kV, 13 kV, 27 kV,
17 and 33kV feeders that fail while in service.
18 Based on review of the Company's system-wide
19 2005 and 2006 feeder failures, we found that 61%
20 percent of the feeders failed from impaired
21 cables and joints. Such failures must be
22 repaired during emergencies to avert potential
23 system-wide instability, leading to overload,

1 which could eventually lead to a complete system
2 shutdown. We found that the Company's proposed
3 budgeted amount is consistent with previous
4 spending levels and recommend no adjustments to
5 this program area.

6 **Secondary Cables (Mains and Services)**

7 This program involves the emergency replacement
8 of secondary cables, including mains and
9 services that are key components to the
10 performance of the secondary network. Staff
11 determined in its Long Island City Network
12 outage investigation that the secondary cables
13 revealed a high percentage of burnouts. In
14 addition, a review of the Company's Annual
15 Manhole Reports indicated that more than half of
16 the Company's manhole incidents since 2001 were
17 a result of secondary main burnouts, resulting
18 in serious personal injury and property damage.
19 One of the issues the Company faces is that the
20 secondary open mains tend to occur at a greater
21 rate than the number of repairs thereto. As a
22 result, there is a constant repair backlog, and
23 in an effort to reduce this backlog, the Company

1 has increased its spending each year since 2004.
2 In 2007, the Company has thus far spent over \$87
3 million further reducing the repair backlog.
4 This program includes other cable programs
5 related to Services. For example, temporary
6 service hookups required while working on
7 permanent repairs, as well as repairs on cables
8 and associated conduits for street lights are
9 important. For these reasons, we recommend no
10 adjustments to the \$92 million budget for the
11 Secondary Cables (Mains and Services) programs.

12 **Underground Secondary Reliability**

13 This capital program addresses the reinforcement
14 of secondary cables and mitigation of manhole
15 events in Con Edison's aging underground system.
16 During its investigation of the Long Island City
17 Network outage, Staff found that many of the
18 secondary mains and service cables failed due to
19 degradation and overloaded conditions.
20 Overloaded secondary cables can cause manhole
21 events such as explosions and carbon-monoxide
22 conditions, both of which threaten public
23 safety. In part, this program replaces solid

1 with vented service box covers as a way of
2 mitigating explosions and carbon-monoxide
3 buildup. Our review found that the Company has
4 only been cursorily addressing its secondary
5 system issues essentially in conjunction with
6 emergency work done as part of the Secondary
7 Open Mains program. Such work is inadequate to
8 resolve the Company's problems with secondary
9 mains and services. Because of this, Staff
10 recommends no adjustments be made to the
11 Company's proposed capital spending of \$71
12 million on the Company's Underground Secondary
13 Reliability Program.

14 **Network Reliability (De-bifurcation)**

15 This program involves the Company's attempt to
16 relieve the loading on primary feeders through
17 de-bifurcation, which increases the number of
18 feeders available within a network. This is
19 accomplished by splitting an existing feeder
20 into two distinct feeders. The resulting
21 redesign of the feeder positions allows for more
22 balanced loading during normal conditions. In
23 turn, the availability of more feeders during

1 multiple contingencies can mitigate cascading
2 feeder failures. Because de-bifurcation of
3 feeders will help prevent critical multiple
4 contingencies during peak summer periods, we
5 recommend that no adjustments be made to the
6 Company's proposed capital spending of \$18
7 million on the Network Reliability (Di-
8 bifurcation) program.

9 **Transformers**

10 Con Edison is proposing transformer replacement
11 programs for transformers operating at the
12 following levels:

- 13 1. transformers operating above 125% of their
14 normal and emergency ratings;
- 15 2. transformers operating between 115% and 125%
16 of their normal and emergency ratings; and
- 17 3. transformers operating between 100% and 115%
18 of their normal and emergency ratings.

19 Con Edison's proposed budget for the first two
20 transformer replacement programs are
21 appropriate, and based on historical spending we
22 recommend no adjustments be made to those
23 programs. We do not find that the Company's

1 budgeted amount for replacing transformers
2 operating between 100% and 115% is justified.
3 We do not find Con Edison's claim that it needs
4 this program because of fewer numbers of
5 required replacements for all transformers
6 operating above 115% to be persuasive. The
7 Company has provided no record of historical
8 spending for replacement of transformers
9 operating between 100% and 115%. Accordingly,
10 we recommend that the budgeted amount for the
11 transformers operating less than 115% be reduced
12 to \$25.733 million in labor and \$31.215 million
13 in purchases.

14 **Remote Monitoring System (RMS)**

15 This program involves Remote Monitoring System
16 devices which are placed in a network protector
17 to monitor critical transformer performance
18 data. New generation RMS units can provide
19 voltage readings, oil temperature, oil level,
20 and tank pressure. Such data can better inform
21 operators about the state of the transformers,
22 allowing for better operating decisions
23 regarding the network system. Upon our review,

1 we recommend no adjustments be made to the
2 Company's budget amount of \$20.6 million in the
3 rate year.

4 **PILC (Paper Insulated Lead Cover) Cable**

5 Prior to its last rate case, 04-E-0572, Con
6 Edison made minimal effort to remove the PILC
7 cables remaining in its system. Staff did not
8 find the Company's performance acceptable and
9 the Company now proposes to accelerate its
10 removal of PILC cables, resulting in the date of
11 completion moving from 2024 to 2020. Con Edison
12 proposes a budget of \$39 million per year to
13 achieve this goal, requiring it to remove 900
14 additional sections of PILC cables per year.
15 Despite the Company's acceleration of the
16 program, we do not find that the Company's
17 proposed budget is justified and recommend a \$9
18 million reduction to more appropriately reflect
19 the increased number of PILC sections to be
20 removed each year.

21 **Public Safety & Environmental**

22 Q. Have you reviewed the Company's proposal for
23 addressing public safety?

1 A. Yes. As part of the Safety Standards directed in
2 Case 04-M-0159, the Company has included
3 proposals for its stray voltage testing and
4 inspection programs. Under the Stray Voltage
5 Testing program, Con Edison must inspect all of
6 its electric facilities, streetlights, and
7 metallic attachments for stray voltage. For the
8 inspection program, Con Edison must conduct a
9 visual inspection of its overhead and
10 underground system on a five year cycle.

11 Q. Has the Company provide to Staff its analysis of
12 stray voltage causes and implemented remedial
13 measures to prevent such occurrences?

14 A. Yes. In fact, the Street Light Isolation
15 Transformer program developed from the Company's
16 analysis.

17 Q. What is the Street Light Isolation Transformer
18 program?

19 A. The Street Light Isolation Transformer began as
20 a pilot program handled jointly with New York
21 City Department of Transportation (NYCDOT).
22 This program was created due to the frequency of
23 stray voltage cases associated with street

1 lights. An installed Isolation Transformer
2 prevents the presence of stray voltage from
3 faulty electrical wires.

4 Q. What is the Panel's position on the Company's
5 proposal for this program?

6 A. The Company proposes to install these units in
7 the base of street lights on a four year plan,
8 which is expected to eliminate approximately 78%
9 of the stray voltage conditions. This also
10 enables NYCDOT to easily access the transformers
11 for maintenance as described in DPS-323 and DPS-
12 493. Our review found this program justified,
13 however, we believe that the Company's program
14 needs refinement. We recommend that the
15 Company's proposed funding be made available;
16 however, it should be clarified that it is
17 solely the Company's responsibility to install
18 these transformers in the service box and to
19 maintain them for increased safety, not NYCDOT.

20 Q. Does the Company propose any other projects
21 related to safety?

22 A. Yes. The Company has proposed a project to
23 reduce the severity of manhole events. Under

1 this program, Con Edison replaces solid manhole
2 covers with vented covers. This enables the
3 release of combustible gases, which if not
4 released, can elevate the danger of manhole
5 events. The Company's program is scheduled to be
6 completed during the first rate year. However,
7 considering the planning, work, uncertainty, and
8 time required to complete the remaining non-
9 standard covers. (DPS-302 and DPS-458)

10 Q. What is Staff's position on the Security
11 Enhancement program?

12 A. We believe that improving the security system of
13 the utility is always of utmost importance. We
14 encourage the Company to continually assess its
15 security for any weakness. Our review of Con
16 Edison's proposal reveals that from 2004 to
17 2006, of the \$450,000 budgeted for security
18 enhancements, no dollars were spent. (DPS-466)
19 We do not find this to be acceptable; however,
20 based on past performance we recommend that the
21 \$4.1 million requested by Con Edison be adjusted
22 to \$2 million. Additionally, any of the \$2
23 million not spent towards security enhancements

1 should be returned as a credit to customers in
2 the Company's next rate case.

3 Q. Have you reviewed the Company's proposals under
4 its Environmental category?

5 A. Yes. Our review found that, as with security
6 enhancements, Con Edison's actual expenditures
7 were not aligned with budgeted amounts between
8 2004 and 2006 (DPS-466). Our recommended
9 adjustments were determined by taking the
10 average actual expense (2004 to 2006) and
11 increasing it by half the difference between the
12 proposed amount for the rate year and the
13 average actual expense. This amount will allow
14 Con Edison to pursue these projects over an
15 extended period of time. We recommend that the
16 Pumping Plant Improvement program be decreased
17 to \$5 million from the \$8.5 million proposed,
18 and that the Environmental Risk program be
19 reduced to \$2 million from the \$3.5 million
20 proposed.

21 Q. Are there any other capital adjustments under
22 Public Safety and Environment?

1 A. We also recommend that the Company's Oil Minders
2 environmental program be reduced to \$500,000
3 from \$600,000 to be more aligned with 2004 to
4 2006 actual expenditures (DPS-466).

5 Storm Hardening & Response

6 Q. What is the Panel's assessment of the Company's
7 storm hardening and response proposals?

8 A. After recognizing the impact that storms can
9 have on the distribution system and customers,
10 especially over the past three years when the
11 overhead system has been exposed to more
12 frequent storms, we find it understandable that
13 a majority of the capital investments under
14 storm hardening and response is programmed
15 towards improvements to the overhead system
16 design, and equipment advancements to decrease
17 recovery time after the storm has passed. Major
18 projects under this section include installation
19 of switches, splitting and upgrade of auto-
20 loops, relocation of poles, advancement in
21 monitoring capabilities, and transformer
22 purchases.

23 Q. Are all these projects under storm hardening and

1 response justified by the Company?

2 A. Yes. Upon our review, we found them to be mostly
3 justified. We do, however, have a concern
4 regarding the level of implementation of all
5 these programs based on actual expenditures
6 compared with budgeted expenses for the past
7 three years, and in the number of new programs
8 proposed. (DPS-466) In addition to our
9 recommendations detailed hereafter, we recommend
10 that any funds not used be credited to
11 ratepayers.

12 Q. What are your recommended adjustments to the
13 storm hardening and response projects?

14 A. The Panel has made adjustments in the following
15 areas:

16 1. Osmose Utility Services, Inc. (C-Truss under
17 DPS-371). The Company proposes to change its
18 12 year cycle of pole inspections to 10 years
19 to be in line with industry practices. From
20 our review, the Company has forecasted a
21 rejection rate for poles that is above the
22 actual historical rejection rate. This has
23 resulted in the Company budgeting for C-Truss

1 at levels that are not commensurate with past
2 expenditure levels. We recommend an
3 adjustment, which was derived by first taking
4 the highest reported actual expense, found in
5 2006, and prorating for a 10 year cycle.
6 Second, we increased this amount by half the
7 difference between the calculated value in
8 the first step and the proposed funding. The
9 recommended amount is \$1.3 million; a
10 decrease from the proposed \$1.7 million.

11 2. For the following programs we found that the
12 actual historical expense was found to be
13 lower than budgeted. Therefore, we recommend
14 adjustments by splitting the difference
15 between the average actual expense and the
16 Company's proposed funding.

17 a. Auto-loop Reliability. (DPS-367 and DPS-
18 466) This includes a plan to split
19 seven existing auto-loops into 14 auto-
20 loops and enlarge two smaller load
21 capacity auto-loops. We recommend
22 reducing the Company's funding request
23 from \$7.9 million to \$6 million.

- 1 b. #4, #6 Self Supporting Wire. (DPS-381
2 and DPS-466) This program covers
3 replacement of these wires on a 20 year
4 plan due to the aging and deterioration
5 that occurs over that span. We recommend
6 reducing the Company's funding request
7 from the \$3.4 million to \$2.3 million.
- 8 3. Three Phase Gang Switch Replacement. (DPS-
9 400) The Company plans to replace defective
10 switches based on an estimated amount of old
11 and mechanically deficient devices. Based on
12 the past 10 years of replacement data, the
13 number of switches that actually required
14 replacement is not consistent with the
15 Company's estimated 20% replacement.
16 Therefore, we recommend splitting the
17 difference between the average actual number
18 of replacements and the 20% estimated rate of
19 replacement. This results in an adjustment
20 reducing the Company's proposed \$400,000 to
21 \$300,000.
- 22 4. Rear-Lot Pole Elimination. (DPS 397) This
23 program involves the elimination of poles

1 located in the rear of customer's homes. The
2 Company plans to relocate such facilities
3 over 20 years. We believe that this program
4 does provide a benefit, although when
5 compared to other programs we found it to be
6 non-essential. Therefore, we recommend a
7 reduction to half of the Company's proposal
8 for a total of \$1.2 million.

9 5. Enhanced 4 kV Grid Monitoring. (DPS-368)
10 This program covers installation of a more
11 advanced power quality and battery monitoring
12 system at 4 kV Unit Substations to eliminate
13 manual testing and inspection and provide
14 enhanced monitoring and alarm functions. In
15 January 2007, the Company submitted a budget
16 estimate of \$425,000 per year for this
17 program in response to Staff's investigation
18 of the Long Island City outage. (DPS-466)
19 This has increased by \$1 million for the
20 first rate year. The Company has not
21 provided sufficient basis for the need to
22 increase funding by \$1 million. We recommend
23 an adjustment by splitting the difference

1 between the Company's January budget estimate
2 and the proposed funding submitted for the
3 rate year. Our adjustment results in a
4 reduction to \$1 million from the Company's
5 \$1.5 million requested.

6 6. Four kV UG Reliability. (DPS-379) Con Edison
7 proposes a 15 year program to replace cables
8 with failures, which the Company has
9 estimated to be 62% of total current 4 kV
10 primary risers. Our review of how the Company
11 derived a failure rate of 62% was found to be
12 mathematically incorrect based on the
13 Company's explanation in DPS-379.
14 Accordingly, we recommend reducing by half
15 the funding for this program, resulting in a
16 total of \$600,000.

17 7. Overhead Secondary Reliability Program. (DPS-
18 404) This program replaces old, bare, and
19 undersized overhead secondary wires. Based on
20 DPS-404, the average replacement cost has
21 increased by 100% with no basis for this
22 significant increase from 2006 cost.
23 Therefore, we recommend an adjustment by

1 splitting the difference between the 2006
2 actual expense and the proposed funding. Our
3 funding adjustment results in a reduction to
4 \$320,000 from \$500,000.

5 8. Transformer Purchase. (DPS-364) This program
6 covers transformers and other associated
7 equipment used for a storm event. Because
8 Con Edison did not track this item separately
9 in the past, and because its necessity is
10 dependent on the number of storm events, the
11 amount of transformers to be purchased is
12 uncertain. Based on the foregoing and
13 prorated 2007 expense, we recommend an
14 adjustment decreasing the Company's proposed
15 funding to \$8 million from \$8.56 million.

16 Advanced Technology

17 Q. Have you reviewed all the projects and programs
18 listed under the category Advanced Technology?

19 A. Yes. Our review included examination of all the
20 exhibits and work papers associated with each
21 project to get a better understanding of the
22 Company's justification for each project.
23 Additionally, through information requests, we

1 have requested and analyzed the Company's past
2 budgets and actual dollar amounts spent on each
3 project and compared that information to the
4 future estimated expenditures identified within
5 the Company's filing. (DPS-466) We conclude
6 that each of the base programs is warranted and
7 justified. We do, however, have a concern
8 regarding the level of implementation of all
9 these programs based on actual expenditures
10 compared with budgeted expenses for the past
11 three years, and on the number of new programs
12 proposed. In addition to our recommendations
13 detailed hereafter, we recommend that any funds
14 not used be credited to the rate payers.

15 Q. Are there any projects or programs in the
16 category Advanced Technology proposed by the
17 Company that warrant expenditure adjustments
18 compared to what the Company has requested?

19 A. Yes. After reviewing the proposed expenditures
20 for the Advanced Technology programs over the
21 three years proposed by the Company, several
22 programs had much higher dollar amounts
23 allocated to the first year, which then dropped

1 consistently over the next two years. Although
2 we believe these programs are justified, because
3 of the lack of historical expenditure data to
4 compare with the Company's proposed budgets, we
5 are not convinced that the Company's proposed
6 expenditure trending is appropriate. Therefore,
7 for the programs listed below, we recommend rate
8 year levels arrived at by taking the average of
9 the proposed expenditures for 2008 through 2010.

10 **Secondary Visualization Model (SVM) program:** We
11 recommend an adjustment from the proposed amount
12 of \$5.2 million, down to \$3.7 million.

13 **Distribution Control Center Upgrades program:** We
14 recommend an adjustment from the proposed amount
15 of \$5.0 million, down to \$2.67 million.

16 **SCADA system program:** We recommend an
17 adjustment from the proposed amount of \$1.5
18 million, down to \$1.0 million.

19 Q. Are there projects or programs with which the
20 Panel has identified concerns in terms of the
21 Company being able to complete the proposed
22 tasks within the rate year?

1 A. Yes. We are concerned about the Secondary
2 Monitoring (Secondary Model Validation) and the
3 Mapping System Upgrade programs. Staff found in
4 its investigation of the Long Island City
5 Network outages that Con Edison had not made
6 measurable advances in secondary system
7 monitoring programs as recommended after the
8 1999 Washington Heights outages. Since 1999,
9 although the Company has apparently made efforts
10 to develop secondary monitoring tools, it has
11 little or no results to demonstrate from such
12 efforts. The Company again is proposing a new
13 secondary modeling system in an effort to put in
14 place a useful and functioning secondary
15 monitoring system. The Company has proposed a
16 rate year budget of \$10.4 million for secondary
17 monitoring and \$4.0 million for the mapping
18 systems upgrade. (DPS-490) Both of these
19 programs require a major effort to meet the
20 schedules proposed by the Company.
21 Additionally, the secondary monitoring remote
22 transmitting units (RTU) are relatively untested
23 and the Company is in the process of identifying

1 the best and most effective means of
2 transmitting the data from the RTUs back to the
3 control centers, which remains as the largest
4 obstacle facing the Company to effective use of
5 these devices. The Company is currently testing
6 different RTU communication technologies with
7 pilot programs in specific networks throughout
8 their system. Additionally, the mapping system
9 upgrade needs to be in place to ensure the
10 information being received from the secondary
11 monitoring RTUs is represented accurately to the
12 control center operators. Although we think
13 that both of these programs are warranted, given
14 the Company's lack of results over the past
15 years, the size of the tasks at hand, and the
16 fact that the secondary monitoring technology is
17 still in question at this time, we have serious
18 concerns about the Company completing its
19 proposed goals. Therefore, we request the
20 Company provide Staff with detailed reports
21 including schedules for each project, with
22 specific milestones and deadline dates that they
23 plan to meet in order to complete the programs

1 as proposed. Thereafter, the Company should
2 provide quarterly update reports to Staff with
3 the status of each program and any proposed
4 changes to the schedule.

5 Process Improvement

6 Q. Have you reviewed all the projects and programs
7 listed under the category Process Improvement?

8 A. Yes. We have reviewed all the exhibits and work
9 papers associated with each project to get a
10 better understanding of the purpose and
11 justification of each project. Additionally,
12 through information requests, we have requested
13 and analyzed the Company's past budgets and
14 actual dollar amounts spent on each project and
15 compared that information to the future
16 estimated expenditures identified within the
17 Company's filing. (DPS-466) We have concluded
18 that each of the base programs is warranted and
19 justified. We do, however, have a concern
20 regarding the level of anticipated expenditures
21 particularly when we compared the Company's
22 historic actual expenditures to what it had
23 budgeted for many existing programs, as well as

1 for a number of new programs for which no
2 historic expenditure data exists. In addition
3 to our recommended adjustments, we also
4 recommend that any funds not used be credited to
5 the ratepayers, as we mentioned earlier in our
6 testimony.

7 O&M Expenses

8 Q. Have you examined the Company's proposal for O&M
9 expenditures in the areas of transmission,
10 substations, and distribution?

11 A. Yes. We examined Con Edison's proposed O&M
12 program changes as outlined in Exhibits ___
13 (IIP-3), ___ (IIP-6), and ___ (IIP-8), with the
14 exception of those changes related to
15 interference. We also reviewed the details of
16 program changes the Company identified in its
17 responses to Staff Information Requests DPS-327,
18 DPS-328 and DPS-329.

19 Q. And did you make any findings based on your
20 review?

21 A. Yes. We found that Electric Operations O&M
22 program expenditures have increased dramatically
23 since 2006 because of increased activity in the

1 categories of Improve Reliability, Public Safety
2 and Environmental, and Storm Hardening and
3 Response. These programs are an outgrowth from
4 the investigations into the Westchester and Long
5 Island City Network outages and the Commission's
6 Order on Safety Standards. In general, we found
7 that the O&M expenses for the categories of
8 Improve Reliability and Storm Hardening and
9 Response are justified.

10 Q. What did you find to be the basis for the
11 increase in Public Safety O&M expenses?

12 A. The Company, in response to the Commission's
13 Safety Standards, established numerous programs
14 which caused increases in the O&M costs for the
15 category of Public Safety and Environmental.
16 \$63.8 million, of the \$76.8 million projected by
17 Con Edison for the rate year, can be attributed
18 to programs related to the Commission's Safety
19 Standards, which represents an increase of \$42.5
20 million from the 2006 budget for these programs.
21 The programs include the subcategories of Stray
22 Voltage testing, Mobile Detectors and the
23 Underground and Overhead Stray Voltage

1 Inspection programs.

2 Q. How did Con Edison justify such a substantial
3 increase from its 2006 budget for these
4 programs?

5 A. The Company claims that it needs a \$23.9 million
6 increase from its 2006 budget to maintain a
7 five-year cycle for the underground inspection
8 program. The Company states that such an
9 increase is necessary based on the number of
10 "unique inspections" it is required to make
11 under this program. The Company also states
12 that other increases are linked to manpower
13 expense associated with handling the increased
14 number of stray voltage cases discovered, as
15 well as for unaccounted expenses not previously
16 considered in its past budgets, such as quality
17 assurance testing. Con Edison further
18 attributes an increase of \$7.4 million in O&M
19 expenses for the Sarnoff device due mainly to
20 stand-by costs. The Company has increased its
21 budget for its Annual Stray Voltage Testing
22 Program by \$5.7 million, also based on what the
23 Company claims are previously unaccounted

1 expenses.

2 Q. Does the Panel agree with Con Edison's alleged
3 justification for these increases?

4 A. No. We find that the need for such a drastic
5 funding increase has been caused by the
6 Company's poor planning for these programs. We
7 recommend that Con Edison schedule in "unique
8 inspections" on a regular basis to prevent such
9 inspections from causing uncharacteristic
10 expenditures in any single year.

11 Q. Apart from Con Edison's projected cost
12 increases, has the Company demonstrated a need
13 for these actual programs?

14 A. Yes. The Company, in its 2006 Stray Voltage
15 Detection and Electric Facility Inspection
16 Report notes that it has identified over 1,400
17 stray voltage cases.

18 Q. Does the Panel recommend any changes in the
19 Safety Standards or methods used to meet those
20 Standards?

21 A. We make no recommendation here, because any
22 changes to the operation of this program will be
23 handled under Case 04-M-0159. If any such

1 changes result in a decrease in approved funding
2 or elimination of a program approved in the rate
3 case, the difference in funding should be
4 credited to Con Edison's customers.

5 Q. What is Staff's position on the Sarnoff device?

6 A. Con Edison has already purchased 15 vehicles
7 able to detect levels of electric fields (stray
8 voltage) in its underground electric system more
9 quickly than manual testing. The Company based
10 the need for these 15 vehicles to enable a scan
11 of the entire underground system in the week
12 after a snow event. (DPS-327) The Panel finds
13 that this is insufficient justification for such
14 a high funding request. Overall, the frequency
15 of vehicular usage found in DPS-327, is low. The
16 standby cost, which accounts for more than 60%
17 of the Sarnoff O&M funding requested for the
18 upcoming rate year is unreasonably high
19 considering the frequency of vehicular usage.

20 Q. Is there a proposed adjustment for the Sarnoff
21 device?

22 A. No. We recommend, however, that Con Edison be
23 required to file a report:

1 1. reassessing the expenses of this program to
2 reduce the costs associated with stray
3 voltage cases found, especially as related to
4 the program's standby cost; and
5 2. reassessing its current operation to optimize
6 utilization of its current fleet of vehicles;
7 The Company's report should be filed with the
8 Department two months after the Commission's
9 Order adopting a rate plan in this case. If the
10 Company fails to reassess its costs adequately,
11 funding for the program should be credited to
12 the Company's customers. Additionally, any
13 decreases in program costs resulting from the
14 Company's reassessment should likewise be
15 credited.

16 Reliability Performance Mechanism

17 Q. What is the Company's position on the
18 reliability performance mechanism (RPM)?
19 A. Con Edison states that pre-determined sanctions
20 are not needed for the Company to fulfill its
21 responsibilities to the public. They are opposed
22 to the RPM because negative rate adjustments
23 deplete resources available to the Company to

1 address system needs; outages that trigger such
2 adjustments can be a result of circumstances
3 outside the Company's control or unpreventable
4 occurrences; and superior performance results in
5 higher standards and targets. The Company
6 believes that adverse financial and public
7 relations resulting from an avoidable event and
8 good work ethics drive Con Edison's performance.

9 Q. What does the Company propose?

10 A. Con Edison requests that all existing negative
11 rate adjustment mechanisms end without
12 replacement. The Company proposes that
13 performance standards and reporting requirements
14 remain. The Commission can then take
15 appropriate action on an individual basis where
16 the Commission believes the Company was at
17 fault. They also propose that the Commission
18 should focus on investments in infrastructure
19 and other programs aimed at improving
20 reliability and safety.

21 Q. Does the Panel agree with the Company's position
22 and proposal?

- 1 A. No. As the Commission stated in Opinion No. 96-
2 12, it has a preference for performance-based
3 regulation wherever a monopoly remains. So long
4 as the Company's delivery service remains a
5 monopoly, there needs to be clearly defined
6 consequences to the Company for failing to
7 provide good customer service. RPMs provide
8 earnings consequences to shareholders for the
9 quality of service provided to its customers.
10 This is separate from the funds used to address
11 system needs. Presently, RPMs are in effect at
12 all of the major electric utilities that link
13 earnings directly to their performance on
14 specific measures of electric service
15 reliability. Targets are set at levels that
16 indicate problems or degradation in service.
17 The Company is given the opportunity to justify
18 on a case by case basis events that are out of
19 its control and that they think should not
20 hinder their performance level.
- 21 Q. Has the Panel prepared an exhibit that
22 summarizes its proposed RPM?

1 A. Yes. Exhibit ____ (SIP-3) is a document entitled
2 "Electric Service Reliability Performance
3 Mechanism" which summarizes our recommendations
4 for the proposed metrics, target levels, and
5 potential negative revenue adjustments for
6 failure to meet the targets.

7 Q. How is the RPM organized?

8 A. The RPM has three categories: overall
9 reliability, restoration, and special projects.
10 Each category contains individual measures which
11 are used to monitor the Company's performance.
12 Measures within the overall reliability category
13 are based on the methodology used in Appendix E
14 of the rate plan approved by the Commission in
15 Opinion No. 00-14.

16 Q. What measures are used in the overall
17 reliability category?

18 A. The overall reliability category uses the System
19 Average Interruption Frequency Index (SAIFI or
20 frequency) and Customer Average Interruption
21 Duration Index (CAIDI or duration) measures.
22 Targets will be set for the Company's network

1 and radial system annual performance. In
2 addition, there is a major outage mechanism.

3 Q. What network and radial targets are proposed for
4 frequency and duration?

5 A. The proposed frequency targets are 0.015 for
6 network and 0.500 for radial. The duration
7 target is 3.35 for network and 1.75 for radial.
8 These targets have not changed from the previous
9 reliability mechanism.

10 Q. Has a review been done of the appropriateness of
11 these targets?

12 A. Yes. A review of Con Edison's performance shows
13 that under normal operation the Company has
14 performed better than the targets set, and in
15 cases where the Company is experiencing a
16 serious problem, such as the Long Island City
17 outage, the Company can not meet these
18 thresholds. These targets are indicative of
19 long-term trends, which is our primary focus.

20 Q. What is the revenue adjustment for the overall
21 reliability category and how does this compare
22 to the previous reliability mechanism?

1 A. The previous mechanism had an annual exposure of
2 \$48 million, of which \$18 million is for
3 frequency and duration and \$30 million for major
4 outages. The proposed mechanism has a maximum
5 revenue adjustment of \$20 million for frequency
6 and duration bringing the total annual exposure
7 to \$50 million.

8 Q. What is the basis for the increased exposure?

9 A. The increased financial exposure under our
10 proposed RPM is to ensure both frequency and
11 duration has the same financial impact. This
12 results a \$5 million revenue adjustment for each
13 network and radial for duration, as set for the
14 frequency standard. The Company should place
15 adequate attention and resources to meet the
16 proposed target levels.

17 Q. What measures are used in the restoration
18 mechanism?

19 A. This new mechanism uses Restoration time as the
20 means to measure the Company's performance.
21 Thresholds are set for the Company's overhead
22 and underground emergency events for Upgraded to
23 Full Scale emergency categories.

- 1 Q. What is the reason for adding this mechanism?
- 2 A. Throughout the calendar year, the utility
3 Company may experience storms or other events
4 that result in outages to customers served. For
5 each outage event, an estimated restoration time
6 should be derived by the Company. This
7 information is the basis for determining the
8 number of resources needed to complete a job,
9 gauges the performance of the Company, and
10 provides customers with an expectation of when
11 electric service will be returned. Throughout
12 Con Edison's history, there have been many cases
13 where restorations times were not derived in
14 adequate time, not provided to customers, or not
15 adhered to by Con Edison. The Company has failed
16 to provide, adhere, and inform customers of
17 restorations times during the recovery period of
18 an emergency event. Restoration time is
19 critical. The restoration targets are set based
20 on location and storm category.
- 21 Q. What is the revenue adjustment for the
22 restoration mechanism?

- 1 A. The rate adjustment for the proposed restoration
2 mechanism is \$5 million per event with unlimited
3 exposure.
- 4 Q. What measures are used in the special projects
5 category?
- 6 A. The previous set of special projects contains
7 measures for completion of work associated with
8 double poles, shunts, street lights, and over-
9 duty breakers. A new addition to the special
10 projects is the Remote Monitoring System.
- 11 Q. Why have the previous special projects remained
12 as part of the measures?
- 13 A. These special projects are areas where the
14 Company previously failed to complete work under
15 its own initiative. The use of a rate
16 adjustment for failure to complete this work in
17 the future will continue exert pressure on the
18 Company.
- 19 Q. What is the revenue adjustment for the
20 previously installed special projects and how
21 does this compare to the prior reliability
22 mechanism?

1 A. The proposed RPM increases the rate adjustment
2 by \$1 million for special projects.

3 Q. What is the basis for this increase in exposure?

4 A. This increase was determined by increasing the
5 revenue adjustment of "No Current Street Lights
6 and Traffic Signals" to have an equivalent
7 exposure as the level previously established for
8 special projects.

9 Q. What is the reason for adding the Remote
10 Monitoring System as a mechanism?

11 A. Prior to the Long Island City event, Con
12 Edison's operating procedure required that a
13 minimum of 95% of total Remote Monitoring System
14 is reporting properly in each network. This
15 enables its control room operators to gain
16 sufficient information about the status of the
17 network system. It has been found that the
18 Company has operated below this reporting rate
19 resulting in Con Edison running its system with
20 an increased level of uncertainty. In addition,
21 it has taken the Company a long period of time
22 to get their system at a state where the Remote
23 Monitoring System can report at a 95% rate.

1 After the Long Island City event, a revision has
2 been made to the Company's procedure from
3 "minimum 95%" reporting rate to "a goal of
4 achieving 95%". The network system is very
5 complex and below ground, which makes it hard to
6 monitor. It is critical that Con Edison set and
7 meet the standards and not simply change the
8 wording of its standards to make it easier to
9 operate their system at a risk.

10 Q. What is the adjustment exposure for the Remote
11 Monitoring System mechanism?

12 A. It is \$10 million for each network not at a 95%
13 reporting rate as required by the Company's
14 specification.

15 Q. Does the Panel propose to continue the exclusion
16 provisions of the RPM adopted in Opinion No. 00-
17 14?

18 A. Yes. The exclusion provisions identified in
19 Appendix E to Opinion No. 00-14 should continue
20 to apply without change.

21 Q. Does the Panel's proposal have any positive
22 revenue adjustments?

1 A. No. The purpose of this RPM is to ensure that
2 an appropriate level of reliability is provided
3 to customers and that the Company fulfills its
4 commitment to capital improvements and O&M.

5 Q. Does this conclude the Panel's testimony?

6 A. Yes.