

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

SHARED SERVICES PANEL - ELECTRIC

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I. INTRODUCTION

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- Q. Would the members of the Shared Services Panel ("Panel") please state your names and business addresses?
- A. Our names are Saddie L. Smith, Tracy Cureton, Terrence J. Walsh, Michelle Alexander, and Michele Campanella. Our business addresses are 4 Irving Place, New York, NY 10003 (for Smith, Walsh, Alexander, and Campanella), and 31-01 20th Avenue, Astoria, New York 11105 (for Cureton).
- Q. By whom are the panel members employed?
- A. We are all employed by Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Company").
- Q. Please explain your educational backgrounds, work experience, and current general responsibilities.
- A. **(Smith)** I am currently the Vice President of Facilities for the Company. I have been employed by Con Edison since 1982, holding positions of increasing responsibility in a variety of support and operating positions including: Senior Attorney, Law Department; Director of Equal Employment Opportunity Affairs; Director of Facilities Management; Vice President, Electric Operations - Staten Island; and Secretary and Associate General Counsel.

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1 Effective April 2008, I was elected to my current
2 position, Vice President Facilities. As Vice President
3 of Facilities, I am responsible for operating and
4 maintaining over 40 facilities (office buildings and
5 field operations locations/service centers) within the
6 service territories of Con Edison and Orange and
7 Rockland Utilities, Inc. ("O&R") including: planning and
8 project management; engineering services; environment,
9 health and safety; and office services. I earned a
10 Juris Doctorate from Columbia University in 1978 and a
11 Bachelor's Degree in Classics from Bowdoin College in
12 1975.

13 **(Cureton)** I have been employed by Con Edison since
14 1991. I was hired by Con Edison as a Management Intern.
15 After completing the intern program, I held a variety
16 of management positions of increasing responsibility in
17 Electric Operations, including Operating Supervisor
18 Splicing, Operating Supervisor Emergency Operations,
19 Feeder Control Representative Brooklyn/Queens, Manager
20 of Brooklyn/Queens Field Operations, Section Manager
21 Brooklyn/Queens Underground West, Department Manager
22 Distribution Engineering Secondary System Analysis. In
23 December 2008, I was promoted to the position of
24 General Manager Brooklyn/Queens Overhead and Services.
25 In November 2011, I was assigned the position of

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1 General Manager, Transportation Operations. I am
2 responsible for all the garages throughout Con Edison
3 and O&R as well as Automotive Engineering and Fleet
4 Administration. I received a Bachelor of Science
5 degree in Marine Engineering from SUNY Maritime College
6 in 1991. In 1998, I received a Master of Science
7 degree in Energy Management from the New York Institute
8 of Technology.

9 **(Walsh)** I have been employed by Con Edison since 1980.

10 I have served as Director of Information Technology
11 Planning in the Company's Information Resources
12 Department for the past 12 years. Prior to my current
13 position, I was Manager of Network Systems, Technical
14 Specialist, and MVS System Programmer. My
15 responsibilities include establishing hardware and
16 software standards for the computing, networking and
17 communications environments. In addition, my area is
18 responsible for defining and implementing cyber
19 security policy for the Company. Prior to that, I
20 managed the Network Systems group. I received a
21 Bachelor of Science in Economics from Albany University
22 in 1980.

23 **(Alexander)** I am employed as the Medical Director of
24 Occupational Health. I have been employed by Con
25 Edison since April 2011. I am responsible for

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1 overseeing all clinical operations and programs
2 addressing employee health, wellness and productivity.
3 I am also responsible for policies pertaining to
4 Occupational Health processes and sick absenteeism.
5 I received a Bachelor of Science degree from Florida
6 State University and a Medical Degree from the
7 University of Florida, College of Medicine. Prior to
8 Con Edison I worked as the Vice President and Chief
9 Medical Officer at Angel Body Products and Corporate
10 Medical Director and Chief Medical Review Officer at
11 Sterling InfoSystems. I also worked at the
12 Metropolitan Transportation Authority for many years as
13 the Assistant Vice President of Occupational Health
14 Services. I am a member of the American College of
15 Occupational and Environmental Medicine and serve on
16 the Executive board of New York State Occupational and
17 Environmental Medicine. I am also a member of the
18 National Medical Association.

19 **(Campanella)** I am the Director of Security Services.
20 I graduated from Clarkson University, Potsdam, New York
21 with a Bachelor of Science degree in Accounting in 1978
22 and from New York Law School, New York, New York, with
23 a Juris Doctor degree in 1989. I am an active member
24 of the Security Committees for both the American Gas
25 Association and the Edison Electric Institute. I am

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1 also a member of the Domestic Security Alliance
2 Council. Prior to Con Edison, I was a Special Agent of
3 the Federal Bureau of Investigation ("FBI") from 1980
4 to 2008. Among other duties, I served as the Assistant
5 Special Agent in Charge ("ASAC") in the Washington
6 Field Office, a position that included oversight of the
7 Security Branch. As the ASAC, I was responsible for
8 the protection of the Attorney General of the United
9 States and the Director of the FBI, the physical
10 security of the properties within the Washington Field
11 Office territory, and the investigative services
12 related to personnel security, including polygraphs,
13 background investigations, and clearances. Since
14 September 2008, I have been the Director of Security
15 Services for Con Edison. As the Director of Security
16 Services, I formulate and direct security policies,
17 practices and procedures for the Company. I direct the
18 investigative and security related activities of
19 twenty-eight investigators and staff; act as a liaison
20 with Federal, State and local law enforcement agencies;
21 advise senior executives on security-related matters;
22 direct physical security surveys of Company facilities;
23 and make and implement security recommendations
24 throughout the Company. In addition, I develop
25 specifications and monitor the performance of contract

1 guard services and implement training requirements for
2 Company security personnel.

3 Q. Have any of you previously submitted testimony in a
4 proceeding before the New York State Public Service
5 Commission ("PSC" or the "Commission")?

6 A. Panel members Smith, Walsh, and Campanella testified in
7 Case 09-E-0428, Case 09-G-0795, and Case 09-S-0794.

8 **II. PURPOSE OF TESTIMONY**

9 Q. Before beginning to explain the various projects and
10 programs, please explain the purpose of the testimony
11 and the relationship of Shared Services efforts to the
12 Company as a whole.

13 A. Shared Services perform a number of different functions
14 that support Company operations. They include
15 logistical support activities; business software
16 development; maintaining and improving computing,
17 communications, and the supply chain infrastructure
18 throughout the Company; hiring and training employees;
19 and maintaining all of the Company's properties. All
20 of the projects and programs discussed in our testimony
21 are common to the Company's electric, gas and/or steam
22 businesses, and, in some cases, to O&R. The Company
23 Accounting Panel provides for the allocated share of
24 these costs to Con Edison's electric, gas and/or steam
25 service.

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1 Q. Please summarize the Panel's testimony.

2 A. We describe numerous Shared Services efforts needed to
3 support common programs throughout the Company.

4 Throughout this testimony, we also discuss measures

5 that Shared Services is taking to mitigate costs now,

6 in the 12-month period ending December 31, 2014 ("Rate

7 Year" or "RY1"), and beyond. With respect to operation

8 and Maintenance ("O&M") expenses, in addition to

9 providing projections for the Rate Year, the Company

10 has included forecasted financial information for two

11 annual periods beyond the Rate Year, i.e., the twelve

12 month periods ending December 31 , 2015 and December

13 31, 2016 (which we will refer to as RY2 and RY3,

14 respectively, for ease of reference). As to capital

15 expenditures, the Company has included forecasts for

16 2013 to 2017.

17 **First**, we explain the Company's capital request for

18 general equipment. As demonstrated in our testimony,

19 general equipment is necessary for the Company's day-

20 to-day operations. The Company is forecasting capital

21 expenditures related to general equipment of: \$60.2

22 million in 2013; \$70.0 million in 2014; \$66.1 million

23 in 2015; \$66.0 million in 2016; and \$68.5 million in

24 2017.

1 **Second**, we discuss the current volatility of vehicle
2 fuel prices and project costs for this expense for the
3 Company's fleet in the Rate Year, as overseen by the
4 Company's Central Field Services Department.

5 Additionally, we describe capital projects sponsored by
6 Central Field Services.

7 **Third**, we discuss the major information technology
8 ("IT") related capital investments and two IT O&M
9 expense programs.

10 **Fourth**, we describe the technological upgrades needed
11 in the Occupational Health Department to address the
12 changes in the medical health care field. We describe
13 the Company's analysis of possible solutions for a
14 fully integrated electronic system and explain the
15 initial costs and potential cost savings associated
16 with a new system. We also discuss three Human
17 Resources capital programs needed to maintain and
18 improve training and development throughout the
19 Company. Regarding Human Resources O&M, we discuss our
20 request for additional Gold Associates and Customer
21 Operations instructors along with strike contingency
22 costs.

23 **Fifth**, we address the need to strengthen the Company's
24 existing security programs by providing for automated

1 electric card access at an additional 13 strategic
2 facilities, the replacement of obsolete Digital Video
3 Recorders ("DVRs") that record the camera activity, the
4 systematic replacement of old/outdated closed circuit
5 television ("CCTV") cameras, and the hiring of two
6 additional technical systems specialists and one
7 technical expert.

8 **Finally**, we explain the need to modernize, upgrade,
9 and improve various equipment, systems and
10 infrastructures associated with the various buildings
11 coming under Facilities' responsibilities. Over the
12 next three years, Facilities is planning to undertake
13 nearly 150 capital projects. We will also discuss
14 various Facilities O&M programs for the Rate Year.

15 Q. How has the Company's response to the cultural barriers
16 identified in the most recent Management Audit affected
17 the way the Shared Services organization operates?

18 A. Shared Services' contributions to the Company's efforts
19 to implement cultural imperatives are demonstrated in
20 many different ways, including the following examples:
21 Enhance Customer and Other External Relationships - the
22 additional Customer Operations Instructors we are
23 proposing will allow the Company to properly prepare
24 the growing need for Customer Service Representatives
25 who can handle customer phone inquiries;

1 Engender Openness, Fairness and Trust - the additional
2 funding proposed for employee training will help
3 prepare the Company's workforce for an ever-changing
4 business landscape; and

5 Cost Management Consciousness - throughout our
6 testimony, we discuss our efforts to mitigate costs and
7 operate more efficiently.

8 Q. Do the projects and programs submitted by the Panel
9 include any costs for escalation?

10 A. Yes. We applied general escalation rates and wage
11 increase factors that we received from the Company
12 Accounting Panel. Please refer to the Accounting Panel
13 testimony for information on how these rates and
14 factors were developed.

15 **III. GENERAL EQUIPMENT**

16 Q. Please explain the Company's category of capital
17 expenditures known as General Equipment.

18 A. General Equipment represents specific categories of
19 capital equipment that are classified under the Uniform
20 System of Accounts as General Plant. This category is
21 basically all the equipment that is necessary for the
22 day-to-day functioning of the Company. In general,
23 these items have a purchase cost equal to or greater
24 than \$500 and have a life expectancy of more than one

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1 year, as detailed in the Company's Corporate
2 Instruction CI-610-2.

3 Q. Do you have exhibits entitled "Capital-Shared Services-
4 General Equipment" detailing Corporate Instruction CI-
5 610-2 and each category of General Equipment?

6 A. Yes.

7 Q. Were they prepared under your direction and
8 supervision?

9 A. Yes, they were.

10 MARK FOR IDENTIFICATION AS EXHIBIT __ (SSP-1)

11 Q. What are the categories of General Equipment?

12 A. General Equipment consists of nine main categories of
13 capital plant or "tools." Each is commonly referred to
14 as an XM, which is a unique budget reference coding for
15 the Company's General Equipment. The following is a
16 list of the Company's XMs.

17	Office Furniture	(XM-1)
18	Transportation Equipment	(XM-2)
19	Stores Equipment	(XM-3)
20	Shop Equipment	(XM-4)
21	Laboratory Equipment	(XM-5)
22	Tools & Work Equipment	(XM-6)
23	Miscellaneous Equipment	(XM-7)
24	Communication Equipment	(XM-8)
25	Computer Equipment	(XM-10)

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1 Q. Please generally describe the nature of and need for
2 General Equipment.

3 A. General Equipment represents the tools and work
4 equipment needed to keep the Company functioning. It
5 ranges from desks in the office, bucket trucks for
6 overhead operations, store room shelving, electrical
7 test equipment, jack hammers and safety hoists to
8 microwave communication equipment and even the computer
9 used to write this testimony. These "work" tools are
10 necessary and critical for employees to perform their
11 job functions. Normal replacement for use and wear of
12 this equipment or changing operations requirements
13 create a constant replacement demand to provide the
14 tools for Company employees to complete their tasks in
15 a safe and efficient manner.

16 Q. Can you provide any specific examples that demonstrate
17 the role of General Equipment in the Company's day-to-
18 day operations?

19 A. Yes. The following example illustrates the vital role
20 General Equipment plays and how it is interwoven into
21 the Company's daily operations from the standpoints of
22 reliability, efficiency and safety, and is apparent
23 when visiting a typical work site. An underground
24 splicing crew requires, in addition to splicing
25 equipment such as a propane torch, a van (XM-2) to

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1 deploy the crew to the site. A mandatory rescue device
2 (XM-6) is setup for employee safety before entering the
3 structure. A requisite examination of the site with
4 the use of a gas detector (XM-5) tests the atmospheric
5 conditions before proceeding with work. The actual
6 work of splicing the cable requires the mechanic to use
7 various cutter and crimper equipment (XM-6) to install
8 the new section of cable. The work is recorded into
9 the work management system through a personal computer
10 (XM-10) and then the crew will be routed to the next
11 location through the use of a radio (XM-8) mounted in
12 their van (XM-2).

13 Q. Do you have exhibits that explain each category of
14 General Equipment in more detail?

15 A. Yes. This information is included as part of Exhibit
16 __ (SSP-1).

17 Q. Please discuss the manner in which General Equipment
18 requirements are developed.

19 A. To begin, the Company has identified organizations that
20 act as Control Agencies to meet corporate standards for
21 quality and compatibility for this equipment and also
22 provide for economies of scale in the purchase of this
23 capital equipment. The Control Agencies are:

- 24 • Central Field Services ("CFS") Automotive
25 Engineering/Fleet Administration

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- 1 o Vehicles (XM-2).
 - 2 • Equipment - Central Field Services
 - 3 o Stores Equipment (XM-3);
 - 4 o Laboratory Equipment (XM-5); and
 - 5 o Tools & Work (XM6).
 - 6 • Equipment - Information Resources
 - 7 o Communication Equipment (XM-8); and
 - 8 o Computer Equipment (XM-10).
 - 9 • Equipment - Facilities Management
 - 10 o Office Furniture (XM-1): and
 - 11 o Safety & Miscellaneous (XM-7).
 - 12 • Equipment - Maintenance and Construction - Van Nest
 - 13 Shops
 - 14 o Shop Equipment (XM-4).
- 15 Q. Please explain how the General Equipment budgeting
- 16 process works.
- 17 A. On an annual basis, each Control Agency develops
- 18 projected costs for each XM category for which they are
- 19 responsible. The projected spending levels are based
- 20 on the Company's historical needs for such equipment
- 21 and the budget review process in which each
- 22 organization forecasts their capital equipment needs
- 23 for five years. A price list is provided to user

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1 organizations to assist them in developing their
2 General Equipment requirements.

3 The user organizations notify their respective Control
4 Agencies of their expected needs by XM category over
5 the next five year period. The appropriate Control
6 Agencies review the submissions and compile all the
7 requests. A final budget is approved for a one-year
8 period each November for each XM category. Other
9 operating needs may cause variations in the general
10 equipment expenditures as well.

11 Q. Once the list is finalized, what do the Control
12 Agencies do?

13 A. Each Control Agency issues purchase requisitions for
14 its responsible category of General Equipment
15 throughout the year. The Control Agency function is to
16 standardize the equipment purchased to maintain
17 quality, reliability and the safety of the employees
18 using the equipment. This function also involves the
19 aggregation of all General Equipment purchases to allow
20 for the most competitive pricing. For example, CFS
21 provides for a listing of transportation equipment that
22 can be purchased such as cars, trucks, and mini-vans.

23 Q. Does the Control Agency also have a monitoring function
24 for the XM budget under its responsibility?

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1 A. Yes. The Control Agency monitors commitments and
2 expenditures to avoid exceeding the authorization
3 levels established in the approved XM Budget for each
4 user organization.

5 Q. How much does the Company plan on spending for General
6 Equipment in 2012 and 2013?

7 A. In 2012, we spent approximately \$59 million for General
8 Equipment. In 2013 we project spending \$60.2 million
9 for General Equipment.

10 Q. What impact did Superstorm Sandy have on the Company's
11 General Equipment?

12 A. While Superstorm Sandy caused damage to several
13 categories of General Equipment, the most significant
14 damage occurred to Company vehicles. Approximately 100
15 vehicles and pieces of equipment were damaged as a
16 result of the storm. The Company is in the process of
17 filing claims with its insurance carriers and will also
18 seek other sources for reimbursement of these costs.

19 Q. Within each category of equipment, are there any
20 changes between the 2012 projected spending and the
21 2013 forecast?

22 A. Yes. In 2013, we project an increase in Transportation
23 Equipment (XM-2) for the replacement of cranes and
24 heavy hauling vehicles for CFS. This vehicle equipment
25 will be coming to the end of its service life,

1 resulting in a spike in budgeted expenditures in 2013.
2 While the Company strives to levelize replacement of
3 transportation vehicles that have reached the end of
4 their useful economic life, highly specialized
5 equipment, such as cranes, are one-time purchases that
6 are incremental to transportation vehicle purchases in
7 the five-year capital plan. These specialized machines
8 can cost between \$500,000 and \$1.5 million.
9 Replacement of this equipment is also based on an
10 evaluation of the specific nature of upcoming
11 construction projects.

12 Q. Are there any other significant increases in equipment
13 in 2013?

14 A. Yes. We also project an increase in Computer Equipment
15 (XM-10) for three major initiatives. First, we will be
16 performing a technology refresh on server storage
17 arrays that have reached end of supported life. These
18 arrays are used to host the Company's electronic
19 information including databases, emails and files.
20 Second, we will be replacing our server backup
21 technology with a new solution that can provide
22 encryption for all electronic data as it is backed up.
23 This will improve our protection of sensitive Company,
24 customer and employee information. Third, we will be
25 increasing network capacity to our server farms needed

1 to provide reliable availability and performance to
2 business systems and information.

3 Q. What is the Company requesting for General Equipment
4 over the next four years, starting in 2014?

5 A. In 2014, we project to expend \$70.0 million, followed
6 by \$66.1 million in 2015, \$66.0 million in 2016 and
7 \$68.5 million in 2017.

8 Q. Why is the projected spending in these years higher
9 than 2013?

10 A. The projected spending is higher in several XM
11 categories as explained below.

12 • There is approximately a \$3.3 million increase
13 attributed to Communication Equipment (XM-8) and
14 Computer Equipment (XM-10) in 2014.

15 For XM-10, there is a \$2.5 million increase for the
16 purchase and installation of a new server farm, which
17 includes the server, storage and network components.
18 The reasons a new server is needed are described later
19 in our testimony. This project will include:

- 20 • Servers requiring hardware technology refresh;
21 • Those not currently in an enterprise server farm
22 today; and
23 • Servers from 4 Irving Place data centers which
24 will be decommissioned.

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1 For Communication Equipment (XM-8), there is a \$0.8
2 million increase. This reflects in 2014 the Company's
3 plans to deploy Voice over IP technology to substations
4 to enable point to point voice communications to the
5 control centers. In addition, the Company will
6 complete the implementation of Session Initialization
7 Protocol technology to connect the Company's private
8 phone network to the public telephone network using a
9 computer network similar to the Internet.

- 10 • There is approximately a \$5.5 million increase
11 attributed to Stores Equipment (XM-3), Laboratory
12 Equipment (XM-5), and Tools and Work Equipment (XM-6)
13 from 2014 to 2017. Beginning 2014, we need to start
14 replacing equipment that has exceeded its normal life
15 expectancy and is resulting in higher maintenance costs
16 for the Company. As discussed later in our testimony,
17 these spending levels are needed for equipment
18 replacement that has been deferred over the last few
19 years.

- 20 • There is approximately a \$1.1 million increase
21 attributed to Transportation Equipment (XM-2) in 2014.
22 This is attributable to spending reductions, over
23 multiple years, on vehicle equipment purchases.
24 Increased spending levels are needed for equipment

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1 replacement that has been deferred over the last few
2 years.

3 Q. Have you prepared an exhibit entitled "General
4 Equipment Trends" detailing historic and projected
5 expenditures for XM General Equipment?

6 A. Yes.

7 Q. Was this exhibit prepared under your direction and
8 supervision?

9 A. Yes, it was.

10 MARK FOR IDENTIFICATION AS EXHIBIT __ (SSP-2)

11 Q. Can you now please explain for each category, the type
12 of equipment purchased, the amounts expended in recent
13 years and any mitigation steps taken to control the
14 expenditures?

15 A. Yes, we will.

16 Q. Please describe the categories of equipment known as
17 Stores Equipment (XM-3), Laboratory Equipment (XM-5),
18 and Tools and Work Equipment (XM-6).

19 A. Central Field Services Capital Equipment Group is the
20 Control Agency for XM-3, XM-5, and XM-6.

21 The XM-3 Budget category is designated for the
22 replacement of warehouse and material handling
23 equipment, including storage bins, pallet racks, pipe
24 racks, shelving, and strapping/wrapping equipment.

25 This equipment is used in the central warehouse/

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1 distribution facility and regional storerooms to
2 operate and maintain materials and supplies for
3 electric, gas and steam distribution equipment. The
4 Company maintains a central warehouse to provide
5 materials needed in the routine maintenance and
6 construction of the Company's system, including the
7 electric infrastructure. It also operates
8 approximately 15 smaller satellite warehouses at
9 various major workout locations. Some of the key
10 warehouses are located at Van Nest (Bronx), College
11 Point Boulevard (Queens), Third Avenue Yard (Brooklyn),
12 and Neptune Avenue (Brooklyn). All these warehouse
13 facilities are linked via work-processes and computer
14 systems to facilitate the effective use of inventory
15 and critical spare components. Materials are moved to
16 and from the main warehouse as well as to field
17 locations, such as specific street jobs or other
18 electric locations where the material is needed such as
19 a substation. The equipment in the XM-3 budget is
20 necessary to maintain proper storage conditions and
21 prepare items for secure shipment to their ultimate
22 use.

23 Q. Please continue.

24 A. The XM-5 Budget category is designated for the
25 replacement of laboratory testing equipment, which

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1 includes volt meters, atmospheric testers, recorders,
2 and pressure gauges. These devices are used by field
3 forces to test and evaluate gas, electric and steam
4 systems components.

5 The XM-6 Budget category is designated for the
6 replacement of tools and equipment, including portable
7 pumps, chain saws, and hydraulic jacks, pneumatic
8 hammers, parts washers, and tire repair equipment.
9 These devices are used by field forces to assist in the
10 installation, repair and maintenance of gas, electric
11 and steam systems components, as well as, for the
12 repair of fleet vehicles. Additional information
13 describing the various tools and instruments is
14 included in Exhibit __ (SSP-1).

15 Q. What is the procedure or process associated with the
16 replacement requirements for XM-3, XM-5 and XM-6
17 category?

18 A. Items covered under the XM-3, XM-5 and XM-6 categories
19 are typically replaced when they are deemed beyond
20 economical repair or in certain instances if a
21 procedure or specification is changed. Procedure
22 and/or specification changes are initiated by the
23 operating department due to operating or work practice
24 changes and can be related to new tasks, or
25 improvements in safety, quality or productivity.

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1 Q. Can you provide some examples of these changes?

2 A. Yes. Two examples are the replacement of retrieval
3 devices and atmospheric gas detectors. The retrieval
4 devices included in the XM-6 budget are used as rescue
5 and material handling apparatus for our field crews
6 that work in electrical enclosed spaces. The units are
7 positioned over manholes and vaults and are used as
8 lifting devices. The existing devices were improved
9 based upon feedback from the field. Corporate EH&S and
10 engineering improved the device by making specification
11 changes to the unit. The new devices offer improved
12 ergonomics and durability over the present units.
13 The atmospheric gas detectors included in the XM-5
14 budget are used by field mechanics in many
15 organizations throughout the Company to monitor the
16 atmospheric conditions that they work in, typically
17 underground vaults and manholes. In the past, when the
18 electro-chemical sensors in the older detectors failed,
19 they did not provide an indicator to the operator that
20 it had stopped working. Corporate EH&S addressed this
21 concern and newer technology was identified to replace
22 the existing instruments. The new devices not only
23 have sensors that provide an indicator when it fails,
24 they also have the ability to test for additional types
25 of gases, such as hydrogen sulfide.

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1 Q. Please explain the ramifications if the Company is
2 unable to acquire and have available the replacement
3 tools and equipment in these categories.

4 A. The current inventory of tools and equipment would need
5 to be maintained beyond their useful life. This would
6 result in increased maintenance and repair costs on
7 older tools and in potential delays to the operating
8 organizations. In addition, if the Company is unable
9 to take advantage of new tool and equipment
10 technologies, such as noise reduction and ergonomics,
11 this could potentially have an adverse affect on
12 employee safety.

13 Q. Do the projected spending levels included in this case
14 reflect any efforts by the Company to minimize
15 expenditures for these tools and equipment?

16 A. Yes. Tools and equipment are evaluated before being
17 replaced; only those that are deemed un-repairable or
18 uneconomic to repair are replaced, except when the
19 equipment is purchased due to operating or work
20 practice changes requiring a new type of device. In
21 addition, the majority of contracts utilized to
22 purchase new tools and equipment are competitively bid
23 and, where possible, orders are consolidated to take
24 advantage of volume discounts.

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1 Q. Can you also provide the actual historic spending
2 levels for these categories?

3 A. Yes, this information is included as part of Exhibit __
4 (SSP-2).

5 Q. What is the projected spending for 2013 for these
6 categories (XM-3, XM-5 and XM-6)?

7 A. We project to spend \$104,500 in XM-3, \$4.3 million in
8 XM-5, and \$2.8 million in XM-6 in 2013.

9 Q. What is the projected spending in the years 2014 to
10 2017?

11 A. In each of the years 2014 through 2017, we project our
12 spending to increase to \$417,000 in XM-3, \$5,634,000 in
13 XM-5 and \$6,703,000 in XM-6.

14 Q. Why is the projected spending level increasing for each
15 of these categories from 2013 levels?

16 A. Beginning in 2014, we will need to start replacing
17 equipment that has exceeded its normal life expectancy
18 and is resulting in higher maintenance costs for the
19 Company. This includes items, such as, but not
20 limited to wrapping and banding machines for XM-3, new
21 model of gas detectors to replace our current fleet of
22 Drager Miniwarns which are no longer produced for XM-5,
23 and pumps, jackhammers, drills, generators, and various
24 cutting tools for XM-6. These levels are needed for

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1 equipment replacement that has been deferred over the
2 past few years.

3 Q. Please discuss the next category of XM equipment.

4 A. The next category is items covered in General Equipment
5 XM-2, which is for Vehicles and Equipment. The XM-2
6 category provides for the purchase of mobile equipment,
7 such as trucks, cars, cranes, construction equipment
8 and forklifts used throughout our operations. As noted
9 above, the Control Agent for this equipment is CFS
10 Automotive Engineering/Fleet Administration group.
11 Under this category of expenditures, the Company owns
12 approximately 4,000 over-the-road self-propelled
13 vehicles, including passenger vehicles, bucket trucks
14 and tractor-trailers. Factoring in other pieces of
15 mobile equipment, like backhoes, aerial devices,
16 forklifts and trailers used to move equipment and
17 materials, the Company owns close to 6,100 items of
18 transportation equipment. This figure includes
19 highway, non-highway powered equipment, trailers and
20 mounted equipment for tracking purposes. Exhibit __
21 (SSP-2) sets forth historical and projected XM-2
22 expenditures related to the replacement of existing
23 equipment.

24 Q. Please describe the manner in which General Equipment
25 XM-2 "Transportation Equipment" is budgeted.

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1 A. The Company has a pre-determined methodology for
2 selecting vehicles and mobile equipment (based on age,
3 maintenance, and reliability). This methodology is
4 based on the equivalent, uniform, annual cost ("EUAC")
5 method. The methodology combines factors related to
6 capital cost, residual value and cost of maintenance
7 over the life of a representative asset to determine an
8 appropriate point at which it makes financial sense to
9 replace such asset. The Company's Transportation
10 department maintains a database of these assets and
11 their associated operating costs. It reviews the
12 information annually, in addition to output from the
13 EUAC model, as a starting point for its vehicle
14 replacement decisions. The Company also employs its
15 judgment and experience, as well as case-by-case
16 evaluations of certain assets, in making its
17 replacement decisions.

18 Q. Can you please explain in more detail the methodology
19 employed for that review?

20 A. The Company uses historical, actual and expected
21 maintenance data, as well as cost-of-money
22 considerations, to determine the point at which it is
23 most economical to replace an asset rather than endure
24 increasing maintenance costs and reduced reliability
25 that would adversely impact our ability to respond to

1 the maintenance of the T&D system. The EUAC model
2 reviews the change in maintenance costs as the asset
3 ages and, more specifically, it looks at the rate-of-
4 change for maintenance costs. This optimizes the
5 Company's overall cost to own and maintain these
6 assets. The EUAC model identifies the optimum time to
7 replace a deteriorating asset.

8 Q. How is that analysis used to budget from year to year?

9 A. The Company maintains a table of various asset-types
10 and their ideal/economic replacement age. This is a
11 starting point and is further refined by looking at the
12 specific assets chosen as candidates for replacement.
13 Based on that review, the Company may either retain an
14 asset that has performed better than its peer group or
15 accelerate the replacement of an asset that is
16 performing poorly. For instance, the current expected
17 life-cycle analysis for vacuum-trucks indicates it is
18 advantageous to replace these types of assets roughly
19 every eight years. That analysis, as well as those
20 performed for other classes of assets, is based on
21 nearly 30 years of accumulated maintenance data from
22 the Company's Vehicle Management System.

23 The Company considers age, maintenance, history, usage,
24 and technology advances in considering replacements.

25 Therefore, a vacuum truck in Manhattan used seven days

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1 a week for three shifts could be replaced before an
2 older vehicle in Westchester that has two shifts of
3 usage in a typical week because of higher
4 usage/mileage. The final selection is made jointly
5 between CFS and the operating areas.

6 Q. Is there any other analysis that is performed to
7 determine which vehicles should be replaced?

8 A. Yes. The factors identified above are incorporated
9 into a prioritization model for XM-2 spending. In the
10 prioritization model, the vehicles that are identified
11 as "beyond life-cycle" are rated using Transportation
12 criteria (which includes vehicle life cycle age,
13 reliability, and cost impacts) and are then prioritized
14 based on this criteria:

15 o The highest priority are heavy-duty vehicles that
16 are well-past due for replacement and/or equipment
17 that would likely be condemned by the local repair
18 facility if a major component were to fail. Loss
19 of this equipment would result in significant
20 incremental maintenance costs and lost productive
21 field time.

22 o The next priority includes medium and light-duty
23 trucks that are somewhat past-due for replacement
24 and would impact cost and productivity, but to a
25 lesser extent.

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1 o And finally, passenger vehicles that are past
2 their normal replacement cycle represent the
3 lowest priority.

4 Q. Can you provide the actual historic spending levels for
5 vehicles and mobile equipment?

6 A. Yes, this information is included as part of Exhibit ___
7 (SSP-2).

8 Q. What would be the ramifications of not meeting the
9 purchase requirements in the XM-2 category?

10 A. The cost to operate mobile equipment beyond its
11 economic life quickly compounds if not replaced at an
12 optimal point in its life-cycle. Over time we have
13 found that the cost to maintain this equipment can rise
14 substantially in a short period of time if the
15 replacement of equipment is deferred or delayed (based
16 on the EUAC model). Reduced spending on replacement
17 equipment would result in higher polluting, older and
18 less reliable mobile equipment being kept in service.
19 Vehicle availability may decrease and in some cases
20 equipment would age beyond our ability to purchase
21 replacement parts. The consequence of this would be
22 the introduction of an adverse effect on operating
23 personnel's ability to respond to emergencies and
24 construction of needed electric, gas and steam
25 projects. The Company cannot operate vehicles, such as

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1 red wagons, flush trucks, or cranes that are not road
2 worthy or capable of performing their functions. If
3 adequate numbers of vehicles are not available to
4 respond to system equipment failures, it would likely
5 adversely affect the time to restore service to
6 customers and thereby decrease the Company's ability to
7 meet Commission-established service targets under the
8 current Reliability Performance Mechanisms.
9 Inadequate vehicle availability would also inhibit the
10 Company's response to major storms. Further,
11 inadequate vehicle availability could jeopardize the
12 Company's ability to maintain a network in service when
13 feeder contingencies occur during summer heat waves.
14 Some equipment, were it to fail, could also put the
15 employee operating the equipment at risk. While some
16 vehicles can feasibly be maintained longer than the
17 life-cycle would suggest with "average" performance,
18 some critical equipment can begin to suffer structural
19 failures due to age. The catastrophic mechanical
20 failure of bucket-trucks, cable-pulling equipment,
21 heavy trucks and cranes, for example, could result in
22 injuries to equipment operators and the public.

23 Q. Do the proposed spending levels include any cost
24 reduction efforts?

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1 A. Yes, the Company's Transportation department
2 periodically evaluates the life-cycle model described
3 earlier. In some cases, Transportation employees have
4 been able to work with manufacturers and engineers to
5 improve maintenance designs and remove common causes of
6 failures. For instance, in 2011, Transportation's
7 engineers improved upon the design of its truck mounted
8 cable pulling apparatus. The improved design
9 incorporated stronger and more reliable components, as
10 well as reduced the initial procurement cost by \$10,000
11 per vehicle. We expect to see reduced maintenance
12 costs by eliminating known failure points. In
13 addition, by competitively bidding large contracts to
14 multiple vendors and negotiating volume discounts with
15 the major Original Equipment Manufacturers, the
16 department leverages its buying power, reducing the up-
17 front cost of the equipment. The department also
18 employs highly-skilled mechanics, armed with
19 appropriate technology to effectively diagnose and
20 repair equipment. We believe that these factors reduce
21 initial cost, cost-to-maintain and MTBF (mean-time
22 between failures), all of which translate into being
23 able to prolong the life of our assets and/or maximize
24 the effect of our capital replacement programs.
25 Furthermore, in 2012, fleet reductions amounted to 181

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1 vehicles (that will not be replaced) which is
2 consistent with the Liberty Audit Item #51
3 recommendation.

4 Q. What effect does prolonging the expected life of these
5 assets have on capital spending?

6 A. Prolonging the life of these capital assets has allowed
7 the Company to maintain or reduce projected spending
8 levels in this category. Transportation continually
9 looks for ways to extend the life or defer the
10 replacement of vehicles and equipment (where
11 practical). However, doing so (in some cases) may have
12 an adverse effect on associated vehicle maintenance
13 costs over the long-run. For example, due to the
14 complexity, the number of components and the
15 environment that a vacuum-truck operates in, extending
16 the life of this type of truck will likely result in an
17 increase in operating and maintenance costs over and
18 above its normal life.

19 Q. Are there any factors that increase the initial
20 purchase cost of Transportation assets?

21 A. Yes, the EPA requires diesel-emission engine control
22 equipment for new vehicles. In previous years, these
23 diesel emissions components added approximately \$13,500
24 to the purchase price of every diesel vehicle. For
25 2013, new on-highway diesel engine regulations call for

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1 the addition of On-Board-Diagnostics systems adding
2 (approximately) an additional \$1,000 per vehicle. The
3 Company annually purchases about 150 diesel vehicles
4 that are affected by these regulations, which have
5 added a total cost of approximately \$2 million
6 annually. In addition, greenhouse gas and fuel-
7 efficiency standards are scheduled to take effect in
8 2014 and 2017 and, as a result, the additional cost of
9 meeting these regulatory standards is not known at this
10 time.

11 Q. What is the projected spending from 2013 to 2017 for
12 Transportation Equipment XM-2?

13 A. We project to spend \$35.4 million in 2013, \$36.4
14 million in 2014, \$37.9 million in 2015, \$37.9 million
15 in 2016, and \$37.9 million in 2017.

16 Q. Please continue.

17 A. The next category is for items covered in General
18 Equipment XM-1 "Office Furniture" and XM-7
19 "Miscellaneous Equipment." The XM-1 budget category
20 represents the portion of the Capital Budget devoted to
21 the purchase of general office furniture, business
22 machines, modular office partitions, floor carpeting
23 and window air conditioners. The XM-7 budget category
24 represents the Company's miscellaneous equipment, such
25 as cafeteria and kitchen equipment, safety and training

1 equipment, fire protection, audio visual and
2 photographic equipment which includes security cameras
3 and recorders, as well as sign and advertising
4 displays.

5 Q. Please explain the ramifications if the Company is
6 unable to acquire the needed equipment in these two
7 categories.

8 A. Our work forces would be hindered from meeting their
9 objectives in an efficient and safe manner. For
10 example, certain employees, due to their medical
11 conditions, require ergonomic ("ERGO") furniture to be
12 able to perform their duties. Also included in the XM-
13 7 equipment category is the safety lifting devices
14 which allow employees who are overcome in confined
15 space to be lifted out of such spaces by fellow
16 employees from above. Self Contained Breathing
17 Apparatus ("SCBA") and Respirators with Escape Bottles
18 for entry by employees in work areas where the
19 atmosphere is suspect in supporting human life (e.g.,
20 underground structures and confined spaces) are part of
21 the XM-7 budget. Other XM-7 equipment includes ice
22 machines at work out locations to provide ice to keep
23 crews with cool drinking water in the summer and
24 portable respirator mask fit testing devices to test
25 for leaks when conditions require employees to wear

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1 respirators. Other critical needs include the
2 replacement of broken or inoperable security cameras
3 and recorders at workout locations and sub-stations.

4 Q. What items have historically been purchased in XM-1?

5 A. Furniture typically comprised of 40% modular furniture,
6 24% chairs, 12% file cabinets, 12% for ERGO chairs, 6%
7 for tables, 3% for window air conditioners and 3%
8 miscellaneous furniture. We project this mix to
9 generally remain constant for both 2012 and 2013.

10 Q. How much have you previously expended and how much do
11 you plan to spend from 2013 to 2017 for furniture?

12 A. Over the period 2008 to 2011, we have spent, on
13 average, \$1.1 million for the replacement of furniture.
14 We expect this spending level to decrease from 2013 to
15 2017 to approximately \$850,000 per year, as a result of
16 restacking and open office space initiatives at workout
17 locations which have decreased the need for furniture.
18 In addition, the Company re-uses furniture following
19 office renovations to replace worn out furniture as a
20 cost mitigation effort.

21 Q. Please describe other cost reduction efforts by the
22 Company in the XM-1 category of costs?

23 A. Tools and office equipment are evaluated before being
24 replaced and only those that are deemed un-repairable
25 are replaced. As a general practice, Facilities

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1 recycles desks, chairs and office partitions whenever
2 possible. In addition, the majority of contracts
3 utilized to purchase new tools and equipment are
4 competitively bid and where possible orders are
5 consolidated to take advantage of volume discounts.

6 Q. What is the mix of equipment purchased under XM-7?

7 A. In 2011 we purchased \$0.9 million of miscellaneous
8 equipment, comprised of 55% Audio and video, 20%
9 Security cameras/card access controls, 15% training
10 equipment and 10% Safety equipment. We expect this mix
11 to change in 2012 and 2013 with the purchase of
12 additional security cameras and access control
13 equipment.

14 Q. How much have you previously expended and plan to spend
15 from 2013 to 2017 for the XM-7 category?

16 A. Over the period 2008 to 2011, we have spent, on
17 average, \$1.8 million for the replacement of
18 miscellaneous equipment. We expect this spending level
19 to decrease from 2013 to 2017 to approximately \$900,000
20 per year. This decrease is mostly attributable to
21 advances in technology which require less audio/visual
22 equipment purchases under this category.

23 Q. Please describe the category of equipment known as XM-
24 4.

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1 A. This is the Shop Equipment category. The equipment
2 includes floor grinders, lathes, milling machines,
3 welding equipment, drill presses, jib cranes and
4 hoists, and specialized equipment to repair network
5 transformers and switch gear equipment.

6 Q. Please describe how the budget is designed for XM-4
7 equipment and what the basis is for the equipment
8 requirement and use.

9 A. The XM-4 Budget is designated for the replacement of
10 Shop Equipment at the Van Nest Shops Operations
11 Facility, the Transformer Shop in Astoria, and Electric
12 Operations Metering Facility located at Van Dam Street
13 in Long Island City. The equipment requirement is
14 based upon the work load, which includes emergency
15 fabrication of specialized parts. The mentioned
16 facilities support the electric and gas distribution
17 operations, sub-station operations, and steam
18 generating stations. Failing to perform this support
19 work could have an adverse impact on delivery time of
20 repairs and fabricating new parts.

21 Q. What are some of the planned equipment replacement for
22 Van Nest's Shop Operations in 2013 to 2017.

23 A. Some of our major equipment purchases under this
24 category will include a CNC Pipe bender, a MAZAK
25 VariAxis Machine, Faro Arm, and Replacement Flowjet.

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1 Q. Describe the types of equipment purchased in XM-4?

2 A. In 2011 we purchased \$164,000 of equipment comprised of
3 54% Milling Machines, 32% Flow Jet/ Welding and
4 Cutters, 11% saws and 3% Sanders. We expect this mix
5 to continue in the years 2012, 2013, and 2014.

6 Q. How much do you plan to spend from 2013 to 2017 in this
7 category?

8 A. We expect to spend approximately \$334,000 annually
9 from 2013 to 2017.

10 Q. Please describe the categories of equipment known as
11 Communication Equipment (XM-8) and Computer Equipment
12 (XM-10).

13 A. The equipment in XM-8 and XM-10 provide the means for
14 Company employees to communicate and access business
15 systems, including the Customer Information System,
16 Outage Management systems, electric, gas and steam
17 monitoring and control systems as well as financial,
18 Human Resource and legal systems. Information
19 Resources' Operations Support Group is the Control
20 Agency for XM-8 and XM-10. The equipment in XM-8
21 "Communication Equipment" is capital communications
22 equipment, including fiber optic cables, electronic and
23 optical communications protocol components,
24 transmitters, receivers, amplifiers, reflectors,
25 towers, radio telephones, vehicle mounted radios,

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1 walkie-talkies, telephone switches and microwave
2 equipment. The equipment in XM-10 "Computer Equipment"
3 is computer equipment used throughout the Company and
4 includes laptops, desktops, mobile data terminals,
5 servers, storage, UPS devices, mainframes, printers,
6 plotters and LAN/WAN network equipment, called routers
7 and switches.

8 Q. What is the procedure or process associated with the
9 replacement requirements for the XM-8 and XM-10
10 categories?

11 A. Items covered under the computer equipment (XM-10)
12 categories are normally replaced on industry standard
13 practice of five years or as business requirements
14 dictate new technology specifications. Over the past
15 two years, however, through the use of virtualization
16 technology, we have been able to extend the replacement
17 of desktops and laptops to seven to eight years.
18 Communication Equipment (XM-8) has an extended life and
19 is replaced at eight to ten year increments. This
20 equipment is mostly carrier grade communications
21 equipment to support voice and other communication
22 requirements.

23 Q. Please provide a summary of the approximate number of
24 PCs, Servers, and Networks within Con Edison?

25 A. As of December 31, 2012:

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1 - Number of Desktops: 8,876

2 - Number of Laptops: 6,285

3 Number of Servers: 1,582

4 - Number of Networks: 1 Logical Corporate
5 Information IP network and 1 Operations network are
6 used for electric, gas and steam control and SCADA
7 applications.

8 In addition to the network mentioned above, there are
9 control networks that are separated by firewalls.

10 Firewalls are devices that provide security between
11 networks. The control networks are located in our
12 electric, gas and steam control centers. These number
13 approximately 15 and use a combination of Company-owned
14 and public carrier communications circuits to operate.
15 The circuits are used for computer applications, voice
16 services and critical feeder protection and SCADA
17 applications.

18 Q. How many computer devices are purchased on a yearly
19 basis?

20 A. Recently (i.e., in 2011 and 2012), the total number of
21 laptops and desktops has stabilized and purchases are
22 mostly limited to address obsolescence and repairs.
23 The number of computer devices purchased is listed in
24 the chart below. In 2013, we will be replacing a large
25 number of obsolete desktop computers and Mobile Data

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1 Terminals ("MDTs"). However, we do not anticipate any
 2 additional growth in this area in the Rate Year. One
 3 area of growth is expected to occur in the newer tablet
 4 market where field crews can use less expensive and
 5 more functional devices than the traditional MDTs. The
 6 rising number of field devices is based on the need for
 7 mobile dispatch applications to access corporate data
 8 from remote locations. Our mobile operating workforce
 9 requires immediate access to maps and procedures to
 10 perform their jobs wherever their work takes them.

11 Our purchases are identified as:

<u>Category</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
				Projected
14 Desktops	3,678	1,876	1,813	2,000
15 Tablets	0	0	0	1,000
16 Laptops	1,963	1,208	1,200	1,000
17 MDTs	373	0	0	300
18 Total	6,014	3,084	3,013	4,300

19 Q. Please explain the ramifications for the Company if it
 20 is unable to meet its projected needs in the XM-8 and
 21 XM-10 categories?

22 A. In XM-8, failure to perform upgrades and expansion to
 23 the Company's communication systems would result in an
 24 increased failure rate and limit performance and
 25 capacity of communication services affecting systems,

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1 voice communications and feeder protection circuits.
2 Reliable communications systems and distribution
3 automation systems are required to support field
4 restoration activities and the automation of the
5 distribution system to maintain electric, gas and steam
6 services. Con Edison operates a wireless communication
7 system for distribution data services. The system
8 provides above-street radio coverage and is used to
9 minimize outage duration and provide more rapid
10 restoration during system disturbances, like storms and
11 feeder trip-outs due to peak loading and faults. Con
12 Edison operates a single master site wireless
13 communication system for voice service. The system
14 provides on-street radio coverage for Con Edison's
15 operations personnel throughout its 660-square mile
16 service territory. It incorporates a man-down safety
17 feature that alerts control center personnel to
18 substation operators in distress during switching
19 operations on the transmission and distribution
20 substation equipment and is essential to Con Edison's
21 public utility services in both routine and emergency
22 situations. This equipment is essential to provide
23 both system reliability and employee safety.
24 If the needed equipment in the XM-10 category were not
25 available, the Company's ability to provide reliable

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1 access to all Company computing systems would be
2 adversely impacted. This equipment is necessary and
3 essential to the operations, maintenance and expansion
4 of the electric, gas, and steam transmission and
5 distribution systems, and is also an integral part of
6 other infrastructure and business systems used by
7 Customer Operations, Finance and Transportation.

8 Q. Did you provide any exhibits for the XM-8 and XM-10
9 General Equipment request?

10 A. Yes, these are included in Exhibit SSP-1.

11 Q. Do the levels included in these General Equipment
12 categories reflect any cost reduction efforts by the
13 Company?

14 A. Yes.

15 Q. Please explain.

16 A. Computer hardware is purchased in bulk and
17 competitively bid to take advantage of volume discount.
18 Additional policies, technologies and centralized
19 control of the procurement and deployment of computers
20 have resulted in the elimination of recent growth
21 trends. Improved remote access technologies and
22 improved asset management processes have eliminated the
23 need for many employees to have multiple PCs. This has
24 eliminated PC growth trends we experienced in previous
25 years. Purchases are made only to replace obsolete

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1 computers and in some cases these devices will be
2 tablets. In addition, Information Resources has
3 initiated programs to optimize its mainframe costs.
4 One such program leverages IBM hardware and software
5 products against non-IBM vendors suggesting suitable
6 IBM replacement products. Through the usage of
7 monitoring tools, we have discovered duplicate
8 functionality between software products as well as
9 products not being utilized. For products of which
10 there are no suitable IBM replacements, Information
11 Resources has been utilizing contract negotiation best
12 practices from an industry consulting expert, Gartner
13 Group, for price and duration of contracts. In
14 addition, through performance tuning, Information
15 Resources has been attempting to improve the run time
16 efficiencies of several of the largest production batch
17 jobs. Con Edison has instituted the use of virtual
18 server and Storage Area Network ("SAN") technology,
19 which allows more efficient use of computer hardware
20 and reduces costs.

21 Virtualization of servers allows multiple logical
22 servers to reside on a single physical server and
23 reduce unused computer cycles. We are continuing the
24 server virtualization program and during the past year
25 surpassed the 50% virtualization rate for all servers.

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1 This has reduced the need for over 1000 physical
2 servers plus the costs of building two new server farms
3 to host them. This also improves disaster recovery and
4 reduces the power and cooling necessary for physical
5 servers. Cost savings are realized by avoiding the
6 need to acquire as many physical servers and house
7 those servers in server farms with the appropriate
8 cooling and power capacity. Each virtual server saves
9 approximately \$7,000 in avoided capital costs.

10 Q. How are computers used at Con Edison?

11 A. Computers are essential to conducting business at Con
12 Edison and have specifically become critical to
13 business applications. There are over 500 business
14 applications accessed via the Company computers and the
15 number grows each year. E-mail and calendaring
16 functions are essential communication and time
17 management tools for employees. Computers provide
18 access to the information and control of the energy
19 management systems used in control centers and customer
20 billing information is accessed directly from the
21 computers.

22 Q. How much do you plan to spend in 2013 and 2014 for
23 these XM categories?

24 A. In 2013, we expect to spend \$3.0 million and \$12.5
25 million on XM-8 and XM-10, respectively. In 2014, we

1 expect to spend \$3.8 million and \$15.0 million on XM-8
2 and XM-10, respectively.

3 Q. Please describe how Con Edison intends to utilize
4 carrier wireless networks to support its smart grid
5 projects.

6 A. Con Edison has worked with Verizon Wireless to develop
7 a private carrier solution that will allow the Company
8 to securely communicate with smart grid assets such as
9 remote switches and remote metering points using
10 Verizon Wireless' network. This is accomplished by
11 using network addressing that allows the Company to
12 communicate with the remote devices without using the
13 internet. The field devices are connected to Verizon
14 Wireless' network but are not exposed to the internet.
15 Con Edison has established a connection into Verizon
16 Wireless' network that allows it to communicate
17 directly with these devices. This solution provides a
18 cost effective means of supporting remote smart grid
19 applications in a secure manner. The alternative would
20 have been for Con Edison to invest capital in building
21 out its own private communications system to connect to
22 these remote devices.

23 **IV. CENTRAL FIELD SERVICES**

24 Q. Please explain the services CFS provides.

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1 A. CFS is a support organization made up of three major
2 groups: (1)Stores Operations, which operates and
3 manages a central warehouse/distribution facility and
4 regional storerooms that provide materials and supplies
5 for electric, gas and steam distribution equipment; (2)
6 Transportation Operations, which provides maintenance
7 and repairs to the corporate fleet and manages the
8 fleet vehicle replacement program; and (3) Astoria
9 Operations, which provides crane and rigging services,
10 tanker support, technical services and material
11 delivery service Company-wide. CFS also provides
12 logistics and support services during contingencies and
13 other emergencies and manages and operates a hazardous
14 waste storage facility in Astoria.

15 **Vehicle Fuel**

16 Q. Please explain the recent history associated with the
17 Company's vehicle fuel expenses.

18 A. Company vehicle fuel includes both gasoline and
19 biodiesel fuel. In 2010, the Company expended \$10.9
20 million for 3.53 million gallons of vehicle fuel used
21 to run the Company's fleet vehicles. In 2011, the
22 Company expended \$13.7 million for 3.5 million gallons
23 of fuel for the fleet. In 2010 and 2011 both gasoline
24 and biodiesel fuel experienced significant variations
25 in pricing. During 2011 alone, gasoline ranged from a

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1 low of \$3.231/gallon to a high of \$4.035/gallon.

2 Similarly, biodiesel fuel ranged from a low of

3 \$3.460/gallon to a high of \$4.185/gallon.

4 Q. Does Con Edison see any pattern to these costs?

5 A. While there has been significant volatility in recent

6 years, the overall trend has been increasing prices

7 over the last couple of decades. With the exception of

8 2009 where prices were lower, the Company has seen

9 price-per-gallon increases annually from 2003 through

10 the present.

11 Q. Can you please explain some of the drivers of vehicle
12 fuel prices seen by the Company?

13 A. Some of the drivers causing increased prices include
14 world events, market forces and, to a lesser extent,
15 mandated reformulation of fuels for certain markets.

16 Previous U.S. EPA enacted requirements have mandated

17 the use of ultra-low sulfur diesel fuel ("ULSD") that

18 has increased the cost of the fuel. Additionally, the

19 Department of Energy ("DOE") regulates the fleets of

20 "fuel providers" and we are obliged to use an

21 increasing portion of alternate or renewable fuels

22 annually. The Company considered several options and

23 has chosen biodiesel as part of its plan to meet DOE

24 regulations. This fuel comes at an additional premium.

25 Q. What is the current status of vehicle fuel prices?

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1 A. Presently, the existing economic situation has seen an
2 increase in oil and petroleum distillate prices which
3 continues to drive prices higher. All current
4 indications (discussed in more detail below) are that
5 prices will continue to rise through 2013 and the Rate
6 Year.

7 Q. What is the Company's current estimate for fuel costs
8 in the Rate Year?

9 A. The Company's current estimate is \$6.1 million for
10 gasoline and \$6.5 million for biodiesel.

11 Q. What is your current estimate of Rate Year vehicle fuel
12 costs based on?

13 A. The Rate Year forecasts are based on the DOE, Energy
14 Information Administration's - Short-Term Energy
15 Outlook ("DOE EIA-STE0") fuel prices report ("STE0
16 report") and the actual fuel prices paid by Con Edison.
17 The STE0 report provides an independent reference for
18 future fuel prices. The Company forecasting
19 methodology uses DOE historical and forecasted
20 price/gallon and the actual historical year
21 price/gallon paid by the Company for both commodities.
22 Our formula considers the net effect of our bulk
23 purchase agreements; local taxes and fees; and in the
24 case of biodiesel, the bio additive. The methodology,

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1 expressed as formulas, is shown below for gas and
2 diesel.

3 Gasoline(The Petroleum Administration for Defense
4 District - East Coast, PADD-1, is used for gasoline
5 projections):

6
$$\left[\frac{\text{Con Edison Historic Year (2011 Average \$/gallon)}}{\text{DOE Historic Year (2011) PADD-1 \$/gallon}} \right] * \text{DOE Future PADD-1} = \text{Con Edison Future \$/gallon.}$$

9 The product of this calculation would be
10 multiplied times the gallons of fuel used in the
11 Rate Year.

12 Using this formula for the Rate Year, we would
13 have the following calculation -- $(\$3.728/\$3.576)$
14 $* (\$3.535) = \3.685 ; then $\$3.685 * 1,650,000$
15 gallons = $\$6,080,250$ expected gasoline
16 expenditures for RY1

17 Diesel (B20 Biodiesel):

18
$$\left[\frac{\text{Con Edison Historic Year (2011) Average}}{\text{DOE Historic Year (2011) National}} \right] * \text{DOE Future National Average} = \text{CECONY Future \$/gallon.}$$

19 $\$/\text{gallon} / (\text{DOE Historic Year (2011) National}$
20 $\text{Average \$/gallon})] * (\text{DOE Future National Average})$
21 $= \text{CECONY Future \$/gallon.}$ The product is again
22 multiplied times the gallons.

23 So, for diesel, we would have $(\$3.998/\$3.917) *$
24 $(\$3.854) = \3.934 ; and then $\$3.934 * 1,650,000$

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1 gallons = \$6,491,100 expected B20 biodiesel
2 expenditures for RY1.

3 Q. Please explain the basis for this formula.

4 A. This formula illustrates the relationship between Con
5 Edison's cost for fuel and the federal government's
6 actual and projected price for fuel. By comparing the
7 Company and federal government data, the Company can
8 develop (subject to certain adjustments) fuel
9 forecasts.

10 Q. Does the Company use the information directly from the
11 STEO report to develop its price forecasts?

12 A. No. The STEO report does not project prices on a local
13 basis. While the DOE/EIA STEO reports actual pricing
14 on a local basis, its forecasts are regional in nature
15 at best. DOE data points can be used as a basis for
16 future projections, but they must be adjusted to
17 reflect local pricing, the terms of the Company's bulk
18 fuel contracts and the use of biodiesel. These
19 adjustments are based upon the Company's historical
20 fuel costs.

21 Q. How does Con Edison mitigate fuel costs?

22 A. We mitigate costs by operating private fueling stations
23 and through our bulk purchase agreements. Retail
24 gasoline prices have historically ranged between \$0.15
25 - \$0.20 more per gallon than at the Company's fueling

1 stations (due to the Company's bulk fuel contract).
2 Regarding diesel fuel, the Company has a regulatory
3 requirement to use alternate fuels, such as bio-diesel
4 in its medium/heavy duty fleet. (Energy Policy Act of
5 1992 ("EPAct")). The use of Bio-Diesel (B-20)
6 contributes to our ability to meet and maintain EPAct
7 alternative compliance. Also, Bio-Diesel is not
8 readily available at outside fueling stations in the
9 metropolitan area.

10 Q. Are there any ways the Company mitigates its fuel
11 consumption?

12 A. Yes. Behavioral management plays an important role in
13 conserving fuel. Employees who operate Company-owned
14 vehicles are reminded periodically about ways to
15 improve their fuel economy. Many of our class 5 and
16 class 6 trucks incorporate technology that
17 automatically shuts off the vehicle's engine after the
18 engine idles past a certain timeframe. We have also
19 incorporated technology into our cargo vans and step-
20 vans that provide AC and DC power (without the need to
21 have the engine running) to power equipment and
22 worksite tools. The technology includes the use of AC
23 shoreline power and on-board generators. And finally,
24 we have initiated a pilot program to incorporate solar
25 panels with lithium polymer batteries to provide

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1 auxiliary power for the operation of tools and
2 equipment. It should be noted, however, that even if a
3 product is found that is designed to reduce fuel
4 consumption and meets our vehicle specification
5 requirements, it typically takes time to implement new
6 technologies throughout the entire fleet.

7 Q. Are there other initiatives that might have a greater,
8 quantifiable impact?

9 A. Yes. We have added approximately 145 Compressed
10 Natural-Gas ("CNG") vehicles and approximately 200
11 hybrid vehicles and have plans to continue purchasing
12 these types of vehicles going forward. Since hybrid
13 vehicles typically exhibit better fuel economy (on
14 average approximately 19 mpg city and 7 mpg highway
15 improvement), we believe that these technologies serve
16 to reduce the amount of fuel used by mobile equipment
17 as we construct and maintain our electric, gas and
18 steam systems. Although we have purchased hybrid
19 vehicles to be used by employees, there are no
20 commercially available and cost-justified hybrid
21 offerings for the biggest consumers of fuel (trucks
22 and other heavy equipment). We continue to work with
23 R&D to develop battery technologies to facilitate our
24 crews working with electrically powered equipment on

1 job-sites. But this is also a few years away from a
2 production technology.

3 Q. Is the Company proposing to update these fuel costs at
4 a later date?

5 A. Yes. Due to the rapid and volatile changes in this
6 market, the Company proposes that it update these fuel
7 costs during this proceeding at the latest date
8 permissible. Waiting until a later date will provide
9 the most accurate forecast of this volatile commodity
10 and allow incorporation of more accurate 2013/2014
11 forecasts when they become available. In fact, the
12 Commission's Order in Case 08-E-0539 (p. 76, footnote
13 109) used the March 10, 2009 DOE forecast to develop
14 the revenue requirement for the rate year.

15 Q. Have you prepared an exhibit detailing historic and
16 projected expenditures for "Vehicle Fuel Costs" for the
17 Company?

18 A. Yes, we have.

19 Q. Was this exhibit prepared under your direction and
20 supervision?

21 A. Yes, it was.

22 MARK FOR IDENTIFICATION AS EXHIBIT (SSP-3)

23 **Central Field Services - Capital Projects**

24 Q. Please identify the capital projects CFS is planning to
25 undertake.

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1 A. Transportation is planning two fuel station upgrade
2 projects. One of the projects is to upgrade the
3 gasoline and diesel fuel stations and the other is to
4 upgrade the Company's CNG fueling stations.

5 Q. What are the projected costs of these projects and what
6 are the anticipated in-service dates?

7 A. The fuel station upgrade project is estimated to cost
8 \$10.4 million and the CNG station upgrade is estimated
9 at \$8.8 million. We expect the CNG station upgrade
10 project to be in service by December 2014. The
11 gasoline and diesel fuel station upgrade project is
12 expected to be completed by year end 2015.

13 Q. Have you prepared an exhibit entitled "Capital - Shared
14 Services - Central Field Services" detailing these
15 projects?

16 A. Yes.

17 Q. Was this exhibit prepared under your direction and
18 supervision?

19 A. Yes, it was.

20 MARK FOR IDENTIFICATION AS EXHIBIT (SSP-4)

21 Q. Can you please explain the gasoline and diesel fuel
22 station upgrade project?

23 A. This project funds the replacement of obsolete and
24 deteriorating equipment at the Company's twelve fueling
25 stations. The equipment at three of the stations is

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1 over 30 years old and the equipment at the remaining
2 nine stations ranges from 20-25 years old. The scope
3 of the project includes the replacement of the fueling
4 islands, gas and diesel dispensing equipment, several
5 single wall tanks and associated hardware. In
6 addition, the Gas Boy card reader systems will be
7 replaced with new state-of-the-art technology.

8 Q. Why do you need to upgrade these stations?

9 A. These fuel stations provide fuel for the daily
10 operation of the Company's fleet of cars, trucks and
11 equipment. Due to the obsolescence of the equipment at
12 these locations, replacement parts are becoming
13 difficult to obtain. There are also environmental
14 concerns because of the potential for system leaks
15 (higher due to the age of the equipment). In addition,
16 if a major failure were to occur at a station, it is
17 possible the station would be out-of-service for a
18 considerable amount of time until repairs could be
19 made. This would severely impact the ability to fuel
20 Company vehicles at the site, resulting in the use of
21 more costly retail fueling sites. These upgrades will
22 significantly improve the operation and reliability of
23 the fuel stations, reduce the risk of an environmental
24 event (leaks) and we also expect to see a reduction in
25 station maintenance costs over time.

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1 Q. Are there any other benefits to performing these
2 upgrades?

3 A. Yes. Because bio-diesel (B-20) is not available at
4 retail fueling stations, the upgrades to these stations
5 will continue to help reduce petroleum consumption by
6 using Bio-Diesel fuel in order to meet the DOE
7 requirement for clean alternate fuel compliance.

8 Q. Do you have an exhibit that provides additional details
9 associated with the gasoline and diesel fuel station
10 upgrade project?

11 A. Yes. The details are shown in Exhibit ___ (SSP-4), on
12 the page entitled "Fuel Station Upgrade."

13 Q. Please explain the CNG Station Upgrade Project?

14 A. This project funds the design and construction required
15 to increase the operating pressure and replace obsolete
16 and deteriorating equipment at the Company's eight CNG
17 fueling stations. In order to accomplish this, the CNG
18 fueling stations will receive new dispensers, storage
19 vessels, piping, associated valving, control panels,
20 electronic control units and card reader systems. In
21 addition, the slow-fill apparatus will be upgraded to
22 3600psi.

23 Q. Is the Company required to use alternate fuel vehicles
24 ("AFVs")?

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1 A. Yes. The DOE, in accordance with the EAct, requires
2 the Company to purchase AFVs, such as CNG-powered
3 vehicles, as replacements for a portion of its light-
4 duty fleet (typically 60 vehicles/year).

5 Q. Why do you need to upgrade the Company's CNG stations?

6 A. These stations provide compressed natural gas for the
7 daily operation of the Company's CNG powered vehicles.
8 All of the stations have been in-service over 20 years
9 and are becoming costly to maintain. Replacement parts
10 are becoming obsolete and difficult to obtain and if a
11 major failure were to occur at a station, it is
12 possible the station would be out of service for a
13 considerable amount of time until repairs could be
14 made. This would severely impact our ability to re-
15 fuel Company vehicles at the site, as well as provide
16 fueling capability for outside customers (Verizon, UPS,
17 US Postal Services, NYC & NYS Agencies, NYC Taxi Fleet,
18 and other small private entities) that also use these
19 sites for fueling.

20 In addition, in order to align with current standards
21 for the operation and fueling of Natural Gas Vehicles
22 ("NGV"), station operating pressures at our CNG Fueling
23 Stations must be increased from 3000psi to 3600psi
24 output. Current vehicle technology requires higher
25 pressure to effectively achieve the manufacturer's

1 mileage ratings. This project will provide Company and
2 outside customers with additional vehicle range and
3 increased throughput at our stations. The higher
4 pressure and current technology will allow for
5 continued expansion of NGVs within the Con Edison
6 fleet. There are presently 145 NGVs in the Company's
7 fleet, and we have plans to purchase approximately 300
8 additional NGVs (as vehicle replacements) over the next
9 several years (total NGV fleet size of 445).

10 Q. Are there any other benefits to performing these
11 upgrades?

12 A. Yes. The replacement of aging equipment and upgrading
13 the stations to new technology will allow the Company
14 to continue to purchase and operate AFVs that produce
15 lower emissions and fewer toxic contaminants than
16 gasoline and diesel powered vehicles. Expanding the
17 Company's clean AFV fleet will reduce negative impacts
18 on the environment, air quality, global warming and
19 public health. These upgrades will also enhance
20 fueling capability for outside customers.

21 Q. Are there any fuel offset benefits associated with
22 using CNG as a motor fuel?

23 A. Yes. Assuming the projected price per gallon of diesel
24 fuel (\$3.934/gallon), gasoline (\$3.685/gallon), the
25 Company's internal CNG rate (\$0.55/GGE) and the

1 approximate average annual vehicle fuel consumption
2 rate (diesel-powered trucks - 1,080 gallons, gasoline-
3 powered cars - 375 gallons), we estimate petroleum fuel
4 savings for Con Edison's current fleet of 145 NGVs to
5 be 79,000 gallons and \$255,000. With the Company's
6 plans to replace 60 petroleum powered vehicles per year
7 with NGVs, the incremental annual estimated savings
8 amount to an additional 47,000 gallons and \$155,000.

9 Q. Does the Company's CNG Station Upgrade Project comply
10 with the Commission's NGV Policy Statement in Case 92-
11 G-0451?

12 A. The Commission's Policy Statement in Case 92-G-0451
13 applies to discretionary utility investments in NGV
14 infrastructure made for the purpose of encouraging the
15 development of a NGV market. In this case, the planned
16 upgrades to existing Company infrastructure are not for
17 the purpose of encouraging the development of a NGV
18 market. Rather, as explained above, the Company is
19 planning to upgrade obsolete and deteriorating
20 equipment that is required in order to continue
21 complying with federal statutory requirements related
22 to AFVs. The EPA Act requires the Company to utilize
23 AFVs for 90% of light duty vehicle replacements
24 purchased annually, to reduce the annual consumption of
25 petroleum. Based on the Company's number of light duty

1 vehicles and EPCAct requirements, the petroleum fuel
2 reduction requirement through 2020 is approximately
3 606,400 gallons. Our strategy to achieve this
4 reduction includes the continued purchase of CNG
5 vehicles and the use of Bio-Diesel (B-20).

6 Q. Has the Company explored other, potentially lower-cost
7 options?

8 A. Yes. The Company has reached out to the City of New
9 York ("City") and the Metropolitan Transit Authority
10 ("MTA"), which operates a total of seven CNG fueling
11 stations, to determine whether the Company could
12 utilize their CNG fueling facilities at a lower cost.
13 The Company has been advised that City-owned CNG
14 fueling facilities are restricted for City vehicle use
15 and the MTA stations are not compatible (fuel nozzle)
16 with our vehicles. The Company has also explored using
17 privately-owned and public CNG fueling facilities.
18 There are currently only two privately-owned stations
19 and six public stations in our service territory. At
20 this time the privately-owned facilities have not
21 granted us access to their stations. The public
22 stations are not always reliable and available for
23 fueling (for example the Clean Energy LaGuardia Airport
24 station has been inoperable for a considerable amount
25 of time). In addition, the public facilities are

1 located at sites that are not in close proximity to our
2 service centers (which can impact crew productivity).

3 And finally, utilizing public stations would add a
4 premium of \$2.16/Gasoline Gallon Equivalent ("GGE").

5 At the current fleet population of 145 NGVs, the
6 Company would incur an increase of approximately
7 \$171,000 per year of additional fuel costs (at the
8 projected fleet population of 445 NGVs the increased
9 fuel cost will be approximately \$681,000 per year).

10 Q. Do you have an exhibit that provides additional details
11 associated with the CNG station upgrade project?

12 A. Yes. The details are shown in Exhibit ___ (SSP-4), on
13 the page entitled "CNG Station Upgrade." We note that
14 as a result of our continuing evaluation of this
15 project, we currently anticipate that we can meet our
16 environmental compliance requirements and satisfy the
17 fueling requirements for the projected number of
18 Company vehicles and our current third party customers
19 by upgrading one less station.

20 **Central Field Services - Cost Mitigation**

21 Q. What does CFS do to minimize costs?

22 A. As described earlier, CFS is a large organization
23 comprising many areas, including vehicle garages,
24 storerooms, trucking, cranes and rigging, and waste
25 processing. Over the past several years, CFS has

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1 provided operational support without significant
2 staffing increases. We continue to achieve cost
3 savings in the following areas:

4 • Stores - CFS will continue evaluating the efficiency
5 of storerooms and will continue to expand the
6 consolidation of Storerooms to include the Cleveland
7 Street Service Center.

8 • Transportation - Transportation Operations continues
9 to purchase clean AFVs that serve to reduce gasoline
10 and diesel fuel consumption. We also work with
11 vehicle manufactures by piloting fuel saving proto-
12 type vehicles for possible future fleet use.

13 Transportation continues to look at new vehicle
14 technologies that offer more efficient vehicle
15 operation such as the use of battery power instead
16 of diesel generators for work-site power, and the
17 use of solar panels to supplement the charging of
18 these batteries. In addition, we reduced the size
19 of the fleet by 181 vehicles in 2012 and are
20 committed to looking at alternative ways to reduce
21 the fleet further (vehicle pooling, etc.). And
22 finally, we continue to use our relationships with
23 suppliers and manufacturers to obtain skills
24 training for our staff of mechanics. Improved

1 skills have allowed Transportation to address a
2 larger and more diverse fleet with no staffing
3 increases.

- 4 • Astoria Operations - The Cranes and Rigging section
5 of CFS provides support for various operating groups
6 throughout the year. During peak workloads
7 additional vendor resources are hired to facilitate
8 the work and meet schedule deadlines. Hiring
9 vendors required the Company to pay for a crane and
10 crane operator. In 2011 the Company negotiated an
11 agreement with a crane vendor that resulted in the
12 Company saving over \$75,000 during 2012.

13 **V. INFORMATION RESOURCES**

14 Q. What is Information Resources and what is its
15 organizational structure?

16 A. Information Resources provides all the computer support
17 for the Company. The group is divided into five
18 sections. They are the Application Services,
19 Information Technology Planning, Technology Services,
20 Quality Assurance/Contract Administration, and
21 Operation Support.

22 Q. Please describe the functional responsibilities of the
23 five sections.

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1 A. Application Services provides and maintains computer-
2 based applications for Con Edison. This group
3 facilitates change of business practices and processes
4 through the use of enabling technologies, and
5 information and application software. Examples of this
6 include the new Oracle Financial and Supply Chain
7 System, new Electric Work Management System, and the
8 System Trouble Analysis and Response ("STAR") outage
9 management system.

10 Information Technical Planning establishes hardware and
11 software standards for the computing and communications
12 infrastructure; introduces new technology into the
13 architecture and is responsible for cyber security
14 policy. Information Technology Planning also provides
15 planning and operations support for the Corporate
16 Communication Transmission Network ("CCTN"), a private
17 communications network, as well as multiple Company
18 owned radio and telephone systems.

19 Technology Services provides the organizational support
20 and operations for the Company's information technology
21 in the areas of data and visual communication,
22 equipment, and infrastructure. This includes design
23 implementation, maintenance and technical support.
24 This group also maintains the corporate data centers
25 and supports disaster recovery.

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1 Quality Assurance/Contract Administration assures
2 quality for Information Resources processes in areas of
3 Environmental Health & Safety, operational security and
4 audit management. They provide administrative services
5 for corporate computing and telecom contracts, and
6 manage the telecommunications clearing budget. The
7 group also satisfies various requests for
8 communications hardware including pagers, cellular
9 phones and blackberries.

10 Operations Support plans and coordinates areas relating
11 to finance, budget, and personnel. They also
12 administer contracts for computer hardware and
13 services.

14 Q. Please explain the capital programs and O&M program
15 changes sponsored by Information Resources.

16 A. The Company is projecting the following amounts under
17 its five-year capital IT budget: \$22.4 million in 2013,
18 \$20.1 million in 2014, \$11.0 million in 2015, \$11.9
19 million in 2016, and \$11.5 million in 2017. The
20 greater spend in 2013 and 2014 is mainly attributed to
21 the new Server Farm Infrastructure project which will
22 be completed in 2014. For O&M, the Company projects
23 \$72,000 for RY1, which is an increase over historic
24 year expenditures of \$72,000. The Company is also
25 projecting expenditures of \$285,000 in RY2 and \$291,000

1 in RY3. Finally, the Company has an additional \$3.4
2 million Rate Year O&M program change related to the
3 Company's implementation of the Project One Financial
4 system.

5 Q. Is the Company planning to implement any additional
6 projects whose costs are not contemplated by the
7 current five-year capital IT forecast?

8 A. Yes. As we discuss later in our testimony, due to the
9 impact of Superstorm Sandy, we are planning to
10 implement a a storm hardening project that will help
11 mitigate the impact of a future storm on the Company's
12 telecommunications system. The annual estimated
13 expenditures for this project are \$1.3 million in 2014,
14 \$2.7 million in 2015, and \$2.6 million in 2016

15 Q. Do you have exhibits detailing these programs?

16 A. Yes, exhibits were prepared for 28 capital projects and
17 the two O&M expense programs that have been submitted.

18 Q. Were they prepared under your direction and
19 supervision?

20 A. Yes, they were.

21 MARK FOR IDENTIFICATION AS EXHIBITS __ (SSP-5, SSP-6)

22 Q. Please discuss the importance of the Cyber Security -
23 Info Resources project.

24 A. Cyber security has been identified as one of the top
25 corporate risks and must be incorporated in every

1 aspect of the energy delivery business. While many
2 steps have already been taken to design and implement a
3 security perimeter to defend Company resources, new
4 risks are identified each day and new techniques are
5 needed to stay secure and improve that defense. Attack
6 vectors change and responses to them must be swift and
7 definitive. Failure to maintain a proactive stance
8 will create an unacceptable risk for the corporation.
9 The risks include operating failures of control
10 systems, damage to transmission and distribution
11 assets, damage to the Company's reputation, the loss of
12 sensitive data and even rising to the safety of
13 employees and the public. Cyber security risks today
14 are evolving into Advanced Persistent Threats which are
15 unlikely to be detected using dated technology. The
16 project will include the installation of new Intrusion
17 Prevention Systems and security tools

18 Q. What is the projected cost and completion date for this
19 project?

20 A. The total projected cost funded in the Five-Year
21 Capital Budget for this project is \$3.7 million and the
22 completion date is December 2017. The annual breakout
23 is \$990,750 in 2013, \$628,500 in 2014, \$512,000 in
24 2015, \$620,000 in 2016 and \$900,000 in 2017.

1 Q. Does the Company anticipate additional capital
2 expenditures to address cyber security threats?

3 A. As we mentioned, new cyber security risks are
4 identified each day and new techniques, which are
5 unlikely to be detected using dated technology, are
6 needed to stay secure and improve our defense. In
7 September 2012, the Department of Public Service Staff
8 directed the state's energy utility companies to
9 develop a strategic planning process for cyber security
10 related to critical infrastructure protection and
11 develop or improve a comprehensive plan to guide a
12 cyber security program. The plan would address
13 strategic cyber security plan elements states in
14 Staff's letter and would include specific and time-
15 lined goals for addressing areas for improvement. The
16 Company is examining its current cyber security program
17 for compliance with Staff's directive. In this
18 process, or in response to newly identified cyber
19 security risks, the Company may identify additional
20 information security technologies or other security
21 features that may be required to mitigate emerging
22 cyber security risks. Company witness Muccilo
23 addresses the reconciliation of capital expenses
24 related to such cyber security initiatives.

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1 Q. Please explain the capital project called Server Farm
2 Infrastructure project included in your request?

3 A. Con Edison is planning to construct a new server farm
4 on a Company facility and funded in our Five-Year
5 Budget for \$17.6 million. The Server Farm is a modular
6 design and will be installed on a concrete pad near the
7 parking lot on an area that is currently unused. The
8 plan calls for construction to begin in 2013 and be
9 completed in 2014. The annual breakout is \$11,850,000
10 in 2013 and \$5,750,000 in 2014. This project is
11 similar in design to our most recent Server Farm
12 completed in 2012, and will replace two large
13 inefficient 1970 vintage data centers. The new Server
14 Farm is scheduled to become operational in the 4th
15 Quarter of 2014.

16 Q. Why is this project important to Con Edison and its
17 customers?

18 A. Computer systems and business applications require
19 servers and storage capacity. Business systems and
20 applications enable critical business functions for the
21 Company and include financial systems, customer systems
22 and control systems. Servers also provide access to
23 Company data in the form of email, files and maps. The
24 ability to access these systems and resources is
25 critical to the Company. The amount of electronic data

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1 has grown ten-fold over the past five years. This
2 project will be designed with redundancy and diversity
3 and provide a secure and reliable environment for these
4 resources for the next ten years. The new Server Farm
5 will also present opportunities to deploy systems
6 faster and access resources faster and more reliably
7 than today. The Company's restacking plan for 4 Irving
8 Place is underway in order to comply with Local Law 26.
9 As each floor is renovated per the restacking plan,
10 affected IT infrastructure is displaced and must be
11 relocated elsewhere in order to maintain operations.
12 Such infrastructure includes existing data centers on
13 the 4th and 17th floors. We have established a plan to
14 eliminate these data centers and relocate the essential
15 equipment to the proposed new Server Farm. The
16 existing data center on the 4th floor houses the
17 Company's mainframe environment which runs critical
18 business systems including the customer system and
19 billing. The retirement of the data centers at 4
20 Irving Place is a multi-year project and is expected to
21 be completed in 2016. Additionally, there are over 500
22 distributed servers running in the two data centers at
23 4 Irving Place. The restacking plan includes the
24 renovation of these two locations and conversion to
25 traditional office space.

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1 The new Server Farm plan also provides for the
2 Company's expanding server and storage needs by
3 establishing a scalable architecture that would meet
4 the demand for future growth in server and storage
5 needed for the Company's business applications.

6 Q. Is there associated O&M related to this project?

7 A. Yes, the new Server Farm as well as our most recent
8 server farm are both stand-alone buildings that will
9 incur costs that are specific to those server farms.
10 These costs include:

- 11 • HVAC operation, inspection, maintenance, repairs and
12 upgrades;
- 13 • Emergency generator operation, inspection, maintenance,
14 fuel, repairs and upgrades;
- 15 • Fire Protection System operation, inspection,
16 maintenance, repairs and upgrades; and
- 17 • Security System operation, inspection, maintenance,
18 repairs and upgrades.

19 Q. What are the additional O&M costs associated with the
20 Server Farm project?

21 A. The additional maintenance of the two Server Farms is
22 required since the two farms were built as independent
23 structures and subject to costs that can be segregated
24 and not associated to any other existing building. The

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1 additional maintenance is \$72,000 in RY1, \$285,000 in
2 RY2, and \$291,000 in RY3.

3 Q. Please explain the capital project called CCTN
4 Expansion - Fiber Projects included in your request?

5 A. Con Edison owns and operates CCTN, a private
6 communications network. This network is the vehicle
7 that enables secure communications circuits for
8 SCADANet, voice, video, protection and the computing
9 and storage environment. CCTN enables computing
10 resource consolidation, disaster recovery, as well as
11 the reduction of public carrier cost savings. There
12 are over 100 Company locations which host the equipment
13 used by CCTN. CCTN will continue to provide the
14 Company with a high-speed, reliable and cost effective
15 alternative and compliment to public carriers.
16 Communications requirements for data, voice,
17 protection, SCADA and video circuits will result in the
18 installation and deployment of modern communication
19 technologies to many Company facilities. CCTN provides
20 the network for SCADA, protection and data services to
21 critical substations necessitating capital projects to
22 improve diversity and capacity to those locations.
23 CCTN has far surpassed the use of public carriers for
24 communications and provides a corporate backbone for
25 all communication services for the foreseeable future.

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1 Many major CCTN nodes possess diverse Points of Entry
2 and redundant components including power sources to
3 eliminate any single point of failure and provide
4 redundancy and diversity. Substations are
5 interconnected to the core CCTN network with fiber runs
6 to support high speed services. Wireless technology is
7 considered for redundancy and diversity when installing
8 new fiber is not feasible or justified. In RY1, RY2
9 and RY3 the following locations will be addressed:

- 10 • Add a new fiber run between 4 Irving Place and the
11 Murray Hill Substation;
- 12 • Add a new fiber run between the Murray Hill
13 Substation and West End Avenue; and
- 14 • Add a new fiber span between East River Substation
15 and the new Gold Street Communications Hut.

16 Q. What is the projected cost and completion date for this
17 project?

18 A. The projected cost funded in the Five-Year Capital
19 Budget for this project is \$5.4 million and the
20 completion date is December 2017. The annual breakout
21 is \$1.4 million in 2013, \$1.6 million in 2014, \$1.3
22 million in 2015, \$392,500 in 2016 and \$750,000 in 2017.

23 Q. Please explain the capital project called SCADANet
24 included in your request.

1 A. The electric industry is undergoing a radical change in
2 the use of technology. Field components now come
3 equipped with microprocessors and the capability to
4 collect power quality and load data. On the other
5 hand, the Federal Energy Regulatory Commission ("FERC")
6 and the North American Electric Reliability Corporation
7 ("NERC") are enforcing new cyber and physical security
8 regulations that affect the ability to achieve the
9 benefits from this new technology. Con Edison is
10 currently designing and implementing multiple new SCADA
11 and Smart Grid applications. In addition, during 2012,
12 the Commission expressed concern for protecting
13 customer information, including meter reads. SCADANet
14 is designed to provide secure communications and
15 address these concerns. Infrastructure has been built
16 to support the following initiatives:

- 17 • Sectionalized Switching for electric distribution;
- 18 • Secondary Model validation;
- 19 • Transformer Monitoring; and
- 20 • Distributed Generation.

21 Q. Will this network include the ability to utilize
22 carrier communications?

23 A. Yes, the network is designed to allow for any number of
24 "last mile" connections including carrier wired or
25 wireless, private wireless or private fiber. In fact,

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1 we have recently established a private wireless network
2 with Verizon wireless that allows any electric, gas or
3 steam SCADA application to securely connect to the
4 control centers and eliminate any concerns about the
5 Internet.

6 Q. What is the projected cost and completion date for this
7 SCADANet project?

8 A. The projected cost funded in the Five-Year Capital
9 Budget for this project is \$7.0 million and the
10 estimated completion date is December 2017. The annual
11 breakout is \$1.8 million in 2013, \$1.5 million in 2014,
12 \$1.2 million in 2015, \$1.7 million in 2016, and
13 \$750,000 in 2017.

14 Q. Please explain the capital project called Desktop
15 Infrastructure included in your request?

16 A. This project provides for the latest productivity and
17 collaborative desktop tools for employees to perform
18 business functions in a secure fashion, as well as the
19 following features:

- 20 • Enables secure desktop environment to share information
21 with external partners as well as provide collaborative
22 sites for internal files sharing and team activities.

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- 1 • Allows third-party software and business applications
2 to be available without being resident on every device
3 and efficiently manage license use.
- 4 • Improves operational processes by enabling a single
5 version of software to be maintained and streamed to
6 users as needed.
- 7 • Reduces requirements to patch 14,000 PCs and disrupt
8 the computer users in doing so.
- 9 • Enables employees to work anywhere and use a broader
10 array of devices.
- 11 • Provides the capability to display and search user
12 content to avoid recreating work and preventing
13 versioning inefficiencies.

14 Q. What is the projected cost and completion date for the
15 Desktop Infrastructure project?

16 A. The projected cost funded in the Five-Year Capital
17 Budget for this project is \$5.3 million and the
18 estimated completion date is December 2017. The annual
19 breakout is \$782,000 in 2013, \$1.6 million in 2014,
20 \$1.4 million in 2015, \$782,000 in 2016, and \$782,000 in
21 2017.

22 Q. Given the impacts of Superstorm Sandy, are there any
23 new initiatives underway that would help prevent or

1 mitigate the impact of a future storm on the Company's
2 telecommunications systems?

3 A. Yes, we have one storm hardening project comprised of
4 three separate initiatives. The first initiative is to
5 harden radio sites by improving backup generator power
6 and reinforcing antennas and radio frequency cables at
7 radio sites. The second is to extend the Corporate
8 Communication Transmission Network ("CCTN") fiber optic
9 network to critical transmission substations in lower
10 Manhattan. The third is to mitigate the impact of
11 flooding on communications infrastructure.

12 Q. Please describe the impact of Sandy on your radio
13 sites.

14 A. During Sandy high winds detached antennas and cable at
15 two of our 35 radio facilities. In addition, several
16 of our radio sites experienced prolonged power outages
17 that interrupted radio service in pockets of
18 Westchester County. The unavailability of these radio
19 facilities had an adverse effect on the overhead
20 distribution restoration efforts in the areas served by
21 the affected radio sites. Typically, radio sites have
22 8 to 16 hours of battery backup time compared to the
23 several days it took to restore utility power.

24 Q. Please describe your initiatives to prevent or mitigate
25 these circumstances during a future storm.

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- 1 A. The following initiatives are planned:
- 2 • Antenna Hardening: Inspect, evaluate, redesign,
3 reinforce and replace antenna and line systems at
4 all radio sites and dispatch centers so equipped to
5 determine where physical reinforcements are
6 necessary to strengthen supports, fastening and
7 anchoring systems used to secure various antennas,
8 including pole, panel and dish antennas and radio
9 frequency cabling and waveguides. There are more
10 than 50 locations to be assessed.
- 11 • Generator Backup Power: Evaluate the capacity and
12 feasibility of installing backup generators at
13 critical radio sites. Provide a backup generator at
14 the Buchanan substation radio hut, increase
15 generator gas tank capacity at Graymoor radio site
16 and install a gas-fired generator at North Castle 1
17 radio site.
- 18 Q. Please summarize the estimated costs for the radio
19 system initiatives.
- 20 A. The two radio systems initiatives are projected to cost
21 approximately \$550,000 over three years: \$200,000 for
22 the antenna reinforcement and \$350,000 for the
23 generator upgrades.
- 24 Q. Why is it necessary to extend CCTN in lower Manhattan?

1 A. During Sandy, the local exchange public carriers
2 sustained (i) severe damage to their telecommunications
3 facilities, which included central offices and copper
4 outside plant directly affected by the flood waters, and
5 (ii) power outages that resulted in prolonged service
6 outages to their customers. Outages adversely affected
7 voice and data services and feeder protection circuits
8 at the bulk power transmission substations in lower
9 Manhattan. The proposed fiber optic extension in lower
10 Manhattan will link Leonard Street, World Trade Center
11 and Seaport substations into the CCTN network to provide
12 carrier diversity for critical circuits. CCTN will
13 provide these substations with a high-speed, redundant
14 and diverse complement to public carriers.

15 Q. Please describe what this work entails.

16 A. The work entails installing CCTN telecommunications
17 facilities at each substation and the following
18 underground fiber spans:

- 19 • Add new equipment at and new fiber span between 4
20 Irving Place and Leonard Street Substation.
- 21 • Add new equipment at and new fiber span between
22 Leonard Street Substation and World Trade Center
23 substation.
- 24 • Add new equipment at and new fiber span between World
25 Trade Center Substation and Seaport substation.

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1 • Add new equipment at and new fiber span between
2 Seaport Substation and Cherry Street Substation.
3 The new telecommunications equipment will be housed in
4 pre-fabricated huts and existing communications rooms
5 and will possess diverse Points of Entry ("POE") and
6 redundant components, including power sources to
7 eliminate any single point of failure and provide
8 redundancy and diversity.

9 Q. What is the estimated cost and projected completion
10 date for this program?

11 A. The estimated cost for this program is approximately \$5
12 million, apportioned as follows:

- 13 • \$1.2 million - equipment at and fiber span to
14 Leonard St
- 15 • \$2.0 million - equipment at and fiber span to
16 Seaport
- 17 • \$1.8 million - equipment at and two fiber spans to
18 close the communications loop at World Trade
19 Center.

20 The projected completion date for this portion of the
21 project is December 2016.

22 Q. What was the impact of flooding on the communications
23 infrastructure and how do you plan to provide
24 additional protection for equipment against flooding?

1 A. Telecommunications equipment is housed in
2 communications rooms and pre-fabricated huts located at
3 generator stations, substations and other operations
4 and office facilities. During Sandy, CCTN circuits
5 remained operational at all locations except for two
6 locations that severely impacted by flood waters. They
7 are the telecom room at East 13th St substation and the
8 communications hut at Goethals substation.

9 Q. What actions has the Company taken to address these
10 circumstances?

11 A. Water damaged equipment, located at low positions on
12 the equipment rack, was replaced at Goethals and East
13 13th St. The new equipment at Goethals was reinstalled
14 higher on the equipment rack. A solution at East 13th
15 St. is being developed to account for space
16 limitations.

17 IR is currently evaluating the flooding risk at
18 facilities located in flood prone areas and will
19 develop solutions that range from enhanced sealing
20 techniques to prevent water ingress to hut replacements
21 where necessary. Although IR has an ongoing program to
22 replace older communications huts, all future huts will
23 be installed on a concrete pad at least four feet above
24 ground.

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1 Q. What additional actions will the Company take to
2 address these circumstances?

3 A. The communications huts at Freshkills substation and 1
4 Davis Avenue will be replaced with elevated huts in
5 2015 and 2016, respectively.

6 Q. What is the projected cost and completion date for this
7 program?

8 A. The estimated cost for this program is approximately
9 \$1.0 million for both huts with a projected completion
10 date of December 2016.

11 Q. Please summarize the planned expenditures for the Storm
12 Hardening project.

13 A. The annual estimated expenditures for the project is
14 approximately \$1.3 million in 2014, \$2.7 million in
15 2015, and \$2.6 million in 2016.

16 Q. Provide a summary of the remaining 22 projects from the
17 five-year capital budget.

18 A. The remaining 22 projects are discussed in Exhibit ____
19 SSP-5 and fall into several categories including
20 technology refreshes on IT infrastructure components
21 for example storage arrays, and network routers and
22 switches, and business application sustainability.

23 Q. Are there any additional O&M programs that you wish to
24 introduce?

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1 A. Yes, our second O&M program change is for expanding
2 programmer support of Project One and the Electric Work
3 Management project.

4 Q. Please describe this program change.

5 A. The implementation of Project One will require
6 additional staff to support the new system. O&M
7 funding has been approved in 2012 and 2013 for this
8 support which will be used to bring on 31 new FTEs.
9 The retirement of legacy applications will free up 13
10 FTEs of the 44 that are needed. The additional 31 FTEs
11 will be brought on in stages beginning with 15 in 2012.
12 The remaining 16 FTEs will be brought on in 2013. In
13 addition the Electric Work Management project will
14 require two additional FTEs in year 2015.

15 Q. What type of support work will the additional staff be
16 performing?

17 A. The additional support work can be divided into the
18 following four distinct modules: Finance, Supply Chain,
19 Business Intelligence, and Financial Planning &
20 Analysis. Specifically, these modules will contain
21 support for:

- 22 • Finance Module
 - 23 o General ledger
 - 24 o Cash Management
 - 25 o Receivables

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- 1 o Advanced Collections
- 2 o Project Accounting/Costing
- 3 o Governance, Risk and Reporting
- 4 • Supply Chain Module
- 5 o Payables
- 6 o Purchasing
- 7 o Sourcing
- 8 o Procurement Contracts
- 9 o Warehouse Management
- 10 o Inventory Management
- 11 o Imaging
- 12 o iSupplier
- 13 o iProcurement
- 14 o iExpense
- 15 • Business Intelligence
- 16 o Financial Intelligence & Analytics
- 17 o Procurement and Spend Intelligence & Analytics
- 18 o Projects and Cost Management intelligence &
- 19 Analytics
- 20 o Oracle OBIEE support
- 21 • Financial Planning & Analysis
- 22 o Planning & Budgeting
- 23 o Forecasting
- 24 o Financial Consolidations

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1 Q. Can you elaborate on the support work that the
2 additional staff will be working on?

3 A. The increased staffing related to Project One
4 implementation is required in order to support new
5 applications that are incremental to the Company's
6 existing systems (i.e., new application do not replace
7 any existing systems). These include Business
8 Intelligence, Project Accounting, HFM Financial
9 Consolidation and GR Break/fix support surrounding the
10 Project Accounting, Accounts Payable, Purchasing and
11 Inventory Management modules. These modules are
12 highlighted due to their complexities and the fact they
13 have had the majority of the defects during the
14 multiple cycles of testing.
15 Additionally we would expect to see a higher level of
16 support arise in Labor Distribution, PowerPlant, legacy
17 Work Management systems integration, again due to
18 complexity.
19 Integration with the new Work Management System will
20 require an initial higher level of support.
21 Project One will go through its first year end closing
22 in January. This event could generate additional
23 issues/requirements. Additional activities include:
24 • Monitor and implement improvements for job
25 scheduling

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- 1 • 24 by 7 support for EBS Application; Development,
2 Technical Architecture, Biztalk, and BI
- 3 • Annual disaster recovery drill for Oracle EBS
4 financial and supply change modules, BI and EIE;
- 5 • Enhancements
- 6 o For legacy system and vendor supplied system
7 (PeopleSoft - new upgrade, PowerPlant - repair
8 allowance, LOGICA - future phases) enhancements
- 9 o System performance monitoring and possible
10 improvements especially in the area of Project
11 Accounting with respects to project creation
- 12 o Required upgrade for Informatica tool. Tool is
13 used for extracting data from Oracle EBS to load
14 information into data warehouse; and
- 15 • Upgrade versions of third-party vendor products
16 that are used in Project One. These have been held
17 in their current versions in order to mitigate
18 testing variances:
- 19 o Symantec's - Virus Scan for incoming documents
20 from vendors
- 21 o Kofax - Image scanning
- 22 o OMTool - Out-bound faxing
- 23 o Zebra - Bar Code Printing
- 24 o UC4 - Job Scheduling.

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1 Q. What are the O&M costs associated with the programmer
2 support program change?

3 A. The cost for programmer support was \$0 in the historic
4 year and the Company is projecting costs of \$3.6
5 million for RY1, \$3.7 million for RY2 and \$3.8 million
6 for RY3.

7 Q. Please describe the next project.

8 A. We are including a new project in the Common budget
9 identified as Consolidated Mapping and Visualization
10 Platform.

11 Q. What is the projected cost and completion date for the
12 Consolidated Mapping and Visualization Platform
13 project?

14 A. The total projected cost for this project is \$40.0
15 million and the completion date is December 2017. The
16 annual breakout is \$10 million in 2015, \$15 million in
17 2016 and \$15 million in 2017.

18 Q. Please explain this capital project.

19 A. Con Edison maintains 38 software applications that are
20 used for map creation, map viewing, and GIS-like
21 functionality to support the Electric, Gas and Steam
22 business processes. This process will consolidate the
23 entire mapping platform. It will include spatial
24 alignment of all Con Edison data using a common lan-
25 based and real world coordinates. It will integrate

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1 engineering design, work across commodities,
2 communication with external stake holders, maps and
3 records maintenance and spatial analysis.

4 Q. Are there any additional projects that you wish to
5 introduce at this time?

6 A. Yes. We would like to discuss improvements to the
7 Steam Customer Care and Billing System.

8 Q. What customer information system is used for steam
9 billing?

10 A. In April 2008, a new Steam customer information system,
11 Customer Care & Billing ("CC&B") was implemented. CC&B
12 replaced a legacy customer information system that was
13 no longer able to support the needs of our complex
14 rates and programs. CC&B provided a basic platform to
15 develop complex rate structures and programs to align
16 steam customers with our electric and gas population.
17 The new system also provided the platform for improved
18 efficiency, customer experience, and Sarbanes-Oxley
19 compliance.

20 Q. Please describe the Company's plan to maintain and
21 expand the functionality of the CC&B.

22 A. The Company plans a number of improvements and upgrades
23 to CC&B. The upgrades are necessary to have access to
24 vendor support. A 2013 upgrade is needed because our

1 current version of CC&B is unsupported by the vendor.
2 The vendor forecasts that an additional upgrade will be
3 needed in 2017. The upgrades will allow the
4 continuation of accurate and timely billing through
5 continued vendor support. While the Company's CC&B is
6 unsupported, we are not eligible to download or receive
7 system updates, maintenance releases, software patches,
8 telephone assistance, or obtain any other technical
9 support services. The Company needs to complete these
10 upgrades so that it will be able to meet its customer
11 care and billing responsibilities to its customers,
12 which generate over \$600 million in annual revenues.
13 The Company is planning seven improvements for
14 completion during 2013-2017 to expand the functionality
15 of CC&B. These improvements will enhance the customer
16 experience and to upgrade the process controls while
17 aligning the steam credit processes with those used in
18 connection with electric and gas service. Having
19 parallel process for credit actions will assist the
20 Company in collecting aged arrears.

21 Q. Please describe the improvements.

22 A. The seven improvements to CC&B include:

- 23 1. Payment Agreement Process Automation & Bill
24 Messaging

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- 1 2. Posting Process Automation - Multiple
- 2 Dwelling Posting Process Prior to Service
- 3 Interruption
- 4 3. Uncollectible Bills ("UB") and Collection
- 5 Agency Process Automation
- 6 4. Level Payment Plan Reconciliation Automation
- 7 5. Meter Paging Functionality
- 8 6. Change of Customer and New Turn On/New
- 9 Business Improvement
- 10 7. Deposit Request and Calculation Automation

11 Q. What is the status of this project?

12 A. The project's implementation schedule is to be

13 completed by year-end 2017. The projected completion

14 of the CC&B upgrade is second quarter 2013, followed by

15 the Meter Paging and Deposit Request Calculation. The

16 Turn On, Multiple Dwelling Posting Process, and the LPP

17 improvements are all scheduled to be completed by year-

18 end 2014. The Change of Customer, Payment Agreement,

19 and UB process improvements are scheduled to be

20 completed by year-end 2015. However, the order of work

21 may be adjusted to meet changing priorities or needs.

22 In 2017, CC&B is anticipated to require an upgrade to a

23 supported version.

24 Q. What is the capital cost of this program?

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1 A. Projected capital costs associated with the Steam CC&B
2 work is \$1.2 million for 2013, \$281,000 for 2014,
3 \$276,000 for 2015, and \$1.9 million for 2017.

4 Q What is the projected O&M cost of this program?

5 A. The 2013 funding includes an upgrade for CC&B to a
6 supported platform. CC&B requires annual O&M expenses
7 for maintenance. The upgraded version incurs
8 additional O&M expenses due to increased Database
9 Maintenance costs. The increase is \$29,000 over our
10 recurring annual cost of \$98,000.

11 Q. What is the GridOps Upgrade Project?

12 A. The Company uses the GridOps Load Forecasting system to
13 develop the short term electric and steam load
14 forecasts to support electric and steam operations as
15 well as how much energy to purchase in the wholesale
16 markets. The GridOps Upgrade Project includes the
17 implementation of an upgrade to the GridOps Load
18 Forecasting system and its supporting database.

19 Q. Why is this upgrade needed?

20 A. The GridOps system and database, as well as the
21 automated system interfaces, currently run on SQL
22 Server 2000. This technology platform will no longer
23 be supported by Microsoft in early 2013, and must be
24 upgraded to a later version.

25 Q. Are there other benefits from this upgrade?

1 A. In addition to addressing technology obsolescence, the
2 upgrade will provide improved data validation to ensure
3 the integrity of the short term forecasts as well as
4 improve the forecasts' accuracy. Furthermore, the
5 upgrade will allow the Company to pursue the
6 development of the short term natural gas forecast
7 using the same system, thereby consolidating the short
8 term forecasts of all three commodities under one
9 consistent platform. The current GridOps application
10 would not support the complexity of the natural gas
11 commodity in terms of a short term forecast.

12 **VI. HUMAN RESOURCES**

13 Q. What is the role of the Human Resources organization?

14 A. Human Resources' ("HR") overall strategy focuses on
15 developing programs around the following four
16 imperatives: attraction, development, retention and the
17 "Way We Work Environment." In support of the
18 attraction imperative, HR continues to refine its
19 corporate hiring program through strategic sourcing,
20 and partnership with schools. The Company's focus on
21 the development imperative is achieved through varied
22 training programs. These programs support leadership,
23 skills and technical development. Career path training
24 for our large trainee population has remained steady
25 and HR has developed technical training programs for

1 new supervisors in several organizations. The Company
2 uses both traditional training at The Learning Center
3 ("TLC") and online training sessions. During 2011, HR
4 began work on contract negotiations and contingency
5 preparations with Local 1-2, our largest union
6 workforce. This contract expired on June 30, 2012.
7 The contract with Local 3, our Staten Island union
8 workforce, expires on June 30, 2013.
9 HR addresses the retention imperative by managing the
10 Company's compensation and benefits programs to be
11 competitive with the marketplace. The Company has
12 developed six guiding principles for how we manage our
13 work and ourselves. They embody our corporate values
14 and are essential to achieving the level of excellence
15 we want in our corporate culture. HR has integrated
16 these principles in the Way We Work Environment. These
17 six principles are Plan the Work, Work the Plan; Seek
18 and Accept Responsibility; Communicate Openly; Work in
19 Teams; Improve Continuously and Celebrate Success.

20 Q. Does Con Edison currently have a recruiting, testing,
21 hiring, and training program for new employees?

22 A. Yes. HR works closely with the Company's operating
23 departments to determine the staffing levels and skills
24 required to meet operational needs. Based on these
25 needs, HR is responsible for recruiting, testing,

1 hiring, and training new and existing employees. This
2 effort involves several groups within HR, including
3 Occupational Health, Recruitment, Testing Services,
4 Human Resource Services, and TLC.

5 **Increased GOLD Program Hiring**

6 Q. Please explain what the GOLD (Growth Opportunities
7 through Leadership Development) program is and the
8 Company's hiring plans for the program.

9 A. The GOLD program is an 18-month program that employs
10 recent college graduates and provides them with basic
11 leadership development and technical skills training to
12 fill anticipated openings and facilitate succession
13 planning throughout the Company. For the Gold program
14 we have been hiring approximately 45 recent college
15 graduates in June of each year. The 18-month program
16 averaged 85 participants during the Historic Year.
17 However, since we plan to hire 60 GOLD Associates in
18 June 2014 (instead of the typical 45) our average
19 staffing level will increase to 100 or 15 additional
20 participants. The total cost for the program in RY1
21 will be \$5.4 million. The increased GOLD hiring will
22 enable us to respond to specific and core critical
23 talent needs to better address strategic recruitment
24 challenges.

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1 Q. Have you provided additional details for the increased
2 GOLD hiring?

3 A. Additional detail can be found in the Exhibit entitled
4 "O&M-Shared Services-Human Resources" on the pages
5 entitled "2013 Growth Opportunities for Leadership
6 Development (GOLD) Program."

7 Q. Was this prepared under your direction and supervision?

8 A. Yes, it was.

9 MARK FOR IDENTIFICATION AS EXHIBIT __ (SSP-7)

10 Q. Please describe the current training program for new
11 employees.

12 A. There are two categories of new employees - union
13 (weekly) or management. For the most part, new weekly
14 employees are hired at the entry level - either as
15 Customer Service Representatives ("CSR"), Customer
16 Field Representatives ("CFR"), or General Utility
17 Workers ("GUW"). Assuming the applicant qualifies on
18 all the selection processes, the individual would be
19 hired. The employee would then be required to take
20 from five to ten days of initial training at TLC,
21 depending on the job function for which she/he was
22 hired. These classes include basic knowledge of the
23 function the new employee is about to perform as well
24 as environmental and safety-related topics. While all
25 areas require initial training, CSRs have more

1 extensive initial training that lasts for approximately
2 nine weeks.

3 Q. Please describe TLC.

4 A. TLC, Con Edison's central training and education
5 facility, is responsible for handling the majority of
6 the Company's training needs. Located in Long Island
7 City, Queens, TLC was built in 1993 as a state-of-the-
8 art training center. In 2012, we trained employees in
9 over 600 courses. In order to complete these courses
10 we conducted over 5,500 classes that were attended by
11 over 25,000 employees. In many cases, employees
12 attended more than one course.

13 Additionally, the Learning Center supports the on-line
14 training effort which has grown in use over the last
15 several years. In 2012, over 15% of training conducted
16 was done through the on-line training methodology.

17 Q. Does the new employee receive any additional training
18 after completing training classes at TLC?

19 A. After his or her initial training at TLC, the employee
20 then goes out into the field to begin performing their
21 job function. The Company continues to train its
22 employees through such methods as on-the-job training,
23 safety talks, online training, "Technically Speaking"
24 and "Strategic Issues" Seminars, and by taking
25 additional classes at TLC.

1 Q. Does the rate request reflect incremental expenditures
2 for training?

3 A. Yes, it does.

4 **Customer Operations Instructors**

5 Q. Please explain the Company's need to add two additional
6 Customer Operations Instructors.

7 A. The Company needs to add two additional Customer
8 Operations Instructors to the Learning Center Staff due
9 to the increase in training classes for CSRs. We
10 currently have five Instructors who teach two of these
11 16 week classes annually. In the course of a year this
12 would allow us to conduct ten total training classes.
13 Customer Operations has a growing need to bring in
14 additional CSRs to handle customer phone inquiries.
15 This need has developed as the incumbent CSR population
16 has dwindled due to attrition and transfers. Our plan
17 is to add approximately 160 CSR's annually. With this
18 increased need, we have to conduct between 14 and 16
19 classes annually. The increased classes require the
20 need for two additional full time instructors. The
21 total cost for Customer Operations instructors in RY1
22 will be \$1.2 million.

23 Q. Have you prepared an exhibit that provides further
24 information on the Customer Operations Instructors?

1 A. Additional information is shown in Exhibit __ (SSP-7)
2 on the pages entitled "Career Path Training - Customer
3 Operations."

4 **Occupational Health Current Operating State**

5 Q. How does the Occupational Health Department function in
6 its current state?

7 A. The Occupational Health Department currently functions
8 in large part through paper records and the existing
9 electronic system, i.e., the Occupational Health
10 Administrative System ("OHAS"). OHAS has limited
11 functionality, and has not been significantly updated
12 since its design and implementation 15 years ago.

13 Other Con Edison systems have been updated, such as HR
14 Payroll, leading the OHAS system to be modified
15 manually to provide essential data on qualified sick
16 absences to payroll. In order to produce reports, the
17 Occupational Health Department must match data across
18 discrete systems and manually manipulate the data for
19 each query. This is not a sustainable process to meet
20 the challenges of addressing and reporting on
21 regulatory requirements, quality checks and lost time.

22 Q. What are some of the major issues that Con Edison faces
23 with the current OHAS?

24 A. The current OHAS is not integrated with our paper based
25 medical records. Occupational Health clinicians are

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1 unable to have a complete and accurate picture of
2 employee illness and disabilities as it relates to the
3 employee's ability to safely do their job and work
4 disposition. The lack of integration between the paper
5 based medical record system and the electronic medical
6 information system increases the potential for human
7 error, decreases the efficacy with which Occupational
8 Health can manage employee health conditions and
9 absence and hamper reporting capabilities.
10 Occupational Health must also move toward an electronic
11 platform to have interoperability with the federal
12 electronic medical records mandate. This mandate will
13 require all physician practices, hospitals, and
14 laboratories that receive Medicare or Medicaid
15 reimbursement to implement an electronic medical record
16 system by 2014. Although Con Edison is not directly
17 subject to the mandate, Occupational Health will need
18 to have an electronic medical system in order to have
19 the ability to receive and send medical information on
20 behalf of our employees in the standards set by the
21 industry and federal government or the clinic will be
22 hampered in reviewing medical information for
23 employees. In addition, the current systems that
24 record information related to employee absence prevent
25 the Occupational Health clinic from identifying and

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1 managing absence patterns and occupational evaluations
2 related illness and injuries of our employees. The
3 paper based system reduces the opportunity to evaluate
4 and investigate root causes of lost time or trends and
5 patterns which may impact absenteeism or fitness.

6 Q. What is the goal of the Occupational Health Integrated
7 Data Management Platform ("IDMP")

8 A. The goal of the IDMP is to integrate and enhance Con
9 Edison's medical information systems so that
10 Occupational Health can improve the department's
11 efficiency and compliance with mandated evaluations for
12 federal, state and local laws and policies. These
13 include surveillance of occupational and environmental
14 exposures, Department of Transportation ("DOT")
15 examinations, substance abuse testing and Company
16 examinations for safety sensitive job functions. These
17 are critical functions which impact the safety of
18 employees and the public. In addition, Occupational
19 Health will need to undergo change in work flow
20 processes to be in accordance with the new federal
21 mandate for electronic medical records, mandated
22 transition in industry diagnostic coding,
23 implementation of the new short-term disability plan
24 for managers and the new procedures changes for the

1 administration of the sick absence policy for weekly
2 employees.

3 **Analysis of Solutions for an Integrated Electronic System**

4 Q. How did the Occupational Health Department assess the
5 data management needs of the Department?

6 A. A discovery/gap analysis was performed by an outside
7 vendor, Vanguard Direct, in 2011 which identified the
8 pros and cons of three alternative plans of action:
9 purchase of a software solution that can be customized
10 for Con Edison's use, redesign of the existing in-house
11 system by internal staff, or a combination in which
12 some functionality is achieved through a purchased
13 solution and other modules are created by enhancing
14 existing applications. The main considerations taken
15 into account included technological feasibility of
16 implementation, costs (upfront and recurrent) and fit
17 with user defined functional specifications. The
18 analysis as to which alternative is most appropriate
19 will be conducted in Q1 of 2013.

20 Q. Explain the components of an IDMP.

21 A. The creation of an Occupational Health Integrated Data
22 Management Platform will improve the quality and
23 efficiency of managing clinic functions related to
24 regulatory examinations, return to work evaluations,
25 and wellness programs resulting in the ability to meet

1 the demands of future sick absence plans/policies and
2 decrease the amount of paper used by the department.
3 The IDMP will coordinate medical data that is currently
4 found in paper charts and information from our
5 disability vendor to create a comprehensive record of
6 employee illness and injuries that may impact their
7 ability to perform their job duties. In addition, the
8 platform will integrate data and reporting across
9 existing legacy systems currently used to hold medical
10 information and report on lost time, although that was
11 not their original purpose when designed. These
12 systems are: eTime, eTime Medical, OHAS, Case
13 Management System, Random Drug Testing and Employee
14 Personal Information Center.

15 Q. Why is the IDMP important to the Occupational Health
16 Department at Con Edison?

17 A. Added focus on integrated data management and reporting
18 structures is needed as it will allow for more advanced
19 analyses that will provide information for strategic
20 planning, as well as provide the ability to identify
21 trends and potential health concerns through the
22 centralization of data. Also the IDMP will introduce
23 electronic medical records to the Occupational Health
24 Department. This will improve regulatory monitoring
25 and will align with the Occupational Health Clinic to

1 have a standard platform and interoperability with
2 outside physicians, hospitals and laboratories with
3 which the department regularly interacts. Implementing
4 this project will put Con Edison in line with best
5 practices, as determined by the Certification
6 Commission for Health Information Technology ("CCHIT"),
7 for the security and accessibility of health records.
8 Moreover, the implementation of electronic health
9 records will allow the Company greater oversight over
10 its OSHA and DOT regulated exams and DOT drug testing.
11 An electronic system will reduce potential human error,
12 increase the efficacy with which Occupational Health
13 can manage employee health conditions, reduce
14 administrative burdens and improve the quality of
15 service, as well as contribute to an overall "greening"
16 and carbon footprint reduction for the department.

17 Q. Have you provided additional details associated with
18 this Capital Program?

19 A. Additional detail can be found in the Exhibit entitled
20 "Capital-Shared Services-Human Resources" on the pages
21 entitled "OH Integrated Data Management Platform/Health
22 Management System."

23 Q. Was this prepared under your direction and supervision?

24 A. Yes, it was.

25 MARK FOR IDENTIFICATION AS EXHIBIT __ (SSP-8)

1 **Cost and Potential Savings Associated with a New System**

2 Q. What will be the anticipated cost of implementing an
3 IDMP?

4 A. As shown in Exhibit SSP-8, the implementation costs for
5 this project are estimated to be approximately \$2.0
6 million. These costs will include Occupational Health
7 and Information Resources labor, purchase and
8 implementation of software, hardware (tablet computers
9 and server), a technical consultant, and training and
10 development.

11 Q. What are the anticipated cost savings of this project?

12 A. There are both financial and non-financial benefits of
13 the IDMP project. The cost savings will be realized
14 through the reduction in paper and the increased
15 efficiencies of the department. The department uses an
16 excessive quantity of paper documenting clinic visits.
17 It is estimated that about 24,000 clinic visits to
18 Occupational Health occur yearly. A substantial
19 proportion of these visits involved regulatory testing.
20 Each of these exams is completed by paper. It is
21 estimated that in a given year, Occupational Health is
22 using approximately 3.5 tons of paper, at a cost of
23 \$10,000/year. The creation of an IDMP also has several
24 non-tangible benefits. Electronic systems will allow
25 for better utilization of Con Edison medical staff and

1 resources, creating efficiencies and the ability to
2 more quickly review employee records and address
3 concerns. Additionally, a reduction in administrative
4 burden and improvement in quality of service will have
5 a direct effect on reducing the time employees spend in
6 the clinic for appointments and will decrease the
7 duration of absences by managing more closely
8 employees' return to work plans. Occupational Health
9 clinicians will be able to more thoroughly focus on
10 employee well-being, fitness for duty and regulatory
11 compliance.

12 **Strike Contingency**

13 Q. Please generally describe the Company's strike
14 contingency efforts.

15 A. The Company and its two local unions, IBEW Local 3 and
16 UWUA Local 1-2 employees, have collective bargaining
17 agreements that expire on June 30, 2013 and on June 30,
18 2016, respectively. In the event of a labor stoppage,
19 the Company has developed a planned approach to provide
20 for the continued safe operation of its facilities and
21 its services.

22 Q. Are there costs associated with these preparations?

23 A. Yes. The Local 1-2 and Local 3 Contingency Programs
24 are ongoing initiatives that occur once every four
25 years. As a result, for rate case filings, the cost

1 for these initiatives is priced out at one-fourth of
2 the estimated cost. The estimated cost of the next
3 round of union contract negotiations is \$1.8 million
4 for Local 1-2 and \$100,000 for Local 3, or a total of
5 \$1.9 million. This is based on our most recent
6 experience with the contingency planning that occurred
7 in 2012 for Local 1&2 and in 2009 for Local 3. One -
8 fourth, or \$475,000 will be included in the rate
9 filing. Incremental costs for contingency planning are
10 estimated at \$1.5 million. The Accounting Panel will
11 address the proper allocation of these costs among
12 electric, gas and steam.

13 Q. Have you prepared an exhibit that provides further
14 information on strike contingency expenses?

15 A. Yes. Additional information is shown in Exhibit __
16 (SSP-7) on the pages entitled "Strike Contingency."

17 **Human Resources Capital Program**

18 Q. Please describe the planned capital program in Human
19 Resources for the rate period.

20 A. As described above, Human Resources must upgrade and
21 enhance various aspects of training so that future
22 training needs are met. To accomplish this, we have
23 three on-going capital program initiatives, the
24 development of eLearning courses to offset additional
25 training costs, a project to upgrade our HR Payroll

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1 application and Learning Center Infrastructure
2 upgrades.

3 Q. Please continue.

4 A. As to the first program, the use of eLearning helps to
5 avoid additional training costs. This program is on-
6 going and we plan on spending \$700,000 in each of the
7 next five years. Secondly, we have a capital project
8 that addresses the need to complete the upgrade of the
9 HR Payroll system. Based on the upgrades Oracle has
10 made to this application it is recommended we make
11 these changes to our application in order to maintain
12 reliability of the system. This project will be
13 completed in 2013 at a cost of \$1.2 million. The
14 Commission adopted a Joint Proposal in the Company's
15 last rate case that reflects spending on each of these
16 capital programs. Finally, in order to provide
17 effective training to our employees, it is necessary to
18 maintain an up to date educational facility.

19 Technology is rapidly changing how way people work. In
20 addition, as equipment and process improvements take
21 place in operating areas, our training facilities and
22 course curriculum must also change to insure that the
23 training experience reflects the field environment.

24 The requested funding of \$300,000 annually from 2014 to
25 2017 will allow the Learning Center to upgrade

1 Facilities to modernize classroom space by increasing
2 space utilization with modern designs.

3 Q. Have you provided additional details for each of these
4 capital programs and the associated costs?

5 A. Yes. Additional detail can be found in Exhibit (SSP-7)
6 on the pages entitled "TLC eLearning Initiatives, HR
7 Payroll Upgrade and Learning Center Infrastructure
8 Improvements."

9 **VII. SECURITY PROGRAMS**

10 Q. What are the security-related projects that the Company
11 is proposing?

12 A. The Company is proposing the following projects: (1)
13 expansion of automated electric card access; (2)
14 replacement of obsolete DVRs; and (3) replacement of
15 obsolete CCTV cameras.

16 Q. What are the projected capital costs for each of the
17 security projects proposed by the Company?

18 A. The projected capital cost for the automated electric
19 card access is a total of \$2.3 million. Because of the
20 magnitude of the projects, and the process of scoping
21 and bidding the projects, these capital costs will not
22 begin until calendar year 2014. These costs are broken
23 down into \$778,000 in 2014; \$821,000 in 2015; \$403,000
24 in 2016; and 279,000 in 2017. The projected capital
25 cost for the replacement of obsolete DVRs is a total of

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1 \$1.1 million in 2014 and the projected capital cost for
2 the systematic replacement of old/outdated CCTV cameras
3 is \$303,000 per calendar year.

4 Q. What are the projected O&M costs associated with the
5 security requests?

6 A. The projected increase for security-related O&M costs
7 are \$161,000 in RY1, \$194,000 in RY2 and \$199,000 in
8 RY3. These costs are associated with the hiring of two
9 new employees in RY1.

10 Q. Do you have exhibits entitled "Capital-Shared Services-
11 Security and O&M-Shared Services-Security" detailing
12 these programs?

13 A. Yes, exhibits were prepared for the three capital
14 projects and one O&M expense program that have been
15 submitted.

16 Q. Were they prepared under your direction and
17 supervision?

18 A. Yes, they were.

19 MARK FOR IDENTIFICATION AS EXHIBITS __ (SSP-9, SSP-10)

20 Q. Please explain the need for the three capital projects
21 described above.

22 A. Con Edison recognizes its importance as a critical
23 component to the infrastructure of New York City and
24 the surrounding areas. To adequately safeguard its
25 facilities, Con Edison continues to incorporate

1 comprehensive security processes to protect the
2 Company, its employees and its assets. The platform we
3 have implemented to date consists of CCTV, intrusion
4 detection, card access and DVR equipment. We continue
5 to add facilities where we have these systems, into our
6 Security Operations Center ("SOC") where we monitor
7 them, on a 24 hour, seven day per week basis. This
8 provides a central point for coordinating response
9 protocols for security events and alarms.

10 Q. Please discuss the access control capital project.

11 A. Access control software integrates the most advanced
12 security technologies with innovative networking
13 capabilities to bring full-featured security solutions
14 serving any size Con Edison facility. Con Edison's
15 current electronic card access system is employed at 87
16 corporate sites. Corporate Security has identified 13
17 high-trafficked Company sites that currently lack or
18 have insufficient electronic access controlled
19 security. This project would provide for the
20 installation of card readers, with supporting CCTVs and
21 DVRs at these locations. This project as proposed
22 would take five years to implement, with a completion
23 date of 2017 and a total cost of \$2.3 million.

24 Q. Which Company locations have been identified?

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1 A. The thirteen locations are as follows: Bruckner
2 Boulevard; Cleveland Street; College Point; Neptune
3 Avenue; East 110th Street; Eastview; Victory Boulevard;
4 East 16th Street; 4 Irving Place parking lot; Farrington
5 Street; West 28th Street; 30 Worth Street; and the
6 Learning Center.

7 Q. Do you have an exhibit that provides additional
8 information regarding the access control project?

9 A. Yes. Additional information is shown in Exhibit __
10 (SSP-9) on the pages entitled "Corporate Security
11 Access Control, CCTV, and equipment."

12 Q. Please continue.

13 A. The next capital project I will discuss is the
14 replacement of obsolete DVRs. All security cameras
15 throughout Con Edison record on DVRs. This is crucial
16 for forensic investigations such as suspicious
17 activity, and attempted or actual breaches of security.
18 Con Edison's Information Resource ("IR") Department is
19 moving to Windows 7 as the system Con Edison currently
20 uses, XP, will have reached the end of its useful life
21 by April 2014. All servers, computers, security DVRs
22 and any technical device that is to be connected to the
23 network mainframe server must have the Windows 7
24 operating system installed and in use. In order for
25 the continued recording of the over 1,400 cameras in

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1 place, there is a need to replace 100 DVRs by April
2 2014. This is projected to result in capital
3 expenditures of \$1.1 million on this project in 2014.

4 Q. Do you have an exhibit that provides additional
5 information regarding the DVR capital project?

6 A. Yes. Additional information is shown in Exhibit __
7 (SSP-9) on the pages entitled "Corporate Security DVR
8 Replacement - Company Wide."

9 Q. Please continue.

10 A. The final capital project we will describe is the
11 systematic replacement of old and obsolete CCTV
12 cameras. Prior to the centralization of technical
13 security at Con Edison, many of the organizations had
14 CCTV cameras installed right after September 2001, and
15 some have had their cameras as far back as in the
16 1990s. Many of these cameras are outdated as they are
17 not supported by their manufacturer, their parts are no
18 longer available, and they are deemed "beyond economic
19 repair." With the introduction of the SOC in 2007,
20 Corporate Security is now able to provide monthly
21 updates regarding the operating status of cameras that
22 are connected to the SOC. Currently there are over
23 1,000 cameras which are connected to the SOC. Security
24 also has the responsibility for standardizing and
25 providing subject matter expertise on the most cost-

1 effective CCTV cameras to install. As cameras continue
2 to fail, requiring more servicing, lose their
3 capability of capturing quality video and even
4 experience total video loss, the Company becomes
5 increasingly vulnerable regarding the security of
6 assets, theft, vandalism and acts of sabotage.
7 Corporate Security is looking to embark on a two-phase
8 equipment replacement plan whereby 100 of the oldest
9 cameras (75 pan, tilt and zoom, and 25 fixed) would be
10 replaced each year. As discussed below, this project
11 will require hiring two additional employees, as Con
12 Edison's Security Department will perform the labor on
13 this continuing project, providing the most cost-
14 effective solution to meet our needs.

15 Q. Do you have an exhibit that provides additional
16 information regarding the CCTV camera replacement
17 project?

18 A. Yes. Additional information is shown in Exhibit __
19 (SSP-9) on the pages entitled "Corporate Security -
20 Rollout Program for Obsolete Cameras - Company Wide."

21 **Employee Support**

22 Q. Does the Company require any additional employees for
23 the Security Department?

24 A. Yes. The Company requires two additional employees,
25 two System Specialists. The estimated cost of these

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1 two employees will be \$161,000 in RY1 (based on the two
2 System Specialists in March 2014); \$194,000 in RY2; and
3 \$199,000 in RY3.

4 Q. Please explain why these employees are necessary.

5 A. Corporate Security's mission has evolved and grown
6 since September 11, 2001. Almost all of this growth
7 has focused on technical aspects of security, which
8 includes evaluating, analyzing, recommending and
9 installing effective electronic security systems to
10 better protect our critical infrastructure.

11 Q. Please continue.

12 A. The Company has an operational need for two highly
13 specialized Systems Specialists proficient in internal
14 and external electronic security protection systems not
15 just for connecting new systems to the SOC, but for a
16 myriad of security-related technical projects.

17 Q. Can you please expand on that?

18 A. The Systems Specialists would serve as Security's
19 project managers on the card access projects, and would
20 provide the labor for the camera replacement project.

21 Q. Are there any other functions these additional System
22 Specialists would address?

23 A. Yes. These two additional personnel would enable
24 Corporate Security to expand the scope of work we
25 currently do to include: some corrective and

1 preventative maintenance on security equipment; test
2 technical security systems; determine optimal equipment
3 logistics and inventory; and bench repair of defective
4 technical security system to the component level.
5 These additional tasks would prove to be cost-effective
6 methods to extend the life of the equipment and
7 maintain the reliability of the system. It would also
8 reduce the costs and time associated with vendor
9 repairs.

10 Q. Do you have an exhibit that provides additional
11 information regarding the hiring of the two Systems
12 Specialists?

13 A. Yes. Exhibit SSP-10 has been provided.

14 **VIII. FACILITIES**

15 Q. Please explain the services Facilities provides.

16 A. Facilities plans, directs, and controls the maintenance
17 of all building systems and the day-to-day building and
18 yard operations at the Company-owned and leased office
19 buildings and service centers. We perform periodic
20 assessments and inspections of all buildings and
21 prepare corrective action plans. We provide
22 engineering support so that critical building systems
23 are operated and maintained appropriately. We also are
24 responsible for seeing that all required fire and life

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1 safety equipment is operational and emergency
2 procedures are communicated to organizations.

3 Q. Have you prepared exhibits entitled "CONSOLIDATED
4 EDISON COMPANY OF NEW YORK, INC., FACILITIES CAPITAL
5 BUDGET PLAN and Capital-Shared Services-Facilities,"
6 detailing these programs and your projected capital
7 expenditures?

8 A. Yes, we have.

9 Q. Were these exhibits prepared under the Panel's
10 direction and supervision?

11 A. Yes, they were.

12 MARK FOR IDENTIFICATION AS EXHIBIT __ (SSP-11, SSP-12)

13 Q. What are the forecasted capital spending levels for
14 Facilities' programs?

15 A. The Company plans to spend approximately \$62.9 million
16 in 2013, \$65.6 million in 2014, and \$46.5 million in
17 each of years 2015, 2016 and 2017. In 2011, Facilities
18 spent \$55.2 million on such capital projects and in
19 2012, Facilities plans to spend approximately \$55
20 million.

21 Q. Please discuss the projected Facilities capital
22 spending level and why it is necessary to modernize,
23 upgrade, and improve the Company's facilities?

24 A. Most of the Company's facilities are over 20 years old.
25 Certain locations, such as 4 Irving Place, Cleveland

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1 Street, Rye Service Center and various auxiliary
2 buildings at the 3rd Ave Yard site, were constructed
3 over 60 years ago. Projects set forth in the exhibit
4 are all needed either to correct potentially unsafe
5 conditions, to address environmental issues, to comply
6 with local, state or federal regulatory
7 requirements/building codes, to maintain the structural
8 integrity of the Facilities buildings, and/or to
9 improve a building's overall condition. Also, various
10 equipment and systems required to operate these
11 facilities have reached the end of their useful lives
12 and are no longer economical or practical to operate.
13 For example, heating, ventilating and air-conditioning
14 ("HVAC") equipment, in many locations such as Irving
15 Place, the Cleveland Street Service Center and Bruckner
16 Boulevard, are close to 20 years old and need to be
17 gradually replaced with more efficient systems that
18 utilize more environmentally friendly refrigerants.
19 Similarly, electrical systems, bathrooms and locker
20 rooms, exterior facades, sidewalks, drainage systems
21 and paved areas at certain locations are aging and, in
22 some places, are in a state of disrepair. Exterior
23 windows and doors need to be upgraded to meet present
24 day energy standards. Finally, in light of security

1 concerns, security fencing and access improvements are
2 required at certain locations.

3 Q. Please explain measures that Facilities is taking to
4 minimize costs associated with these projects.

5 A. Facilities identifies its projects via programmatic
6 assessments, such as the Facilities Roof Inspection,
7 Steel/Concrete/Façade Inspection, Emergency Diesel
8 Generator and Electrical System, Bathroom/Locker Room
9 and HVAC Evaluation Programs and the Engineering
10 Service Request ("ESR") process, which evaluates a
11 particular problem and then provides a conceptual scope
12 of work/budgetary order of magnitude cost estimate.
13 Facilities uses this information to then prioritize
14 projects according to the following categories:
15 "compliance," "critical infrastructure projects,"
16 "programmatic site improvements," or "user requests".
17 By studying, evaluating and assessing the condition of
18 its equipment and systems, and developing work scopes
19 and cost estimates, categorizing and prioritizing its
20 projects accordingly, Facilities develops the best
21 understanding of where to most efficiently allocate its
22 funding and personnel resources. This method has
23 identified "compliance" and "critical infrastructure"
24 projects as targets for funding in the earlier years of
25 its program with projects categorized as "programmatic

1 site improvements" and "user requests" being deferred
2 until later years.

3 Q. Have you prepared other exhibits detailing the O&M
4 programs for the Facilities buildings and yards located
5 in the five New York City Boroughs and Westchester
6 County (described in this testimony as "The Regions")

7 A. Yes, we have.

8 Q. There are two exhibits prepared under the Panel's
9 direction and supervision?

10 A. Yes, there are.

11 MARK FOR IDENTIFICATION AS EXHIBIT __ (SSP-13, SSP-14)

12 **FACILITIES O&M**

13 Q. Please discuss O&M spending for Facilities.

14 A. As for O&M, the Company's Regions (e.g., the Flatbush
15 Ave and Davis Ave Headquarter Buildings facilities, and
16 the various service centers such as those located at
17 Cleveland Street, Neptune Ave, 28th street and 16th
18 street) plan to spend approximately \$1.9 million in RY1
19 and \$2.0 million in each of RY2 and RY3 on specific
20 programs compared to historical year spending of
21 \$216,000. The O&M increase over the historical year is
22 attributable primarily to the following programs: Plant
23 Held for Future Use Maintenance Program, Facilities
24 Structural Inspection and Repair Program, Floor

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1 Maintenance Program, and Painting and Wall Treatment
2 Maintenance Program.

3 Q. Please further explain these O&M programs.

4 A. Concerning the Plant Held for Future Use Maintenance
5 Program, the costs for these services are \$224,600 in
6 RY1, \$229,300 in RY2, and \$234,100 in RY3. This cost
7 will cover the associated fees pertaining to Company
8 labor for supervision, refuse removal, permits, snow
9 removal, fire/security system maintenance,
10 miscellaneous repairs, exterminating, landscaping, and
11 utilities relating to Plant facilities Held for Future
12 Use.

13 The Facilities Structural Inspection and Repair Program
14 restores the envelopes of Company buildings for
15 improved energy efficiency and façade safety and
16 includes waterproofing, structural restoration, window
17 lintel/sill replacement, brickwork replacement, roof
18 repairs, and brickwork mortar joint re-pointing.
19 Façade restoration is a major expense, especially at
20 many of our older brick structures in Astoria,
21 Brooklyn, Manhattan, Staten Island and in the Bronx.
22 Waterproofing will prevent water infiltration and thus
23 safeguard the structural integrity of the buildings
24 thereby extending the life of the buildings in general.

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1 The costs for these repairs are \$734,700 in RY1,
2 \$750,100 in RY2, and \$765,900 in RY3.

3 Concerning the Floor Maintenance Program, this program
4 will replace worn carpeting throughout the Facilities
5 Regional locations annually. This also includes moving
6 furniture so carpeting can be installed. This is a
7 programmatic approach to address aging carpet
8 throughout various locations plus the cost to move
9 furniture while the work is in progress. Annual carpet
10 inspection will prioritize carpet replacement. Normal
11 wear and stretching of floor carpeting creates tripping
12 hazards. Carpeting is replaced when it has worn beyond
13 any economic or reasonable cleaning method resulting
14 with torn, rolled, and extremely dirty carpets. The
15 costs for these replacements are \$446,100 in RY1,
16 \$455,400 in RY2, and \$465,000 in RY3.

17 Concerning the Painting and Wall Treatment Maintenance
18 Program, this program is a programmatic approach
19 similar to the carpet program where all locations are
20 inspected annually and required painting is scheduled
21 on a priority basis. This program also includes
22 repainting worn striping to more efficiently utilize
23 parking space and making better use of our properties.
24 Inadequate maintenance/repair of aging infrastructure
25 is problematic and further delays in repair will result

1 in greater escalation of costs. The costs for these
2 repairs are \$524,800 in RY1, \$535,800 in RY2, and
3 \$547,100 in RY3.

4 **Facilities Capital Compliance Projects**

5 Q. Please explain the first category of capital projects,
6 compliance projects.

7 A. Compliance projects are required to address potentially
8 unsafe conditions and environmental issues as well as
9 to comply with the latest local, state or federal
10 regulatory requirements and building codes.

11 Q. Is there one project that accounts for much of the
12 spending in the compliance category?

13 A. Yes. In terms of expenditures and time, the largest
14 and most complicated regulatory requirement project
15 involves compliance with NYC Department of Buildings
16 ("DOB") LL26. LL26 requires full sprinklering, which
17 is a water based fire suppression system, of office
18 buildings 100 feet or more in height no later than July
19 1, 2019. Under this law, water based sprinkler systems
20 are required in all office areas and other areas such
21 as electrical closets, mechanical/fan rooms,
22 computer/LAN/UPS rooms, and tower stages of buildings.

23 Q. Has the Company discussed LL26 in prior rate
24 proceedings?

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1 A. Yes, the Commission has adopted Joint Proposals in the
2 Company's last electric, steam and gas rate cases that
3 reflect spending on compliance plans with LL26.

4 Q. To which Company facilities does LL26 apply?

5 A. LL26 applies to the Company's headquarters at 4 Irving
6 Place as it is greater than 100 feet tall.

7 Q. What is the basis for this new requirement?

8 A. LL26 is based on recommendations made by the World
9 Trade Center Building Code Task Force in February 2003
10 and signed into law by Mayor Bloomberg on June 24,
11 2004. LL26 implements this requirement through
12 amendments to the NYC Building Code and Fire Prevention
13 Code.

14 Q. What steps are necessary for the Company to timely
15 satisfy the LL26 requirement?

16 A. The Company has determined that the most efficient
17 means for meeting the LL26 requirement is to continue
18 to install the required sprinkler systems for a certain
19 number of floors each year between now and 2019. We
20 would note that Facilities has developed and
21 periodically updates its comprehensive "restacking"
22 program to determine the order, schedule, timing and
23 method in which the building will be renovated. When
24 the Company renovates a floor, the Company pursuant to
25 its "restacking" program temporarily relocates, as

1 needed, the affected employees to another part of 4
2 Irving Place or outside of the building. On July 1,
3 2011, as required by LL26, the Company submitted to the
4 DOB its seven year affidavit stating the progress of
5 the program at Irving Place. This report indicated
6 that the "Percent of Building Sprinklered" was 43.23%.
7 Since then several additional floors at 4 Irving Place
8 have undergone full renovations and have been
9 sprinklered and that the Company is currently
10 approximately half way through the program. However,
11 in order to meet LL26's 2019 deadline, the Company
12 needs to continue on its current schedule; also the
13 Company may need additional space for temporary
14 relocation of employees during the renovation.

15 Q. Please explain.

16 A. As noted above, when the Company renovates a floor, it
17 temporarily relocates, as needed, the affected
18 employees to another part of 4 Irving Place or outside
19 of the building. This is because it is logistically
20 difficult or practically impossible to maintain
21 employees in their current work area during the
22 renovation process. This is due to the physical
23 arrangements of ceilings and other building
24 infrastructure and the presence of environmentally

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1 sensitive materials (such as lead and asbestos) that
2 need to be addressed during the renovation process.

3 Q. Please detail the issues associated with performing
4 renovations while floors are occupied.

5 A. It would be neither safe nor practical or efficient to
6 perform the required renovation and sprinkler
7 installation during off-shifts, when personnel have
8 vacated the space, and allow the affected personnel to
9 return to work during their normal work hours (thereby
10 requiring a set-up and take-down of the work area on a
11 daily basis). Most importantly, the safe removal of
12 any environmentally sensitive materials, while the area
13 is occupied, is logistically extremely difficult.
14 Having personnel completely vacate the space until the
15 renovation (and any required abatement) is finished
16 enables the Company to completely abate the
17 environmentally sensitive materials in a safe and
18 efficient manner.

19 Q. Can sprinklering be accomplished absent full floor
20 renovations?

21 A. No. To install sprinklers, one must remove all the
22 asbestos and other materials from the ceiling, which
23 serves as the structural support base for the sprinkler
24 pipe. Thus, this project basically requires the
25 complete renovation on the respective floors as there

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1 is no practical manner to install sprinklers without
2 doing extensive ceiling renovation work. In addition,
3 other compliance methods such as installing exposed
4 pipe on un-renovated floors were evaluated but these
5 options were not chosen; exposed pipe installed below a
6 hung ceiling is unsightly in a commercial building,
7 while installing such pipe above a ceiling would be
8 disruptive to personnel and require that
9 ceilings/lighting be taken down and then reinstalled,
10 requiring abatement of environmental materials such as
11 asbestos in the spaces above hung ceilings. In
12 addition, furniture would need to be stored and
13 personnel relocated during this abatement process and
14 new carpeting would need to be installed as it would
15 become contaminated.

16 Q. If the Company follows its current renovation schedule,
17 will it be in compliance with the LL26 requirement by
18 2019?

19 A. Yes. At the current rate of floor renovations (i.e.,
20 two to three floors per year) which has been determined
21 by the "Restacking Plan" schedule and dictated, in part
22 by available temporary space, the Company would be in
23 compliance with LL26 by the 2019 deadline.
24 Accordingly, the Company has developed a plan to
25 install required sprinkler systems in conjunction with

1 the conversion of floors at 4 Irving Place, to restack
2 the building (realign adjacencies) to improve
3 synergies, and renovate to provide more flexibility.
4 In order to meet the needs of this program, some of the
5 affected personnel may need to be relocated out of 4
6 Irving Place because there is insufficient swing space
7 currently available in the building (i.e., there is
8 currently less than one full floor of available swing
9 space). At the present time, office renovation and
10 associated sprinklering projects have been mostly
11 completed on eighteen floors (i.e., the basement,
12 2nd, 3rd, 5th, 6th, 9th, 10th, 11th, 15th, 17th, 20th, 21st,
13 22nd, 23rd, 24th, 25th, 26th, and 27th floors and eight
14 tower stages.) Ten un-renovated floors currently
15 remain but projects associated with the 7th, 8th, and
16 13th floors are scheduled to be completed in 2013.

17 Q. What impact does this program have on the temporary
18 relocation of employees?

19 A. In order to meet the needs of this program, some of the
20 affected personnel will be relocated out of 4 Irving
21 Place for three to five years because there is
22 insufficient space to move the personnel in the
23 building.

24 Q. What are the costs associated with LL26 compliance?

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1 A. There are both O&M and capital costs associated with
2 this project. For O&M costs, Company-wide, the
3 expenses associated with the temporary relocation of
4 personnel are projected to be approximately \$2.6
5 million annually until the program is completed and to
6 maintain the infrastructure of the temporary space.
7 This estimated O&M cost includes maintaining the space,
8 i.e., furniture, computer and associated local area
9 network relocation; placing items into storage; and
10 moving personnel and files off-site to temporary swing
11 space. The Company currently leases approximately
12 15,000 square feet at 111 Broadway, Manhattan. The
13 rent prices consist of a base lease and infrastructure
14 rents which include fiber leases, cooling surcharges
15 and building management charges.

16 Q. Has the Company done anything to minimize the costs
17 associated with these renovations?

18 A. Yes. The Company has renovated the 6th and 7th floors at
19 its Flatbush Avenue location, making 28,000 square feet
20 (from the 6th floor) of space available in mid 2011.

21 Q. Please explain the capital costs associated with LL26.

22 A. We project Company-wide common capital costs of
23 approximately \$ 25.0 million in each of 2013, 2014 and
24 2015 and \$12.5 million in each of 2016 and 2017. These

1 project values are based on actual past expenditures
2 and project appropriation estimates.

3 Q. What benefits are associated with completing the LL26
4 program according to the "Restacking Plan" schedule and
5 prior to the 2019 compliance date?

6 A. Many buildings in the City must comply with LL26. As
7 compliance time gets closer to the deadline, we believe
8 that temporary space in other buildings will become
9 more expensive and less available. In addition,
10 contractors performing these types of renovations will
11 become more in demand, which impacts their
12 availability, as well as their costs.

13 Q. Are there any additional significant projects at 4
14 Irving Place necessary to meet LL26 requirements?

15 A. Yes. There is one other large project related to LL26
16 concerning the relocation of the Company's Bill
17 Printing Operation from the fourth floor at Irving
18 Place to Mail Operations located on the first floor at
19 a cost of approximately \$2.0 million. The combined
20 space will then be sprinklered as required by LL26 and
21 the area's HVAC system will be modified as required to
22 accommodate the additional cooling loads.

23 **Local Laws 10-11**

24 Q. Are there any other major compliance projects
25 associated with local laws?

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1 A. Yes. There are projects needed for the Company to
2 remain in compliance with Local Laws 10-11, the
3 applicable provisions of which are described below.
4 The Commission has adopted Joint Proposals in the
5 Company's last electric, gas and steam rate cases that
6 reflect spending on Local Law 10-11 projects. Even
7 though the Company is not projecting any increased O&M
8 expenditures for this program in the Rate Year from the
9 historical year, we will discuss this project because
10 of its safety and compliance significance.

11 Q. Please describe Local Law 11.

12 A. Local Law 11 ("LL11") was instituted in the early
13 1980's as LL10. The law, which was amended and renamed
14 LL11 in 1998, requires the periodic inspection of the
15 exterior facades of buildings in NYC greater than six
16 stories in height. Upon completion of the inspection,
17 a report must be filed by a Licensed Professional
18 Engineer or Registered Architect with the DOB. These
19 inspections primarily act as a safety measure to
20 protect the public from falling building materials and
21 improve awareness of the importance of maintaining and
22 restoring the City's architecture.

23 Q. When is the next LL11 review cycle?

24 A. In 2012, the Company's engineering department and an
25 outside consultant completed its LL11 Cycle 7 building

1 inspections/evaluation and submitted the associated
2 report to the DOB. This report identified any façade
3 repairs that needed to be immediately addressed or
4 completed prior to the Cycle 8 inspection which is
5 scheduled for 2017. The report was submitted prior to
6 the NYC DOB mandated date August 21, 2012.

7 Q. What façade-type repairs were necessary as a result of
8 the Cycle 7 inspection?

9 A. In 2012, the Company's engineering department (through
10 an outside consultant) submitted a corrective report to
11 the DOB on the LL11 Cycle 7 inspections. This report
12 identified "safe with a repair and maintenance program"
13 ("SWARMP") and "unsafe" conditions. These items
14 included repairing new and emerging defects such as
15 cracked stone, defective masonry sealant, and open
16 masonry joints not identified in Cycle 6. In addition
17 to normal façade and/or parapet repairs, the report
18 identified other water infiltration issues associated
19 with caulking on the facade windows.

20 Q. Please explain further.

21 A. Deteriorated facade areas, such as cracked brickwork,
22 defective window lintels/broken sills, defective
23 caulking along window perimeters and open joints, etc.,
24 permit water infiltration into the building. This
25 water travels behind the façade stone and masonry.

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1 During cold months of the year, this water can freeze,
2 which then expands against the back of the
3 stone/masonry, resulting in cracked, loosened stone,
4 masonry and mortar. This broken stone, masonry, and
5 loosened mortar have the potential to fall from the
6 side of the building to the street below, thereby
7 creating a public safety concern.

8 Q. Please continue.

9 A. Recognizing the public safety concern and other
10 potential water infiltration issues, Facilities
11 Engineering worked with the LL11 Cycle 7 inspector to
12 perform a comprehensive assessment of 4 Irving Place in
13 order to identify any deficiencies that can lead to
14 water infiltration and structural damage of the
15 building's load-bearing system. Note that the Cycle 6
16 LL11 report generically mentioned deficient window
17 caulking as one cause of possible water infiltration
18 into the building. Facilities Engineering has since
19 hired a civil engineer with expertise in architectural
20 façades and this person has knowledge of and recognizes
21 that deficient window caulking is but one possible
22 means of the water infiltration. This Engineer
23 coordinated the Cycle 7 Local Law 11 effort with his
24 own assessments and produced comprehensive
25 recommendations.

1 Q. Please explain further.

2 A. This comprehensive assessment reviewed areas such as
3 the clock tower and penthouse setbacks. Engineering
4 believes that items identified in both the LL 11 Cycle
5 7 report and the Company's own engineering assessment
6 should be completed in the time frame indicated below
7 as these corrective measures will help mitigate water
8 infiltration into the building and restore the
9 structural integrity of the building. The proposed
10 scope of work is as follows:

- 11 • Retire remaining decorative stone lintels and
12 install new steel lintels atop the window assemblies
13 along Third Avenue façade. Work should include
14 removal of five brick courses and installation of
15 Total Flash waterproofing system and new matching
16 bricks in color and texture.
- 17 • Retire and install new 9-foot high parapet wall
18 along Third Avenue façade. Work shall include
19 installation of new steel shelf angle to support the
20 single-wythe exterior brick veneer retrofitting of
21 existing steel spandrel beam/installation of water
22 proofing at parapet base and restoration of the
23 roofing system.

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- 1 • Remove and replace cracked/spalled stone along the
2 tower elevations. Work shall include all associated
3 anchorage onto the adjoining structure using
4 stainless steel spring-loaded anchors.
- 5 • Cut out and re-point defective stone-to-stone mortar
6 joints along all tower facades with Cathedral Stone
7 M110 mortar. Work shall include all associated
8 surface preparation and installation of backer rods.
- 9 • Remove and replace cracked/bulging or otherwise
10 defective brickwork along the roof level masonry
11 stacks and interior courtyards/airshafts. Work
12 shall include installation of stainless steel
13 staples every three brick courses.
- 14 • Completely scrape flaking paint along third Avenue
15 façade and install Cathedral Stone vapor permeable
16 MasonRE coating.
- 17 • Retire and install new window assemblies along Third
18 Avenue façade. Work shall include all associated
19 fasteners and caulking along the window perimeter.
- 20 • Remove and replace defective cast iron decorations
21 along the street elevations.
- 22 • Cut out and replace spalled stone segments (via form
23 and pour techniques) along the Tower section of the
24 building using Cathedral Stone's M60 Mortar and

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1 stainless steel pins. Work shall include all
2 associated preparations following manufacturer's
3 instructions.

- 4 • Remove and replace all defective stucco along third
5 Avenue façade. Work shall include installation of
6 galvanized wire mesh, followed by application of
7 Cathedral Stone's M90 as per manufacturer's
8 instructions.

9 Note that all "Unsafe" issues identified during the
10 Cycle 7 inspection have been corrected and it is
11 proposed that all remaining "SWARMP" work be
12 accomplished in stages over a two year period (RY1 and
13 RY2) and that this work be completed prior to the Cycle
14 8 inspections, which will be scheduled in mid-2017, so
15 that the required inspection report can be filed by
16 August 2018. Note that if the "SWARMP" repairs
17 identified in the Cycle 7 inspection are not addressed
18 by 2018, they will automatically become the more severe
19 condition defined as "UNSAFE" and any repairs will need
20 to be completed immediately.

21 Q. What is the total cost of this program?

22 A. The total O&M cost estimate is approximately \$4
23 million. This work will begin in 2014 and should be
24 completed in 2015. Anticipated costs are \$2.0 million

1 in RY1 and \$2.0 million in RY2 compared to historic
2 year spending of approximately \$2.0 million.

3 Q. Please explain the anticipated O&M expenditures for
4 this project.

5 A. The LL11 Cycle 6 repairs costs were estimated at
6 approximately \$4.0 million and during the Cycle 7
7 inspections we concentrated on other areas not
8 necessarily reviewed during the Cycle 6 inspections
9 (e.g., the clock tower and penthouses setbacks); it is
10 anticipated that repair costs will be similar in
11 magnitude (i.e., \$4.0 million). Recognizing that
12 attempting to accomplish all the work scope in one year
13 would be extremely intrusive to personnel occupying the
14 building and the neighborhood, due to the required
15 sidewalk bridging surrounding the entire building, it
16 was decided the work shall be accomplished over a two
17 year period and prior to the 2018 Cycle 8 inspection
18 deadline.

19 **Additional Compliance Projects**

20 Q. What other regulatory compliance projects need to be
21 undertaken?

22 A. Additional examples of compliance projects that are
23 capital in nature include:

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1 • Replacement of Astoria Outfall B Sewer System for a
2 cost of approximately \$13 million in 2013. In April
3 2010 Con Edison entered into a Consent Order with
4 the New York State Department of Environmental
5 Conservation ("NYS DEC") that required the Company
6 to implement a NYS DEC approved work plan to
7 replace/repair the Outfall B storm sewer system to
8 prevent sediments containing PCBs from entering the
9 storm sewer discharging at Outfall B. This storm
10 sewer system collects storm water from approximately
11 18 acres of the southwest portion of the Astoria
12 facility and discharges to the East River via
13 Outfall B. The system originates on Con Edison
14 property, although the lower 800 feet of piping and
15 Outfall B itself are located on US PowerGen's
16 property. Some portions of the system are believed
17 to have been constructed more than one hundred years
18 ago. This project will remove the existing Astoria
19 Outfall B system pipes, manholes and catch basins
20 and replace them with new corrugated high-
21 performance polypropylene pipes and associated
22 concrete structures. To mitigate ground water
23 infiltration, the new drainage system will utilize
24 double-gasketed bell & spigot high performance
25 piping connections.

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- 1 • Installation of Fall Protection/Guardrails on the
2 Roofs of Various Regional Buildings of Facilities
3 for approximately \$1.9 million in 2014. Note that
4 the Company's Environment, Health and Safety
5 personnel identified roofs, elevated working
6 locations and platforms throughout the Regions that
7 do not have adequate protective guardrails or fall
8 protection. This project will bring those roofs and
9 elevated working surfaces into full compliance with
10 current OSHA and NYC Building Code regulations.
- 11 • Installation of a new Fire Alarm System at the TLC
12 for approximately \$2.1 million in 2013. Note that
13 the existing TLC fire alarm system has a history of
14 malfunctioning, which has led to the unnecessary
15 evacuation of the building on several occasions.
16 Obsolete system components are frequently in need of
17 repair or replacement but are no longer manufactured
18 and thus, extremely difficult, if not impossible, to
19 obtain necessitating the purchase of after-market
20 parts from suppliers outside the United States. The
21 critical "life-safety" fire alarm system at TLC has
22 thus become unreliable. The NYC Building and Fire
23 Codes require a functionally reliable fire alarm
24 system and the building may not be occupied with one

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1 in disrepair or inoperable. This project replaces
2 the existing system at TLC with an addressable
3 microprocessor based fire alarm system including
4 manual pull stations and horn/strobes. In addition,
5 new wiring will be provided not only to bring the
6 system up to current codes but also to allow the
7 means to build a parallel system while the existing
8 fire alarm system remains active.

- 9 • Installation of additional fire alarm notification
10 devices in the basement of 4 Irving Place for
11 \$635,000 in 2014. This project installs, as needed
12 to bring the system into compliance with the
13 applicable NYC Building and Fire Codes, new
14 addressable type devices/equipment (i.e., Manual
15 Pull Stations, Speaker/Strobes, Speakers, Smoke
16 Detectors, Heat Detectors, Duct Detectors, Tamper
17 Switch Interface, Flow Switch Interface, and Warden
18 Phones) that are compatible with the existing fire
19 alarm control panel at Irving Place.
- 20 • Installation of Stairwell Pressurization Fan Louvers
21 at 4 Irving Place for Emergency Diesel Generator
22 Exhaust Fumes Mitigation for a capital cost of
23 approximately \$180,000 in 2014. This project calls
24 for the installation of new stairwell pressurization

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1 louvers to stop the odorous fumes entering the
2 building during the testing of diesel generators.
3 These louvers are intended to be closed at all times
4 unless the fans come on during a building fire. The
5 intake air louvers for the pressurization fans are
6 leaky and are allowing wind and associated
7 pollutants to enter the building without
8 restrictions.

9 • Replacement of an oil filled Pad Mounted Transformer
10 at Van Nest to prevent potential oil spills to the
11 sewer at a capital cost of \$550,000 in 2015. This
12 project installs a new 480V dry type transformer to
13 feed equipment that is currently connected to the
14 oil-filled transformer. The project will not only
15 reduce the size of the existing transformer but also
16 relocate it to the inside of the building. The new
17 480V distribution system will include new disconnect
18 switches, new 800A distribution switch, local
19 disconnect switches and wiring.

20 • Renovation of 2nd and 3rd floor Ladies Bathrooms at
21 the West End Avenue Energy Control Center for a cost
22 of approximately \$815,000 in 2014. This project
23 will provide suitable facilities for women at this

1 location which is a requirement of the NYC Building
2 Code.

3 Q. What are the projected costs of all of the compliance
4 projects that you have addressed?

5 A. The estimated capital costs for this category of
6 projects are \$39.5 million in 2013, \$30.5 million in
7 2014, \$27.5 million in 2015, \$15.0 million in 2016 and
8 \$15.0 million in 2017. The 2013 and 2014 costs are
9 primarily for LL26 projects and Consent Order related
10 work discussed above while the 2015 costs are almost
11 exclusively for the continued need to address LL26
12 compliance.

13 Q. Are there any additional compliance projects expected
14 to be undertaken that are O&M in nature?

15 A. No.

16 **Critical Infrastructure Projects**

17 Q. Please explain critical infrastructure projects.

18 A. These are projects that have been initiated because
19 they are deemed necessary to maintain the structural
20 integrity of the Facilities' buildings, to allow them
21 to operate as designed, or to protect critical
22 equipment (e.g., high maintenance or obsolete HVAC
23 systems; LAN Room AC Installations, Chiller Steam
24 turbine condensate drain enhancements, building water
25 supply rehabilitations). Note that various required

1 projects in this category have been identified and are
2 projected to be undertaken in the Rate Years but other
3 projects may need to be added to the list as ESRs are
4 completed and programmatic assessments are performed.
5 Projects of this nature, despite planning, and
6 preventative maintenance, are generally identified when
7 systems, equipment and components are at or close to
8 failure. Projects that address replacement of critical
9 infrastructure usually need to be completed in a quick
10 time frame.

11 Q. How much are you planning to expend in capital costs
12 for these types of projects?

13 A. We plan to spend \$1.8 million in 2013 and \$615,000 in
14 2014. Exhibits SSP-11 and SSP-12 identify the projects
15 currently remaining for this category. Some of the
16 largest critical infrastructure jobs, completed in
17 2010, 2011 and 2012, include the 3rd Ave Yard Building
18 2,3 & 4 Demolition, the West End Avenue and Irving
19 Place Cooling Tower Condenser Water Piping Replacement,
20 the Eastview Yazaki Chiller and the Irving Place
21 Penthouse & Cornice Restorations.

22 Q. What are some other examples of the capital projects
23 included in this group?

24 A. Examples and descriptions of such capital projects are:

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- 1 • Irving Place East Penthouse Controls and Valve
2 Modifications - \$1.45 million for 2013. This project
3 will perform various repairs and modifications to this
4 riveted tank such as cleaning, repairing and recoating
5 its interior, sealing joints and rivets, installation
6 of a new man-way for future inspections, replacement of
7 stiffening members and the installation of new level
8 sensors and isolation valves.
- 9 • Irving Place Chiller Condenser Steam Turbine Traps and
10 Condensate Drain Modifications - \$250,000 in 2013. This
11 project will replace traps and provide for larger
12 condensate drain lines to address an existing condition
13 where condensate and water are backing up into Chiller
14 Condenser Steam Turbine; such build-up can severely
15 damage the turbine blades and reduce performance.
- 16 Q. Please explain the O&M projects in this category.
- 17 A. The Company plans to undertake one project to upgrade
18 facades at various locations as part of the Facilities
19 Structural Inspection and Repair Program (explained
20 above) and LL11.

21 **Programmatic Site Improvements**

- 22 Q. Please describe your third category of costs,
23 Programmatic Site Improvements work.

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1 A. These capital projects are to maintain and improve on
2 overall conditions at the buildings and yards and are
3 intended to upkeep the facilities. The program
4 addresses efficiency improvements and/or equipment
5 modernization or upgrades and projects that are
6 evaluated/prioritized based on facility assessments.
7 These projects generally involve yard
8 paving/resurfacing, roof replacements identified in the
9 Facilities' roof inspection program, HVAC systems
10 nearing the end of their expected useful life, general
11 office renovations for buildings other than 4 Irving
12 Place, and elevator upgrades.
13 Concerning roofs, Engineering has in place a roof
14 inspection program, which assesses each building roof
15 once every five years. The inspection reports,
16 generated as a result of this effort, specify the
17 extent of the repair work necessary or if a complete
18 roof replacement is required. The roof project is then
19 budgeted for and scheduled accordingly.
20 In order to group, evaluate and prioritize other
21 building systems and equipment, Facilities has
22 established various programs to address: yard and road
23 paving/resurfacing, loading platforms, sidewalks,
24 fences/gates, garage doors, windows, office
25 renovations, HVAC systems, lighting, electrical

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1 systems, bathroom/locker rooms, security systems,
2 electrical systems, and emergency diesel generator.
3 Projects are listed in Programmatic Site Improvements
4 Category either as a result of a completed ESR or
5 program assessment or as a placeholder based on
6 engineering or historical knowledge of the systems and
7 equipment (e.g., since the expected life of a freon-
8 based HVAC system is approximately 20 years, units that
9 are 15 years or older will be listed in the five year
10 plan). A completed ESR provides a scope of work and
11 budgetary order of magnitude cost estimate required to
12 address a particular system problem.

13 Q. Please provide some examples of this type of capital
14 work.

15 A. There are currently over one hundred projects
16 identified in the Programmatic Site Improvements
17 category, which are listed in Exhibits SSP-11 and SSP-
18 12. These include:

- 19 • 3rd Avenue Parking Lot Design for More Efficient
20 Operation - \$2.5 million in 2013.
- 21 • Astoria Cable Yard Security Improvements - \$3.0 million
22 in 2013.
- 23 • WEA - Halon System Replacement \$2.0 million in 2013.

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- 1 • Van Nest S/C Bldg 1 - 1st floor Mezzanine
2 Bathrooms/Locker rooms renovation - \$520,000.
 - 3 • Bruckner Boulevard. - Yazaki HVAC Replacement - \$2.0
4 million in 2014.
 - 5 • Van Nest Building 1 - Air Handler Replacement \$2.57
6 million in 2014.
 - 7 • Various Roof Replacements (The Astoria Warehouse, 3rd
8 Ave Yard Garage, and other anticipated emerging work as
9 a result of the ongoing roof inspection program)
10 approximately \$7.0 million in 2013, \$5.5 million in
11 2014, \$3.0 million in 2015 and \$3.0 million in 2016.
- 12 Q. What are the projected costs for this category of
13 Programmatic Site Improvement projects?
- 14 A. The estimated capital costs for this category are \$17.2
15 million in 2013, \$34.4million in 2014, \$19.0 million in
16 2015, \$31.5 million in 2016 and \$31.5 million in 2017.

17 **User Requests**

- 18 Q. Please describe the final category, user requests.
- 19 A. Any projects that do not meet the criteria of the three
20 categories explained above and are generally done at
21 the request of the user are considered to be User
22 Requests. They are prioritized on a "first-come,
23 first-served" basis and budgeted/engineered/scheduled

1 subject to an engineering evaluation of the need for
2 the project.

3 Q. Are these User Request projects capital or O&M
4 projects?

5 A. Generally, these are capital projects but there are
6 some O&M requests.

7 Q. Please provide examples of these types of projects.

8 A. There are currently almost 30 projects identified in
9 the User Request category, and these were similarly
10 discussed in previous rate cases. They are forecasted
11 for \$6.1 million in 2017. We do not expect to incur
12 costs for this category from 2013 to 2016 as we will be
13 concentrating on the other project categories.

14 Examples of such projects are:

- 15 • TLC - Enclose gas pavilion for training.
- 16 • College Point Blvd. S/C- New Heated Flush Truck Shed.
- 17 • 16th St S/C - Enlarge Ave C gate for truck traffic.
- 18 • TLC - Employee/student notification system.
- 19 • Irving Place - Additional Pressure Switches for Chilled
20 & Secondary Water Pumps.

21 **Astoria Dock Repairs**

22 Q. Please explain this dock repair program.

23 A. In late 2007, as part of the Company's five-year
24 waterfront inspection program and in order to determine

1 the condition of its docks, Ocean and Coastal
2 Consultants ("OCC"), an outside engineering consultant
3 hired by the Company, identified various deteriorated
4 and degraded conditions at the Astoria A-11 and A-12
5 docks.

6 The OCC report recommended an over-sheeting bulkhead
7 repair method for A-11 Dock Area A and replacement of
8 pump house intake grating for Area B. The OCC report
9 recommended for the A-11 Dock Area D, a Rip Rap
10 Revetment repair method (i.e., sloped natural stone to
11 secure the waterfront and prevent erosion). For the A-
12 12 Luyster Creek Bulkhead, a Rip Rap Revetment repair
13 method was also recommended. The OCC report waterfront
14 inspection program discussed above identified the
15 various deteriorations/degradations of the A-11 Dock
16 and A-12 Luyster Creek Bulkhead and these were
17 categorized from "Poor" to "Serious." The American
18 Society of Civil Engineers recommends that such
19 conditions be carried out "with urgency." The section
20 A work of the A-11 dock and the A-12 dock work were
21 completed in 2011 for a cost of \$3.7 million. The
22 section B & D repairs of the A-11 dock have been bid
23 and construction will continue into 2013 for a cost of
24 \$4.4 million.

25 Q. Was this project requested in Case 09-E-0428.

1 A. Yes. The Commission adopted a Joint Proposal in the
2 Company's last electric rate case that reflects
3 spending on this capital program.

4 **Storm Hardening**

5 Q. Has Facilities evaluated its project needs in the
6 immediate aftermath of Superstorm Sandy?

7 A. Yes, Facilities Engineering and Operations personnel
8 have assessed the Headquarters Buildings and Regional
9 Buildings & Yards in order to determine the projects
10 and efforts needed for immediate restoration and to
11 return facilities to their original design basis (i.e.
12 "System Normalization"). These assessments have
13 determined that there was damage from Superstorm
14 Sandy's wind and storm surge to both life safety and
15 key operational equipment, along with damage to basic
16 building infrastructure at most of the buildings and
17 yards of Facilities that are located adjacent to
18 waterways. The Company's Learning Center experienced
19 the most significant damage due to flooding in its
20 basement and first floors, which house equipment such
21 as its fire pump, fire alarm panel, roof tank fill and
22 domestic water pumps, sewer ejector pumps, air
23 compressors, elevators, and roll-up doors, along with
24 classroom facilities (e.g., damage to sheet rock walls,
25 cabinets, training equipment). All will need to be

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1 repaired or replaced in the short term in order to
2 return this facility to full operations for Company
3 training.

4 The E. 16th Street Service Center also experienced
5 significant damage to key operational equipment, such
6 as its steam absorption chillers, hot water boiler and
7 heaters, UPS's, security systems, A/C systems and
8 vacuum pumps, along with damage to its first floor
9 locker and equipment storage areas.

10 Other Buildings and Yards of Facilities, such as the
11 Neptune Ave, Rye, Van Nest, Davis Ave, 28th Street,
12 Victory Blvd and Bruckner Service Centers, all
13 experienced damage to key equipment and basic critical
14 infrastructure, such as fencing, lighting, signage,
15 security systems, flooring, sheet rock walls, and
16 sanitary sewage systems, which also will need to be
17 repaired or replaced in the short and immediate term.

18 The preliminary direct cost estimate for this capital,
19 O&M and demolition work is approximately \$6.1 million.

20 Q. What is the Company's current plan to fund these
21 expenditures?

22 A. The Company believes that these repairs are covered by
23 insurance and therefore will be covered by insurance
24 proceeds. Accordingly, the projections for O&M and
25 capital expenses in this rate filing do not reflect any

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1 of these costs. However, to the extent the Company is
2 unable to recover these costs (or any portion thereof)
3 through insurance, the Company plans to update this
4 filing at the appropriate stage of this proceeding.

5 Q. Are there any other Storm Hardening efforts that the
6 Company is considering?

7 A. There are ongoing efforts at the Company to develop and
8 recommend immediate and long-term Storm Hardening
9 initiatives and system design changes that would
10 mitigate the impacts of future weather related damage.

11 Q. Does the Company have specific projects or programs, a
12 proposed schedule and/or estimates of costs to
13 effectuate Storm Hardening concepts?

14 A. Although the Company commenced evaluation of new storm
15 hardening initiatives immediately following completion
16 of restoration of service, time did not permit the
17 development of specific projects, projected costs and
18 schedules to be reflected in the rate request. The
19 Company will update the rate filing during the course
20 of this rate proceeding if and to the extent that
21 Company determines that specific initiatives for storm
22 hardening are necessary and appropriate.

23 Q. Does the Company have a proposal for addressing Storm
24 Hardening projects and programs that are not developed

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1 in a timeframe that permits their consideration in this
2 rate proceeding?

3 A. Yes. Company witness Muccilo proposes a framework for
4 addressing the recovery of such costs.

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

6 A. Yes, it does.