report

Con Edison
Law Department
Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N.Y. 10003

June 30, 2000

ORIG - FILES
C99-E-0930
11 COPIES DIST PER
7/99 LIST
EXTRAS: MR. M. WORDEN

Hon. Janet Deixler
Secretary
New York State
Department of Public Service
Three Empire State Plaza
Albany, New York 12223

Re: Case No. 99-E-0930

Dear Secretary Deixler:

Enclosed for filing are an original and fifteen copies of the June 30, 2000 Status Report of Consolidated Edison Company of New York, Inc. on it plans to implement the recommendations made in the "Report on Consolidated Edison's July 1999 System Outages" issued on March 15, 2000 in this proceeding.

A copy of this filing is being served on the City of New York and the Attorney General of the State of New York.

Very truly yours,

Martin F. Heslin
Senior Attorney

Enclosures

cc: Attorney General of the State of New York
City of New York

2000 JUN 30 PM 3:22

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Investigate the July 6, 1999 Power Outage of Con Edison's Washington Heights Network	:	**Case 99-E-0930**

STATUS REPORT ON RECOMMENDATION IMPLEMENTATION PLANS OF CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

In response to the Public Service Commission's May 26, 2000 order in this proceeding, Con Edison is filing today with the Public Service Commission its status report on its plans to implement the recommendations made in the "Report on Consolidated Edison's July 1999 System Outages."

Dated: June 30, 2000

Respectfully submitted,

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

By 

Martin F. Heslinr
Senior Attorney

4 Irving Place
New York, NY 10003
(212) 460-3302

II-1 Con Edison should improve its cable rating methods to more accurately reflect actual thermal conditions and develop techniques to better model its network systems, especially those under multiple contingency conditions.

Scope

Using a phased approach, Con Edison will enhance its existing thermal modeling techniques to better predict actual conductor temperature to improve feeder reliability.

Ampacity ratings of 13 kV, 27 kV and 33 kV primary distribution cables installed in underground conduit are normally calculated using the Cable Ampacity Rating Program (CARP) subroutine of the Poly-Voltage Load Flow program (PVL).

CARP calculates the cable ampacity in a 2, 4, 6, or 8 concrete duct bank configuration where all cables in the duct bank are of the same construction and operating at the same loss factor. The cable is rated based on the hottest occupied duct called the reference duct. Conductor temperature limitations are dictated by the cable insulation. To account for unequal loading of cables in the duct bank, a multiplier is applied to all other cables in the duct bank other than the reference duct. CARP is limited in its adaptability to accept actual current flows extracted from the load flow program to calculate the ratings of cables under normal and emergency conditions.

We are developing a new thermal modeling program called Underground Systems Ampacity Program, USAMP, which will provide more accurate modeling in a duct bank occupied by different cables with different loadings and loss factors. It will also be capable of modeling multiple-duct bank installations and external heat sources such as steam mains. Inputs to this program can be either conductor temperatures or conductor currents and the corresponding output can be provided in either current or temperature. USAMP has been developed to analyze one section of cable at a time making it a cumbersome and time-consuming process and ineffective as a real time tool.

Our goal is to configure USAMP for every section of cable on every feeder simultaneously (batch mode operation) with interfaces to the real time monitoring data and the network load flow analysis tool. We are working with a consultant to develop this batch mode capability for the USAMP program. This program will be an engineering tool as well as a operator tool to identify overloaded cables and their temperatures quickly and accurately.

Tasks

1. Establish a committee to evaluate the level and extent of thermal modeling needed and to guide the development of computer applications.

   Due date: Complete for Phase 1

2. Define scope for thermal modeling.

   Due date: Complete for Phase 1

3. Retain consultant to develop pilot software program. Con Edison will integrate into load flow.

   Due date: 5/30/00

4. Evaluate proposals from vendors to install monitoring devices in various duct and cable configuration and manholes. The results will be used to valuate the vendor's algorithms. The following are the 14 tentative structure numbers for monitoring: M27738; M44784; M39478; M28097; M51263; M50785; M28126; M53833; M53784; M34126; M53875; M39201; M40031; M24326; M60597; M28113.

   Due date: 4/30/00

5. Determine feasibility and method to extend network analysis program to cover extreme contingency level. The present modeling of network loads in the Poly Voltage Load Flow (PVL) connects the load extracted from the Remote Monitoring System (RMS) at the transformer low voltage bus (125/216 V for the Distributed Network and 277/480 V for Spot and Isolated Networks). However, this is not an accurate representation since the loads on the grid are distributed and not concentrated in one point at the transformer location. What makes this assumption possible is the existing of the monitoring of the transformer load. Even though the location of the service points to all the customers are known, their demands are not known. Another important point is that the High Tension Customer (HT) demands modeled in PVL are at their maximum coincident value for the summer peak day condition and they remain constant since they are not included in any monitoring systems. The PVL models consider that all the secondary mains on the grid are in service and do not consider opened secondary mains that are not known to be open when in reality some of them may be open. Also, the PVL models consider that all network protectors that are not reporting (UNR) are closed and carrying loads. The assumptions stated above for the location of the loads on the transformers 'low voltage buses, the fixed demands of HT customers, the secondary mains in service and the UNR are conservative assumptions for normal load flow studies and for the second contingency conditions on the networks. For those stated cases the PVL program converges for the normal runs and all combinations of second contingencies. However, the same assumptions become less and less conservative and accurate as the network progresses from its design limit levels to cascading or multiple contingencies.

   The proposed remedies are already in progress: 1) disperse the loads on the low voltage grids, 2) install RMS systems to monitor the HT customer loads, and 3) Improve the reporting of the existing RMS system to reduce the number of UNR's.The testing under the improved reporting conditions will allow for more accurate input data to the

PVL models and improve convergence under higher-level contingencies. These PVL cases will be selectively tested for improving the results.

Due date: 6/1/00

6. Improve secondary model to reflect (CUFLINK) loads on actual service points.

   Due date: Detailed schedule will be developed upon evaluation of task 3.

7. Improve existing thermal modeling techniques to use more of the data available in the electric primary and secondary mapping systems (i.e. numbers and types of cable in common runs between structures).

   Due date: 6/1/01

8. Analyze the ability to create digital data from existing paper conduit maps after the data requirements for the thermal model have been determined.

   Due date: 1/1/01

9. Measure and monitor the subsurface temperature of sample conduits and manholes in Manhattan by utilizing fiber optic or other sensing and field-hardened data acquisition systems. This is a successor to and an expansion of the monitoring put in place for summer 2000. Fiber optic temperature sensing is technically feasible. However, the feasibility and durability of a large-scale data collection system must still be demonstrated. In addition, allocated fiber lines must be installed or licenses must be obtained to use other lines.

   Due date: 5/1/01

10. Measure and monitor the soil thermal resistivity in the vicinity of conduits and manholes in sample Manhattan locations by sensing and field-hardened data acquisition systems. This is a successor to and an expansion of the monitoring put in place for summer 2000.

    Due date: 3/1/01

11. Develop an enhanced thermal model of typical manholes, including cables and joints, by advanced analytical means, such as finite element analysis. The results will be compared to II-2, Task #3.

    Due date: 11/1/00

Supplemental Task

Evaluate by March 31, 2001 whether any information from these activities can be incorporated into the Company's preparations for the 2001 peak load season.

Status

A committee has been established that consists of representatives from Distribution Engineering. The scope of the thermal modeling project, for summer 2000, has been established and a request for proposals was released. One proposal is being evaluated. In addition, proposals from vendors to install thermal, load and soil resistivity probes are being evaluated and the equipment will be installed for the summer. Other advanced projects are being scoped and proposals are being sought.

Status Report (June 30, 2000)

Request for proposals for the development of pilot software, to improve cable-rating methods, were sent to several vendors. The committee members evaluated proposals and one vendor met Con Edison's requirements. A meeting was held by the interested parties to discuss and clarify issues and the proposal is being modified to reflect this discussion.

Distribution Engineering has selected a vendor to supply instrumentation packages to acquire data necessary to validate the thermal model accuracy. A letter of intent has been signed, and a purchase order will be issued. Based upon this letter of intent, the vendor is presently assembling instrumentation packages.

II-2 Con Edison should evaluate reasonable actions that can be taken to improve monitoring of its secondary system, including use of additional monitoring devices where feasible, and report to the Commission by June 1, 2000 on its findings.

Scope

Con Edison is evaluating the implementation of a Secondary Underground Network Data Acquisition System (SUNDAS) to better and more extensively monitor its secondary system. This enhanced system uses the secondary grid for two-way power line carrier communications. The Remote Monitoring System (RMS) system provides only three-phase current and the network protector position. SUNDAS provides this plus voltages, phase angles, relay status and diagnostic, and the capability of remote relay setting changes and remote operation of the protector. In preliminary work, we have developed the additional secondary monitoring sensors and demonstrated the feasibility on a small scale. The current work is a large-scale demonstration, which simulates full-scale communications traffic and the successful operation of the expanded monitoring system with multiple concentrators in the communications network. In addition to the 138 network transformers that will be monitored, approximately 100 three-phase voltage, current and phase-angle sensors will be placed to monitor the secondary at intersections and mid-block locations.

Tasks

1. Install and make operational SUNDAS network protector relays, and communications infrastructure in Hunter Network.

   Due date: 6/1/00

2. Develop software screens for SUNDAS for Hunter network.

   Due date: 6/1/00

3. Install and make operational Voltage, Current and Power Factor sensors in selected manholes in Hunter Network.

   Due date: 9/1/00

4. Install and test selected sites with modified electric meters equipped to communicate via SUNDAS.

   Due date: 10/1/00

5. Demonstrate equipment and procedures.

   Due date: 9/1/01

6. Issue report and recommendations including implementation plan.

   Due date: 10/1/01

Supplemental Task

7. Provide to the DPS Staff by March 31, 2001 an interim report on the status of the Hunter network demonstration project including an evaluation of data collected and an interim evaluation of project feasibility.

Responsible Department

Research and Development

Status

Equipment and components are being delivered. Installation in the field started 3/22/00.

Status Report (June 30, 2000)

SUNDAS to Monitor Secondary Network

We are evaluating the implementation of an advanced remote monitoring system for our secondary networks. This Secondary Underground Network Data Acquisition System (SUNDAS) will monitor the network system more extensively than any system in the world. The SUNDAS project is the first of its kind in the utility industry. This enhanced system uses the secondary grid for two-way power line carrier communications. Our present Remote Monitoring System (RMS) system provides only three-phase current and the network protector position. It also provides 5 data points which can be used to monitor water level, vault entry, etc. The latest version of RMS has voltage and transformer top oil temperature capabilities. SUNDAS provides this information as well as voltage, phase angle, relay status, and the capability of remote relay setting changes as well as remote operation of the protector.

Additional secondary monitoring sensors have been developed and the feasibility on a small scale has been demonstrated. The current work is a large-scale demonstration project, which simulates full-scale communications traffic and the successful operation of the expanded monitoring system with multiple concentrators in the communications network. In addition to the 138 network transformers that will be monitored, approximately 50 three-phase voltage, current and phase-angle sensors will be placed to monitor the secondary at intersections and mid-block locations.

The pilot project is being conducted in the Hunter network. Most of the equipment and components for this project have been delivered. The installation began on 3/22/00. To

date, 138 network relays have been installed along with 4 operational collectors (A total 16 collectors will be required).

Remote Monitoring System (RMS) Reporting Level

In order to improve the existing system, we are working with the manufacturer, Hazeltine and have generated lists of corrective work to be performed at area substations and assigned to Company forces. The ongoing corrective work is outage related and contingent on system conditions. In addition, vault located malfunctioning transmitters are being serviced and made operational as part of routine maintenance workload. Once the receivers and transmitters are operating properly, Phase II surveys will take Hazeltine into the field to locate and determine solutions for those remaining cases where transmitted signals are still not being received.

Con Edison has implemented revisions to its maintenance specifications for RMS units – EO 10110, "Inspection and Maintenance of Network Type Distribution Equipment" – that are designed to increase reporting availability of RMS units. The revisions to the specifications include specific instructions on symptoms to look for, how to handle non-reporting units, time frame for performing repairs, prioritization of repair work, and requirements for performing periodic system wide surveys.

The goal is to achieve at least 95% RMS availability on a given network to be attained through the following measures:

- immediate repair response to critical non-reporting RMS units,
- repair response to non-critical units as soon as possible but no later than 30 days,
- prioritization of units needing repair based on engineering/operational need and overall network performance, and
- system-wide optimization surveys to be performed once every three years.

II-3 Con Edison should examine its 86 degree Fahrenheit wet bulb/dry bulb design criterion to determine whether a more stringent criterion is appropriate for its distribution system. The study should estimate the costs of implementing various scenarios (e.g., one in five or ten year criteria).

Scope

To review the need, impact and effect of raising the design criteria for temperature variable for the network system. As part of the project, Con Edison will assess the effects of using higher temperature variable criteria, in terms of costs, benefits and reliability, on the distribution system, as well as the generation, transmission, and substation systems.

Tasks

1. Produce a 5-year forecast for the following temperature variables:

Temperature Variable	Frequency of Occurrence
86 degrees	1 in 3 years
87 degrees	1 in 6 years
88 degrees	1 in 12 years
89 degrees	1 in 24 years
90 degrees	Never reached

   Due date: Complete

2. Estimate loads by substation, by year, and by each of the temperature variables

   Due date: Complete

3. Studies are being conducted which determine reinforcement requirements and incremental costs for each design criteria. The study will result in cost estimates for each of the higher design criteria

   Due date: 6/1/00

4. Consultant will be retained to assist the study, particularly to quantify the reliability benefits of using the higher temperature variable criteria.

   Due date: 6/1/00

5. Technical and financial impact on generation, substation, transmission and distribution systems will be assessed and recommendations will be made for each.

   Due date: 9/1/00

Status

Tasks 1 and 2 have been completed.

Con Edison has developed five-year load forecasts using elevated levels of temperature variables. The system load forecasts have been converted into network and load area forecasts for the 5-year period. Studies are being conducted which determine reinforcement requirements and incremental costs for each design criteria. The study will result in cost estimates for each of the higher design criteria. We will work with a consultant to quantify the benefit of potential criterion changes in terms of reliability. An analysis will be performed to determine optimal design criteria.

Status Report (June 30, 2000)

We have completed the load forecast and the system reinforcement plan and associated costs for five years for each of following temperature variables: 87, 88, 89, and 90 degrees. An extensive study was performed for both normal and emergency conditions. The study included the areas of generation, transmission, substation, network distribution and non-network systems. The load forecast for each station for each of the design criteria has been calculated. The cost impact of modifying the temperature variable design criteria is completed. The benefits to the system, including the effect on reliability, and the operational impact of increasing the temperature variable design criteria will be analyzed, quantified and evaluated against the economic costs by two consultants – RLW Analysis and The Risk Research Group, Inc.. The Company will also examine the feasibility, i.e., physical, electrical, etc., of actually implementing the reinforcement measures.

II-4 If Con Edison water-cools a transformer during a multiple contingency event, it should review the transformer's load capacity after the system emergency.

Scope

Con Edison is reviewing and revising procedures to detail requirements for post-contingency testing on network transformers that required water-cooling to confirm transformer integrity.

Tasks

1. Revise EO-4095, "Distribution System Operation under Contingency Conditions," to reflect post contingency maintenance and testing requirements for network transformers that required water cooling during a contingency.

   Due date: 5/1/00

2. Train operators on new procedure. The new procedure will be reviewed with all regional control center managers. The regional control center managers will ensure that all operators have been trained and will report the training schedule and status to the Chief Distribution Engineer prior to 6/1/00.

   Due date: 6/1/00

Responsible Department

Distribution Engineering

Status

A draft revision of EO-4095 is complete and is being reviewed by the operating areas. The procedure will be issued by 5/1/00 and provided to Staff. Proper training to all relevant personnel will be completed before 6/1/00.

Status Report (June 30, 2000)

EO-4095 has been revised to require post-event inspection and testing for units that experienced overload or water-cooling to assess the integrity of the unit. A copy of the revised EO-4095 is being transmitted electronically to the DPS Staff.

II-5 Con Edison should require basic impulse level (BIL) testing in its network transformer rebuild specifications.

Scope

Purchase and install Basic Impulse Level (BIL) test device for testing of reconditioned network transformers to ensure they can sustain voltage transients when installed on the system.

Tasks

1. Purchase BIL testing equipment.

   Due date: Complete- Delivery 5/15/00

2. Create Transformer Shop Operating Procedure (TOP) to outline testing procedure

   Due date: 6/1/00

3. Train personnel on use of the equipment

   Due date: 6/1/00

4. Implement in production

   Due date: 6/1/00

Responsible Department

Distribution Engineering

Status

A BIL test unit was ordered on 2/8/00. Delivery of the unit is expected mid-May. Training program will be put together to ensure proper utilization of the equipment. The unit is expected to be in production on 6/1/00.

Status Report (June 30, 2000)

A Basic Impulse Level (BIL) test unit has been purchased, delivered and installed. The Transformer Shop has developed a Transformer Shop Operating Procedure (TOP) on the use and training for this new equipment. The Transformer Shop personnel have been trained in its operation and for the first time, BIL testing of refurbished network transformers

is taking place. This unit was incorporated into the production line on 5/26/00. The equipment and testing is being done in accordance with IEEE Standard C57.98. This will increase the reliability of the refurbished network transformers being installed on the distribution system.

II-6 Con Edison should establish clearer criteria for prioritizing the order in which paper cable should be replaced. Con Edison's unwritten policy of removing and replacing sections of paper/lead cable in both directions between splices when making repairs associated with stop joints or paper/lead cable, needs to be formalized.

Scope

Based on each year's performance, a specific program is developed to replace the worst performing feeder components. A backbone feeder program is in place to enhance the reliability of key feeders in each network and improve their ability to support the network during contingencies. The statement that the policy for replacement of paper cable sections was unwritten is incorrect. Con Edison will formalize its guidelines currently outlined in a white paper by incorporating into existing procedures.

Tasks

1. The 2000 reliability program was developed to address the worst performing system components based on 1999 performance. In addition to the removal of such components, the program provides for re-conductoring backbone feeders in each network to optimize their support of the network during contingencies. The attached document describes the scope of the 2000 Reliability Program (See Appendix-1).

   The number and type of stop joints and the feeder they are on is also known (See Appendix-2)

   This year it is planned to remove approximately 1,500 heat sensitive stop joints on a planned program. About 500 additional heat sensitive stop joints will be removed for other reasons (burnouts, new business, etc.). Based upon removing approximately 2,000 of these joints per year and current system performance, and a population of 13,000 of these joints, the program will take approximately 7 years to complete (2007). An annual review will be made to re-prioritize the planned programs, based upon system performance of the previous year.

   Due date: 2000 Program has been developed and is being implemented

2. Con Edison will formalize the guidelines for replacing paper cable while a feeder is out of service due to failure, currently outlined in a white paper, by incorporating these into appropriate design and operating procedures as well as for the 2001 load relief program.

   Due date: 9/1/00

Responsible Department

Distribution Engineering

Status

Based on 1999 performance, a specific program has been developed to replace the worst performing feeders and components. This program shifted the focus of the paper cable replacement program to thermally sensitive components and a backbone feeder program to enhance the reliability of key feeders in each network and their ability to support the network during contingencies. The reliability/reinforcement plan was significantly accelerated this year. In addition to re-prioritizing the reliability program to target poor performing components, additional components will be replaced as a result of the High Potential Proof Test program, New Business work, Interference work, and during the repair of feeder failures.

Status Report (June 30, 2000)

Con Edison has provided to the DPS Staff its written criteria prioritizing removal of PILC cable and will incorporate this criteria into a formal application and design specification by September 1, 2000.

Based on 1999 performance, Con Edison developed a specific program to replace the worst performing feeders and components. This program shifted the focus of the paper cable replacement program to thermally sensitive components and a selected feeder program to enhance the reliability of key feeders in various networks and their ability to support the network during contingencies.

II-7 Con Edison should develop a program for eliminating stop joints with high failure rates that are still in service.

Scope

Improve the feeder performance of our network system by establishing a prioritized program for the removal of thermally sensitivity components including stop joints from the network system.

Tasks

1. Complete the established Reliability Program to target the removal of (a) thermally sensitive components and (b) paper cable replacement

   Due date: (a) 12/31/10

   (b) 12/31/24

2. Develop an application to assist in the identification of these components and make this application available on line for operators to use to incorporate their removal in conjunction with scheduled or non-scheduled outages. The program utilizes available data from the mapping systems in conjunction with cable card data to determine known locations to the best of our records (See Appendix-1 and Appendix-2).:

   Due date: Complete

3. Replace stop joints:

   a) 914

   b) 1,492

   Due date:

   a) 6/1/00

   b) 12/31//00

Responsible Department

Electric Operations

Status

To better manage our component replacement program, a number of computerized systems have been developed since July 1999 and are being enhanced with experience. By extracting data from our Automated Mapping and Facilities Management system (AM/FM) and cable card tracking system, we were able to identify the location of the

thermally sensitive stop joints on our system. The location of these components can be plotted on a map that will allow our engineers, control center operators and project managers to identify them and plan programs to replace them. The accuracy of this data is subject to actual field verification.

To help better facilitate feeder work and the reliability program, data from the Outage Scheduling System and the locations of thermally sensitive stop joints have been added to a data warehouse, so that these records are now stored and viewed on one application. An Intranet Application has been developed to allow the Feeder Control Representative (FCR) to view this data when they need to take a feeder out. The FCR can then see all planned work for that feeder as well as any restrictions on the feeder and if the feeder has any stop joints that are part of the replacement project. The FCR will then try to combine as much of this work as possible depending on how long the feeder can be kept offline.

Supplemental Implementation Plan

II-7 Con Edison should develop a program for eliminating stop joints with high failure rates that are still in service.

Tasks

1. Complete the established Reliability Program to target the removal of (a) thermally sensitive components and (b) paper cable replacement

   Due date: (a) 12/31/08 (revised date)

   (b) 12/31/24

Based on current system performance, Con Edison's plans to fund the Reliability Program at a level adequate to effect the removal annually of approximately 1500 thermally sensitive components (i.e., Elastimold 2w-1w and Raychem 3W-1W stop joints) until these components are eliminated from the distribution system.* At that rate of removal and using the current estimate that there are approximately 13,000 of these joints in the distribution system, the removal of these components would be completed in about 9 years (by 2008). The Company is continuing efforts to establish the total population and location of these components, and the population estimate may increase.

In addition to the number of thermally sensitive components that will be removed annually under the Reliability Program, additional numbers of these components will be removed for other reasons, such as burnouts and new business installations. The number of such removals will vary depending on conditions such as economic activity and weather, and we estimate that there will be about 500 of such removals during the year 2000. All other

* Con Edison's Reliability Program reflects current system design criteria and is adjusted annually to incorporate the system performance experience of the prior year and trends that emerge from the accumulation of operating experience. Such experience may warrant reprioritization of expenditures in order to improve the overall effectiveness of the Reliability Program.

factors being equal, these additional removals would accelerate the completion of the removal of such components to a date earlier than 2008.

Status Report (June 30, 2000)

In order to improve system reliability, Con Edison's capital programs (reinforcement, new business, burnouts, and reliability) will be funded to a level adequate to effect the removal annually of approximately 1500 thermally sensitive components (i.e., Elastimold 2w-1w and Raychem 3W-1W stop joints) until these components are eliminated from the distribution system.* At that rate of removal and using the current estimate that there are approximately 13,000 of these joints in the distribution system, the removal of these components would be completed in about 9 years (by 2008). The Company is continuing efforts to establish the total population and location of these components, and the population estimate may increase. As of June 1 2000 under the Company's summer 2000 preparedness program, we have identified and removed 929 thermally sensitive stop joints.

* Con Edison's Reliability Program reflects current system design criteria and is adjusted annually to incorporate the system performance experience of the prior year and trends that emerge from the accumulation of operating experience. Such experience may warrant reprioritization of expenditures in order to improve the overall effectiveness of the Reliability Program.

II-8 Con Edison should accelerate efforts to better understand the susceptibility of various age groupings of paper/lead cables to failure to help prioritize replacement efforts.

Scope

To assess the thermal characteristics of various vintages of paper insulated lead covered (PILC) cables and joints, using cable and joints removed for reinforcement and reliability programs, in order to better understand their performance. Analysis would include power factor, dryness of tapes and moisture content. This will provide data that will be used to evaluate the remaining life of the cable and guide the replacement program.

Tasks

1. Identify types and vintage of cables for testing

   Due date: 5/1/00

2. Determine testing criteria

   Due date: 5/15/00

3. Retain laboratory consultant to perform testing of various vintage cables

   Due date: 6/15/00

4. Obtain samples of the different cables and joints from the field

   Due date: 6/1/00

5. Complete analysis of the test results

   Due date: 10/00

6. Prioritize the paper cable replacement program based on results

   Due date: 1/01

Responsible Department

Distribution Engineering

Status

The project is underway and testing criteria are being determined and types and vintage cable are being classified. A request for proposal will be released by 5/15/00 to obtain a consulting laboratory for testing of the cable.

Status Report (June 30, 2000)

Cable Technology Laboratories, Inc (CTL) was hired to evaluate the characteristics of Pre-World War II belted paper insulated cables and to determine if they could be loaded to the same temperature level as shielded paper insulated cables.

CTL will conduct the following tests on the Pre World War II belted cables:

- Dissipation factor and measurement of the sheath temperature during the test
- Determination of thermal resistance of belted cable insulation at 60° C, 85° C, and 110° C steady state conductor temperatures
- Calculation of the temperature in the interstice of the three insulated conductors
- Breakdown tests on the belted cable samples at 1.2 times rated voltage with incremental conductor current for a duration of five days for each specimen

Testing will be performed at CTL and the statistical evaluation of the test data with corresponding computations at Underground Systems (USI).

II-9 Con Edison should implement its cable rejuvenation program associated with manholes and reassess its manhole inspection program.

Scope

Ventilation of subsurface structures has the potential for mitigation of manhole events. Con Edison is embarking on a large-scale evaluation of the impact of ventilating manholes and boxes. This project will evaluate increased atmosphere exchange, the build-up of debris, and the change in number, or pattern, of manhole events, for all of the approximately 1,000 structures in the Grand Central network and attempt to balance the benefits and drawbacks.

Tasks

1. Specification EO-1184, "Periodic Inspection, Maintenance and Reporting of Distribution Underground Cables and Joints" will be revised. One of the changes will include a more efficient utilization of manpower, for the inspection of manholes.

   Due Date: 9/1/00

2. Select appropriate project site.

   Due date: Complete

3. Develop field protocol.

   Due date: Complete

4. Describe test plan for ventilation measurement.

   Due date: 5/15/00

5. Develop and test cover designs for increased ventilation.

   Due date: 6/30/00

6. Purchase manhole covers.

   Due date: 7/15/00

7. Exchange manhole covers.

   Due date: 2/28/01

8. Accumulate data and analyze results.

Due date: 12/1/02

Responsible Department

Research and Development

Status

Grand Central Network has been selected. This network comprises of about 1,000 structures. Tasks 1 and 2 have been completed. The remaining tasks are progressing.

Status Report (June 30, 2000)

Ventilation of subsurface structures has the potential for mitigation of manhole events. Con Edison has embarked on a large-scale evaluation of ventilating manholes and boxes under actual field conditions. This project will evaluate increased atmosphere exchange, the build-up of debris, and the change in number, or pattern, of manhole events, for approximately 1,000 structures in the Grand Central network. This data will be used in the evaluation as described in the scope. A purchase requisition for the vented manhole covers was prepared and approved. All of the proposed vendors were contacted in an effort to expedite the purchase. It is anticipated that the purchase date of 7/15/00 will be met and the project will remain on schedule.

II-10 Con Edison should accelerate its evaluation of alternatives to high-potential testing, such as low frequency AC testing, to determine their possible effectiveness and report to the Commission on its efforts by June 1.

Scope

Evaluate alternatives for hi-potential testing to improve our ability to locate incipient faults prior to experiencing an operating failure. We will use a two-pronged approach by investigating existing commercially available technologies as well as developing technology through an R&D project.

Tasks

1. Evaluate the use of partial discharge tests on the distribution system using Detroit Energy's equipment to determine its effectiveness.

   Due date: 6/1/00

2. Purchase a VLF (Very Low Frequency – 0.1 Hz) test unit and evaluate very low frequency testing.

   Due date: 12/31/00

3. Re-evaluate the feasibility of thermal hi-pot testing based on changes in technology since 1998

   Due date: 9/1/00

Responsible Department

Research and Development

Status

The effectiveness of Detroit Energy's partial discharge test equipment is being tested on Con Edison's distribution system. Testing began in late March in Manhattan (13.8 kV feeders), and in April in Brooklyn (27 kV feeders). Testing of URD components will also be done in Westchester. VLF tester has been purchased and is scheduled for delivery in September. Evaluation to be completed by year-end.

Status Report (June 30, 2000)

As an alternative to high potential (Hi-pot) testing of our feeders, the effectiveness of Detroit Energy's partial discharge test equipment is being tested on Con Edison's distribution system. Testing began in late March in Manhattan (13.8 kV feeders), and in April in Brooklyn (27 kV feeders). Testing of URD components will also be done in Westchester. A major benefit of this approach is that the test is performed under operating conditions with the feeder energized. This also saves feeder-processing time. A major drawback of this approach is that only portions of a feeder can be tested simultaneously and therefore multiple tests are required per feeder, thus increasing both the time and the cost per test.. The final report was received from Detroit Energy on 6/15/00, and Engineering is evaluating the report. Detroit Energy will meet with Engineering in early July to discuss the report.

Con Edison is also evaluating Very Low Frequency VLF (0.1 Hz) testing as another alternative to using hi-pot tests on distribution feeders. This test is believed to be a less destructive test for solid dielectric cable than the DC high potential proof test. A VLF unit has been purchased. A factory visit to HDW Electronics, in Dresden, Germany was made from 5/20/00 through 5/26/00. A review of the VLF development project was made and there are no significant problems being encountered. The time schedule for the equipment delivery was reviewed and discussed. The delivery date has been extended to November, 2000 due to the long lead-time for the high voltage power supply component. By November 2000, Con Edison will develop a test plan that will define the test period, scope of testing, methodology, etc.

II-11 Con Edison should consider installation of feeder sectionalizers for all networks in order to return customers to service more quickly and to help stabilize the network during multiple contingencies.

Scope

In order to mitigate the effects of feeder outages during multiple contingencies, install sectionalizing switches on selected feeders. Sectionalizing switches will be installed on feeders in two networks to evaluate their effectiveness and gain operational experience. The effectiveness of the initial pilot project will be monitored in order to review the feasibility and benefits of an expanded program. Consultant to be retained to prepare a costs versus benefits analysis of feeder sectionalizer installation.

Tasks

1. Develop and/or revise specifications (EO-2127, EO 4027, EO 4086, and EO 4019) for installation of sectionalizing switches.

   Due date: Complete

2. Install sectionalizing switches on Washington Heights (1M03, 1M04, 1M06) and Bay Ridge (8B83, 8B84, 8B89) feeders.

   Due date: 6/1/00

3. The proposal to the consultant will include the request to generalize the application of sectionalizing switches on all networks and to determine the improved reliability of the networks. The proposal will request the determination of the improved SAIFI and CAIDI and the improved probability of maintaining the network in operation under severe cascading contingencies. A comparative study of the before and after reliability would be generated and the cost/ benefit ratio derived.

   Due date: 9/1/00

4. Revise the guidelines for the installation of sectionalizing switches (EO-2127) based on evaluation of costs and benefits, operating experience and field conditions.

   Due date: 12/1/01

Supplemental Tasks

5. Develop theoretical reliability benefits for sectionalizers in terms of SAIFI, CAIDI, probability of loss of load, or reduced exposure to multiple (i.e., above design criteria) contingencies.

Due date: 9/1/00

6. Gather operating experience to confirm theoretical model and ensure that the introduction of this new device avoids unforeseen operational, environmental (e.g.,SF6 gas in underground structure), or safety issues that might prevent realization of the benefits. Revise the guidelines for the installation of sectionalizing switches (EO-2127) based on evaluation of costs and benefits, operating experience and field conditions.

   Due date: 12/1/01

Responsible Department

Distribution Engineering

Status

The three Washington Heights locations are with Construction Management for installation of the three required manholes and the associated duct runs. We anticipate completion by May 15th.

The three switches to be installed in Bay Ridge network in Brooklyn will be completed prior to the summer.

Status Report (June 30, 2000)

Con Edison has completed the installation of sectionalizing switches on feeders in the following networks:

- Washington Heights feeders 1M03, 1M04, 1M06
- Bay Ridge feeders 8B83, 8B84, 8B89
- Jamaica feeders 5Q52, 5Q53
- Crown Heights feeders 3B87, 3B88
- Riverdale feeder 1X22
- Ocean Park feeder7B44
- Rego Park feeder3Q83

Con Edison is conducting a pilot project to gain operational experience and to evaluate the effectiveness of these switches, such as reduction of exposure to multiple contingencies. The effectiveness of the initial pilot project will be monitored in order to review the feasibility

and benefits of an expanded program. Further analysis will be undertaken to review the impact of these improvements on feeder processing time and system reliability.

II-12 Con Edison should evaluate the effects of low voltage on customer equipment as a result of the secondary network problems experienced in Washington Heights. As part of its evaluation, all equipment damage claims should be reviewed. The company should report its findings to the Commission by June 1, 2000.

Scope

Con Edison will utilize an outside consultant to document industry standards for motor protection. Based on the results, the effect of low voltage on non-protected customer motors will be studied. This will allow us to provide better guidance to our customers and operators during periods of reduced voltage. Review all denied residential and commercial claims to determine the type of equipment damage.

Tasks

1. Retain consultant (Electrotek) to document industry standards for motor protection and dates of adoption of such standards (to determine the age of unprotected motors).

   Due date: Complete

2. Retain consultant (NY Polytechnic University) to evaluate the effect of very low voltage on residential and commercial customer motors.

   Due date: Complete

3. Complete study and issue specification. The project will examine a representative sample of customer motor equipment and will include running and testing motors under variable voltage conditions in the NY Polytechnic labs in order to correlate the supply voltage to the motor demands and to determine the acceptable minimum running and starting voltage conditions of the different type and size of motors. The results of the tests will be tabulated and equations will be derived for use as input to the load flow computer programs to calculate the demand loads under the voltage condition experienced by the networks undergoing cascading contingencies. The end result will be more accurate modeling and more accurate load flow output results which will serve to guide the operator on the actions to be taken to reduce the risk of running motors under low voltage conditions and to issue appeals as needed to the customers connected to the network undergoing severe contingencies.

   Due date: 12/1/01

4. Develop and issue customer education guidelines

   Due date: 12/1/01

5. Identify all denied residential and commercial claims.

   Due Date: Complete

6. Locate and retrieve claim files for all denied residential and commercial claims.

   Due Date: Residential 4/24/00
   Commercial Complete

7. Examine information to be gathered from claims submitted, for example:
   - Was any equipment damage claimed
   - Type of equipment damage claimed
   - Make, model, and age of equipment damaged
   - Amount of equipment damage claimed
   - Repair or replacement cost claimed
   - Documentation submitted (e.g., purchase receipt, repair estimate, paid repair bill)

   Due Date: Complete

8. Compile data gathered

   Due Date: Residential- 5/15/00
   Commercial- Complete

9. Review data gathered

   Due Date: Residential 5/18/00
   Commercial 4/24/00

10. Tabulate number of claims received for equipment damage

    Due Date: 5/18/00

11. Categorize and tabulate claims by type of equipment damaged

    Due Date: 5/18/00

12. Tabulate amount claimed in each category

    Due Date: 5/18/00

13. Determine what conclusions, if any, can be drawn from data

Due Date: 5/22/00

Supplemental Task

14. Provide to the DPS Staff by March 1, 2001 an interim report on the status of the New York Polytechnic University study including an analysis of actions that can be implemented prior to the summer 2001.

Responsible Department

Distribution Engineering

Law

Status

The consultants have been hired. Polytechnic University will use the results of the Electrotek investigation to proceed with their portion of the study. The claims analysis is in progress.

Status Report (June 30, 2000)

See Con Edison's Interim Report on its study evaluating the effects of low voltage on customer equipment, filed June 1, 2000.

II-13 Con Edison should review the design for all relay protection schemes on its network feeders similar to those on IM05 to ensure proper relay operation.

Scope

Determine specific conditions and configurations in which a station relay would operate in lieu of a network protector opening. Locate these situations on the distribution system and recommend a plan to address them. This will prevent feeder breakers from incorrectly operating, thus reducing multiple contingencies.

Tasks

1. Identify the configurations and specific conditions on the distribution system where a feeder breaker can open in lieu of a network protector relay.

   Due date: Complete

2. Identify the location of the network protector relays that have to be replaced in Washington Heights network. The replacements of these relays will be prioritized.

   Due date: 6/1/00

3. Feeder relay settings will be modified by the summer as an interim measure to prevent reoccurrence of undesirable breaker operations. Analysis has shown that this is critical at only two stations, Sherman Creek and Hell Gate, which will be addressed by the beginning of Summer 2000.

   Due date: 6/1/00

4. Develop schedule for system wide network protector relay replacement program

   Due date: 9/1/00

Responsible Department

Substations / Electric Operations

Status

Task 1 is complete. 1,500 relays in the Spot Networks are involved. As an interim solution for this summer, work is in progress to issue revised relay settings to be applied at Sherman Creek and Hell Gate, with a priority on Washington Heights feeders.

Station relaying

As a permanent solution the relays at Sherman Creek and Hell Gate substations will be modified/replaced with directional capability.

Network Relays

The network protector relays at 480-volt Spot network locations will be replaced beginning in the Washington Heights Network.

Status Report (June 30, 2000)

Con Edison has conducted a major study that reviewed the design of the relay protection on the Washington Height network and has completed the replacement of all network protection relays where it was found that a feeder breaker could open instead of network protector relay operation. The Company also replaced all such units in the Yorkville network. As indicated in Con Edison's supplemental implementation plan for this recommendation, Con Edison will develop by September 1, 2000, a schedule for system-wide replacement of such units.

Con Edison has also identified two substations - Sherman Creek and Hell Gate - where, due to the double secondary winding transformers, a 13 kV feeder fault causes the voltage to drop significantly on that side of the station, while close to normal voltage is maintained on the other side of the station. Recent PVL computer simulations show that this results in significant current flows both in and out of various 13 kV network feeders via the distributed network grid as well as through isolated networks. Time-current coordination studies for 13 kV overcurrent relays vs. 120/208 V. and 277/480 V. network protectors were performed to identify those feeders where relay settings were required to be modified to prevent reoccurrence of undesirable breaker operations. Con Edison has completed the required modification of feeder relay settings at these stations.

II-14 Con Edison should develop, before June 1, formal plans for operating networks under multiple contingency conditions, including the identification of load relief measures available for each network.

Scope

Enhance emergency procedures and provide training to operators on guidelines for operating networks under multiple contingency conditions. To assist the operators in load reduction measures, we will review the inventory of network customers by network and by feeder. Enhanced data to be made available to our operators will include peak load levels, feeders, generation capability, hours of operation and contact names. In addition, network transformer water-cooling procedure, as outlined in specification EO-4095, will be made available to the operators.

Tasks

1. Revise EO-4095 ("Distribution System Operation under Contingency Conditions") to provide improved guidelines for actions by operators when conditions exceed design criteria.

   Due date: 5/1/00

2. Identify, by network and by feeder, customers to reduce load and emergency generators to add capacity.

   Due date: 6/1/00

3. Incorporate customer contact data and available generating capacity of customers by feeder and by network in control center for easy accessibility by the operators.

   Due date: 6/1/00

4. Provide training on the guidelines

   Due date: 6/1/00

Supplemental Task

5. Provide to DPS Staff a copy of revised EO-4095 ("Distribution System Operation under Contingency Conditions") and summary of load relief measures identified for each network.

Due date: 6/1/00

Responsible Department

Distribution Engineering

Status

EO-4095, "Distribution System Operation under Contingency Conditions," is being reviewed and will be implemented prior to the summer. Guidelines will be provided to the operating areas to ensure that equipment that is listed as corroded will be pressure tested prior to the summer, to ensure that water spraying of this equipment is a viable solution to meet the load demand. This procedure will provide guidelines to operators during contingencies, and will address post contingency inspections of the affected equipment. The Company will ensure proper training of its control center personnel on this new procedure. A list of network customers who can assist in load relief will be compiled by network and by feeder by 6/1/00. The emergency procedure will be drilled in all Control Centers.

Status Report (June 30, 2000)

Con Edison has revised its procedure EO-4095, "Distribution System Operation under Contingency Conditions" to provide additional guidelines for actions by operators when conditions exceed design criteria. Included are guidelines for the use of two recently installed tools to assist operators such conditions. One tool provides operators immediate on-line access to the Company's transformer inspection and maintenance records for assessment of the physical condition of a transformer when considering the method for cooling a unit. The other is a predictive tool for forecasting transformer temperature based on current loading and load curve. It allows operators to take proactive measures prior to development of an overload.

EO-4095 also includes new guidelines for use of water spraying to cool transformers. Also, in an effort to evaluate the physical condition of transformers, Con Edison has conducted analyses of potential transformer overloads and has pressure tested those units that might experience high loads during multiple contingencies. Units failing this testing are relpaced.

Con Edison has created an on-line database – Emergency Operations System (EMOPSYS) – that provides by network and individual customer the amount of available customer generating capacity and the amount of load reduction that the customer is able to achieve on a voluntary basis. This database is also available in hardcopy format in each of the Company's regional distribution control centers and operators have been trained in its use for achieving load reduction. The database has a sort function that allows an operator to search for particular information. The database is being continually updated to reflect the latest known customer information.

In advance of summer 2000, each regional heat storm emergency plan was reviewed and updated to reflect the July 1999 experience. Each region has conducted pre-summer drills involving simulated multiple network contingencies requiring both operational and communications responses.

II-15 Con Edison should monitor the loading of high-tension customers' transformers as part of its system modeling programs.

Scope

Establish a pilot program to test the feasibility of monitoring of high tension customers and integrate into the existing Con Edison's system to improve our ability to determine feeder loading and operations.

Tasks

1. Initiate a pilot program to establish the hardware requirements for monitoring high-tension customers.

   Due date: 6/1/00

2. Develop method to integrate collected data into VDAMS for real time monitoring. This will complete the pilot program.

   Due date: 12/31/00

3. Determine the feasibility of using demand metering to monitor real time loading.

   Due date: 6/1/00

4. Determine the feasibility of using "SUNDAS", Secondary Underground Network Data Acquisition System for monitoring of real time loads.

   Due date: 6/1/00

5. Determine the System Wide Implementation Plan.

   Due Date: 1/31/01

6. The implementation of the program, to monitor approximately 500 high-tension customer loads, will be implemented at the rate of 100 per year.

   Due Date: 12/01/05

Responsible Department

Research and Development

Status

The hardware requirement to embark on a pilot project to monitor high-tension customers is being studied and analyzed. The feasibility of utilizing demand metering to monitor high-tension customers loads is being reviewed. In addition, a review of the deployment of the SUNDAS system to monitor high tension is underway.

Status Report (June 30, 2000)

A pilot project has been established to test the feasibility of monitoring high-tension customers and integrate their load into the existing Con Edison analytical tools and modeling. Two methods have been established for proof of concept. Presently, there are 2 installations that are operational utilizing RMS and there is 1 location, with 6 meters, that is operational, utilizing the high tension metering and a telephone line. The method utilizing RMS is a more reliable system and can be implemented more quickly .to install. The data received from RMS is in the correct format and is being fed directly into the VDAMS system. We will install additional units using RMS. Once SUNDAS is operational, trial installations will be set up for monitoring high-tension customers through SUNDAS.

II-16 Con Edison should revise its procedures to ensure that upgrades required for load relief and load distribution changes experienced during the previous year are implemented in time for the next year's summer season.

Scope

Con Edison will review and revise its peak summer forecasting procedures to ensure that upgrades required for load relief and load distribution changes experienced during the previous year are implemented in time for the following summer season. Completed for 2000, will do each year thereafter.

Tasks

1. Accelerate the development of independent station forecasts.

   Due date: Complete

2. Establish methodology to standardize analysis tools and the archival and retrieval of load flow model data. This provides the ability to recreate load flow analysis from a specific point in time, system configuration and load data set.

   Due date: 6/1/00

3. Implement standardized methodology throughout operations areas.

   Due date: Based on task 2, an implementation schedule will be developed.

4. Adopt existing electronic drawing and enhance layout-tracking tools within our mapping system to streamline the layout design process. Promote a standardized business process across all areas of Electric Operations. Approximately 250 Mappers and Designers, in Electric Operations and Energy Services, received CAD refresher training in 1999 to reinforce the skills required.

   Due date: 12/31/00

5. Implement standard layout tracking system enhancements to facilitate the process of capturing completed fieldwork and updating electric distribution system maps.

   Due date: 1/31/01

6. Develop 5 year plan for unit substations

   Due date: 12/31/00

Responsible Department

Distribution Engineering

Status

The Company incorporated the complete 1999 load and distribution data into the load flow models used to develop the 2000 load relief program. The Company will continue to incorporate the complete prior-year load and distribution data into the modeling for the following-summer load relief work. We have modified the design and analysis process, in order to support this effort, and as is indicated in the tasks above, we are examining additional process enhancements to further accelerate data availability.

Status Report (June 30, 2000)

Con Edison incorporated the complete 1999 load and distribution data into the load flow models used to develop the 2000 load relief program. The Company will continue to incorporate the complete prior-year load and distribution data into its load flow modeling for the following-summer load relief work. The Company has modified the design and analysis process in order to support this effort. The Company is examining additional process enhancements to further accelerate data availability.

To prepare for summer 2000, Con Edison has carried out the most extensive system reinforcement program in its history. The following points present the highlights as of 6/1/2000.

Distribution System Reinforcement

- Reinforced 298 feeders (1368 underground sections, 1141 overhead spans). All planned feeder reinforcement work has been completed.
- Reinforced 170 network transformers. The Company had planned to reinforce 171 transformers by summer 2000. The remaining transformer is associated with a new business project where the Company is awaiting customer actions before performing the reinforcement.
- Upgraded 9 unit substations. The Company plans to upgrade 4 additional unit substations in the fall.
- In addition to the feeder reinforcement work stated above, the Company plans to upgrade an additional 73 feeders through paper cable and targeted stop joint removal under its system reliability program during 2000. As of June 1, 2000, the Company has upgraded a total of 57 feeders. This exceeds the Company's plan to have completed 46 feeders by the summer.

In total, Con Edison has installed more than 135 miles of new distribution feeder cable/wire in preparation for summer 2000.

Substation and Transmission Systems Reinforcement

- Replaced cross over assemblies at Harrison/Elmsford Substations
- Replaced three transformers at Jamaica Substation
- Upgraded Transformer #6 13kV breakers at Sherman Creek Substation
- Upgraded 13kV breakers at W. 19th Street Substation
- Upgraded 13kV breakers at Avenue A Substation
- Added supplemental transformer cooling at Avenue A Substation
- Upgraded 27kV disconnect switches at Corona #2 Substation
- Installed supplemental transformer cooling at Bensonhurst #1 Substation
- Installed 1-20 MVAR capacitor bank at Cedar Street Substation
- Replaced transformer #1, 2 and 3 at Greenwood Substation
- Replaced disconnect switches & cable at Vernon/Queensbridge Substations
- Replaced 13kV feeders 99031 and 99032 between Sherman Creek/Dunwoodie stations
- Established oil circulation at Rainey Substation
- Purchased and installed high voltage test sets at various stations
- Purchased and installed ground & test devices at various stations
- Installed bus tie breakers at Millwood West Substation

II-17 Con Edison should determine which recommendations in its report on the July 1999 outage, and in the report of the Review Board, need to be completed immediately to improve reliability for the summer of 2000 and implement them expeditiously. The company should report to the Commission on all of the recommendations, explaining its implementation plans and status.

In response to the report of the Review Board and the report of Con Edison's Review Committee, the Company prepared an Action Plan dated January 15, 2000 that incorporated all of the recommendations of each report. The Action Plan has been furnished to the Department of Public Service Staff. The Implementation Plans furnished herewith for the Commission's technical recommendations track the activities being undertaken for the Action Plan as well as the Commission's recommendations. Appendix 5 is a matrix that correlates the recommendations made by the Commission, the Review Board, and the Review Committee with responsive activities in the Company's Action Plan.

Tasks

1. Provide to the DPS Staff the current status of all Action Plan activities

   Due date: May 1, 2000

2. File with the Public Service Commission a report on the Status of the Action Plan activities that are scheduled for completion by the summer 2000.

   Due date: June 15, 2000

Status Report (June 30, 2000)

See Con Edison's Amended Status Report on Action Plan Activities in Preparation for Summer 2000, filed June 16, 2000.

II-18 Con Edison should perform a formal review of the effects of low voltage (below the 8% voltage reduction level) on customers in the Cooper Square network and report to the Commission by June 1, 2000. Con Edison should also report to the Commission on its analysis of the fire at the Cooper Square MTA station within 30 days after the New York City's Fire Department's report is completed.

Scope

Con Edison will simulate the July 1999 event through load flow modeling to determine the voltage levels experienced through the Cooper Square network and utilize consultant on effects of low voltage on load and customer equipment. See implementation plan for recommendation II-12.

Tasks

1. Retain consultant (Electrotek) to document industry standards for motor protection and dates of adoption of such standards (to determine the age of unprotected motors).

   Due date: Complete

2. Retain consultant (Polytechnic University) to evaluate the effect of voltage reduction (both planned voltage reduction and very low voltage conditions) on load and on customer equipment.

   Due date: Complete

3. Complete study and issue specification. See project description in implementation plan for recommendation II-12.

   Due date: 12/1/01

4. Develop and issue customer education guidelines

   Due date: 12/1/01

5. Provide to the DPS Staff by March 1, 2001 an interim report on the status of the New York Polytechnic University study including an analysis of actions that can be implemented prior to the summer 2001.

Responsible Department

Distribution Engineering

Status

Electrotek and Polytechnic University have been retained to assist in this project.

Status Report (June 30, 2000)

See Con Edison's Interim Report on its study evaluating the effects of low voltage on customer equipment, filed June 1, 2000.

II-19 Con Edison should review its design criteria for non-network distribution equipment and report to the Commission by June 1 on steps it is taking to reduce the likelihood of widespread problems in future heat waves.

Scope

To determine feasibility, benefits and cost of raising the design criteria for temperature variable for the non-network system. Con Edison will assess the impact on the distribution system as well as the generation, transmission and substation systems. (See details in II-3)

Expansion of the existing supervisory and control system on the non-network systems, providing additional monitoring and control and enhancement of the auto-loop model, will assist in better design and operation of the system.

All 200-auto loops will be modeled beginning with the 73 Westchester loops. This modeling will be done on each loop individually and improvements will be implemented on each loop as needed.

Unit Substation Automation (USA), which monitors feeder loads, breaker status, tap changer position, bus voltage, directional power flow, relay targets and transformer top oil temperature will continue to be implemented until all 215 substations are automated. This automation will also allow the control of the tap changer position, auto reclose on/off position, cooling fans on/off, breaker position trip/close and water spray for cooling.

Tasks

1. Continue the expansion of the improved latest generation of supervisory and control system on non-network system providing additional monitoring and introducing control capability.

   Due date: 7/1/04

2. Complete the Unit Substation Automation project (See Appendix-3).

   Due date: 10/31/02

3. Modeling of 200 auto loops to study the reliability of each loop and introduce improvements to each, as needed. The modeling utilizes a computer program called LOOP that predicts the reliability of the auto-loop system and optimizes the positioning of additional protective devices. The program simulates single phase and three phase open and short circuit failures. It calculates SAIFI (System Average Interruption Frequency Index), CAIDI (Customer Average Interruption Duration) and SAIDI (System Average Interruption Duration Index). In addition to calculating the reliability indices, the

program will determine the number of customers who will lose power because of the failure of individual components or sections of cable/wire. It optimizes the design of an auto-loop by calculating the reduction in customer interruptions/year if a fuse or recloser is placed in each section of line in turn. The program will indicate which replacement will have the most impact.

Due date: 12/1/01

Responsible Department

Electronic Communications & Distribution Engineering

Status

Proposals for the enhancement and expansion of the auto-loop monitoring and control system have been requested and are expected to be received during May, 2000.

Modeling of the auto-loops is with a contractor and has commenced for the 73 loops in Westchester. This is a phased program and our schedule is to complete six loops by June 2000. All 73 Westchester loops will be completed by 12/31/00. The entire project of 200 auto-loops will be completed by 12/1/01.

To date, the automation of 22 of our unit substations has been completed. There are a total of 215 unit substations that are being automated. By 6/1/00, there will be a total of 48 unit substations automated.

The modeling of the auto-loops is underway with a contractor.

Status Report (June 30, 2000)

See status report on design criteria study under Recommendation II-3.

Con Edison's current reliability has placed emphasis on the replacement of higher failure-rate components with lower failure-rate components on supply feeders to non-network load areas.

The Company has enhanced its data collection and record keeping to obtain specific failure data for non-network feeders in order to identify worst-performing components.

Six of the 73 Westchester auto-loop models have been completed. The balance are expected to be completed by December 2000.

A total of 53 unit substations have been automated.

IV-1 Con Edison should evaluate the further acceleration of its paper/lead cable removal program. The evaluation should include, at a minimum, an assessment of the cost and benefits of further acceleration.

Scope

Evaluate the effectiveness of the current programs that eliminate thermally sensitive components including paper-insulated lead covered cables and stop joints. Based on the testing result of the different vintage of cables (see recommendation II-8), a consultant will be retained to quantify the costs and benefits that may be achieved by accelerating the program.

Tasks

1. Retain consultant to quantify the benefits of accelerating the paper/lead cable removal program

   Due date: 6/30/01

2. Develop projections of the cost to accelerate the removal of all PILC cable from the currently projected removal completion date of 2024 to the years 2019 and 2014 respectively.

   Due date: 7/17/00

Responsible Department

Distribution Engineering

Status

The current paper replacement program is being closely monitored. As mentioned in II-8, the thermal characteristics of various vintage cables will be assessed. Upon the completion of the analysis by consultant (3/01/01), the benefits of accelerating the program will be quantified and a recommendation will be made. The results from the thermal model analysis will include the effect of current flows in primary and secondary cables located in the same duct system, and the increased loading due to the projected load growth might accelerate the replacement of PILC cables remaining in service.

The paper cable on the Con Edison system is continually being removed through attrition. Appendix-4 indicates the projected removal program through its completion in 2024.

Status Report (June 30, 2000)

Risk Research Group, Inc. has been retained to evaluate the benefits of accelerating the PILC cable removal program.

IV-2 Con Edison should report annually to the Commission on its capital and operations and maintenance expenditures for electric distribution and substation operations and the progress of the associated programs.

Scope

Determine contents of annual filing to be made with the PSC and develop a Company procedure providing for such filing.

Tasks

A committee of the operational and staff financial managers will meet to determine the data to be filed, the format required, the source of the data, and the timing for preparation of the final exhibits. The need for explanatory statements of variations from budget and specific additional detailed data by project will be reviewed. The report will be provided to the Public Service Commission electronically when the data is available from the Company's financial database in mid-January.

Timeframe

1. Committee to have initial meeting to determine relevant data by April 28, 2000.

2. Committee to meet and examine data-gathering process by May 30, 2000.

3. Committee to meet and finalize recommendations by June 15, 2000.

4. Senior Management will approve the report requirements by June 30, 2000.

5. The technical requirements for computerization of the reports will be finalized by July 14, 2000. The test report will be available by July 31, 2000, and an actual report, using 1999 data, will prepared by August 15, 2000 (copy to be provided to Staff for its review).

Responsible Organizations

1. The Regional Financial Managers of Electric Operations and Substation Operations directed by Planning & Analysis Financial Manager and his O&M and Capital staff will determine the data requirements.

2. The approval level is the Senior Vice President of Electric Operations and the Senior Vice President of Central Operations.

3. The computerization and technical support is the Director of System Development, Corporate Accounting.

Status Report (June 30, 2000)

Corporate Accounting has prepared a proposed format for reporting annually to the Commission on its capital and operations and maintenance expenditures for electric distribution and substation operations. A copy is being transmitted electronically to the DPS Staff.

V-1 Con Edison should evaluate its emergency procedures in light of lessons learned from the July 1999 outages and modify the procedures as necessary.

Scope

Review current emergency communications procedures to determine if they are adequate to ensure appropriate internal communications [procedures regarding external communications are considered in response to V-4, V-5, V-6 and V-7]. The product will be a detailed analysis of current procedures regarding internal communications during electric distribution system emergencies

Tasks

1. Appoint a team consisting of one representative from each involved functional area, each representative to be appointed by the appropriate Vice President, including:
    - Distribution Engineering
    - Energy Services
    - Manhattan Control Center
    - Brooklyn/Queens Control Center
    - Staten Island Control Center
    - Bronx/Westchester Control Center
    - Customer Operations
    - Public Affairs
2. Determine whether current procedures are clear and concise
3. Identify redundant or cumbersome procedures
4. Identify any internal inconsistencies within the procedures
5. Review current procedures to determine if they are consistent among all four operating regions
6. Identify best practices from among the procedures for each operating region
7. Determine whether procedures adequately identify all internal personnel who should be notified in case of emergency
8. Determine whether procedures call for internal notification sufficiently early during an emergency event to ensure adequate notice to public officials and the public
9. Determine whether procedures sufficiently describe how and when to notify internal personnel regarding events which may subsequently occur as a result of an immediate emergency or an incipient emergency
10. Evaluate the role of the Emergency Information Coordinator (EIC); recommend whether the role of the EIC should be consistent for all types and levels of emergencies
11. Draft report on V-1 activities to be completed by the team identified above
12. Draft report to be submitted to Con Edison January 15 Action Plan Steering Committee plus the Vice Presidents for Public Affairs and Customer Operations
13. The Con Edison January 15 Action Plan Steering Committee plus the Vice Presidents of Public Affairs and Customer Operations will review the draft report and either approve it or make amendments to it

Timeframe

All activities in response to Recommendation V-1 will be complete by June 15, 2000

- Team to be appointed by May 1, 2000

Status Report (June 30, 2000)

Con Edison has initially focused on the modification of existing emergency communication procedures and the development and implementation of new emergency communications procedures for the purpose of reflecting lessons learned from the July 1999 outages. That effort was targeted for completion by June 15, 2000 and will be followed by a review of all emergency communications procedures for the purpose of consolidation, simplification, and elimination of conflicts or redundancies. The status of this latter effort is provided in the status report for Recommendation V-2.

The Company has adopted the following new procedures pertaining to communications during an electric distribution emergency:

- Corporate Policy Statement 810-2 "Public Affairs Crisis Communication Plan" *
- Customer Service Procedure 10-0-2 "Customer Service - General - Crisis Communication Plan" *
- Customer Service Procedure 2-0-1— Customer Operations-General: Corporate Event Customer Response Plan
- Customer Service Procedure 4-0-1 – Energy Services-General: System Emergency Plan

The Company has modified the following procedure pertaining to communications during an electric distribution emergency:

- Customer Service Procedure 5-0-23 "Communication Guidelines in the Event of an Electric Emergency"

Copies of these procedures are being provided to the DPS Staff electronically.

* Procedure has been approved by responsible Company Officer and is awaiting publication.

V-2 Con Edison should streamline and consolidate its emergency procedures to eliminate redundant and cumbersome material.

Scope

Revise emergency communications procedures to address issues identified in report prepared in response to Recommendation V-1. The product will be adopted revisions to Con Edison's procedures regarding internal communications during electric distribution system emergencies

Tasks

(To be performed by same team as assembled to address Recommendation V-1)

1. Using information developed in response to Recommendation V-1, identify specific actions in the current procedures that should be streamlined, consolidated or eliminated
2. Identify any specific actions which should be added to the procedures
3. Determine whether the role of the Emergency Information Coordinator should be adjusted both generally and in regard to a variety of types and levels of emergencies
4. Propose specific revisions to the procedures which will improve internal communications
5. Identify, by title and organization, personnel to be assigned to each new or modified activity in the revised procedures
6. Draft revised procedures
7. Draft revised procedures to be submitted to Con Edison January 15 Action Plan Steering Committee plus the Vice Presidents for Public Affairs and Customer Operations
8. The Con Edison January 15 Action Plan Steering Committee plus the Vice Presidents of Public Affairs and Customer Operations will review the draft revised procedures and either approve them or make amendments to the procedures

Timeframe

All activities in response to Recommendation V-2 will be complete by July 14, 2000

Status Report (June 30, 2000)

The team has been appointed and the relevant emergency communications procedures have been identified and circulated among team members for examination using the criteria stated in Tasks 2 to 10 outlined under Recommendation V-1. Progress on this project has been limited as the team members focused efforts on the pre-summer electric distribution system preparation activities, implementation of new and revised procedures and preparedness drilling, and peak season system operations. It is anticipated that this project will be completed by November 30, 2000.

V-3 Con Edison should implement a rigorous training program to ensure that all its employees are adequately trained in emergency procedures.

Scope

Revised emergency communications procedures will be distributed to all Con Edison personnel responsible for external and internal communications during electric distribution emergencies and all such personnel will be trained to ensure timely and effective communications with government officials, the media and the public.

Tasks

1. A team will be appointed to develop an enhanced training program. The team will include the following:
   - Staff of Con Edison's Learning Center
   - All Con Edison personnel who will be involved in implementing the revised emergency communication procedures regarding both internal and external communications
2. Upon completion of the revised procedures, they will be immediately distributed to Con Edison personnel responsible for internal and external communications
3. Presentations of the revised procedures will be made to all relevant Con Edison personnel responsible for internal and external communications
4. Personnel expected to be named Emergency Information Coordinators (EICs) will receive training directly relevant to EIC responsibilities
5. Working with the operating regions, Customer Operations and Public Affairs, the Learning Center will arrange for development and implementation of periodic refresher training on emergency communication procedures

Timeframe

The following activities in response to Recommendation V-3 will be completed by July, 31, 2000:

- Revised emergency procedures will be distributed to all relevant Con Edison personnel responsible for internal and external communications
- Presentations on the revised emergency communications procedures will be made to all Con Edison personnel responsible for internal and external communications

The following activities in response to Recommendation V-3 will also be implemented:

- By December 31, 2000, the Learning Center will have completed development of a refresher training program for Con Edison staff on the revised emergency communications procedures
- Refresher training in the revised procedures will begin in the first quarter 2001

Status Report (June 30, 2000)

The modified or revised procedures listed in the status report for Recommendation V-1 have been distributed to the relevant Company personnel responsible for internal and external communications. Communications requirements and responsibilities have been reviewed and practiced during pre-summer electric distribution emergency drills conducted at each of the company's four electric operations control centers on the following dates:

- Manhattan Control Center – May 11, 2000 and June 8, 2000
- Brooklyn/Queens Control Center – May 23, 2000
- Bronx/Westchester Control Center – May 31, 2000
- Staten Island Control Center – May 24, 2000

Following completion of the project to streamline and consolidate emergency communication procedures (see status report for Recommendation V-2), presentations on the revised procedures will be made to personnel responsible for internal and external communications and a training program on the revised procedures will be developed by year end 2000.

V-4 Con Edison should review its process of appealing to the public for conservation during system emergencies to determine the effectiveness of its approach and whether other actions might be more effective (e.g., appeals from appropriate government officials, working with public officials to spread information, coordinating with agencies of the City of New York, etc.).

Scope

A new energy usage brochure detailing how the public can conserve energy overall as well as specifically during a system emergency will be produced and made available to customers, elected officials, community organizations and other appropriate outlets. This material will help Con Edison's education process 1) by sensitizing the public, in advance of an emergency, to the need to be responsive to the Company's appeals for conservation and 2) by educating the public to the specific ways in which they can assist the effort.
Additionally, Public Affairs will review existing procedures for public notification of system stresses prior to and during a system emergency including the annual June press release advising customers of conservation procedures, together with press releases and press interviews alerting the public. Government and Community Relations will formalize notification procedures for elected officials and community organizations. Specify system condition levels that may, after consultation with VP, Public Affairs, trigger notification procedures.

Tasks and Timeframe

1. Review press strategies for media and public including use of Intranet, blast fax, on-site interviews, etc. – April 26, 2000
2. Produce brochure and develop comprehensive distribution list
3. Distribute brochure (circulation to include posting on the Company's web site, article in Customer News with mention of web site availability, and bulk distribution to community-based organizations, offices of elected officials, and governmental offices) – May 15, 2000
4. Brief appropriate organizations (through meetings, mailings, and telephone calls) on how they can assist in getting the energy conservation message out before and during a crisis (distribute to members, constituents, etc.) -- May 15, 2000
5. Formalize notification procedures for elected officials, non-OEM government agencies and community organizations – include designated staff for notifications (see implementation plans for recommendations V-10 and V-11) – May 15, 2000
6. Produce information templates for notifications that include areas affected and customer impact, crew assignments, estimated time of restoration
7. Identify, evaluate and if deemed appropriate, integrate new procedures, including sound trucks for public notification
8. Identify types of system conditions that would trigger notification procedures

Responsible Organization

Corporate Communications

Status Report (June 30, 2000)

Corporate Communications used a consultant to review its strategies for communication with the public through the media. The consultant approved the existing procedures (use of the PR News Service distribution service supplemented by Corporate Communication's direct contact of specified news outlets).

A new energy usage brochure detailing how the public can conserve energy overall as well as specifically during a system emergency has been printed. A distribution list -- consisting of elected officials, community boards, community organizations, the NYC Department of the Aged, and organizations the Con Edison supports – has been created and the brochures have been provided to a vendor for bulk mailing during the week of June 26, 2000. The contents of the brochure are expected to be posted to the Company's web site by June 30, 2000. The cover letter accompanying the brochures asks the recipients to distribute the brochures to their constituents.

Corporate Communication has prepared a template that will standardize the information provided to public officials and community organizations during an emergency. Corporate Communication has formalized a listing of over 1,300 officials and organizations that, depending on the particular situation, will receive such information. The template also asks the recipient to share the information with constituents. The Company's local Public Affairs organizations have been briefed on the use of this template.

V-5 Con Edison should evaluate the efficiency and effectiveness of its processes for dispatching and setting up its mobile command center.

Scope

Evaluate the process for dispatching and setting up the mobile command center (MCC) by examining the Washington Heights dispatch experience and current dispatch and set-up procedures and develop revised or new procedures needed to enhance the efficiency and effectiveness of the process

Tasks and Timeframe

1. Appoint review team consisting of one representative from Energy Services, Transportation and Electric Operations (Appropriate Vice Presidents – May 1, 2000)

2. Review events associated with the dispatch and set-up of the MCC in Washington Heights and evaluate whether that experience supports adjustment of current procedures (Team – June 1, 2000).

3. Review MCC dispatch procedures to ensure they reflect a logical, effective process for dispatch and set-up (Team – June 1, 2000).

    a) Review current mobilization procedures with Control Centers and Transportation and Stores.
    b) Review procedures with New York City Police Department and Westchester County to obtain escort of MCC to emergency site rapidly, as needed.
    c) Examine transport of trained, advance personnel to the emergency site so that appropriate presence can be established in advance of the MCC arrival and the site prepared for MCC set-up.

4. Prepare report containing recommended procedures that provide an efficient and effective process for dispatching and setting up the mobile command center (include draft new/revised procedures) and circulate to Vice Presidents (Team – June 15, 2000).

5. Implement final changes to procedures to provide for an efficient and effective process for dispatching and setting up the mobile command center (Team – July 15, 2000).

The implementation of final changes to procedures to provide for an efficient and effective process for dispatching and setting up the mobile command center will be completed by June 15, 2000.

Status Report (June 30, 2000)

Con Edison has developed a new "Corporate Emergency Vehicle Response Procedure" providing guidelines for the timely mobilization of personnel, vehicles, equipment, materials and services in response to corporate and system emergencies. Con Edison's Vice President for Emergency Management has met with the New York Police Department and has reconfirmed the arrangement by which the NYPD provides escort to the mobile command center vehicle to speed its arrival at emergency locations. The Company has also spoken to the Westchester County Director of Emergency and Disaster Services who has confirmed that Westchester County Police Department will escort the mobile command center from the New York City line to Westchester County locations.

V-6 Con Edison should evaluate its processes for supplying up-to-date status reports to its mobile command centers. It should also ensure that information provided to customers during system emergencies support current emergency needs.

Scope

Identify current procedures for communication of information to mobile command center (MCC) and from the MCC to customers locally, examine MCC communications during the Washington Heights event, and develop revised or new procedures needed to effectuate timely communication of information to the MCC and to customers locally.

Tasks and Timeframe

1. Appoint review team consisting of one representative each from Energy Services, Corporate Communications, Customer Operations and Electric Operations (Appropriate Vice Presidents – May 1, 2000).

2. Identify and evaluate the process established by procedure and the steps taken during the Washington Heights event to get status reports to mobile command post (Team – June 1, 2000).

3. Identify and evaluate the process established by procedure and the steps taken during the Washington Heights event to get information from the mobile command post to customers locally during emergency events (Team – June 1, 2000).

4. Identify and evaluate feedback processes from representatives in contact with customers locally back to mobile command center and back to information sources such as Manhattan Control Center, Public Affairs, Media Relations (Team – June 1, 2000).

5. Prepare report (including draft new/revised procedures) containing recommended procedures that provide for 1) the communication of up-to-date status reports to the mobile command center and 2) the communication to customers locally of information (e.g., through flyers) that supports current emergency needs and circulate to Vice Presidents (Team – June 15, 2000).

6. Implement final changes to procedures to provide for the communication of up-to-date status reports to the mobile command center and the communication from mobile command center to customers locally of information that supports current emergency needs (Team – July 15, 2000).

The implementation of final changes to procedures to provide for the communication of up-to-date status reports to the mobile command center and the communication from mobile command center to customers locally of information that supports current emergency needs will be completed by June 15, 2000.

Status Report (June 30, 2000)

Con Edison's Energy Services Department has prepared an "Energy Services Emergency Response Flowchart" that delineates Energy Services' functions, including communications with the mobile command center (MCC), during an electric distribution system emergency. The June 8, 2000 pre-summer emergency drill conducted by the Manhattan Control Center included practice on communications with the MCC under the model in the flowchart. A copy of the flow chart is being provided electronically to the DPS Staff.

V-7 Con Edison should convene focus groups with customers in areas affected by the July 1999 outages to discuss how communications can be improved during emergency situations. Con Edison should seek the participation of the advisory boards in this process.

Scope

Working with the local Advisory Boards and organizations contacted by local Con Edison offices, Public Affairs will set up meetings with customers in no less than six communities which experienced outages last summer. The communities will be representative of the entire service area. Based on customer information gained from these meetings, Public Affairs will incorporate practical communication recommendations into communication procedures.

Tasks and Timeframe

1. Identify representative communities – May 19, 2000.
2. Consult with appropriate Advisory Boards and local Public Affairs' offices to identify customers – May 19, 2000.
3. Host meetings – June 2, 2000.
4. Evaluate results – June 9, 2000.
5. Incorporate appropriate recommendations – June 16, 2000.

Responsible Organization

Corporate Communications, Customer Outreach

Status Report (June 30, 2000)

Corporate Communications and Customer Outreach have conducted a series of five meetings with residents and representatives of the community and businesses – one each in Brooklyn, Queens, Westchester, Staten Island and Manhattan (In Washington Heights). The attendees were in general agreement that Con Edison's most effective means of communication during an emergency is through radio and television notification, supplemented by Company personnel located in effected neighborhoods. The attendees exhibited a mixed reaction to the use of sound trucks to provide information. Representatives of less affluent neighborhoods generally opposed and representatives of more affluent neighborhoods generally supported this concept. All attendees were willing to assist in distribution of the Company's energy usage brochure.

V-8 Con Edison should strengthen its emergency procedures to ensure that a knowledgeable and trained Emergency Information Coordinator is assigned in a timely way to support the communication processes during emergencies.

All activities undertaken in response to this Recommendation V-8, are specifically included in the implementation plans for Recommendations V-1, V-2 and V-3.

Status Report (June 30, 2000)

Manhattan Electric Operations has revised its "Emergency Management Center Procedure" to clarify the function of the emergency information coordinator. The procedure:

- establishes an Emergency Information Center triggered by the mobilization of the Manhattan Emergency Management Center ("EIC") (eliminates prior discretion for establishing EIC),

- designates the Manhattan Region Assistant Vice President as the "EIC officer" responsible for direction of EIC area operations and communications, and

- identifies the staffing of the EIC and the responsibilities of each EIC staff person.

The Manhattan Control Center pre-summer emergency drills of May 11 and June 8, 2000 included operation of the EIC and scenarios involving EIC communication with Customer Operations/Call Center, Energy Services, and Regional Public Affairs.

The distribution emergency plans for the Company's other regions – Bronx/Westchester. Brooklyn/Queens, and Staten Island – provide for the establishment of an EIC run by a coordinator during an emergency. During the pre-summer emergency drills conducted by these regions, the EIC was established and the EIC coordinator handled all communications to Customer Operations/Call Center, Energy Services, and Regional Public Affairs.

A copy of the procedure is being transmitted electronically to the DPS Staff.

V-9 Con Edison should run practice drills to simulate emergency situations. These drills should involve all employees likely to be involved if a system emergency arises and should ensure that clear communications are maintained between staff from the electric control center, field operations, call center, public affairs, and media relations.

Scope

Design and implement drills to ensure Con Edison employees are well-versed in appropriate internal and external communications during emergencies. Documentation and critique of each drill will result in continuous attention to improving internal and external communications during emergencies.

Tasks and Timeframe

1. Appoint team consisting of the Vice President of Emergency Management and representatives from the following functional areas:
    - Distribution Engineering
    - Energy Services
    - Manhattan Control Center
    - Brooklyn/Queens Control Center
    - Staten Island Control Center
    - Bronx/Westchester Control Center
    - Customer Operations
    - Corporate Communications/Public Affairs
2. Develop plan to execute practice drills to simulate communications during emergency situations. Planning activities will begin by May 15, 2000 and drills will commence as described below
3. Develop schedule to implement drills
4. Commence drills at the local operating control centers involving field operations, call center, public affairs, and media relations. Drills will commence at the local operating control centers on a rotating basis within one month following completion of the Company's review and revisions of its communications procedures per recommendations V-1. V-2, and V-8
5. Critique the drills and revise procedures and/or training as required
6. Drills will occur a minimum of three times per year
7. Evaluation of drills will occur within two weeks of each drill
8. Necessary revision of procedures and/or training will occur within one month of each evaluation

Prior to the summer 2000, Con Edison will conduct practice drills in each of its four regional operating areas – Manhattan, Brooklyn-Queens, Bronx-Westchester, and Staten Island. The drills will be run from the electric distribution control center of each area, will simulate

emergency situations that could arise on the electric distribution system during high heat or summer storm periods, and will involve both operational and communications personnel. To ensure that company personnel are familiar with their communications responsibilities, each region will conduct a pre-drill tabletop review of internal communications procedures including a review of communications procedures implemented since summer 1999.*

The Manhattan Region drill is scheduled to take place on May 11, 2000. The Brooklyn/Queens Region drill is scheduled to take place on May 23, 2000. Con Edison will provide the DPS Staff with the dates of the drills in the other regions as these are scheduled.

Status Report (June 30, 2000)

Communications requirements and responsibilities have been reviewed and practiced during pre-summer electric distribution emergency drills conducted at each of the company's four electric operations control centers on the following dates:

- Manhattan Control Center – May 11, 2000 and June 8, 2000
- Brooklyn/Queens Control Center – May 23, 2000
- Bronx/Westchester Control Center – May 31, 2000
- Staten Island Control Center – May 24, 2000

---

* The following emergency communications procedures have been implemented since the summer 1999 by Customer Operations and Energy Services:

- Customer Service Procedure 2-0-1— Customer Operations-General: Corporate Event Customer Response Plan
- Customer Service Procedure 4-0-1 – Energy Services-General: System Emergency Plan

Copies of these procedures are attached. In addition, Public Affairs/Corporate Communications is finalizing procedures entitled "Crisis Communications Plan" and "Media Relations Emergency Communications Plan." Copies will be provided to the DPS Staff when these procedures are published.

V-10 The company should develop more detailed procedures for providing information to public officials and community leaders during system emergencies, including a broader list of community leaders.

Scope

Detailed lists of community boards, elected officials, community organizations and other appropriate contacts have been developed. The lists are organized by network to assist in the correct identification of appropriate notifications. Appropriate staff will be designated as key contacts for specific elected officials and community organizations. This information will be available in local public affairs offices, the media relations command center, and central public affairs offices. A telephone phone number will be made available to elected officials and community-based organizations to call for system updates. Public Affairs personnel, who will be updated by media relations, will staff the telephone number.

Tasks and Timeframe

1. Compile lists – Completed.
2. Identify fax machines and phones to be used to make contacts – May 17, 2000.
3. Notify appropriate public affairs staff of contact duties and undergo drill to evaluate procedures – May 17, 2000
4. Review all contact information quarterly to ensure correct phone numbers and fax numbers are available – Ongoing.
5. Establish phone number (in Media Relations Command Center) – May 15, 2000.
6 Using previously completed list of community contacts and elected officials, notify them of the phone number and appropriate times to use it – June 2, 2000.
7 Request that they use their established networks to contact their constituents – June 2, 2000.

Responsible Organization

Corporate Communications

Status Report (June 30, 2000)

Corporate Communications has formalized a listing of over 1,300 names of community boards, elected officials, community organizations and other appropriate contacts during an emergency. The list is organized by network to assist in the correct identification of appropriate notifications. This list is maintained in local public affairs offices, the media relations command center, and central public affairs offices. The list will be used in conjunction with the template information (see the status report for recommendation V-4) to provide information during emergencies. The template provides for the designation of particular local Public Affairs staff as key contacts for additional information (direct

telephone number to be provided), and Public Affairs personnel, who will be updated by media relations, will staff the telephone number.

Local Public Affairs representatives have been trained in responsibilities for contacting persons and entities on the list. The fax machines and telephones to be used for these contacts have been identified

V-11 Con Edison should take advantage of the existing network of community-based organizations to assist in its efforts to provide affected customers with information about the problem, restoration information, updates and the claims process.

Scope

Con Edison Customer Outreach has developed a database of community and civic organizational leaders, which is segmented by customer group (e.g., seniors, physically challenged, healthcare). We will broaden the ability to reach these targeted groups by increasing the number of organizations and periodically updating the database to maintain the integrity of the contact information, such as telephone and fax number and email information, if available. We will develop a plan to activate a notification process for use during an emergency event.

Tasks and Timeframe

1. Provide a narrative describing the database, enhancements achieved since the summer of 1999 and the process for periodic updates – May 1, 2000.
2. Format database for the purpose of electronic faxing and develop guidelines to activate the notification process – May 1, 2000.
3. Develop guidelines for use of database information prior to, during and after an event – May 15, 2000.
4. Make internal departments such as Law (Claims) and Public Affairs aware of the database for use as a tool for disseminating corporate information – May 31, 2000.
5. Conduct an annual test of the electronic faxing capability – May 15, 2000 and ongoing.

Responsible Organization

Customer Outreach

Status Report (June 30, 2000)

A description of the database, including its enhancements and future plans has been documented. Technical enhancements to allow for electronic faxing were completed and guidelines on electronic notification activation were prepared. Guidelines for use of the database prior to during and after an event have been prepared. This document is being provided to DPS Staff electronically.

Con Edison Customer Outreach met with the Claims Department and Public Affairs to brief them on the Customer Outreach database. We reviewed the electronic fax capability of the system and different uses for the database contacts. A demonstration of the system was

conducted and an explanation of the database set-up was provided. Customer Outreach advised both departments that they could use the organizational contacts within our database for their initiatives (direct mailing, electronic fax, phone numbers, etc.). The first annual test of electronic faxing notification took place on June 15, 2000. Subsequent annual tests will be conducted by 6/1.

V-12 Con Edison should review non-business hour staffing levels for its Call Center during system emergencies.

Scope

Increase current off-hour normal staffing levels so that more personnel are routinely available for extended hours in the event of a sudden emergency. Review past call answering and staffing performance during major emergencies to have the data available to readily establish and set up staffing level requirements for new emergencies based on weather forecasts.

Tasks and Timeframe

1. Hire and train additional Customer Service Representatives. Initial group of eight graduated class on April 10, 2000. A total of 80 new employees will have graduated by September 1, 2000.
2. Review current off-hour staffing and recommend additions to 5 PM to 9 PM and Saturday staffing. - 15 CSRs are being added from 5 PM to 9 PM and 15 CSRs are being added on Saturday – June 1, 2000.
3. Establish report folders for major storm/emergency events such as July 5-7-heat wave, Tropical Storm Floyd – completed.
4. Review performance vs. staffing levels during major events and compare to staffing requirements developed from software used to forecast and schedule staffing. Establish benchmark events to use as a template for future weather conditions – May 31, 2000.
5. Document the process of updating emergency event information, template creation and use of templates at the onset of the adverse weather forecast to establish system emergency staffing levels – 5/31/00.

Responsible Organization

Communications Management Group

Status Report (June 30, 2000)

Thirty two customer service representatives have completed training and have begun working in the Call Center. An additional ten CSRs will be trained by July 10, and training for an additional thirty-eight CSRs will be completed by September 18. A total of 80 will be trained. Staffing augmentation for evenings (fifteen additional CSRs) and Saturdays (fifteen additional CSRs) has been implemented. Report folders have been established and the process review has been completed and documented in the "Call Center Operating Instruction." A copy of this document is being electronically transmitted to the DPS Staff.

V-13 Con Edison should implement procedures to monitor the quality and timeliness of information conveyed to customers during an emergency situation.

Scope

Review methods of obtaining information and communicating it to CSRs and customers during July 5-7, 1999 period. Recommend and test improvements and document procedures for obtaining information in a procedure. Revise if needed based on experience.

Tasks and Timeframe

1. Review staffing in Communications Management and determine roles – completed July 1999.
2. Review methods of obtaining information during system emergencies determine whether any improvements are needed – completed July 1999.
3. Document recommended improvements and test in an actual storm/emergency situation. – improvements include establishing a designated "Communicator" in CMG during system emergencies, establishment of roles for command post liaison and liaison with control centers. Tested during Tropical Storm Floyd and Y2K Weekend – completed December 1999.
4. Document emergency handling and communications in procedure CSP 2-0-1 Corporate Event Customer Response Plan – completed December 1999.

Responsible Organization

Communications Management Group

Status Report (June 30, 2000)

Customer Operations has developed and implemented a new procedure, "Customer Service Procedure 2-0-1, Customer Operations – General: Corporate Event Customer Response Plan." The procedure describes the Customer Operations actions to ensure that customers and contact Customer Service Representatives receive consistent, timely and accurate information during the course of a corporate event. A copy of that procedure is being electronically transmitted to the DPS Staff.

V-14 Con Edison should review its procedures for contacting "Concern" customers.

Scope

We have determined the "at risk" segment of our concern population to be LSE customers and those with medical hardships (persons who have been medically certified to have a medical condition that seriously affects well being), and we have developed a procedure that governs notification of these customers (CSP 2-0-1). In addition, we are providing weekly electronic files of LSE and medical hardship customers to each control center to ensure a current listing of the these customers in the appropriate area, and we have installed a user friendly desktop query facility to provide access to Customer Assistance personnel to obtain LSE and medical hardship customer information by county, zip code and network. By the end of May 2000, we will have completed the update LSE and medical hardship accounts with network and feeder information to ensure current data in the event of emergencies.

Tasks and Timeframe

1. Prepare and distribute weekly updated listings of LSE customers by county, zip code and network to Control Centers, the Distribution Engineering Command Post and Customer Assistance Management - ongoing since December 1999.
2. Prepare and distribute weekly updated listings of Medical Hardship customers by county, zip code and network to Control Centers, the Distribution Engineering Command Post and Customer Assistance Management - ongoing since April 2000.
3. Update network codes and feeder numbers for LSE customers and inspect overhead service facilities – May 31, 2000.
4. Update network codes for medical hardship customers – May 31, 2000
5. Document actions to contact LSE/medical hardship customers when there is a pending system emergency – completed December 1999 for LSE and for medical hardship in hot weather emergencies; a pre-storm contact will be added for medical hardships for category 3 storms – May 31, 2000.
6. Document actions to contact LSE customers during a system emergency – completed December 1999.
7. Participate in drills in advance of summer season – as scheduled by Electric Control Center.

Responsible Organization

Communication Management Group

Status Report (June 30, 2000)

Con Edison has determined the "at risk" segment of our concern population to be LSE customers and those with medical hardships (persons who have been medically certified to have a medical condition that seriously affects well being). Customer Operations currently distributes weekly updated listings of LSE customers and medical hardship customers by county, zip code and network to Control Centers, the Distribution Engineering Command Post and Customer Assistance Management.

"Customer Service Procedure 2-0-1, Customer Operations – General: Corporate Event Customer Response Plan." states procedures for contacting LSE/medical hardship customers when there is a pending system emergency. Customer Operations will make automated outbound calls Life Sustaining Equipment customers to warn them about an imminent major storm, heat wave or other event. Medical Hardship customers will be called in advance of an extended heat wave. LSE customers will be called during an event if a condition yellow is declared on a network or when LSE customers have lost service.

The pre-summer emergency drills conducted in the four regional distribution control centers included practice in notification of LSE/medical hardship customers. Pre-summer preparations also included inspection of overhead lines serving LSE and medical hardship customers. Network coding for LSE customers and medical hardship customers has been completed. Feeder coding for LSE customers is in process.

V-15 Con Edison should ensure that it has properly identified and obtained appropriate contact information for all large and/or sensitive customers in its service territory. This information should be updated on an ongoing basis.

Scope

Update current customer contact information for large and/or sensitive customers. Develop a process and format for maintaining such information.

Tasks and Timeframe

1. Identification of sensitive and major customers for emergency contact listing.

   a) Define population by defining the classifications such as hospitals, nursing homes etc. (Energy Services – completed February 2000).
   b) Review of customers to be included in each classification (Energy Services – completed March, 2000).
   c) Check of existing lists of major customers (over 1000 kW demand) and sensitive customers to ensure new listing is complete (Energy Services – completed March, 2000).
   d) Consolidate information for all operating areas (Manhattan, Bronx etc.) into one list (Information Resources – completed April 4, 2000).
   e) Update Con Edison's Customer Information System to ensure that the customer's accounts on the emergency contact listing are properly noted (Customer Operations – April 21, 2000).

1. Obtain customer contact information.

   a) Check existing lists of major customers and sensitive customers to ensure they contain updated contact information (Energy Services – completed March 2000).
   b) Conduct outreach to customers being added to the list to obtain contact information (Regional Energy Services – April 28, 2000).

2. Process to update contact listing.

   a) Provide a single computer platform to be used by all operating areas. This will be done by extending the functionality of our computer application currently in use (Information Resources – May 15, 2000).
   b) Review with Brooklyn/Queens, Manhattan and Staten Island Regions the automated notification of changes to sensitive accounts and associated managerial steps currently provided in the Bronx/Westchester Region (Energy Services – April 28, 2000).
   c) Assignment of personnel to review and maintain the emergency contact listing in each area and centrally (Regional Energy Services – May 1, 2000).

3. Regular review, to ensure appropriateness of:
   a) Customer classifications.
   b) Customers on the emergency contact list.
   c) Use of computer system.
   d) Logistics for use of list during drills and actual emergencies (Annually, beginning March 1, 2001, Regional Energy Services).

Status Report (June 30, 2000)

Con Edison has updated its listing of large and sensitive customers through the tasks identified in item 1 above. The updated listing currently includes over 2,300 customers. The accounts for these customers have been noted in the Company's Customer Information System as serving critical facilities so that customer service representatives receiving emergency telephone calls from these customers will have this information. These accounts have been entered into the Company's Emergency Operations System (EMOPSYS) on-line database that is accessible by Distribution Control Center and Energy Services personnel during an emergency. EMOPSYS was installed systemwide on May 17, 2000. Among other capabilities, this system is designed to sort and identify such accounts by network and by feeder. The Company is currently gathering and entering into EMOPSYS network and feeder data for these accounts.

During the week of June 5, 2000, the Company has sent to each of these customers a letter and survey form requesting, among other things, that the customer provide the Company with customer contact information (name of contact person, telephone numbers for day, evening and weekend, fax number, e-mail address). The customer response will be used to verify/supplement existing contact data maintained by Con Edison. In addition, the letter also alerted the customers that a Con Edison Customer Project Manager is available to assist the customer on all matters related to Con Edison energy services and provided contact information (name and telephone, pager and fax numbers). The letter also provided the Con Edison emergency telephone number.

Con Edison's Energy Services Department has developed a procedure that implements a process for annually updating the Company's records of sensitive and major customer emergency information and disseminating the company's emergency telephone numbers and contact personnel information to these customers. A copy of that procedure is being electronically transmitted to the DPS Staff.

V-16 Con Edison should provide appropriate contact information to all large and/or sensitive customers in its service territory to ensure that they have access to information to support their planning needs. This information should be updated and provided to these customers on a regular basis..

Scope

Assure assignment of Customer Project Manager (CPM) to each Sensitive and Major Customer. Communicate to customer CPM contact information and availability of CPM for emergency planning. Develop a process to ensure customers continue to receive updated contact information.

Tasks and Timeframe

1. If no assignment currently in effect, assign a CPM to each customer on listing of Sensitive and Major Customers developed per Recommendation V-15 (Regional Energy Services – May 15, 2000).

2. Draft and mail letter (uniform letter text to be developed by Manhattan Energy Service) to the listed contact for each Sensitive/Major Customer identifying the CPM, how to contact him/her during business hours and how to contact Energy Services personnel during emergencies, and explaining the CPM's availability to assist the customers in planning for electric system emergencies (Regional Energy Services – May 29, 2000).

3. Review customer assignments with CPMs (by May 29, 2000) and require CPMs to communicate directly with customer contact (by June 14) to reiterate the message provided in the Task 2 letter (Regional Energy Services).

4. Establish process for annual mailing to Sensitive and Major Customers informing them of information stated in Task 2 letter (Manhattan Energy Services – June 14, 2000).

Status Report (June 30, 2000)

Con Edison has assigned a Customer Project Manager (CPM) to each large and sensitive account identified by the Company (currently over 2,300 accounts). During the week of June 5, 2000, the Company sent to each of these customers a letter that, among other things, notifies the customer that a Con Edison Customer Project Manager is available to assist the customer on all matters related to Con Edison energy services and provides CPM contact information (name and telephone, pager and fax numbers). The letter also provided the Con Edison emergency telephone number. During the months of May and June 2000, the CPMs have made telephone calls to each of the large and sensitive customers to introduce (or reintroduce) themselves and explain their availability to assist

the customers in their energy needs. (Many of these customers already have had longstanding business contacts with their CPM.) To date, 2,125 large and sensitive customers, including all Manhattan customers) have been reached thorough telephone contacts or face-to-face meetings.

Con Edison's Energy Services Department has developed a procedure that implements a process for annually mailing to the Company's large and sensitive customers information about CPM services and contact information. A copy of that procedure is being electronically transmitted to the DPS Staff.

V-17 Con Edison should work with its large and/or sensitive customers to develop an accurate current inventory of the emergency generating capacity installed on these customers' premises. The company should provide assistance, when requested, to ensure that these emergency generators will be utilized optimally in possible future events.

Scope:

Update current inventory of emergency generating capacity on large/sensitive customers' premises. Develop criteria and a process for communicating optimum usage during events.

Tasks and Timeframe

1. Review current inventory of customer emergency generating capacity to ensure it is up-to-date and accurate. The review process will include a mailing to each sensitive and major customer 1) informing of emergency generating equipment and capacity known to Con Edison, 2) requesting return of an enclosed form verifying capacity of its generating equipment, and 3) informing of Con Edison's availability to provide advice on the use and configuration of emergency generating equipment to meet the customer's needs (Regional Energy Services – May 29, 2000).

2. Establish process for annual mailing to Sensitive and Major Customers informing them of information stated in Task 1 letter (Manhattan Energy Services – June 14, 2000).

Status Report (June 30 2000)

During the week of June 5, 2000, Con Edison's Energy Services Department sent survey forms to each of its 2,300 large and sensitive customers a letter and survey form that, among other things, asked the customer to provide specified information concerning any on-site emergency generation at the customers premises. Where the Company already had on-site generation information for a customer, the survey form provided that data and asked the customer to confirm or correct the data. Responsive information from customers is entered into the Company's EMOPSYS database.

Con Edison's Energy Services Department has developed a procedure that implements a process for annually mailing the on-site generation survey to the Company's large and sensitive customers. A copy of that procedure is being electronically transmitted to the DPS Staff.

V-18 Con Edison should consider developing a more formal program for using customer-owned emergency generators as a strategic load management tool during critical distribution system events like that of July 1999.

Scope:

Evaluate possibility of successful implementation of program for using customer-owned emergency generators as a strategic load management tool during critical distribution system events and develop program if warranted.

Tasks and Timeframe

1. Establish a team comprised of a representative from Distribution Engineering and two representatives each from Regional Control Centers and Energy Services (May 1, 2000).

2. Examine past Con Edison experience in obtain voluntary generation assistance from customers (Distribution Engineering – July 2000).

3. Identify and convene meeting with representative group of customers possessing significant self-generation capacity to discuss circumstances in which customers would opt to start up generation for emergency support of Con Edison system (July 2000).

4. Evaluate offerings Con Edison could make in return for generation support (July, 2000).

5. Send letter (incorporating information learned for meeting in Task 3) to all customers possessing significant self-generation capacity soliciting willingness to make generation available to Con Edison for emergency support (August 1, 2000).

6. Based on input from customers and prior Con Edison experience, evaluate the likelihood that a successful program can be implemented (August 31, 2000).

7. Develop program if warranted (September 30, 2000).

8. Customer education and solicitation (October 2000 – April 2001).

Status Report (June 30, 2000)

In the interim period, the issue of providing customers with compensation for using their on-site generation during critical distribution system events has been raised and is being considered by the parties to the settlement negotiations in Cases 96-E-0897 (Con Edison

Competitive Opportunities and 00-M-0095 (Con Edison/NU Merger). Con Edison is preparing a proposal for such compensation for consideration by the parties in that venue.

V-19 Con Edison should, as part of its formal reporting responsibilities for system emergencies, prepare a comprehensive evaluation of the effectiveness of its internal and external communication processes.

Scope

Develop a procedure for preparing, following system emergencies, a formal comprehensive evaluation of communications during the event. Communication Research Associates (CRA), our principal research and communications process consultant, will be used to prepare a proposal for a communications evaluation process including a template for Company organizations to use in reporting on their communication activities during an event.

Tasks and Timeframe

1. Meet with involved parties and CRA to develop work plan that scopes out the steps and tasks needed to develop procedure that clearly states the communication evaluation process – May 12, 2000.
2. CRA to deliver proposed procedure/guidelines – May 26, 2000.
3. Comment period for involved departments prior to approval and acceptance of CRA recommendations – May 26 – June 9, 2000.
4. Final approval and implementation of plan – June 23, 2000.

Responsible Organization

Customer Operations

Status Report (June 30, 2000)

On April 26, 2000, a three-member CRA team met with representatives of the various departments to discuss the scope of the assignment and the process. Thereafter, the CRA team analyzed applicable emergency communication procedures and/or guidelines and interviewed individuals from a number of Company organizations involved in the communication process during distribution system emergencies. The CRA team has mapped out the communication processes (the actual decision making process and the information flow). CRA has prepared draft communication evaluation scorecards for use by Company organizations in evaluating their communication activities. These scorecards have been circulated for comment. It is anticipated that a procedure for evaluating communications during a system emergency will be in place by July 31. In the event of a system emergency requiring the evaluation required in the recommendation, the Company will prepare an evaluation of its communication activities whether or not this procedure has been adopted.

VI-1 The Commission should direct Con Edison to show cause why, for distribution failures of 12 or more hours in a 24 hour period, it should not:

a. increase the compensation for losses due to spoilage of food for lack of refrigeration for residential users from $100 to $350 per incident;

b. increase the compensation for losses due to spoilage of perishable merchandise for lack of refrigeration for non-residential customers from $2,000 to $7,000;

c. increase the liability per incident to a total of $10,000,000; and

d. file a proposal to provide compensation to customers for verifiable damages to their appliance motors.

See Con Edison's April 17, 2000 response to the Public Service Commission's order to show cause pertaining to this recommendation. ant the Public Service Commission's "Order Approving Tariff Amendments," issued June 22, 2000 in Case 99-E-0930.

VI-2 The company should develop and submit for Staff review, a form for customers to submit to the company for damage claims.

Scope

Develop a form for residential and commercial claimants to use when submitting claims for compensation for losses resulting from power failures attributable to malfunctions in the local distribution system.

Tasks and Timeframe

1. Determine the information needed on the claims form

    - Canvass appropriate organizations involved in the process for suggestions on information to be included on the claim form (Customer Operations, Law) – April 30, 2000.
    - Analyze all requirements of the Company's electric tariff pertaining to compensation for losses resulting from a power failure attributable to malfunctions in the local distribution system (Law – April 30, 2000).
    - Items to be considered for inclusion on claim form:
        - Summary of tariff compensation provisions
        - Procedure for filing claim
        - Statement of information to be provided by claimant including claim documentation to be submitted
        - Contact telephone number for claim status information

2. Develop claim form format

    - Draft claim form (Law – May 15, 2000).
    - Circulate draft form and receive comments (Law – May 15, 2000).
    - Submit final form language for formatting and graphics design (Law/Graphic Design – June 15, 2000).
    - Distribute final claim form to Company Organizations responsible for distribution (such organizations to be identified per the work plan for recommendation VI-4) (Law – July 14, 2000).

3. Review and update current procedures that govern claims processing and amend to include a copy of the new claim form

    - Prepare changes to applicable procedures and submit to appropriate Company organizations to effect changes (Customer Operations, Law – June 15, 2000).

Status Report (June 30, 2000)

Con Edison has developed a draft claim form and submitted it on June 6, 2000 to the DPS Staff for review. Con Edison will revise its procedure entitled "Corporate Instruction 730-2 – Settlement of Claims for Spoilage of Food or Perishable Merchandise Due to Power Outage" to include a copy of the new claim form (as approved by the DPS staff).

IV-3 In the event of another sustained outage, the company should provide claim forms, in English and other widely used languages, and mail them to each customer in the affected area.

Scope

Identify widely-used languages in the Con Edison service area, translate claims form prepared per recommendation VI-2 into these languages, and keep forms in such languages, as well as the English language form, readily available for distribution on request in the event of a sustained network outage.

Tasks and Timeframe

1. Identify the widely used languages in Con Edison's service area (Customer Operations – May 15, 2000).

2. Translate the claim form into these languages (Customer Operations – May 31, 2000.

3. Develop a procedure for maintaining forms in the languages selected per Task 1 so as to be readily available for distribution upon request following a sustained network outage (exceeding twelve hours) and for notifying the public of the availability of claim forms in such languages (e.g. on Con Edison's web site, at offices of community-based organizations and elected officials, and by mail upon telephone request) (Law – May 31, 2000).

Status Report (June 30, 2000)

Con Edison will maintain a stock of claim forms in the following languages: English, Spanish, Polish, Russian, Hindi, French-Creole, Chinese, and Korean. A supply of such forms will be maintained by the Claim Agent, Law Department, and electronic versions of the forms will be maintained.

In the event of a local distribution outage for which Con Edison would be liable for spoilage claims under the terms of its electric tariff, the Company will develop and implement a plan, based upon existing conditions within the affected area, for communicating information about the claims process to affected customers and members of the public. The communication methods to be considered will include: broadcast recorded message on the main customer service telephone number; message on the Company's web site; media advertisements; letter to affected customers; and outreach efforts to local community organizations, elected officials, and other interested parties. The claims process information will include a summary of the tariff provisions concerning compensation for losses, the availability of claim forms in the widely used languages of the affected area, how to obtain and submit a claim form, and a telephone number for obtaining additional information.

VI-4 Con Edison should develop ways to disseminate information about the claims process so that customers have realistic expectations about how much reimbursement they can obtain.

Scope

Determine the circumstances under which information about claims for compensation resulting from an outage of electric service should be disseminated and establish how such claims information will be disseminated. Institute a procedure establishing a process for disseminating such claims information.

Tasks and Timeframe

1. Determine the circumstances under which claims information should be disseminated, the organization responsible, who should receive the information, and the methods in which it may be disseminated (Customer Operations, Law/Claims – April 30, 2000).
2. Determine how claims information will be disseminated under each of the circumstances identified in Task 1 (Customer Operations, Law/Claims – May 15, 2000).
3. Determine those actions that may require system modification to put into place and the time frame to enact modifications as necessary (Customer Operations, Law/Claims – May 15, 2000).
4. Review current procedures that govern the steps followed in claims processing and modify procedure to document the actions determined in Tasks 1, 2, and 3 (Customer Operations, Law/Claims – May 31, 2000).

Status Report (June 30, 2000)

When it is determined that an outage will in all likelihood exceed twelve hours, a fact sheet on the claims process including, claims eligibility and obtaining claims forms, will be distributed by Public Affairs//Media Relations, Outreach advocates, and other individuals who are on site to address customer concerns and questions. A copy of this fact sheet is being transmitted electronically to the DPS Staff.

Following a local distribution outage for which Con Edison would be liable for spoilage claims under the terms of its electric tariff, the Company will develop and implement a plan, based upon existing conditions within the affected area, for communicating information about the claims process to affected customers and members of the public. The communication methods to be considered will include: broadcast recorded message on the main customer service telephone number; message on the Company's web site; media advertisements; letter to affected customers; and outreach efforts to local community organizations, elected officials, and other interested parties. The claims process information will include a summary of the tariff provisions concerning compensation for losses, the availability of claim forms in the widely used languages of the affected area, how

to obtain and submit a claim form, and a telephone number for obtaining additional information.

For customers who call with questions about the claims process, a special IVR application will provide this information and accept requests for claims forms to be mailed to customers. System modifications to accommodate such requests are targeted to be effective by 7/15/00.