OCTOBER 2006

WESTERN NEW YORK MAJOR SNOWSTORM

A REPORT ON UTILITY PERFORMANCE

New York State

Department of Public Service

May 2007

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WESTERN NEW YORK MAJOR SNOWSTORM

October 12-13, 2006

EXECUTIVE SUMMARY

Starting late in the afternoon on Thursday, October 12, 2006 an unusually early lake-effect snowstorm developed over Lake Erie and began to cause utility outages that affected Niagara Mohawk Power Corporation d/b/a National Grid, New York State Electric & Gas Corporation (NYSEG), and Verizon New York (Verizon) in their western divisions in and around the Buffalo area. Initial forecasts predicted a few inches of snow for portions of Erie, Niagara, Wyoming, Genesee, and Orleans Counties. Before the snow subsided on October 13, these counties received anywhere from 6 to 24 inches of heavy wet snow. Because most of the fall foliage was still on trees, the heavy wet snow caused severe damage to electric and telecommunications facilities throughout the region. Although lake-effect storms are common in western New York, it was uncommon for this time of the year. The National Weather Service described this storm as an "historic" snow event.

On Friday, October 13, service was interrupted to approximately 396,000 electric customers (261,000 National Grid and 135,000 NYSEG). Additionally, 93,000 trouble cases were experienced by Verizon New York (Verizon) customers. Limited snow plowing and storm debris made travel difficult for responding utility companies, whose initial focus was on safety, responding primarily to downed wire and emergency calls. The storm caused the closure of a 105 mile portion of the New York State Thruway most of the day Friday between Rochester and Buffalo, which hindered mutual aid crews traveling westbound. Local municipalities also imposed travel bans and Governor George Pataki declared a state of emergency for Erie County and three adjoining counties. National Grid and NYSEG's restoration efforts returned service back to all their customers in ten and nine days, respectively. It took twenty-nine days to restore telecommunications service.

Commission regulation 16 NYCRR, Part 105 require an internal performance review by electric utilities any time there is an emergency where the restoration period exceeds three days. There is no corresponding mandatory requirement for telecommunications; however, such reviews are requested following major outages due to storms or other emergency events. National Grid complied with

this requirement and identified eight recommendations to improve its storm restoration response. NYSEG also filed a report, but its report lacked adequate detail. More detailed recommendations from NYSEG came about through information requests during the course of this report's writing. Staff reviewed National Grid and NYSEG's self-assessment reports, as well as its own notes of observations of events during and after the storm, and completed an analysis. Staff has concluded that National Grid and NYSEG adequately managed this major event, and adequately restored service in a timely manner under difficult conditions. Areas where Staff has made recommendations for improvement by National Grid include damage assessment, use of damage surveyors, and earlier estimation of crew requirements. Staff's recommendations for NYSEG include improved training of outage management system operators, enhancements to the Company's outage management system, and the expansion of the detail and scope of its storm reports.

Generally for telecommunications facilities, the underlying cable, cellular, and wired telephone networks held up reasonably well against the storm; where commercial power was interrupted, back-up power systems allowed for the continued provision of service to customers whose outside plant remained powered and secure. However, severe damage to individual service drop wires at businesses and homes over a widespread area caused telecommunications service outages that lasted well after power was restored. Staff's assessment of the restoration focused on Verizon's recovery efforts as it had by far the most storm related outages to critical telecommunications services and its restoration period was the longest.

In response to Staff's inquiry, Verizon provided a review of its performance. Verizon acknowledged in its report where it could enhance future restoration performance. Based on the resources made available in the impacted area, Office of Telecommunications staff's general observation of Verizon's restoration effort indicated that its response was efficient and well organized. Staff's review, however, identified areas where Verizon could have improved its restoration efforts and reduced the overall amount of time it took to restore service to all customers. In particular, Staff found that Verizon's damage assessments did not adequately account for unreported damage and overly relied on reported customer troubles which led to delays in overall service restoration. Staff also identified several areas for improvement with regard to its communications with the media, public officials and its customers during storm events.

Staff's recommendations will enhance Verizon's ability to restore storm related outages sooner, respond to its customers better, and allow Staff to monitor storm impacts and utility restoration efforts more accurately during future storm outage events.

Staff expects National Grid, NYSEG and Verizon to consider and act on the recommendations provided here. Staff will monitor the companies' efforts to ensure timely implementation of their own and Staff's recommendations. Where applicable, Staff's recommendations should be incorporated into the respective companies' emergency plans.

The companies are expected to implement all recommendations by August 1, 2007, except as otherwise noted. The companies should report to Staff by July 1, 2007 on their progress, and then every three months thereafter, as necessary. Staff will report to the Commission on the companies' progress in addressing the issues outlined in this report.

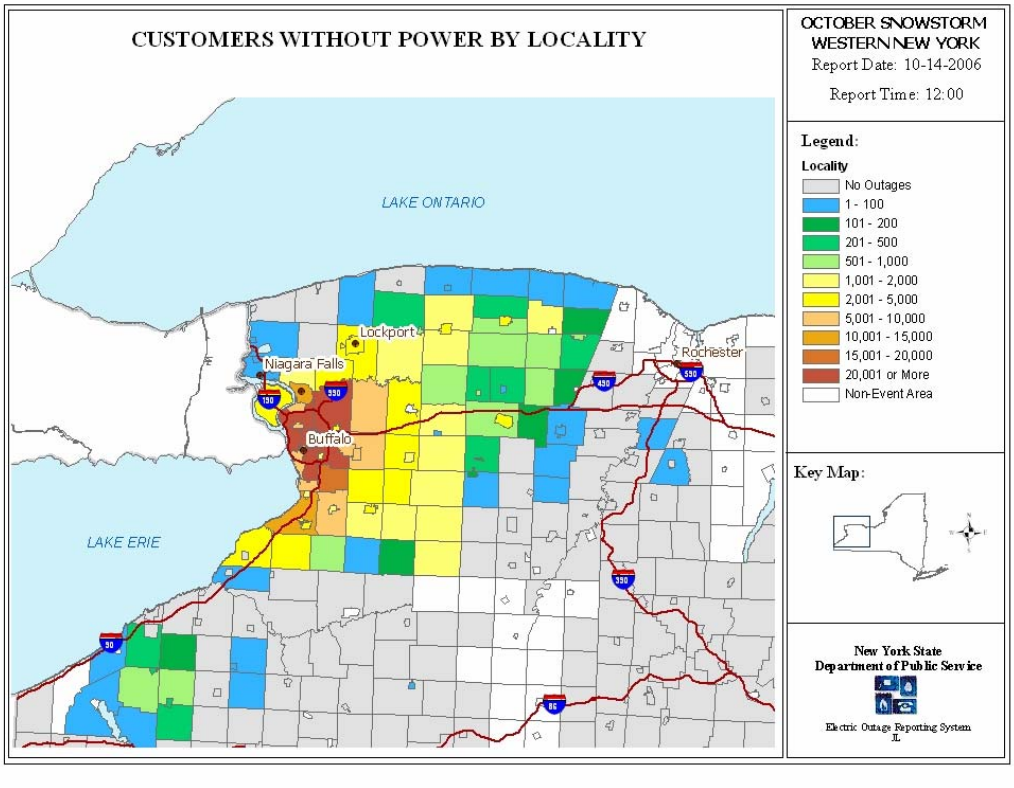
BACKGROUND

Weather

During the late afternoon on October 12, a record breaking lake effect snowstorm began covering fall foliage in the Western New York Counties of Erie, Orleans, Genesee, and Niagara. The storm was dubbed the "October Surprise" storm because predictions were not for such a severe event. The National Weather Service reported that two feet of heavy wet snow fell in the greater Buffalo area. This historic lake effect snow resulted in significant power, communications, and tree damage paralyzing the area.

The crippling snows cut directly through the City of Buffalo northeast towards the City of Rochester. The storm extended well across Genesee and Orleans Counties, and pushed into extreme Southern Niagara and Northern Erie Counties. An early map, (Figure 1, below), from Staff's Electric Outage Reporting System, shows the geographical distribution of customers affected by the storm.

Figure 1



The National Weather Service's Weather Forecast Office in Buffalo described the snowstorm that struck western New York on October 12-13, as a "dramatic, crippling out of season event" with "unprecedented meteorological parameters". [1] The weather service went on to say that "Words cannot do justice to the astounding event which opened the 2006-07 season". The weather service summary described the storm, which caused great devastation to utility facilities in the Buffalo region as "historic." It noted that the "extreme parameters of this event" combined to form what might be called a "perfect storm."

The unprecedented damage to trees in the region is acknowledged in an October 20, 2006 letter from Governor George Pataki to the President of the United States seeking Disaster Relief and Emergency Assistance and a declaration of a major disaster for New York State as a result of the "unprecedented, unseasonable, severe lake-effect storm." At that time, joint preliminary damage assessments completed by the New York State Emergency Management Office (SEMO) and the Federal Emergency Management Agency (FEMA) indicated that debris removal costs were in excess of $169 million and $17 million in costs associated with protective measures taken in response to this event.

Effect on Utilities

As one would expect, the physical effect of the heavy, wet snow to National Grid and NYSEG facilities was extensive. The following (Figure 2, below) is a summary of the physical damage experienced by both companies:

Figure 2

	NYSEG	National Grid
Circuits Affected	138	257
Circuit Lockouts	69	403
Poles Broken	289	600
Transformers Replaced	84	300
Services Repaired	1,432	10,000

On Friday, October 13, approximately 261,000 National Grid customers and 135,000 NYSEG customers were without electric service as a result of the storm.

[1] "Historic Lake Effect Snowstorm of October 12-13, 2006" attachment from www.erh.noaa.gov/buf/storm101206.html

Similar damage was experienced by Verizon with over 93,000 trouble spots, including 41,800 downed drops and an additional 350 poles that needed to be repaired or replaced.

Staff Support

Department Staff provided valuable support throughout the duration of this event. Over twenty Staff worked at the PSC desk at the State Emergency Management Office (SEMO), while numerous others from the Offices of Electricity and the Environment, Telecommunications, Consumer Services, and Information Services GIS Unit, provided mapping, reporting of information and intake and response to consumer calls.

NATIONAL GRID

Electric Operations

Staff Activities

Department Staff monitored National Grid's restoration efforts on site (starting Friday, October 13), receiving periodic reports on customer outages and restoration projections. Staff also worked at the PSC desk at the SEMO providing maps and status reports, assisting that office with coordination of State resources. For example, when it was reported that westbound crews were being delayed because the Thruway was closed from Rochester to Buffalo, SEMO made arrangements with the New York State Police and the Thruway Authority to assist crews through the closed portion of the Thruway.

Staff participated in daily conference calls between the companies and affected municipalities. These calls, required by the Commission's Order originating from the February, 2006 windstorm, (Case 06-M-0496), kept community leaders aware of restoration activities in a consistent and timely manner. The calls were very well received by the municipalities and other parties who participated.

Utility Preparation

Emergency Plan

National Grid's Western Division followed its Electric Emergency Procedures as filed with the Commission. The Company used lessons learned from Florida Power and Light's storm management experience and revisions made to the procedures resulting from the February 2006 wind storm (see Appendix I). Training drills have been conducted as required by 16 NYCRR, Part 105 – Electric Utility Emergency Plans.

On the afternoon of October 12, the Western Division held all employees after normal working hours to work on "no light calls". The Materials Supply Chain Management began mobilizing staff to prepare material for mutual assistance support. The Company notified Staff at the onset of the event on October 12, at 7:40 PM.

Outage Management System

The Company had been working on enhancing its outage management system since the February 2006 wind storm. Many of the lessons learned during that storm were implemented during the October storm. The enhancements improved the system's performance, thus the situations encountered during the February storm were not an issue in this storm. National Grid reports it will continue to investigate and implement best practices.

Damage Assessment

Damage surveys of the transmission and distribution system began at 5:00 AM Friday, October 13. Travel conditions were difficult with many roads impassable. Thirty damage surveyors started assessing conditions Friday morning and additional surveyors were requested and mobilized from other National Grid regions, including New England. A total of 321 surveyors were used during the restoration. The Company used its damage surveyors according to its emergency plan; however, it added a few new functions for the surveyors that are not in the emergency plan. Line crews typically sweep feeders after the service has been restored to assure the work is complete. The Western Division used damage surveyors to sweep, allowing the line crews to continue with priority work and maximize their restoration effort. Also, National Grid New England surveyors were qualified to use Class II rubber gloves and were able to make safe secondary wire down situations as the surveys were conducted. These additional functions of the damage surveyors increased the restoration efficiency and emphasis on safety.

Recommendations:

1. As the Company identified in its report, it should adopt the best practices for damage surveyors used during this storm. The damage surveyors should be used to sweep feeders for the line crews where applicable.

2. The National Grid New York damage surveyors should be trained and qualified to be able to make safe secondary wire down situations similar to National Grid New England surveyors.

The Company relies heavily on damage surveys to determine the number of line and tree crews that will be needed for full restoration. The travel conditions, however, hampered the ability to perform damage surveys of the transmission and

distribution systems all day Friday. Foot patrols of the transmission lines started Friday morning because the helicopter patrols were not able to start until Sunday, when the cloud cover lifted. Phase 1 distribution surveys, which detail primary circuit damage to the three phase feeder circuits, started Friday morning under difficult conditions, and were completed on Sunday. Progress was limited by the conditions, and therefore, waiting for the damage surveys to quantify the number of crews required for the restoration delayed any earlier requests for additional crews.

Mobilization/Staffing

Mobilization

By late afternoon Thursday, October 12, National Grid's weather service provider issued a weather alert for heavy wet snow exceeding 12 inches in the Buffalo area. At approximately 5:00 PM Thursday, National Grid started to see the first impact of the heavy, wet snow on top of October tree foliage. At 6:00 PM, the Western Division Storm Director began requesting additional crews from the Company's System Storm Staff in Syracuse to assist the division's normal complement of 60 two man line crews, 15 one person crews, 15 tree crews, and 18 service crews. At 8:00 PM Thursday, approximately, 50,000 customers were out of service and the Western Division requested an additional 148 line crews to total 208 line crews to restore service.

Over the evening hours of Thursday the heavy wet snow continued to bring down lines, taking approximately 227,000 customers out of service by 6:30 AM Friday, October 13. Unfortunately, the snow made travel difficult between Rochester and Buffalo and the New York State Thruway closed the 105-mile section between Rochester and Buffalo early Friday morning, preventing west bound mutual aid crews from getting to Buffalo. At 6:00 PM Friday, the number of customers out of service climbed to an approximate peak of 261,000 customers out of service. The Western Division then requested an additional 200 line crews raising the commitment to a total 435 line crews to support the restoration. However, at that time only 126 of those crews were in the field, and were mainly responding to emergencies and wire down calls.

Staffing

By 6:00 AM Saturday, October 14, 179 line crews were in the field working on the restoration of approximately 237,000 customers out of service. A day and a half after the storm started National Grid needed many more line crews in the field to adequately address the storm damage. At 8:00 PM Saturday, the Western Division requested an additional 200 line crews committing 635 line crews to the restoration effort. By this time 487 line crews were in the field restoring approximately 229,600 customers out of service. Crews trickled into the restoration effort all day Saturday and Sunday. By noon Monday, October 16 (almost three days after the storm started) 796 of the 851 line crews requested were in the field restoring service.

Even though crews were requested early in the storm, and even with assistance from the State Police through SEMO, the crews traveling west could not get to Buffalo most of the day Friday because the Thruway was closed. Excluding travel on Friday until 5:00 PM when the Thruway was reopened in its entirety, it still took two days before all the line crews requested arrived and were ready to work. Crews traveled from as far a way as Kentucky, Maryland, North Carolina, Virginia, West Virginia, Michigan, Texas, and New Brunswick, Canada and their travel time contributed to the delay in crew arrivals. When major storm restorations require mutual assistance crews to respond from long distances, it is essential that these requests be made as early in the restoration process as possible to maximize their effectiveness.

National Grid has experience with full foliage heavy wet snow storms and ice storms. Both types of storms cause significant damage to the electric infrastructure that's generally isolated to an area or region, and the devastation always affects both transmission and distribution. Early Friday, October 13, over 200,000 customers were out of service and the Western Division committed only 423 line crews to restore service to 200,000. From the Company's experience with similar storms, it should have been clear that 423 line crews would not be adequate enough to restore 200,000 customers in a timely manner.

With the historically similar destructive nature of these types of storms and the Company's experience, it is reasonable to believe that more accurate estimates of required crews can be determined early in the restoration without the benefit of detailed damage surveys. It is important to note that National Grid followed its emergency plan in determining the number of crews required from damage surveys; however, there is

an opportunity for the Company to improve its response to some major storms and modify its emergency plan accordingly.

Recommendation:

3. National Grid should review previous heavy wet snow and ice storm events and draw from its experience to develop an improved method for early estimation of crew requirements (including line, forestry, and service crews) for complete restoration, and revise its emergency plan to reflect the change.

Logistics

During large restorations, the logistics of crew lodging/meals, staging, and material supply are significant in contributing to the efficiency of the overall restoration effort. With limited lodging in and around the Buffalo area, and the large number of mutual assistance personnel used for the restoration, the Western Division set up staging areas to support lodging, meals, material supply, fueling, and bussing crews.

The largest staging area to support the crews was at the Eastern Hills Mall. Using draft procedures developed from an alliance with Florida Power and Light, the company set up a staging area at the mall that supported 500 crews during the restoration. Crews that were assigned long distance lodging early in the restoration were bussed to the staging areas. Crew assigned lodging accommodations were as far away as Rochester and Erie, Pennsylvania, and then moved closer to the restoration when lodging became available. Crews were fed breakfast at the mall staging area and provided box lunches to aid in productivity. Line trucks were fueled and restocked with material supplies in the evening when the crews were resting.

National Grid appropriately handled difficult logistical needs during the restoration. The Company intends to document best practices from lessons learned in logistics. Staff agrees with that objective and encourages the Company to revise its emergency plan to reflect those best practices.

Restoration

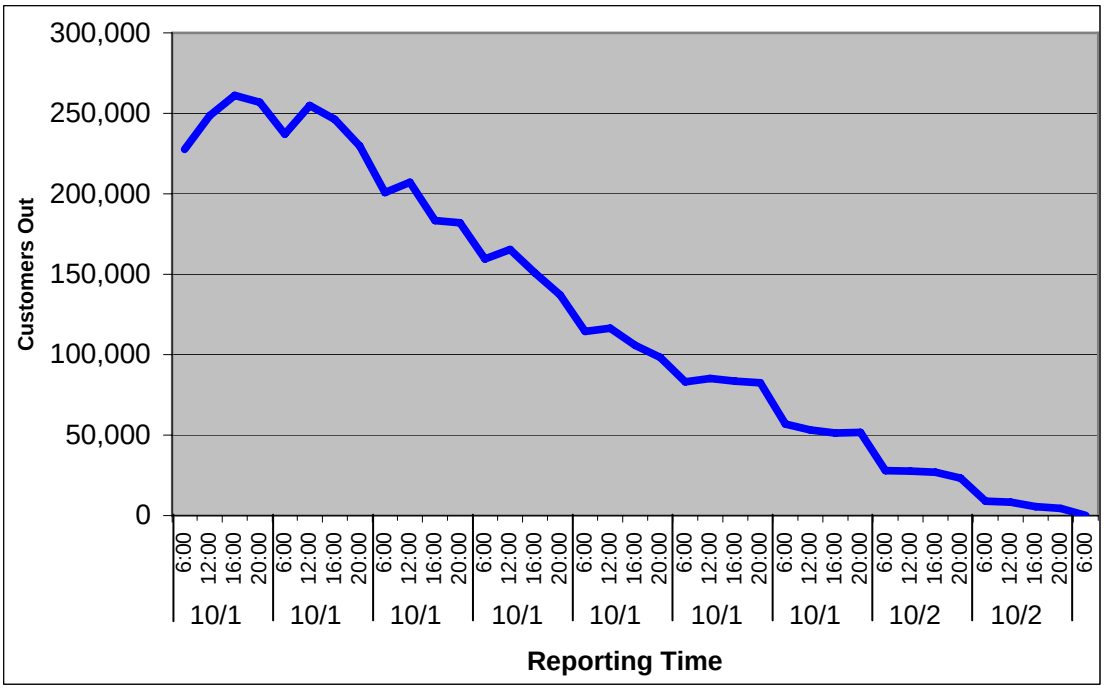
Forecasting

By 4:00 PM Friday, October 13, National Grid forecast an estimated restoration date of October 22, and met that forecast. The Company did a good job with its accurate early restoration forecast, that helped its customers to make appropriate arrangements for the duration of the restoration.

Duration

The complete restoration took approximately ten days from the storm's first impact on customers late afternoon on Thursday, October 12 (Figure 3, below). Staff has previously identified an opportunity for the Company to improve its early estimation of required crews that would promote a quicker response and shorten the duration. It is important to note that once the crews arrived in Buffalo, the restoration operation was adequately conducted under difficult conditions.

Figure 3



Downed Wires

The Company established a separate wire down organization from the metering services group. This group managed downed wire calls by responding, evaluating, making safe if possible, and/or standing by until line crews arrived to ensure safety. The down wire groups were effective.

Municipal Coordination

After the February 2006 wind storm, Staff recommended that National Grid hold daily conference calls, to brief public officials during a major event. The Company held two municipal conference calls, 8:00 AM and 4:00 PM, per day and

provided municipal and state leaders valuable restoration effort information. Overall, National Grid found the conference calls useful in providing a successful and safe storm restoration. Municipal leaders also had positive comments regarding these calls.

Self-Assessment

National Grid's self-assessment report provided a chronology of events and considered many areas of its performance. The Company's report identified seven areas needing improvement or the adoption of best practices from lessens learned. Staff believes that these are good suggestions, and that they be adopted by the Company, and should confer with Staff regarding their implementation. The recommendations contained in the self assessment are:

- Investigate and implement best practices with regards to the outage management system;
- Consolidate training for damage surveyors for consistency and methods (such as using rubber gloves to make down secondary wires safe);
- Work with the NYS Thruway Authority to establish expedited passage of mutual aid crews;
- Revise municipal conference call procedures based on lessons learned;
- Finish draft of emergency procedures for crew staging area logistics for the emergency plan;
- Develop Buffalo rear lot up/down riser briefing document for mutual aid crews;
- Complete the Storm Emergency Assignment List that implements storm assignments for all employees. This was a National Grid recommendation from the February 2006 storm.

Customer Service and Public Communications

Staff Activities

Staff reviewed National Grid's communications activities with its customers, the media, public officials, Critical Care customers and Life Support Equipment customers. Staff also reviewed the communications procedures in the Company's emergency plan and information it provided to the Company's call center representatives.

National Grid contacted the Department of Public Service Office of Consumer Services (OCS) as the storm began to establish a daily briefing schedule to

keep Staff informed of the Company's outreach, restoration and call center efforts. National Grid briefed Staff one or more times each day until all customers were returned to service. The Office of Consumer Services' Call Center remained open during the first and second weekends of the storm from 8:00 AM to 4:30 PM, put additional staff on its Emergency Hotline, and modified OCS' interactive voice response system to allow customers affected by the storm to speak directly with a Call Center representative. During the storm, the OCS Call Center received approximately 197 National Grid customer contacts and it assisted those customers with answers to questions related to the storm and restoration process. National Grid had dedicated staff available during the weekends to assist customers who contacted the OCS Call Center. Each day during the event, National Grid provided OCS with copies of press releases, call center statistics, outreach efforts and crew deployment data so that the OCS Call Center was adequately informed to assist customers.

Organizational Responsibility

According to the Company's emergency plan, Corporate Communications is responsible to provide, among other things, news releases, media spokespersons for regions upon request, updates to the Company's website, and briefing points for the daily community leader conference calls. The Company reported that Corporate Communications followed the standard practices outlined in the Company's emergency plans during the storm event. Its primary goal was to provide information to customers, community leaders, media representatives and employees that was timely, consistent and accurate. Primary messages throughout the duration of the event focused on safety, the magnitude of the damage and restoration effort, and estimated restoration dates and times.

Media and Customer Communications

To reach as many customers as possible, the Company engaged in a proactive media effort. The Company initiated contacts with media representatives and responded to hundreds of media inquiries from affected areas. Company officials were available for and conducted live interviews with radio and television. In addition, Company representatives participated in nearly all press conferences held by community and elected officials, and emergency personnel.

Corporate Communications provided reports of outages and restoration to Staff four times per day. Based on these reports, the Company prepared information that formed the basis for all other external communications to, for example, customers and public officials. The Company provided public information on a daily basis through news releases, the website and call centers on a number of topics, such as reminding the public to never touch a fallen power line, and to disconnect sensitive appliances such as televisions, computers and microwave ovens to help prevent potential surge damage when the power is restored.

On September 15, 2006, the Company began including real-time outage information and estimated restoration times on the "Storm Central" portion of its website. Customers viewing the Company's website are able to view real-time outage information in their county and, if they enter their phone number or account number and the last four digits of their Social Security Number, they can access outage information for their residence or business. This was a new and effective means for the Company to communicate with its customers.

Public Officials

In its August 2006 report on National Grid's performance in response to the February 2006 windstorm, Staff recommended that the Company should hold daily conference calls to brief public officials during a major event. The Company instituted such calls as part of its communications effort for the October 13 storm in direct response to Staff's recommendation. The Company concluded that the calls proved to be an excellent forum for communications with community leaders.

The Company reported that the daily conference calls allowed key municipal leaders the opportunity to hear about restoration activities directly from the storm operation leadership in a concise manner and also allowed for general questions. The calls were generally led by the Vice President of the Company's Western Division. Participants in the calls included representatives of the Company's Western New York Operations Department, Staff, Members of the State Assembly, County Legislators and local town and village officials. The calls were well-received by community leaders and provided the Company with better insight into community leaders' concerns and priorities.

In addition to the conference calls, contacts were made daily by the Company to local municipal organizations, such as highway departments, to coordinate restoration efforts in the communities affected. The Company also participated in numerous joint press conferences with community leaders. Updates were provided by the Company's Public Affairs group to elected officials throughout the State twice per day to ensure that they were updated on the status of the restoration efforts and to answer any questions or concerns of elected officials. The Company arranged tours for State and federal officials of the impacted areas and restoration crews at work.

Staff finds that the Company communicated very well with its customers, local government officials and the media before, and during, the storm outage. The community conference calls were especially informative and helped answer questions and resolve issues.

Life Support Equipment and Critical Care Customers

The Company followed the procedures set forth in its emergency plan regarding Life Support Equipment customers. The 148 customers identified by the Company as having life support equipment were initially contacted by the Company at the beginning of the storm and every day thereafter until the storm restoration was complete. In addition, due to the length of the storm, OCS Staff monitored the Company's contact with its Life Support Equipment customers. The Company checked on the customers' welfare, gave restoration information, and answered any customers' questions and concerns. A new software system, called "New Life," an innovative web-based tool that monitors all Life Support Equipment customers, was instituted by the Company. The New Life tool helped to streamline the life support monitoring process during the October storm event.

According to the procedures in its emergency plans, the Company contacted its Critical Care customers, such as hospitals, on a daily basis. There are approximately 250 Critical Care customers in the affected areas, each of which were given the highest priority. Streets on which Critical Care customers were located were given priority by the Company to be cleared of fallen trees, branches, debris and downed wires in order to provide access and services to them as quickly as possible. Examples of these customers are the Erie County Water Authority, which lost power to two main pumping stations, and the Buffalo Sewer Authority. The Company did not find

it necessary to provide generators to any of its Life Support Equipment or Critical Care customers.

Call Center Operations

National Grid reported that it arranged for additional staffing in its customer call center late in the afternoon of October 12. According to National Grid's customer call center data, during the storm period, it received 208,856 calls. The center's interactive voice response system and its representatives answered 99 percent of the calls, and its representatives personally answered 88 percent of the calls within 30 seconds.

The Company implemented several measures to help its customer call center provide assistance to its customers. To augment existing call center staff, the Company conducted advanced training for managers, who were then able to handle incoming calls along side customer call center staff during the storm. The Company also added trunk capacity, as a result of lessons learned from the February 2006 storm, which resulted in fewer busy signals for customers.

The Office of Consumer Services' Call Center entered 17 cases for follow-up from National Grid customers who called about the storm. The concerns included the following: customers reported having no service while others around them did; an inability to reach the Company; the Company's failure to restore service by the date the customer was promised; that trees in need of trimming contributed heavily to the outages; the impact of the outage on the elderly living alone and family members with medical hardships; and questions regarding the Company's criteria and priorities for restoring service.

Given the volume of customers who were out of service, and the performance of its customer contact center as shown by the data, Staff concludes that National Grid's customer contact center responded well to its customers.

NYSEG

Electric Operations

Staff Activities

Department Staff monitored NYSEG's restoration efforts on site, receiving periodic reports on customer outages and restoration projections. Staff also worked at the PSC desk at SEMO providing maps and status reports assisting that Office with coordination of State resources.

Staff participated in daily conference calls between the companies and affected municipalities. These calls kept community leaders aware of restoration activities in a consistent and timely manner. The calls were very well received by the municipalities and other parties who participated.

Utility Preparation

Emergency Plan

NYSEG's Lancaster/Lockport Division, the division affected by the storm, followed its Electric Utility Emergency Plan as filed with the Commission. Additionally, the plan has recently been enhanced as a result of lessons learned (and recommendations from Staff's report) from the wind storm in Brewster in January 2006 (See Appendix II). Training drills have been conducted as required by 16 NYCRR, Part 105 – Electric Utility Emergency Plans.

Outage Management System

A key element today in managing storm restorations is the utility's outage management system. There were several issues with NYSEG's relatively new outage management system, which is now being used by all the Energy East companies. These issues include training, modeling accuracy and usability.

Since the system was fairly new to the Lancaster division, several expert NYSEG and RG&E users from around the state were called in to assist. NYSEG has stated that operator experience and proficiency will continue to improve and that these experts will remain to assist other operators system-wide in future events as necessary. Staff is uncertain whether operator experience gained on the job will be sufficient or

timely enough for the next large scale event and, therefore, makes the following recommendation:

Recommendation:
1. NYSEG should evaluate the adequacy of training of its outage management system operators to respond to major storms on a system-wide basis and report back to Staff on its findings.

There was an issue with the outage management system to accurately model what was going on in the field when distribution lines were temporarily reconfigured to more quickly restore blocks of customers. This lessened the quality of information available and required an extra manual effort to correct. NYSEG has stated its system will be enhanced, hopefully by this summer, to enable transformers to be convicted (flagged) as damaged, which should produce more effective modeling during future large scale events.

Recommendation:
2. NYSEG should report to Staff details of the changes made when the outage management system enhancements related to transformer conviction (flagging) have been completed.

Finally, in a response to its experience in the October storm, NYSEG reports that it has already updated its outage management system to enhance usability. The operator can now turn on separate map layers to focus on either trouble or outages separately, or view them together which makes it easier to determine trouble or outage locations.

Damage Assessment

Transmission lines were patrolled by helicopter on October 14 and 15, although at that time the one transmission outage that remained was not affecting customer service. For the distribution component of its system, NYSEG used 38 individuals for damage assessment.

Before assessments were performed, distribution line crew leaders were given circuit diagrams and instructed to work from the substation outward. A visit by Staff during the restoration touched upon damage assessment and seemed to indicate a systematic and complete approach by NYSEG, whose assessment method includes craft-hour estimates.

In the wake of the January 2006 storm in Brewster, a recommendation was made by the Company to use magnetic signs for survey vehicles for identification purposes. The signs had been ordered but not received at the time of the October storm. We have been assured by NYSEG that all its offices, including Lancaster, now have the signs on hand.

Mobilization/Staffing

Mobilization

NYSEG reports that local management called all local managers and supervisors into the office for media, line, wire guarding, forestry, substations, engineering, fleet services, customer advocacy, customer service, public official contact, and meals and hotel accommodations planning. Management personnel from each of these areas was either in the office, or connected to the office remotely, during the evening of October 12, planning and coordinating with their contacts from across the state. Additionally, all available local line, substation, meter, engineering, garage, and customer service personnel were called into the office the evening of October 12.

From the corporate perspective, NYSEG initially opened its Corporate Emergency Operations Center (EOC) during the afternoon of October 12, distributing weather forecasts to the local divisions. The first discussions between the EOC and the Lancaster Division were held at 7:00 PM on October 12, followed by contact between the EOC and National Grid. At that time, the National Weather Service was still expecting that this would be a severe but fast moving storm without significant long-term impact.

By 10:00 PM the night of October 12, NYSEG reports that it became apparent to its management that the system impact would be significant, and that mutual aid would be required. The EOC office fully opened to initiate emergency response, with the first mutual aid calls being made at 10:00 PM. The EOC remained opened throughout the event. In Staff's view, the Company's timely efforts in mobilizing its forces appeared sufficient.

Staffing

NYSEG got off to a quick start with respect to staffing, with 120 line crews, 54 tree crews, 21 service crews, 47 damage assessors, and 15 wire guards on site by the evening of October 13.[2] As the restoration effort proceeded, NYSEG used a maximum of 159 line crews, 54 tree crews, 85 service crews, 52 damage assessors, and 25 wire guards. The crews comprising the bulk of the line crews (120) were from NYSEG (108), and fellow EnergyEast affiliate, Rochester Gas and Electric (12). The remainder of the line crews was supplied through contractors (31), ConEdison (4) and Orange and Rockland (4). A total of 888 people worked (generally, very long hours) to restore service to NYSEG customers.

Staff has a concern that NYSEG might perhaps be developing a tendency to be reluctant in requesting non-company line crews for assistance. In the analogy of a fast-track construction project, more people working on the project can always be used to shorten the project's duration but it can come at a price through inefficiencies, management control, logistics and safety. While NYSEG maintains that a proper number of crews were used during this restoration, and Staff does not disagree, the disparity of the numbers of line crews used by National Grid seems to beg the question, "why?" One possible reason could be that a greater proportion of large shade trees and distribution wires running between property lines in backyards in the City of Buffalo appeared to have caused more damage than in the Lancaster division. Nevertheless, the Company should reassess its procedures for requesting non-company line crews.

Logistics

Fuel storage tanks were full in Lancaster and Hamburg at the beginning of the storm, and deliveries were scheduled throughout the storm to maintain sufficient inventories. Trucks were fueled at the motels during the night while the crews rested.

At the peak of restoration, NYSEG was reserving 465 rooms daily at 15 hotels that were close to the NYSEG Lancaster office. However, 25 tree crews were lodged in Henrietta, which required bussing arrangements. Also, on the night of October 20, many rooms were lost because of the Buffalo Bills football game, requiring 40 NYSEG and RG&E crews to stay in Dunkirk, which also required bussing.

[2] NYSEG's Lancaster Division has a normal complement of 30 line crews.

Meals were provided daily from October 14 to October 21 for office workers at the Lancaster office. Field workers generally ate breakfast at their hotels and dinner at local restaurants. A coffee wagon also delivered coffee and other light snacks to the crews, in addition to snacks that were provided to the crews by their supervisors.

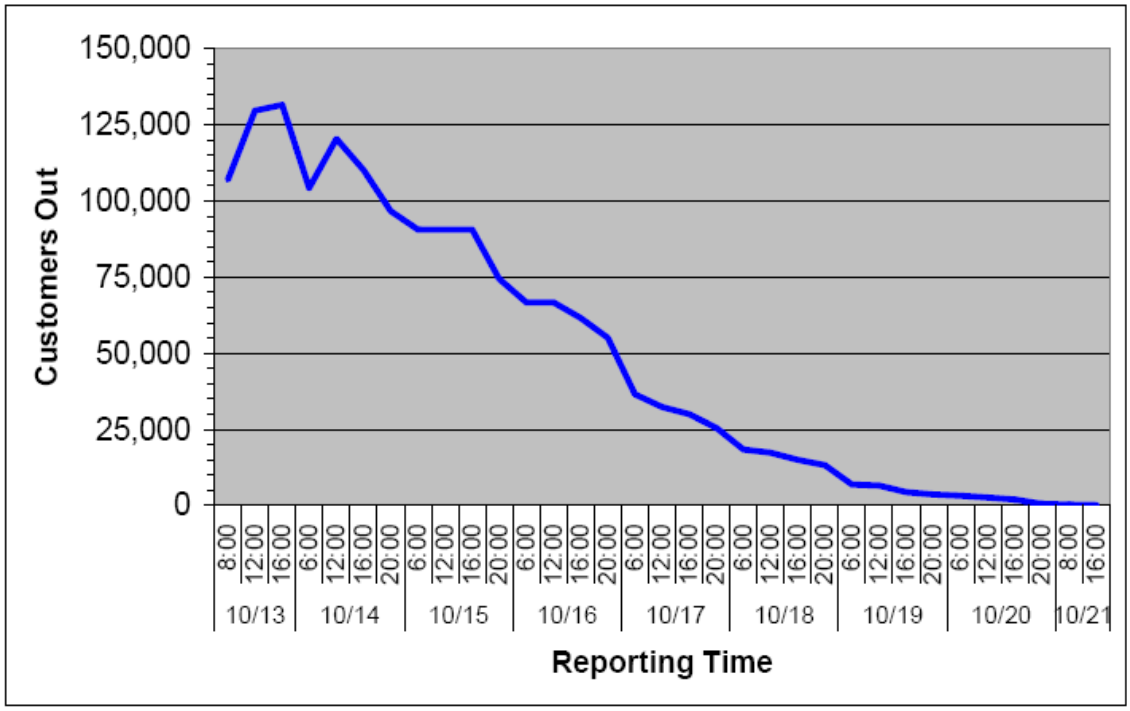
Crews were staged at the NYSEG Lancaster, Hamburg, Lockport, and East Aurora facilities, and the Lancaster High School. Poles were delivered to the job sites. Transformers were distributed from the NYSEG facilities or delivered to the job site. Other materials were distributed directly from the NYSEG facilities. Staff found nothing incorrect in the Company's logistics efforts.

Restoration

Forecasting

In its 9:00 AM news release on Friday, October 13, NYSEG noted that early indications were that it would be at least Tuesday, October 17 before power to all of the 135,000 customers initially affected would be restored. While somewhat optimistic, because there were still 20,000 customers without power on Tuesday (Figure 4, below), the prediction still provided an early and appropriate signal to customers that this was a serious storm and not to have unrealistic expectations about resumption of service. In the news release on Monday, October 16, NYSEG stated that restoration activities would continue until the end of that week in the most severely affected or remote areas.

Figure 4



(Source: NYSEG Storm Report)

Duration

While some restoration work took place on October 12 during the passage of the storm, activity did not commence in earnest until the next day after the storm had passed, and the last customer was reconnected on October 21.

Looking at the graph (Figure 4, above), one can see the flattening out of the curve on October 19 to October 21, where the last 2,000 customers were being restored. While these customers might have been in more remote areas as noted previously, or scattered individual services, the reality is that someone must be last. Staff did not identify any instance where the normal restoration priorities, as outlined in the storm plan, were circumvented by the Company.

Downed Wires

As a result of a self assessment in the wake the January 2006 storm in the Brewster district, and recommendations from the Staff review of that restoration effort, NYSEG modified its response to guarding downed conductors. The wire guard coordinators acquired the necessary personnel (25 people) and worked with municipal

emergency representatives, restoration management, the outage management system, and damage assessors 24 hours a day for the duration of the restoration effort.

The use of dedicated wire guards also improves the productivity of damage assessors by freeing them from standing watch over downed conductors found in the course of their duties. While it is impossible to guarantee no electrical contacts in any large restoration, this new approach appears to be a successful safety enhancement.

Municipal Coordination

In the aftermath of the January 2006 storm in Brewster, Staff recommended more communication and coordination with municipal highway departments and officials. During this storm restoration, it does appear to Staff that this was the case:

- NYSEG conducted daily conference calls with elected officials from October 13 through October 21, which, among other things, allowed NYSEG to provide street-by-street restoration progress and allowed officials to identify special needs from their perspectives;
- NYSEG participated in Erie County Emergency Management Planning conference calls on October 13 and October 14 with one outcome that NYSEG patrolled and cleared priority roads identified in these calls to support snow plowing;
- NYSEG provided continuous staffing of a Public Works/Highway Coordinator position at the Erie County Emergency Management Center from October 13 through October 20, which enabled the NYSEG representative to coordinate specific highway and public works requests with the NYSEG Lancaster operations center;
- Highway departments were given the Lancaster 24-hour emergency number to report downed energized conductors.

In addition, NYSEG cooperated with municipal agencies by providing generators and portable light towers to critical facilities[3], as well as in other ways such as helicopter patrols for damage assessment.

Self-Assessment

Although NYSEG answered Staff's requests for additional information well, the initial report on the storm, while containing much useful information, was only

[3] NYSEG provided 70 emergency generators and 14 portable light towers.

six pages (plus attachments), and did not fully respond to 16 NYCRR, Part 105.4 C[4]. More details on topics such as opportunities for improvement identified in post-storm meetings, advance preparation activities, training, damage assessment, personnel usage, lodging logistics and the like[5] could have provided a better initial overall picture of this major week-long outage.

Recommendation:
3. NYSEG should improve the detail and scope of its major storm reports to include all aspects of its preparation and system restoration performance.

As a result of post-storm self assessment meetings (not included in the Company's filing), NYSEG identified several focused opportunities for improvement. Staff believes that these are good suggestions that should be adopted by the Company, and that the Company should confer with Staff regarding their implementation. The recommendations contained in the self assessment are:

- Improve Outage Management System performance (discussed earlier);
- Provide National Incident Management System training to its employees;
- Further formalize management and coordination of dry ice and bottled water distribution;
- Utilize tower lighting systems to support community shelters and other key locations;
- Further develop capacity for effective generator deployment;
- Provide more dedicated pole setting coordination for large events.

[4] Within 60 days following completion of service restoration in an emergency where the restoration period exceeds three days, each electric corporation shall submit to the Secretary of the Public Service Commission a review of all aspects of its preparation and system restoration performance.
[5] This list not meant to be all inclusive.

Customer Service and Public Communications

Staff Activities

Staff reviewed NYSEG's communications activities with its customers, the media, public officials, Critical Care customers and Life Support Equipment customers. Staff also reviewed the communications procedures in the Company's emergency plan and information it provided to the Company's call center representatives.

NYSEG contacted the Department's Office of Consumer Services at the beginning of the storm to establish a daily briefing schedule to keep Staff informed of the Company's outreach, restoration and customer call center efforts. The Company briefed Staff one or more times each day until all customers were returned to service. The Office of Consumer Services' Call Center remained open during the first and second weekends of the storm from 8:00 AM to 4:30 PM, put additional staff on our Emergency Hotline, and modified our interactive voice response system to allow customers affected by the storm to speak directly with a Call Center representative. During the storm, the OCS Call Center received approximately 87 NYSEG customer contacts and it assisted those customers with answers to questions related to the storm and restoration process. NYSEG had dedicated staff available during the weekends to assist customers who contacted the Office of Consumer Services' Call Center. Each day during the event, the Company provided the OCS with copies of press releases, call center statistics, outreach efforts and crew deployment data so that the OCS was adequately informed to assist customers.

Media and Customer Communications

The Company reported that it maintained communications with local government officials, community representatives, and the media throughout the event. NYSEG issued press releases several times a day reminding the public about safety precautions, describing the restoration efforts and listing dry ice and bottled water distribution locations. The Company conducted daily conference calls with local elected officials, which Staff monitored. Participants on the calls included NYSEG's Western New York Community Outreach Coordinator, the Vice-President of Western New York Operations, the Western New York Operations Manager, mayors, deputy mayors, supervisors, trustees, county legislators and Staff. The Company maintained continuous staffing at NYSEG's station at the Erie County Disaster Preparedness Center.

Staff finds that the Company communicated very well with its customers, local government officials and the media before, and during, the storm outage. The daily conference calls were especially informative and helped to answer questions and resolve concerns.

Life Support Equipment and Critical Care Customers

The Company followed the procedures set forth in its emergency plan regarding Life Support Equipment customers. The 458 customers identified by the Company as having life support equipment were initially contacted by the Company at the beginning of the storm and every day thereafter until the storm restoration was complete. In addition, due to the length of the storm, OCS Staff monitored the Company's contact with its Life Support Equipment customers. The Company checked on the customers' welfare, gave restoration information, listed shelter locations, and answered customers' questions and concerns. Due to telecommunications problems during the event, which prevented direct telephone conversations, the Company dispatched personnel to check on about 30 Life Support Equipment customers. Generators were supplied to two Life Support Equipment customers, and several other offers were declined. The Company delivered dry ice and bottled water to those Life Support Equipment customers who were in need.

In accordance with its emergency plan procedures, the Company initiated and maintained contact with all of the approximately 65 Critical Care customers affected

by the storm in its service territory. Additionally, NYSEG asked elected officials to identify any additional customers who required special services beyond the Critical Care customers. Customers who were identified were then given special consideration, such as providing more specific information regarding restoration efforts and estimates, or expediting restoration. For example, the Cheektowaga Town Water Authority requested that a pump station be treated as a Critical Care customer, and the station was given a higher priority.

The Company reported that a total of 74 tons of dry ice and 310,000 bottles of water were provided to residents in the area at three distribution centers and by delivery to shut-in customers throughout the affected areas. Distribution centers for dry ice and drinking water were set up at locations in the most severely affected areas.

Due to local flooding, NYSEG assisted in providing pumping services. Over 100 basements in the Town of Marilla were pumped by NYSEG teams working with local fire departments. NYSEG also provided emergency generator service to critical municipal buildings and to several senior citizen buildings.

Call Center Operations

According to NYSEG's customer relations center data, during the storm period, the center received 60,049 calls. The center's interactive voice response system and its representatives on average answered 90 percent of the calls and its representatives personally answered 72 percent of the calls.

The OCS Call Center entered 12 cases for follow-up from NYSEG customers who called about the storm. Customers questioned NYSEG's criteria and priorities for restoring service, its failure to restore service by the date the customer was promised, and voiced concerns about the impact of the outage on the elderly living alone and family members with medical hardships.

Based on the data from the Company's customer relations center and the contacts received by the OCS, Staff concludes that NYSEG responded well with regard to its customer contact center.

Telecommunications Operations

Overview of Telecommunications Carriers and Services Affected

The October 2006 Snowstorm had a profound impact on telecommunications services in the Buffalo area. The resiliency of the telecommunications network was tested on two fronts: the widespread loss of commercial power that affected nearly 400,000 households; and, the severe damage from wet snow and winds which felled utility poles, trees and limbs, and left tens of thousands of individual telephone and cable television customers out of service due to damaged or downed service lines.

Generally, where commercial power was interrupted, back-up power systems deployed at cellular, telephone, and cable television network facilities allowed for the continued provision of service in areas where outside plant remained powered and secure and where customers had power at their homes. However, because the storm caused such severe and widespread damage to individual outside plant cables and drop wires at businesses and homes, the devastating impact on telecommunications services was present well after power was restored.

Telephone Services

Verizon New York is a provider of telephone and broadband data services, and more recently has introduced video services in areas of New York State. In the area affected by the storm, which included the greater Buffalo area and some of its suburban communities, Verizon is the primary telephone service provider and serves about 475,000 access lines. It also is a major provider of DSL service in the area which allows broadband access to internet services.

During the storm and resulting loss of commercial power, Verizon network facilities up to the customer premise held up well, and failures of those parts of the network were limited due to sustained emergency power generation. Where plant continuity existed between central offices and customer premises, telephone service was available even when commercial power was lost.[6] Our review indicates that Verizon customers experienced storm related service outages mostly due to individual

[6] Customers with telephones that required commercial power would not have been able to access the network without their own power generation.

drop wire damage at customer locations. During the course of the restoration, Verizon also replaced, reattached or repaired approximately 350 poles, and replaced or reattached approximately the same number of distribution and feeder cables. From October 13 to November 10, storm related damage to its outside plant caused Verizon to issue and address over 93,000 trouble tickets.

Cellular Services

Cellular companies serving the Buffalo area include Sprint/Nextel, Cingular and Verizon Wireless. These companies reported that most of their cell cites and towers remained operational during the storm by the provisioning of generated back-up power. In certain instances, coverage was lost when back-up power at some facilities was depleted (or not available), and also when cables that connect the cellular facility to the wired telephone network were downed or otherwise lost connection. In these areas, cellular coverage either may not have been available or overlapping coverage from an adjacent facility allowed for service that was spotty. Within six days after the storm, all cellular companies reported that there were no longer any storm-related impacts on service.

Cable Services

Time Warner (TW) is the primary cable television provider in the Buffalo area and provides video and broadband internet services. It does not provide voice services in Buffalo, however, some of its customers may use TW broadband service for telecommunications using voice over Internet protocol (VoIP).

During the storm, TW reported no interruptions in service at its head-ends and hubs because emergency back up generation provided power when commercial electricity was lost temporarily. However, customers in affected areas lost their services when distribution facilities were felled; when certain outside plant facilities powered by commercial electricity lost power and no back-up generation ability existed; and, where commercial power at the customer premise was not available to operate equipment, such as set top television converters, cable modems, and the like. Similar to Verizon, Time Warner sustained severe damage to drop wire facilities that connect homes to distribution facilities. From October 13 to November 10, TW sustained over 149,000

outage or service affecting conditions and repaired, replaced or removed over 46,000 drops wires at customer locations.

Staff Monitoring and Reporting

Telecommunications service providers operating in New York are required to report major service outages to Staff per guidelines issued by the Director of the Office of Telecommunications.[7] The Office of Telecommunications (OT) manages a 24/7 watch team who are trained to receive outage reports, analyze them, and disseminate pertinent information in near real-time. Service providers are made aware of our outage reporting protocols which are published on a secure web link. The web site also contains a link to the OT Emergency Operations Plan, which explains Staff's responsibilities regarding the reporting of major service outages and mobilization during major storms and other emergencies.

OT and Office of Consumer Service (OCS) Staff began monitoring the impact of the storm on telecommunications networks, services and customers early on the morning of October 13. From October 13 through November 10, OT Staff issued 34 memos on the status of telecommunications outages to various personnel within and outside of the Department, as well as the Department desk at SEMO, which was staffed by the Office of Electricity and Environment (OEE). These daily reports ended on November 10, when telecommunications service outage levels in the Buffalo area returned to normal.

The Office of Consumer Services' Call Center remained open during the first and second weekends of the storm from 8:00 AM to 4:30 PM and additional staff was provided for its Emergency Hotline. OCS also modified its interactive voice response system to allow customers affected by the storm to speak directly with a Call Center representative. The Department resumed normal call center operations on Monday, October 16, when it appeared that all of the impacted utilities were handling customer calls and inquiries in an efficient manner. Throughout the restoration period, OCS Staff continued to evaluate damage assessments and restoration efforts by

[7] 16 NYCRR, Part 603.5(b) (2). In the summer 2006, all telecommunications providers, including cable television and cellular carriers were invited to participate in the Department's outage reporting program.

Verizon. During the period October 13 to November 9, OCS call center Staff processed 58 requests for assistance or information from Verizon customers.

Soon after the conclusion of restoration activities, Staff began its review and analysis of telecommunications utility restoration efforts. As part of its review, Staff also began to explore lessons learned on internal procedures followed during the restoration period. Although the October Western New York snowstorm impacted cellular, cable TV and wired telephone services in the area, our analysis focuses on the restoration of wired telephone service as its loss and the length of time to restore service had the most impact on the safety and welfare of consumers in the Buffalo area. To assess the restoration of telecommunications services following the Western New York Snowstorm, Staff reviewed past responses to similar outages and the unique challenges of this event. With these considerations, and our own observations of the Verizon's restoration efforts, Staff reviewed actual restoration performance to determine areas that require improvement.

Utility Preparation and Mobilization

Verizon Emergency Plan

Verizon's Emergency Preparedness Plan (the Plan) is on file with the Department, as required by this agency's rules and regulations.[9] The Plan follows the Incident Command System protocol[10] and appears well organized. According to the Plan, Emergency Event Designations are set at Levels 1 through 4 (the most severe), depending on the severity and geographic area affected by the event. The October Western New York snowstorm qualified as a Level 3 - Market Area Event. Verizon's Market Area Control Center coordinates the operational and technical inter-business unit response to a Level 2 or higher emergency event within a Network Services Market Area President's geographic region.

In addition to communication and coordination, the Verizon Emergency Plan addresses other topics relevant to utility restoration following a storm, including damage assessment and supplementing work force. Damage assessment, workforce issues, restoration timeframes, costs and other logistics associated with storm outage

[9] 16 NYCRR, Part 603.5 (b) (1).

[10] According to the National Incident Management System administered by the Department of Homeland Security, ICS is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to enable effective and efficient domestic incident management.

restoration are considered on a subjective basis by Verizon executives. Decisions regarding these issues during events of this magnitude are based on the unique challenges faced.

Mobilization and Initial Response to the October Western New York Snowstorm

At the onset of a major service outage due to a storm, Verizon performs an end-to-end examination of its network, beginning with affected central offices, and then an outward examination of conditions in the distribution plant. The central office assessment includes checking commercial power availability, status of generators, and affects on remote systems. Verizon reported at the beginning of this event that it had lost commercial power in 15 of its central offices, however all but one continued running on backup power generation without interruption[11] until commercial power was restored. The final central office was restored to commercial power on October 19. Initial field reports from Verizon's technicians during the storm indicated the storm had caused numerous downed trees, broken poles, downed drop wires, low-hanging cables, and live electric lines that were hitting cables. Verizon immediately declared a state of emergency in its western New York region, allowing for a reallocation of resources from other Verizon regions to assist in the repair. All installation activity in the area was temporarily suspended and those employees were reassigned to restoration functions. Initially, restoration crews had a difficult time accessing the area as travel was severely limited. At one point the storm forced the closure of a 105-mile section of the New York State Thruway.

Consistent with its Emergency Plan, Verizon representatives discussed network status, restoration strategies, and supplemental work force requests on twice-daily conference calls among Verizon executives and managers from other areas. Verizon also placed a manager at the emergency operation centers for Erie County, NYSEG and National Grid to communicate service outage information and to coordinate the Verizon restoration effort with that of the affected electric companies.

[11] Operations at one central office, Williamsville, were interrupted for less than 2 hours on October 14 due to failed rectifiers, affecting dial tone for about 31,000 customers. Many of these customers could have already been out of service due to outside plant damage.

During this event it appears that Verizon adhered to its Emergency Plan procedures which resulted in prompt and effective implementation of emergency restoration measures.

Damage Assessment

The Verizon Emergency Plan calls for a comprehensive estimate of the overall impact of storm damage to be provided at the earliest possible time to the local management team. This allows for decisions to be made relative to assigning resources and for seeking additional resources. In a major outage event, Verizon first assesses damage to outside plant by analysis of field reports from responding technicians, as well as the volume and characteristics of trouble reports generated by customers. The combination of this information indicates the extent of the damage and where it the most severe. Based on this information, strategies for repair are prepared, with strong emphasis placed on employee safety. Whenever electric services are affected, telephone facilities cannot be repaired until power is restored and telephone crews can safely enter the area.

Early on in the event, customer trouble report volumes were extremely high, with nearly 30,000 received in the first five days. As hundreds of customers served by the same distribution cable reported out of service conditions, Verizon systems would generate a “serial” which surmised that a failure to single cable serving many customers had occurred. However, it soon became clear by analysis of field reports that many of these situations were actually due to a concentration of many drop wire losses in a particular area. Subsequent damage assessments later determined that the majority of service outages caused by the storm was not due to distribution cable failures, but because of tens of thousands of individual customer drop wire disconnections.

As the storm subsided and restoration began, Verizon reported that it anticipated that incoming customer trouble reports would peak on Monday, October 16, three days into the event. While incoming troubles appeared to peak on that day, incoming troubles only slightly tapered in the following two-week period, and the total trouble load did not reach its full peak until October 26, as indicated in Table 1. Heavy winds during the week of October 15 contributed to additional damage as tree limbs,

already broken due to the heavy snow but hung up in trees, were blown down onto power and telephone cables.

Table 1: Verizon Daily Opening Trouble Load and Staffing Levels

DATE	OPENING TROUBLE LOAD	INCOMING TOUBLES	TROUBLES CLEARED	REPAIR TECHNICIANS
10/14/2006	7,004	6,539	1,305	278
10/15/2006	10,811	6,274	2,467	372
10/16/2006	11,774	4,155	3,192	453
10/17/2006	15,699	7,196	3,271	497
10/18/2006	17,373	5,473	3,799	497
10/19/2006	18,263	4,791	3,901	535
10/20/2006	19,947	4,479	2,795	509
10/21/2006	19,604	4,015	4,358	514
10/22/2006	19,100	2,896	3,400	519
10/23/2006	19,700	2,068	1,468	568
10/24/2006	20,368	5,307	1,639	589
10/25/2006	21,218	3,830	2,980	599
10/26/2006	20,674	3,191	3,735	617
10/27/2006	20,157	3,213	3,730	608
10/28/2006	18,965	2,726	3,918	606
10/29/2006	17,361	1,986	3,590	607
10/30/2006	15,397	2,064	4,028	614
10/31/2006	14,884	3,164	3,677	606
11/1/2006	14,121	2,713	3,476	603
11/2/2006	13,055	2,358	3,424	649
11/3/2006	11,652	1,844	3,247	772
11/4/2006	10,085	1,801	3,368	776
11/5/2006	8,290	1,009	2,804	758
11/6/2006	6,113	934	3,111	732
11/7/2006	3,995	1,826	3,944	675
11/8/2006	2,540	1,747	3,202	636
11/9/2006	1,779	2,133	2,894	629
11/10/2006	1,388	1,306	1,697	448
11/11/2006	1,034	968	1,322	287

Of the over 93,000 troubles addressed by Verizon, 74,000 trouble reports were from customers and approximately 19,500 troubles reported by field technicians found while working on other troubles. Nearly half of the reported troubles were related to drop wire damage.

It appears that Verizon's assessment of the true damage caused by the storm and its determination of an expected total trouble load were complicated by many factors. First, much of the damage was to facilities at the farthest end of the network: drop wire cables serving individual customer at their homes and businesses. These

facilities are often located in customer's backyards so accessibility during, and immediately after the storm made accurate damage assessment difficult. Another factor that challenged the accuracy of Verizon's damage assessment was that many customers did not report service outages right away. This was likely due to any one of the following reasons:

- The extended loss of power and excessive damage in some areas caused customers to flee their homes;
- Customers believed that utility services would eventually be restored without them having to call;
- Customers believed that phone service would be restored concurrent with power restoration;
- Problems more serious than loss of telephone service took priority, such as flooded basements due to melting snow and other property damage;
- Many landline customers have cell phones which continued to work during the event.

To obtain our own assessment of the damage caused by the storm, Staff from the Office of Telecommunications made field visits to the affected areas, once on October 24, and again on November 2. Staff also met with Verizon at the site of their field operation center. In our initial field visit, Staff observed that tree damage was catastrophic in some areas, with many trees and poles completely destroyed. Numerous piles of branches and other debris were still seen scattered along the sides of roads on the November 2 inspection, as residents continued cleaning up.

Because of the nature of this storm, Verizon faced many unique challenges in assessing actual damage to its facilities, and sizing its workforce to adequately address an unexpectedly increasing trouble load. Limited access to damaged facilities and delays by customers in reporting service outages contributed to the difficulty in accurately measuring the true trouble load. Changes in technology in the last twenty years have made telephone networks, equipment and phones more dependent on commercial electricity which restricts a customer's ability to call in a trouble when power is lost. Additionally, with the proliferation of cellular services, customers experiencing an outage on their wired telephone service may be less likely to call in an outage immediately because they have a working communications medium and are likely focused on other storm related problems.

While access restrictions and customer reporting delays are plausible reasons for inaccurate determinations of the actual trouble load, they are certainly not

unexpected factors in a storm of this magnitude. The importance of these factors was enumerated in Verizon's (then New York Telephone) own observations relative to the 1987 snowstorm as reported to the Commission.[12] It is apparent that in this case, Verizon likely placed too much reliance on the reported trouble load, and not enough on the damage assessments flowing in from its field staff. Verizon acknowledges this point in a letter addressing its restoration efforts, stating:

> "One of the lessons learned from this storm is the value of utilizing Verizon's own assessment of the potential damage from such a major storm in order to properly size the restoration force, independent of the data from actual trouble reports".[13]

Based on our review of lessons learned from previous restoration events and the particulars of this restoration effort, Staff believes that Verizon could have done a more accurate and timely assessment of the true damage caused by the snowstorm, which should have included a better estimate of non-reported troubles based on feedback from its personnel in the field.

Recommendation:

1. Verizon should develop procedures to improve its ability to assess damage following widespread outage events, such as storms, and report on an initial and subsequent basis, an assessment of storm damage that accounts for reported troubles and that includes an estimate of non-reported troubles based on field assessments. Verizon should work with Staff to develop appropriate thresholds which would trigger the commencement and duration of such reporting.

Verizon Staffing

In response to an event of this magnitude, Verizon determines what additional workforce it needs by taking into account anticipated trouble load, required skill types, resource availability from other areas (both in and out-of-state), and other logistical challenges, such as lodging availability. Pursuant to its Emergency Plan, requests for additional workforce originate with the regional Vice President and are discussed in the daily restoration status briefings. Staff interviews with Verizon indicate that all requests for additional workforce to assist in the restoration were granted.

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[12] A Report on the Restoring of Utility Service following the Storm of October 4, 1987, dated February 1988, at 202.

[13] Letter from Thomas McCarroll, Vice President of Regulatory Affairs, Verizon NY & CT, to Robert Mayer, Director, Office of Telecommunications, dated December 21, 2006.

Normally, Verizon has approximately 300 repair technicians in its Western New York service area. By Tuesday, October 17, Verizon had brought in an additional 167 loaned-in technicians to assist in the restoration. Total workforce assigned to the restoration reached a high of 776 on November 4. Included in Table 1 is a day-by-by account of the workforce levels associated with the restoration.

As noted above, inaccuracies in damage assessment and a failure to anticipate and include estimates of unreported troubles may have lead to a failure to determine the true impact of a storm. Staff believes this led to delays in supplemental work force deployment and thus may have prolonged the overall restoration duration. According to Table 1, the last major increase in the workforce did not occur until November 2, three weeks into the event, when the number of repair technicians increased by 123, from 649 to 772. That boost in work force occurred much too late in the restoration to meaningfully reduce the duration of the restoration. As actual storm damage became apparent, it is Staff's opinion that the reported daily trouble load and the influx of new troubles starting the week of October 23 and onward (when electric service had been fully restored) should have prompted the addition of supplemental technicians well before the November 2 surge. Based on our analysis of trouble load and work force statistics, an additional augmentation of the repair force at the beginning of the third week of the restoration would have facilitated the reduction of the trouble load and could have reduced overall restoration duration by as much as a week.

Recommendation:

2. To enhance its ability to adequately size its workforce in response to widespread outages, such as storms, Verizon should incorporate procedures to accurately assess damage in a timely and more accurate manner, and consider these factors in determining the work force necessary to restore service in a reasonable time frame. Verizon should work with staff to develop a protocol for the reporting of planned workforce augmentations during widespread outage restorations.

Restoration Forecast and Duration

Restoration strategies and overall restoration duration depend on the unique characteristics of the event: geographic area impacted; concentration of damage; elements of the telephone network damaged (i.e. network, distribution, local plant facilities); and the services and amount of customers affected. Restoration of telecommunications services after an event of this magnitude is obviously difficult.

Those responding initially must be mindful of the hazardous conditions posed by downed live electric wires, broken limbs, and an overall hostile environment due to the snow, ice, wetness, and winds. The restoration of telecommunications services will always lag that of electricity, as technicians must wait for the "all clear" notice from the power utility before entering areas that have been damaged.

Comparison to Similar Events

Staff's experience in monitoring many past major storm outages and restoration efforts indicates that similarities among types of storms and resulting damage exist and that comparisons can be made regarding workforce deployment and restoration duration to gauge if a utility's response to a particular storm is reasonable. Staff looked at four previous storms that caused similar damage and compared data to determine if the restoration effort for this event appears reasonable. The four previous events are:

1. The October 1987 Snowstorm, which produced up to 22 inches of snow in portions of the region between Westchester County and Glens Falls. Like the 2006 Western New York snowstorm event, this involved heavy snow on trees that had not yet lost their leaves and resulted in substantial tree damage and cable damage. Total troubles were approximately 43,000, and included roughly 22,000 drops wires and 300 poles replacements. The number of technicians working this event peaked at 885. **The duration from the start of the event to normal conditions was 14 days.**

2. The January 1998 Ice Storm that affected the northern areas of the State, in which six counties were declared disaster areas by President Clinton and Governor Pataki. Total troubles were approximately 129,000, with roughly 42,000 drops wires, 3,600 poles and 480 miles of cable replaced. The number of technicians working this event peaked at 1,225. **The duration from the start of the event to normal conditions was 40 days.**

3. The Labor Day 1998 Thunderstorms that moved across the New York State Thruway corridor from Rochester to Syracuse and into Utica, causing the Governor to declare a disaster emergency in nine counties. Total troubles were approximately 37,000, with roughly 15,000 drops wires and 300 poles replaced. The number of technicians working this event peaked at 535. **The duration from the start of the event to normal conditions was 16 days.**

4. The Ice Storm of April 3 and 4, 2003, which affected telephone service provided by Verizon and Frontier in the western part of the State. Total outage troubles were approximately 10,800, with 8,600 drop wires replaced. The number of technicians working this event is not available. **The duration from the start of the event to normal conditions was 15 days.**

Each of these events involved downed power lines, and in each case a week or more elapsed before Verizon could get access to all areas of their affected service territory. In three of the four events, service returned to normal conditions within 14 to 16 days, with the exception of the ice storm in 1998 which took 40 days to return to normal conditions because of its overwhelming severity. In contrast, the Western New York snowstorm recovery took 29 days for Verizon to return to normal trouble levels for the area. With over 93,000 total troubles, including approximately 41,800 downed drops and work to repair or replace 350 poles, the Western New York snowstorm event can be characterized as less devastating than the January 1998 ice storm but more devastating than the other three events. In its comments, Verizon states that the 1998 ice storm is the only recent weather event that is comparable to the October 2006 Western New York snowstorm in terms of damage and service restoration.

Verizon's first public indication of a restoration forecast did not occur until October 25, twelve days after the event, when it stated in a press release that it expected to have its network fully restored "within two weeks." Verizon's trouble load did not reach normal levels until November 10, or 16 days after its original forecast. It is Staff's opinion that a more accurate and timely damage assessment by Verizon, as discussed above, would have resulted in a more accurate forecast of full recovery and would have reduced the duration of the restoration.

Verizon Customer Service Operations

Communication with Media

Verizon's first press release to the local media with regard to restoration efforts was on October 17, four days after the storm. The release briefly describes damage to the utility's infrastructure and states "*We've assessed the damage and continue to work on service issues caused by the weather*". This statement gives the impression that Verizon completed a full damage assessment and was working to restore effected services. There is nothing in the release that states the number of affected services or a time frame as to when service will be fully restored.

On October 19, the second press release was issued and provides a more accurate description of the utility's actions in response to the storm restoration. This second release, six days after the storm, states "*Our employees are engaged in*

identifying critical areas or neighborhoods and prioritizing them, placing new poles and cables, if necessary, and communicating with customers when the job is done". It further stated "…*the Company is conducting engineering surveys of neighborhoods to identify downed drop wires and cables, and is working with local agencies and the power company to identify safe work areas as well as those needing telecom service.*" These statements appear to contradict the October 17 release, which implied that a full damage assessment was previously completed. The subsequent release advised the public that assessment work was presently underway. Further, there is nothing in the second release that states the number of effected services or a time frame as to when service will be fully restored.

Verizon's third press release was dated October 25, twelve days after the storm and almost one week after the previous release. A portion of the release states "*Since the start of the storm, the Company has completed 68 percent of this type of weather related repair work*." This statement appears to be inconsistent with actual reported service trouble data, which for October 25 was 21,218; the highest number during the entire restoration period of October 14 to November 11. This release stated that Verizon expected to have service fully restored "within two weeks." This was the first time that Verizon had publicly communicated a targeted restoration date. Absent from this release was information stating the level of customers without service or areas where damages and service outages were most severe.

No additional press releases were issued until November 8. However, the utility did take full page advertisements in the Buffalo News on October 30 and 31 which briefly stated facilities that were replaced due to the storm damage and that 600 utility technicians were assigned to restore service. The ads also apologized for inconveniences experienced by customers and requested customers to call Verizon if they were still without service. On these two days, the utility still had a significant number of customers experiencing trouble (15,397 and 14,884, respectively) based on data reported by Verizon. The November 8 press release indicated that the utility achieved near normal service levels. The release provides a synopsis of the challenges faced by the utility due to the storm and for the first time, advised that nearly 90,000 service affecting issues were responded to in the aftermath of the storm.

The efforts by Verizon to release critical and essential information to the public were inconsistent during the restoration. In major storm events it would be

beneficial for Verizon's press releases to state information that is consistent with its actual storm assessment and planned restoration efforts. Further, since telecommunications is a vital service, press releases should be issued on a regular (daily) basis and provide a truer picture of the number of customers out of service, areas affected, along with an estimated time period of restoration, once an accurate damage assessment has been conducted.

Recommendation:

3. During and following a major storm, disaster, or other emergency, Verizon should strive to issue press releases on a regular (daily) basis and provide a more accurate picture of the number of customers being affected along with an estimated time period of restoration.

Communication with Public Officials

During the period October 14 to October 25, Verizon's main contacts with public officials targeted two areas: being present at daily press briefings hosted by the Mayor of the City of Buffalo and having utility personnel at the Erie County's Emergency Operating Center (ECEOC). Starting on October 24 and continuing through November 10, Verizon provided daily e-mails and fax messages to federal, state, county and city officials detailing work force size, number of trouble reports, response strategies, as well as reminding public officials to have their constituents report service problems to Verizon. Noticeably absent in the list of public officials Verizon communicated with were local officials on the town and village level. Although Verizon did have personnel on location at the ECEOC, not all towns and villages had staff at the ECEOC to facilitate interaction with Verizon staff to discuss ongoing damage assessments, the number of affected service interruptions, areas involved and restoration efforts.

With regard to the release of information to public officials, Verizon should adopt a program, which was considered very successful by both National Grid and NYSEG, in which daily call-in teleconferences are conducted by senior operational management to brief all interested parties on conditions affecting services, damage assessments, restoration efforts and to solicit feedback from the local officials on critical situations and other issues. The daily calls should be scheduled so as not to conflict with calls by the other utilities and continue until the level of participation on the calls drops to a point where it is evident continued calls are no longer needed. Department

Staff should also be contacted and advised of the calls in order to monitor participation and information exchange, and to report back to senior PSC management on communication efforts by Verizon.

Recommendation:

4. Verizon should develop a program to include daily call-in teleconferences by senior operational management to brief all interested parties on conditions affecting services, damage assessment, and the status of restoration efforts during major storm and emergency restorations, and to solicit feedback from the local officials on critical situations and other issues.

Communication with Consumers

In addition to communications by the use of press releases and contacts with public officials as discussed above, Verizon used several other methods to communicate information to the public after the storm. The Verizon website (www22.verizon.com) had storm-specific information on its New York specific page. The page was entitled, "Storm Recovery Update," and it included daily information on customer troubles, customer troubles found in the field by Verizon technicians, customer troubles cleared, and the opening trouble load, among other statistics. This information, while somewhat useful, was probably not that beneficial to Verizon's customers experiencing service interruptions in the post-storm period. The website did not include specific information or instructions to consumers regarding the use of a corded phone to check the phone service, or specifics on Verizon's local restoration efforts and estimates for total restoration.

Another vehicle for direct contact with customers is the Verizon Repair Response Center (VRRC) which is responsible for call center operations involving repair requests for consumer and general business customers. Once they are logged into the system by VRRC staff, repair requests are transmitted electronically to the Dispatch Resource Center. There are four VRRC centers in New York State located in Albany, Brooklyn, Garden City and Syracuse. Immediately after the storm Verizon began examining VRRC staffing levels in all four centers. Additional staff was brought in and Verizon used overtime for existing staff in order to meet the call demand. As a regular practice, Verizon examines the VRRC call volumes on a daily basis in each of the four centers. The adjustments in staffing and/or overtime are made for the following day.

Verizon Customer Service Associates (CSAs) at the repair centers take all types of trouble reports and perform automated line tests. Consumers calling the repair center first encounter a voice portal called the Voice Response Unit (VRU). The VRU can process calls wholly without the aid of a live person, or a caller can opt to talk to a CSA. The CSAs or the VRU take the information from the customer and perform a mechanized loop test to detect the nature of a service outage. Following the storm, the VRU for the repair centers was modified to include an automatic message to customers if the customer's phone number was in the Buffalo area (area code 716). Verizon does not have the ability to reprogram its VRU to address calls from specific central office or neighborhood locations. The VRU message instructed customers in potentially impacted areas to use a corded, non-powered telephone to check their home phone service. Customers using cordless phones requiring electricity may not have been able to do so after the storm if commercial power was lost, even though the underlying phone service might have been operable.

For periods after the storm, when call volumes increased, a call volume message was programmed on the VRU which instructed customers that they may experience longer wait times. Verizon said that a customer experiencing a busy signal would have been rare following the storm because of the distribution of calls statewide and the ability of the VRU to pick up the calls. However, OCS records indicate that during the weekend immediately following the storm (October 14-15), customers called the OCS Call Center to report reaching a busy signal when they called the Verizon repair center. OCS Call Center Representatives also experienced busy signals during this time period when trying to reach the Verizon repair center. On Monday, October 16, OCS Staff requested that Verizon personnel be available to accept calls transferred by the Call Center during the storm recovery period. Verizon complied with this request.

Under normal operating conditions, a Verizon Customer Service Associate would consult the "commitment clock" when advising a customer on expected restoration time for a repair. The normal restoration time for out of service conditions is between 24 and 48 hours.[14] In situations involving severe storms such as the Western New York snowstorm, the commitment clocks may be "thrown" or pushed out a week or two depending on the extent of the storm damage found in the field. Verizon did not

[14] 16 NYCRR, Part 603.1(c) requires that 80% of out of service trouble reports to be fixed within 24 hours; however, our standards do not apply during severe storms.

change the commitment clocks until several days after the storm. Customers who may have called in during the first 24-48 hours may have been given unrealistically short restoration times. Verizon acknowledged that some customers were given short repair intervals, and that when service was not repaired as indicated the customer had to call back.

Recommendations:

5. Verizon should modify the commitment clock used for customer repairs to more accurately reflect expected restoration time based on current and/or expected trouble loads and available work force.

6. Verizon should publish consumer educational materials related to phone service during blackouts, emergencies and storm related service outages. Consumers should be educated on the restoration process (e.g., priority of electric repairs, need to call in service troubles immediately, use of a corded phone to test phone service).

7. Verizon should enhance its state-specific website during storm and post-storm periods and other emergency events to include consumer-friendly information and instructions to consumers such as the use of a corded phone to test phones after a storm.

8. Verizon should develop a procedure to communicate directly with the Office of Consumer Services on a daily basis regarding restoration, outreach and call center efforts.

Appendix I

Recommendations Regarding the October 2006 Western New York Snowstorm

ELECTRIC OPERATIONS

National Grid

Damage Assessment

1. As the Company identified in its report, it should adopt the best practices for damage surveyors used during this storm. The damage surveyors should be used to sweep feeders for the line crews where applicable.

2. The National Grid New York damage surveyors should be trained and qualified to be able to make safe secondary wire down situations similar to National Grid New England surveyors.

Staffing

3. National Grid should review previous heavy wet snow and ice storm events and draw from its experience to develop an improved method for early estimation of crew requirements (including line, forestry, and service crews) for complete restoration, and revise its emergency plan to reflect the change.

New York State Electric and Gas

Outage Management System

1. NYSEG should evaluate the adequacy of training of its outage management system operators to respond to major storms on a system-wide basis and report back to Staff on its findings.

2. NYSEG should report to Staff details of the changes made when the outage management system enhancements related to transformer conviction (flagging) have been completed.

Utility Storm Report to Staff

3. NYSEG should improve the detail and scope of its major storm reports to include all aspects of its preparation and system restoration performance.

TELECOMMUNICATIONS OPERATIONS

Verizon

Damage Assessment

1. Verizon should develop procedures to improve its ability to assess damage following widespread outage events, such as storms, and report on an initial and subsequent basis: an assessment of storm damage that accounts for reported troubles and that includes an estimate of non-reported troubles based on field assessments. Verizon should work with staff to develop appropriate thresholds which would trigger the commencement and duration of such reporting.

Staffing

2. To enhance its ability to adequately size its workforce in response to widespread outages, such as storms, Verizon should incorporate procedures to accurately assess damage in a timely and more accurate manner, and consider these factors in determining the work force necessary to restore service in a reasonable timeframe. Verizon should work with Staff to develop a protocol for the reporting of planned workforce augmentations during widespread outage restorations.

Customer Service Operations

3. During and following a major storm, disaster, or other emergency, Verizon should strive to issue press releases on a regular (daily) basis and provide a more accurate picture of the number of customers being affected along with an estimated time period of restoration.

4. Verizon should develop a program to include daily call-in teleconferences by senior operational management to brief all interested parties on conditions affecting services, damage assessment, and the status of restoration efforts during major storm and emergency restorations, and to solicit feedback from the local officials on critical situations and other issues.

5. Verizon should modify the commitment clock used for customer repairs to more accurately reflect expected restoration time based on current and/or expected trouble loads and available work force.

6. Verizon should publish consumer educational materials related to phone service during blackouts, emergencies and storm related service outages. Consumers should be educated on the restoration process (e.g., priority of electric repairs, need to call in service troubles immediately, use of a corded phone to test phone service).

7. Verizon should enhance its state-specific website during storm and post-storm periods and other emergency events to include consumer-friendly information and instructions to consumers such as the use of a corded phone to test phones after a storm.

8. Verizon should develop a procedure to communicate directly with the Office of Consumer Services on a daily basis regarding restoration, outreach and call center efforts.

Appendix II

Status of Staff Recommendations in Response to February 17, 2006 Windstorm in National Grid's Service Territory

1. National Grid should modify its distribution damage assessment survey criterion to ensure that night hours are used effectively when working conditions permit.

The Company has updated its Electric Procedures to ensure that night time hours are used effectively when working conditions permit. Travel conditions were difficult early in the October storm making this recommendation not applicable.

2. National Grid should modify its emergency plan for damage survey procedures so that damage assessments on power distribution lines affected by power transmission failures are not delayed until the restoration of transmission service is complete.

The Company has clarified in its emergency procedures that distribution system damage assessments should not be delayed by transmission system damage assessments. The Company reported it didn't delay distribution damage assessments while conducting transmission damage assessments.

3. National Grid should correct its problems with the outage management system, fully test the system, and provide there results to Staff.

The Company planned a stress test on the outage management system by November 15, 2006 however, the October snowstorm came before the test was conducted. The operation of the outage management system during the October storm did not have the issues that it experienced during the February storm. Because of the successful results of National Grid's changes, staff has waived the test requirement.

4. National Grid needs to be more aggressive in requesting more mutual aid resources during emergency recovery actions.

The Company affirmed its commitment prior to the October storm to aggressively pursue mutual aid for emergency recoveries. During the October storm the Company was aggressive in the number of crews it requested, however, staff has recommended, in this report, an opportunity to improve the mutual aid response time.

5. **National Grid needs to make better use of nighttime hours to conduct restoration activities when work conditions permit to expedite the overall recovery effort.**
National Grid affirms its commitment to better use nighttime hours for restoration efforts. The Company used nighttime hours in the October storm to set poles later on in the restoration that increased its restoration efficiency.

6. **National Grid should review its overall linemen needs and make the appropriate adjustments to improve its storm restoration response time and reliability. The Company should submit a comprehensive report to staff on its workforce review with respect to storm restorations, normal operations maintenance activities, and reliability work.**

The Company did not submit to staff a report on its workforce review. The Company has been notified of the non-compliance and requested to submit a report.

7. **National Grid should submit to staff quarterly status reports on the planned reliability maintenance and improvements in Essex County until they are completed.**

The Company has complied with this recommendation.

8. **National Grid should review its line clearance and danger tree program specifications relative to the reliability importance of each 34.5 kV and 46 kV circuit and determine the best use of maintenance dollars.**

The Company has notified us that this review is ongoing and requires further study; Staff is working with the Company on this issue.

9. **National Grid should provide a copy of its emergency preparedness brochure, "How to Prepare for and Respond to Power Outages," annually to all customers.**

National Grid has made the information contained in the brochure readily available to customers through a number of communications vehicles. The brochure can be viewed or downloaded from the Company's website. Excerpts from the brochure are provided to customers through bill messages and in the bill insert newsletter. These messages have provided customers the option to request printed copies of the brochure. The company plans to devote its July bill insert to this topic.

10. **National Grid should be consistent and proactive in providing information, including holding daily conference calls, to brief public officials during a major event.**

National Grid responded to this recommendation by reaffirming its commitment to be consistent and proactive in providing information, including holding daily conference calls, to brief public officials during a major event. National Grid has implemented and continues to utilize this communication practice since the

February 2006 storm. The Company also has revised its Electric Emergency Procedures to document this process and to ensure that the process will be followed during future events. Additionally, on September 15, 2006, the Company began including real-time outage information and estimated restoration times on the "Storm Central" portion of its New York homepage. Customers viewing the Company's website can view real-time outages in their county and, if they enter either their phone number or account number and the last four digits of their Social Security Number, they can access outage information for their residence or business.

During the outage, the Company held daily conference calls which proved to be extremely informative and beneficial. The "Storm Central" portion of the New York web page is operational and provides important outage information.

11. National Grid should educate its customers and public officials about the restoration process, including restoration priorities.

i) National Grid educates its customers about the restoration process, including restoration priorities via several communications vehicles. National Grid's Corporate Communications Department routinely issues a news release across the New York service territory (or parts thereof, as appropriate) when severe weather causes or is expected to cause power outages to a significant number of customers. This news release includes important information to help customers prepare for storms and a description of the company's restoration process. Storm preparedness news releases have been issued and included this information. During the restoration process of a major outage, this information is included in the pre-recorded media messages on the National Grid media information line, to further encourage reporters to include it in their stories. When National Grid spokespeople are interviewed during major restoration processes, they make every effort to include it as part of the discussions with reporters.

ii) National Grid also has a Storm Central area on its external website that includes this information as well as a variety of other information about outages and restoration that should be helpful to customers. Storm Central can be accessed from National Grid's New York home page. The company plans to include a description of the Storm Central page in subsequent customer news releases about storm preparation and outages. National Grid also includes information about outage reporting and other important, related topics in its customer bill newsletter, "Energy Matters", as discussed previously. This information is included in the July/August and November/December issues. The article provides the address to outage and restoration information on the National Grid website at www.nationalgridus.com/poweroutage. It also contains a toll-free phone number for requesting this information in print.

iii) National Grid's Business Services staff communicates to key contacts at the company's Managed Accounts (large customers and municipalities) during emergencies and storms. These accounts are handled by Account Managers who contact the affected customers regularly during and after a storm event.

The Company has educated its customers on the restoration process effectively and followed Staff's recommendations.

12. National Grid should identify and correct the cause for the overload of its trunk capacity in Syracuse and the loss of computers at the Buffalo Contact Center.

Grid has improved its trunk capacity and computer system, which resulted in fewer busy signals for customers.

Appendix III

Status of Staff Recommendations in Response to January 2006 Windstorm in NYSEG's Service Territory

1. **NYSEG should place appropriate signage on all vehicles used for damage assessment purposes during outages and other events.**

   Magnetic signs for damage assessment vehicles had been ordered but not yet received at the time of the October 2006 Storm. All NYSEG offices (including the Lancaster Office) now have damage survey magnetic signs on hand.

2. **NYSEG should develop and implement comprehensive plans for coordinating its storm restoration activities, including eliminating hazardous conditions, with municipal highway departments and officials. These plans should include details on enhanced communications with the departments and officials regarding its activities.**

3. **NYSEG should identify ways to improve its communications with municipal highway departments and officials to ensure that they receive accurate and timely information.**

   2 and 3: NYSEG stated that it would assign specific people to communicate with highway departments, use conference calls with highway officials at various levels of local government, staff the County Emergency Management Command Center and enhance communication of downed wires. NYSEG appears to have done these things and more during the October storm restoration effort to enhance cooperation with highway departments.

4. **NYSEG should develop a more comprehensive program to educate citizens and customers on the dangers posed by downed electric wires. NYSEG should report to Staff on its specific plans throughout the Company for educating the public on the danger of downed electric wires.**

   NYSEG indicated that it will review available educational safety training videos to provide to fire departments, highway departments and other emergency service personnel and organizations. NYSEG also said that it will review available videos for use with the general public. NYSEG indicated that it will look at opportunities to reinforce safety messages with customers through bill inserts and on the NYSEG website. Additionally, news releases on restoration efforts include safety messages regarding downed wires as appropriate.

   The Company has adequately addressed this customer safety outreach and education issue on downed wires.

5. NYSEG should perform an in-depth evaluation with recommendations for improvement, company-wide as well as for the Brewster Division, on how it handles downed wires in storm restoration scenarios.

The evaluation report should include but not be limited to:

- **Current wire down practices;**
- **Completeness and scope of downed wire procedures;**
- **Accuracy of wire down procedures (e.g., danger of non-arcing downed wires);**
- **Consistency of downed wire procedures;**
- **Prioritization of response;**
- **Timeliness of response;**
- **Use of additional personnel to act as wire guards;**
- **Communication and coordination with local police and fire departments;**
- **Role and level of "make safe" crews; and**
- **Effective public outreach and education regarding electricity wire dangers.**

NYSEG reported that it would separate the "wires down" and "damage assessment" functions and assign coordinators for each to address the management, communication and coordination issues listed above. The procedure, used in the October storm response, seemed to work very well.

6. The Company should improve communications with its customers by:

- **Posting highly visible notices about restoration, such as a running banner or a pop-up box, on its web site;**
- **Posting information about locations and delivery times for dry ice distribution on its web site;**
- **Making customers aware that their calls can provide the Company with important and useful information; and**
- **Developing a more comprehensive program to educate citizens and customers on the dangers posed by downed electric wires.**
- **Use of additional personnel to act as wire guards;**
- **Communication and coordination with local police and fire departments;**
- **Role and level of "make safe" crews; and**
- **Effective public outreach and education regarding electricity wire dangers.**

NYSEG agreed to post pertinent outage-related information on its website in order to keep its customers and public officials informed during major outages. Information posted includes news releases, dry ice distribution information, safety tips, restoration prioritization and contact information for NYSEG.

NYSEG executed these practices throughout the October snowstorm outage.

7. The Company should expand its present efforts to educate customers and public officials on the process NYSEG uses to determine the order of restoration of service.

The process NYSEG uses to determine priorities for restoration of service was reviewed on the daily conference calls conducted with municipal officials. News releases were distributed to provide storm tips and restoration procedures.

NYSEG includes this information in its "Energylines" bill insert and in "Weathering Storm Emergencies," available on the website.

8. The Company should post its press releases about storm restoration on its website.

This information was posted on the Company's website during the October snowstorm outage period.