

Post Sandy Enhancement Plan

Consolidated Edison Co. of New York

Orange and Rockland Utilities

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INTRODUCTION

On October 29, 2012, Superstorm Sandy hit our region. With impacts beyond what forecasters even imagined, Sandy devastated many of our communities, and our own energy systems. The storm brought both flood impacts from a storm surge beyond any historical experience and sustained high winds. Sandy was an unprecedented storm, one that is part of a new weather pattern that is changing the way Con Edison plans for and responds to storms and other natural disasters. While many of our systems performed well, the size and scope of Superstorm Sandy posed a significant challenge to our systems and processes.

Going forward, our storm planning is being driven by these changing weather patterns and by our mission to provide energy to our customers with outstanding reliability and superior service. We have embarked on a long-term plan to make sure that our system is less susceptible to similar storms and more responsive to customer needs. We are doing this in three distinct ways:

- Hardening our systems – making changes that provide greater protection from flooding and make our overhead systems more resistant to high winds and tree damage
- Improving the information we provide to customers – developing more effective processes and investing in new technologies to ensure that we provide more accurate and timely information to officials and our customers
- Strengthening our partnerships – implementing strategies to improve pre-planning and post-storm coordination with public officials, businesses and the media

Our efforts are described in detail in this Post-Sandy Enhancement Plan. We have developed this plan based on careful study of information garnered from our own experiences with storm preparation and response, our benchmarking efforts to learn from other utilities around the world, and — importantly — the input of our customers, governmental agencies and other stakeholders.

The Plan you are about to read provides greater detail on our initiatives, demonstrating a commitment to our customers to improve our ability to withstand and recover from whatever Mother Nature throws our way. We know that the millions of people who live and work in our service areas depend on us. We have committed our resources to provide our customers and communities with an improved experience, even in the most extreme weather events.

EXECUTIVE SUMMARY

In October 2012, Superstorm Sandy tested the resilience of our region, its people, and our systems. Sandy affected our entire service territory, from Staten Island's Tottenville to Pennsylvania's Milford. Nearly 1.4 million homes and businesses in our area lost power, including those affected by the nor'easter that struck days later. Sandy caused more than four times as many customer outages as Hurricane Irene, previously the worst storm in Company history.

Two hurricanes – Sandy and Irene – in as many years, and more frequent nor'easters, tornados, and heat waves, suggest a trend that we cannot ignore. We cannot just rebuild. We must rebuild smarter, stronger, and more sustainable systems. We must also develop new technologies to meet our customers' need for better information.

To prepare for the likelihood of increasingly destructive storms, Con Edison has developed a plan that includes a broad array of measures to improve the resiliency of our energy systems in the face of future storms and other natural disasters. We are working with government and business leaders to enhance and protect our energy infrastructure. We are participating in a collaborative organized by the New York City Office of Long-Term Planning and Sustainability along with environmental organizations, climate scientists, urban planners, and other industry leaders to better understand the drivers for recent weather trends and the potential impacts of climate change on our region.

This plan details our current thinking on how best to safeguard our system and our region from violent weather events. The plan is not just a response to Superstorm Sandy, but to our cumulative experience with the increasing trend of extreme weather. This is part of our efforts to continually improve, a process that is ongoing in our business. For example, we modified our system design to install waterproof equipment in new installations based on the experiences of other coastal utilities during Hurricane Katrina. Our goal continues to be to minimize the hardships that weather events impose on the 10 million people who rely on us. To meet that goal, we are investing in and strengthening our energy systems, in many cases advancing projects that had been previously planned, and in other cases adopting new designs and strategies. We will continue to assess and improve, enhancing our storm response planning and restoration efforts every day, including expanding and diversifying both what and how we communicate with customers and stakeholders.

The plan focuses on three areas:

1. Fortifying the electric, gas, and steam systems against future storms;
2. Improving estimated times of restoration, and enhancing storm planning and restoration processes; and
3. Improving the flow of information to customers and other stakeholders.

To meet our goal of protecting our customers, the region, and our systems from future natural disasters, we have proposed and begun to invest \$1 billion over the next four years in our energy systems. Some of these investments will prepare critical equipment and facilities for this year's hurricane season, while others will strengthen systems incrementally over the next few years. Many of the upgrades will keep our systems more reliable and add flexibility into our operations not only when bad weather strikes, but every day.

Our plan is flexible and will continue to be adjusted. Importantly, while we have planned substantial projects, we will continue to evaluate what we've accomplished and what additional steps we may need to take. With every action we take, we must balance our infrastructure and storm response needs against customer costs. We are committed to managing our costs, and will prioritize future projects that substantially reduce the risk of damage from severe weather events and/or lead to faster restoration and better information after storms. This is not simply a plan in reaction to Sandy: it is a plan to meet the challenges expected from future storms, rising sea levels, and changes in weather patterns that could emerge as a result of climate change.

Finally, our plan takes into consideration not only our own experiences, but the findings, recommendations, and input of our customers and a variety of government commissions and inquiries on the local, state, and federal levels. This feedback has focused on the need to improve our projections for customer restoration times and to develop a more collaborative process with local government on information flow and the use of resources. We have therefore placed special emphasis on improving our ability to provide accurate customer-specific estimated times of restoration (ETRs) and on our communication with local governments and other stakeholders.

In the weeks following Superstorm Sandy the Company compiled a list of 87 action items that appear in this plan at the end of each major section. To date we have completed 28 items, and have plans to finish an additional 18 by the end of September and another 9 by the end of 2013. In the 2014-2016 timeframe, we will complete 21 additional projects that have longer lead times. Eleven of the action items — such as working with our municipal partners to maximize resources during restoration — are continuous in nature; we will continue to work on these “ongoing” action items in parallel with our other projects.

FORTIFYING THE ELECTRIC, GAS AND STEAM SYSTEMS AGAINST FUTURE STORMS

Protecting our systems from extreme weather has long been central to our investment plan. Over the past five years, we've spent roughly \$600 million to recover from the damage caused by severe storms, including Superstorm Sandy. From work as basic as trimming trees around power lines to investments in sophisticated smart-grid technologies, these measures give our energy systems greater flexibility and reliability. New, state-of-the-art monitoring sensors and remotely operated switches and valves help system operators respond to problems during extreme weather — whether that's flooding, downed wires, or heat waves.

We have completed substantial storm-hardening work in time for this year's hurricane season. For example, we have already expedited installation of new smart switches on overhead lines. These switches will reduce the number of homes and businesses that lose power when a tree brings down an electric wire. They do this by automatically disconnecting certain segments of the electric grid that are experiencing problems, ensuring that power flow to other areas is not interrupted while repairs are made.

Additional protections in place in time for this year's hurricane season include measures for the electric distribution system that will help protect 28,000 customers in Brooklyn in case of powerful storms. Substation flood walls and other measures will protect more than 200,000 customers in Lower Manhattan that experienced outages during Superstorm Sandy. At our steam generating plants, similar projects will ensure that four of five plants remain online during storms and maintain steam service to

customers throughout Midtown Manhattan. Hardening measures at our fifth steam plant, which would be pre-emptively shut down to protect the steam system in Lower Manhattan, will allow that plant to come back online faster following a storm event. Both substations and generating plants will be designed to withstand at least Sandy flood levels, which means that these stations would not be at risk of severe impacts until a storm surge exceeded 14 feet. Furthermore, we have designed the new measures with enough flexibility to be modified should design standards change in the future.

Looking ahead, we will continue to invest in systems that are designed to withstand increasingly severe weather and floods. To fortify and protect our electric, steam, and gas systems, we plan to redesign portions of our energy-delivery systems, install higher and stronger flood barriers, introduce more submersible equipment, raise critical equipment, and selectively bury overhead power lines. We will also install additional switches and related smart-grid technologies to improve the flexibility and resiliency of our electric system. With underground smart switches and submersible equipment, coastal networks will be restored in 24 hours after they are pre-emptively taken off-line to protect equipment, which translates to services being restored 75 percent faster than the Sandy experience.

Below we highlight the key fortification projects that are detailed in this plan.

Redesigning underground networks

To protect underground networks vulnerable to corrosive salt-water flooding, and minimize power outages, we are reconfiguring our most vulnerable underground networks to form separate flood areas. When the region is threatened by floods, we will be able to pre-emptively isolate areas at risk, while keeping electricity flowing in the surrounding areas. Two of these vulnerable networks — Lower Manhattan’s Fulton and Bowling Green — will be permanently divided into smaller networks. Fifty percent of the customers in these networks that experienced outages during Sandy will be protected from outages in similar storms. Isolation switches will be utilized in other networks to allow us to de-energize high-tension customer equipment that poses a risk to the electric grid if flooded. We have already successfully applied this segmentation strategy in our smart-grid demonstration projects in Queens, and with that experience, will now advance that approach. To the extent that there are customer generation resources able to provide additional power during emergencies, we are ready to explore new configurations that further enhance grid resiliency. The result is a more flexible and dynamic grid that gives operators more control in all conditions, and reduces the likelihood and size of widespread outages.

Flood-proofing vulnerable facilities

We are continuing our work to flood-proof energy equipment, incorporating our experience during Superstorm Sandy as well as the latest flood-zone guidance from FEMA and the National Oceanic and Atmospheric Administration (NOAA). In the aftermath of Hurricane Katrina, we began deploying submersible equipment, such as network protectors, in flood-prone networks and requiring commercial customers in those areas to install submersible or elevated equipment in their facilities.

Since Superstorm Sandy, we have developed additional flood-proofing measures that will better protect energy systems, including:

- Installing barriers and pumping equipment, or relocating critical equipment to higher elevations in customer buildings
- Applying sealants around pipes and other openings that provide a point of entry for floodwater

- Installing new submersible network equipment, including field testing and deployment of newly designed high-voltage equipment
- Constructing concrete moat walls and raising flood walls at our generating facilities, major flood-prone substations, and other critical facilities
- Installing remotely operated switches on our network feeders to isolate non-submersible components during a weather event

Investing in more smart-grid technologies

Smart-grid technologies give us tools that make the grid more flexible and responsive during extreme weather, which allows us to minimize power outages. Smart-grid measures such as sectionalizing switches allow system operators to identify and isolate problem areas and rapidly bring power back to the surrounding areas, keeping more customers in service. We will continue to advance the installation of smart-grid technologies, including sectionalizing switches in our underground and overhead electric systems.

Upgrading overhead systems

We will expand our efforts to upgrade our overhead distribution equipment, with the aim of making the system more resilient against damage from high winds and downed trees and limbs. Our expanded effort will include:

- Separating feeders into sections and installing remotely operated sectionalizing switches to isolate problems, so that damage does not cause outages for all customers on the feeder.
- Redesigning feeders so that they can be supplied power from both ends, or potentially from customer generation sources (e.g., combined heat and power/distributed generation) giving operators more options for restoring service.
- Installing stronger poles able to withstand wind gusts of up to 110 miles per hour in strategic locations.
- Redesigning wires to provide better protection from falling tree limbs, and to detach more easily when force on the wire is more extreme to reduce the likelihood of damage to poles and other pole-top equipment.
- Expanding use of overhead cables for greater resistance to damage from high winds and tree branches.
- Creating greater tree clearances around our distribution facilities near substations and critical infrastructure.

These investments will reduce the customer outage impact by 15 to 20 percent and provide the ability to restore affected customers more quickly through additional supply points and remotely operated smart switches.

Burying select overhead lines

During the next four years, we anticipate selectively undergrounding portions of the overhead system based on our analysis of outage data and field surveys of tree density. While undergrounding is an appealing option from the perspective of storm resiliency, undergrounding the entire overhead electric distribution system could cost up to \$60 billion – which would dramatically increase our electricity rates. As we confront the challenges of extreme weather, however, we are considering burying overhead lines in selected areas with a history of significant damage and outages, including those that serve critical customers. We will focus on areas where tree trimming alone may not be sufficient, and where the added costs can provide significant added value in terms of reducing future restoration costs. To better understand the value of selective undergrounding, we are revisiting Con Edison’s most recent undergrounding study, completed in 2007, and updating it with the latest information.

Protecting the gas systems from flooding

While our gas systems performed well throughout Superstorm Sandy, we are taking steps to protect all our energy systems from future natural disaster. The most critical threat to the gas system is the introduction of water into gas distribution equipment and tunnels, which can damage pipes and lead to service interruptions. Protecting our gas system means customers do not have to endure the long and laborious process of restoring gas, which must be done one customer at a time, ensuring that each and every pilot light is lit in the process. To fortify our gas system, we are accelerating and expanding plans to replace leak-prone cast iron and steel pipe and install valves that prevent water from entering high-pressure service vent lines. Installation of these valves will reduce the likelihood of flooding-related service interruptions for more than 22,000 gas customers.

In addition, we are taking the following steps to protect our gas system:

- Evaluating new methods to prevent damage to the distribution system caused by flooding of customer equipment.
- Considering strategic replacement of low-pressure cast iron distribution mains with high-pressure facilities that are more resistant to water intrusion and less likely to leak.
- Developing backup solutions for the communications systems that remotely monitor and control gas system pressures and flows.
- Employing flood-mitigation strategies around remotely operated gas valves and regulator stations.

Protecting our generating facilities

To protect our steam and electric generating plants from future storm surges, we are installing flood-control measures, including:

- Protective gates or barriers on intake tunnels to prevent water intrusion.
- Sealing perimeter walls and doors.
- Raising existing moat walls around critical equipment and installing new ones where needed.

- Introducing new mobile flood pumps.
- Backup generators for flood control equipment.

Flood-control measures at the generating plants will ensure that four of our five steam plants remain online throughout a storm surge. These measures will significantly reduce the number of customers for whom steam service is impacted following the storm and will reduce the number of days that service must be restricted while the full system is restored. These investments will minimize customer outages and allow for a faster recovery from flood surges. Our fifth steam plant will be pre-emptively shut down ahead of large storms to protect the steam distribution system in Lower Manhattan from contact with floodwater, but with the measures listed above it will return to service in half the time it previously took.

Reinforcing critical tunnels

Con Edison operates many underground tunnels that contain steam and gas mains as well as electrical feeders. Flooding results in interruption to services in the tunnels, including proactive isolation when water is expected to intrude, which leads to service outages for customers. In order to protect the tunnels against future storm surges and flooding, we will install hardened, reinforced concrete tunnel entrances that are designed to prevent or greatly reduce water intrusion. As an additional line of defense, we will install improved pumping equipment and back-up generators to remove any water that does intrude.

Hardening internal communications infrastructure

An extensive energy communications network allows us to remotely operate key pieces of equipment. The operational flexibility of our delivery systems requires the uninterrupted use of this communications network. To achieve this goal, we are evaluating ways to shore up our information systems to withstand flooding.

We will focus on expanding the use of water-resistant fiber-optic communications and control systems, rather than copper wires, which will enable us to remotely operate equipment during flooding. Our recent experience, in which fiber-optic equipment provided uninterrupted communications in a flooded substation, validates this approach.

Benchmarking and evaluating new capabilities and technology solutions

Regional leaders are discussing a range of flood-mitigating proposals, from building natural barriers, such as dunes and wetlands, to the use of floodgates, barriers, and artificial islands in New York Harbor.

Similarly, we are considering alternative approaches to system design that would reinforce the electric distribution system. For example, we are developing plans to create strategically placed sub-networks that can be isolated from the rest of the grid. This approach – part of our “third-generation” or “3G” solutions – would improve reliability while eliminating the need for additional capacity on our distribution system. We are also looking at how to incorporate customer-side distributed generation resources into our restoration plans, including the role that distributed generation can play in reducing localized customer impacts. Generators provide power to critical customers such as hospitals during outages, and they may also help reduce the need for grid upgrades in strained networks.

IMPROVING ESTIMATED TIMES OF RESTORATION AND ENHANCING STORM PLANNING AND RESTORATION PROCESSES

Our Company has a long and proud history of preparing for and responding to emergencies. Our focus on preparedness and contingency planning is one of the reasons for our strong record of reliability. We rely upon long-standing storm preparation guidelines that we have updated and refined continuously, especially following major storms in our region and other areas. Our comprehensive preparations and pre-emptive actions are based on guidance from our Corporate Coastal Storm Plan, training, drills, and lessons learned from severe weather events like Hurricanes Katrina, Rita, and Irene, as well as severe nor'easters that have impacted our region.

In the spirit of continuous improvement, we are again focused on enhancing our storm readiness, planning, and restoration processes. We are working to find ways to improve our resource availability when storms hit and to assess damage more quickly. We are placing special emphasis on efforts to improve the accuracy of our estimated times of restoration (ETRs). We view our ability to provide timely and accurate information to our customers and stakeholders as equal in importance to our actual service-restoration efforts.

Storm planning

Comprehensive storm planning is key to responding to emergencies. We are building on our recent storm experiences — in Sandy as well as Irene and other large storms — to gain a better understanding of the range of extreme weather conditions that could affect our service area. We are also considering information about potential future impacts resulting from climate change, and in this regard, we are working with the City of New York's climate adaptation task force. We are revising our emergency plans, and restoration procedures to address the broad range of conditions we may encounter. We have already implemented — and will continue to implement — extensive improvements to our storm-planning processes.

As part of this effort, we are analyzing and updating our employee storm assignments, with an eye toward maximizing the number of available workers with restoration skills. Our mission is clear: to improve our ability to ramp up and focus staffing as storm response demands in order to implement an effective restoration process that reduces outage time. One possibility we are considering is deploying more contractors and personnel to assist with cutting and clearing trees, power lines, and roads, so that personnel trained in overhead electric systems can be fully committed to restoring power.

We are also implementing a new logistics and resource management system, which will allow us to track and manage personnel, equipment, and lodging needs for mutual assistance crews and contractors before the storm and throughout the restoration effort.

Securing external workforce and resources

We will focus on improving our ability to quickly secure workers with overhead lineman skills, through mutual assistance crews (on loan from other utilities) or contractors. The lessons we learned from our experience in Sandy's aftermath are invaluable in this effort. Securing skilled workers is especially challenging in storms with a broad reach, which can dramatically diminish recruitment opportunities during events that affect large heavily populated areas in our region. This is an industry-wide challenge, and we are actively participating in, and in many instances leading the efforts with mutual assistance

groups and the Edison Electric Institute (EEI) Executive Committee to find a more effective process for securing skilled resources quickly, particularly during events with broad regional or national impact. In the meantime, we will be more ambitious in securing mutual assistance and contractors as future storms approach.

Equally crucial to restoration work is securing the critical materials needed to support an increased workforce. We are updating stock levels and contracts for critical materials, fuel, food, and support for staging areas, and lining up personnel to oversee the logistical challenges associated with a significant increase in staffing, as happened when we doubled our workforce during Superstorm Sandy. At the same time, we are working with the other New York State utilities and state regulators to evaluate inventories and better prepare to share materials during major events.

More effective restoration and accurate Estimated Times of Restoration

We understand the importance of providing restoration estimates to our customers as accurately and as promptly as possible, especially when customers may need to plan for prolonged outages. To meet our customers' need for more accurate and timely restoration information, we are re-examining our restoration planning process from start to finish. Our ETR initiatives are designed to provide customers and stakeholders with an accurate global ETR within 24 hours of a storm's end; the global ETR specifies the date by which 90% of affected customers' service will be restored. Within approximately another 24 hours of a storm's end, we will provide each customer with a more specific individual estimate of the date when service will be restored. We will update customers as such estimates change, with a goal of minimizing the updates (which can occur, for example, when field conditions delay crews) and maximizing timely delivery of restored service.

To improve our ability to establish detailed estimates for when customers' power will be restored, we are working to improve the speed and accuracy of our systems for assessing damage. We are implementing a program to automate and expedite damage assessment through the use of "smart" devices, such as wireless tablets, that will allow us to remotely capture and transmit detailed damage information to our Outage Management System. The devices will be provided to employees and contractors. Our Outage Management System will then integrate damage reports with data from municipalities, including local police and fire departments. Deploying these devices will not only increase the amount of information gathered, but make the process of assessing damage more efficient.

Beyond data collection, we are also developing a computer model to better forecast the potential scope and magnitude of storm damage, and to add new predictive models that will allow us to develop restoration plans. These tools will allow us to provide customers with more accurate restoration times. We are working to create software applications capable of delivering these results. In fact, we are leading the industry in improving restoration processes and advancing the ability to calculate restoration times. We plan to complete an initial roll out of the new technology in September 2013, but we recognize that these initial steps are the beginning of a longer-term process to improve and then refine our modeling capabilities. To make the most of these technological advances, the Company has created a team dedicated to specifying and monitoring ETRs, and established a new position in our incident command structure, the ETR Unit Leader. Having a dedicated ETR team will add accountability to the ETR process.

We have already completed a multi-part, full-scale corporate storm drill that enabled us to gain critical insight into, and experience with, our new restoration processes. By participating in these drills, our

employees became more familiar with our emergency preparedness plans, and established a practiced baseline for future storms.

Going forward, we will continue to prioritize restoring critical customers, such as schools, hospitals, and nursing homes. In the coming months, we will continue to review and update these priorities based on our experience with Superstorm Sandy as well as local community needs. To that end, we are meeting with community representatives to discuss prioritizing essential customers such as grocery stores, drug stores, gas stations, shopping centers, and shelters. These customers are integral to the livelihoods of communities, and we are working to strengthen the infrastructure that serves them.

Our plans further engage telecommunications companies. Specifically, we envision a telecom liaison on site in our restoration process, and perhaps a reciprocal liaison arrangement for their process, to improve coordination of restoration activities for both our services and the services of the telecommunication companies, and also to better consider priorities in a joint manner. Moreover, we expect that advance planning would be another benefit of an enhanced relationship and more open dialogue with telecommunication providers, including joint drills and improved emergency planning. We are already participating in a PSC-sponsored effort to facilitate these enhancements.

As summarized below, we will also improve restoration planning and coordination by engaging more fully with local community leaders and key stakeholders from local municipalities and townships. We will work with these leaders to conduct emergency drills more consistently, improve how we share outage information, coordinate opening of closed or blocked roads, and communicate work plans to the community more clearly.

IMPROVING THE FLOW OF INFORMATION TO CUSTOMERS AND OTHER STAKEHOLDERS

In the event of destructive storms and other emergencies, open and ongoing communication is essential for customers, as it is for government at the federal, state, and municipal levels. We are working to enhance all aspects of our information-gathering and communications processes and tools in order to deliver comprehensive, up-to-date information to customers and all stakeholders during emergencies. We are also working with government at all levels to educate officials about our plans and maintain ongoing dialogues on important issues like emergency plans, restoration process improvements, and advances in information-sharing. These interactions will improve the flow of information and strengthen our collective response when an emergency arises.

Strengthening community relations

The Company is leading a broad campaign to educate the public about our post-Sandy initiatives to fortify our infrastructure, equipment, and other systems. We are publicizing our plans through traditional media, social media, elected officials, community groups, Company websites, and at public forums and industry conferences. These efforts began in the immediate aftermath of Hurricane Sandy and are continuing with ongoing initiatives and forward-looking outreach efforts.

Collaborating with government

The Company's working relationships with government leaders and officials at all levels play a key role during extreme weather and emergencies. We plan to reinforce these relationships and make them more effective by enhancing and expanding the systems we use to collaborate with New York City

government, and the municipal governments in Westchester, Orange, Rockland, Sullivan, Pike, Passaic, Sussex, and Bergen counties.

These efforts include the following:

- An enhanced Municipal (Muni) Liaison Program will give public officials access to a new “Muni Dashboard” website. The site will include comprehensive information about our restoration activities during outages. Municipal officials will be able to view information on the number and location of local outages, daily work plans, crew dispatches, and estimated restoration times in their communities. By offering this data to our public sector partners, we will allow our muni liaisons to focus on facilitating critical restorations and responding to other needs within the municipality.
- New feeder maps for individual municipalities allow officials to better visualize where our systems are damaged, and the impact the damage is having at street level. An expanded role for the Company’s muni liaisons will enable them to better answer questions about restoration efforts. These liaisons, who are dispatched to municipal facilities to serve as on-site resources and coordinate Company efforts there, have received additional training and will now remain in communities as long as the municipalities want them there.
- Our municipal partners and liaisons are invited to participate in annual exercises to help them prepare for emergencies. In addition, we will spend at least one day each year with officials from each municipality, sharing information, providing officials with tours of Company facilities, and updating them on our energy systems and emergency-management procedures.

We have conducted extensive community outreach to local elected officials, community boards, and other community groups. We will continue this outreach going forward, and we will be part of the conversation about future infrastructure hardening plans, as well as possible revisions to building codes.

We also communicate regularly with state and federal agencies during emergencies, and look for opportunities for continuous improvement after each major outage. We work closely with officials at the State Emergency Management Office before and after major events, along with the Port Authority, Metropolitan Transit Authority, Department of Energy, Department of Homeland Security, and the U.S. Army Corps of Engineers. We will continue to maintain close contact with state and federal agencies and provide liaisons during emergencies. We also plan to continue to work with our state counterparts to keep them up-to-date on our emergency management plans and protocols, and to get their feedback on our plans.

As we move ahead with our plans, we will make adjustments where appropriate based on additional recommendations from government entities as well as any new laws and regulations. The Company will also continue to work with New York regulators to define storm performance metrics that reflect the on-the-ground realities of the restoration process.

We have begun discussions with every state and local elected official in our service territory about how we can improve the exchange of information and coordination during a significant power outage. That dialogue also encompasses how we can collaborate on long-term and sustainable infrastructure resiliency solutions for the future of our communities and our region.

We are also soliciting the support of various government entities in our efforts to find holistic approaches to disaster response and to define the roles and responsibilities of the public and private sectors. We are stressing the need to find a unified approach to new code and design changes that will

protect energy equipment on the customer side. We are also seeking a more streamlined process for quickly obtaining the certifications, permits, and approvals required to conduct our business — not just during emergencies, but every day. And finally, because our storm-hardening investments will ultimately benefit the livelihoods of the people and businesses in our entire region, we are seeking government funding and support for these efforts.

Expanding and enhancing customer information flow

We are developing new ways to connect with customers and deliver timely information, even as we enhance and expand our existing communication tools, such as our website, outbound telephone messages, and e-mail blasts. These changes will allow us to be responsive and open in our communications and to provide customers with information when and where they need it.

Our communication initiatives include the following items, many of which are designed to reach customers in ways that are most convenient to them:

- Apps for iPhone and Android phones, already available for download in the App Store and Google Play, include a “storm mode” to provide customers quick access to functions they need during outages, including the ability to report and check the status of an outage. Proactive alerts will update customers on estimated times of restoration.
- An opt-in text message service will allow customers to notify the Company that they are without power simply by texting “OUT” from a registered device. Text messages from the Company will notify customers of status updates.
- Additional call-center agents will be available via an outside vendor, providing access to a pool of 200 or more agents during emergencies.
- We plan to equip wire guards (workers trained to guard downed wires until repairs can be made) with internet-enabled devices or smart phone applications so they can deliver useful information from the field and access the latest details about restoration progress.

In addition, we have preemptively prepared storm communications, including messages about storm safety, generator safety, customers who rely on life-sustaining electronic equipment, downed wires, ETRs, and meter-reading cancelations, as well as a thank you to our customers for their patience while we restored power. We will send these messages via e-blasts before, during, and after storms.

SUMMARY

Since Superstorm Sandy, we have worked to bring our systems back to normal, to reinforce equipment before the next hurricane season, and to develop innovative strategies to provide timely, comprehensive information to customers. This summer, reconfigured networks in flood zones will allow us to keep the power flowing to more customers in the event of a storm surge. Consider this measure of our efforts: a storm of Sandy’s magnitude would now result in about one-third fewer customers being affected by service interruptions. Our long-term efforts will further reduce the number of customers who lose power during extreme weather events. Every transformer that we raise or retrofit to be submersible, and each floodgate and barrier we install, will keep our systems resilient and our power flowing. Over the course of the next four years, we will continue to make our energy systems better able to handle the stress of extreme weather conditions. In addition to all of the measures described in our

Post Sandy Plan, the Company continues to make investments to upgrade its systems so they are more resistant to extreme heat storms.

We have also made significant advances in the information we provide to customers before, during and after storms. We are leading the utility industry in developing new tools that will allow us to calculate customer-level ETRs faster and more accurately. These tools will allow us to provide customers the detailed information they need to make informed decisions after a storm. In tandem with our work on ETRs, we are making improvements to our restoration process to improve information flow and restore service faster. Taken together, these two efforts will reduce the inconvenience felt by customers during prolonged power outages.

At the same time, we are collaborating with our municipal partners to improve our Muni Liaison Program, aimed at providing more accurate information about our storm response work. Critical to our interactions with local authorities, and ultimately our customers, is our ability to provide realistic and timely information on restoration activities and ETRs. Initial steps for the 2013 storm season include new educational materials on storm hardening and guidance for customers and stakeholders on what to expect in the event of a major storm. Storm-related information and faster, more accurate ETRs will be provided to our customers and stakeholders through new mobile outage applications and text messages.

Keeping the power flowing in our region is a monumental responsibility that we take very seriously. Making our energy systems more reliable and resilient is a start, but it is not enough. We must join with other public works industry leaders, government agencies, elected officials, businesses, and other stakeholders to find a broad array of solutions to protect our region. We are working to identify solutions that make sense — in terms of costs, the broader social value of our investments, and the ability to keep our communities and economy moving even after extreme weather conditions.

I. FORTIFYING THE STEAM, GAS, AND ELECTRIC SYSTEMS AGAINST FUTURE STORMS

Our infrastructure systems have faced an unprecedented series of challenges in the past two years. In August 2011, Hurricane Irene caused damage that resulted in over 300,000 electric customer outages, making it the most damaging storm in Company history at that time. A little more than a year later, Superstorm Sandy caused four times the number of electric outages experienced during Irene. Sandy's storm tide — a rare combination of surging storm waters and high tide — reached above 14 feet, breaking all existing flood records. Though we have seen winds of up to 90 mph in our service territory before, Sandy's combination of sustained 64 mph winds with 90 mph gusts was unprecedented, bringing down wires, transformers, and utility poles at nearly 30,000 locations on our overhead electric distribution system. By the time the Sandy restoration process was complete, we had replaced 1,500 utility poles and 1,380 transformers on our overhead system. We had also pumped water out of 2,126 structures, such as transformer vaults and manholes, on our underground network system in New York City (NYC). In the weeks that followed, we made over 20,000 repairs to the underground system on account of flood damage. All told, over the past five years, we've spent about \$600 million to recover from the damage caused by severe storms, including Superstorm Sandy, Hurricane Irene, two major nor'easters and a tornado.

We have been planning for coastal storms for many years, and have also been working to plan for the potential long-term effects of climate change. Each year we invest in new upgrades to our electric system to make it more resistant to summer heat storms, and refine our long-term plans to accommodate growth in electricity needs on the hottest days. We have also been installing water-resistant underground network equipment since 2007 to reduce the impact of flooding on our electric distribution network. However, taken as a whole, our recent weather experiences demonstrate the need to accelerate our plans and to take further steps to fortify our energy infrastructure. In this section we describe in detail our plans to implement a wide range of storm-hardening projects that will make our energy systems more resilient, enhancing their capability of withstanding extreme weather events. Our plans also include deploying technology — some existing that was planned for deployment over longer periods of time, and some new — that will improve the flexibility and responsiveness of our systems during outage events. Ultimately, these technological upgrades will make our facilities less vulnerable to damage, minimize the impact on customers in areas not directly affected by a storm's fury, and shorten the duration of outages.

As we move forward with storm-hardening measures, we are committed to maintaining a balance between infrastructure needs and customer cost impacts. To meet that goal, we will prioritize among an array of possible measures and implement first those that most substantially reduce the risk of damage from severe weather events. Our immediate work is aimed at hardening components so that they can withstand a storm similar to Sandy — in terms of the magnitude and location of the experience, but we are aware of the possible threat of even more severe storms with perhaps different impacts due to unpredictable and changing weather patterns. We have therefore built flexibility into our plans. For

example, all of our concrete floodwalls being installed have been designed with footings that will allow the walls to be built higher in the future.

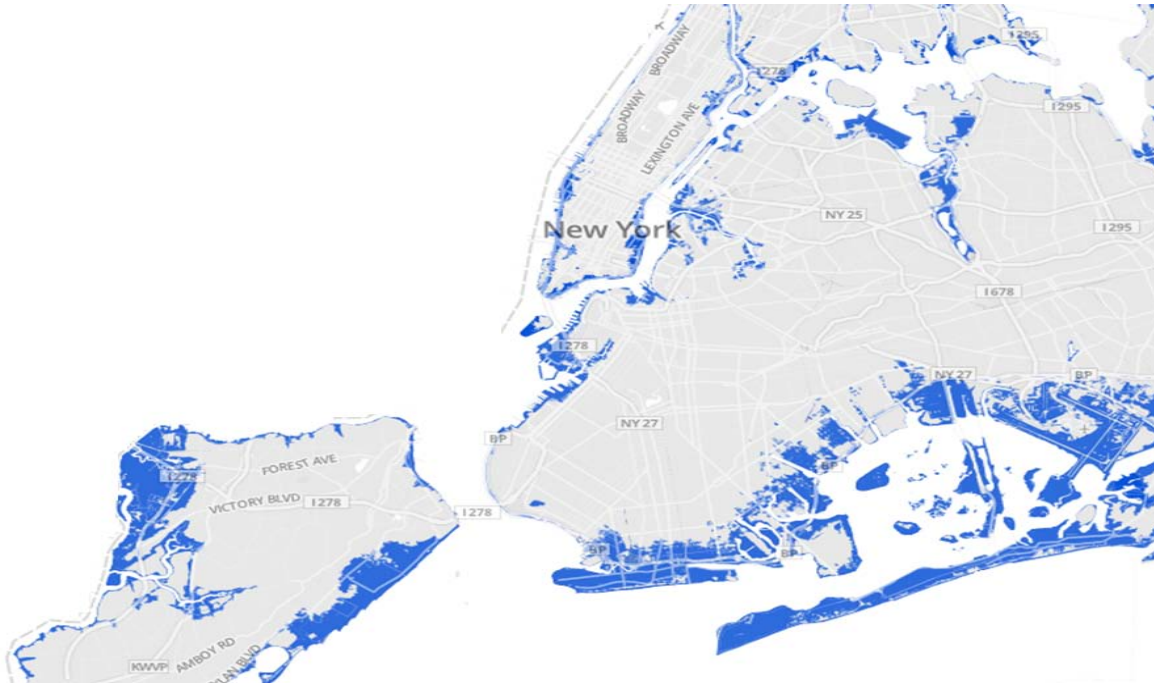
A. Establishing Common Post-Sandy Design Standards

As a coastal utility, Con Edison has historically recognized the need to design its energy systems to protect against storm surges and wind damage. Not only do we serve a coastal area, but many of our facilities are located near water, a vestige of an era when power plant operations required water access. In O&R service territory, freshwater flooding is a major concern in areas close to streams, rivers, and lakes.

We have long had measures in place to protect our system from weather damage. After Hurricane Katrina in 2005, Con Edison began installing submersible underground transformers when replacing transformers in flood-prone areas. Upgrading to submersible equipment prevents damage of critical components by corrosive saltwater. We began requiring new buildings in flood zones to install electrical equipment above the flood risk level outlined in Federal Emergency Management Agency (FEMA) Flood Insurance Rate maps. Our overhead systems have also been built to resist storm damage. Both Con Edison's and O&R's overhead systems are designed to National Electrical Safety Code (NESC) Rules, which require that our wires be able to withstand the stress of ice and strong winds. Con Edison substations, generating stations, and other work locations follow the NYC Building Code Section, which requires us to meet American Society of Civil Engineers (ASCE) standards for flood-resistant design and construction.

Despite rigorous adherence to these engineering standards, our designs were not enough to protect against the unprecedented impact of Superstorm Sandy, which has caused us and others in our industry — as well as those in related infrastructure businesses such as communications, transportation, buildings — to rethink our standards.

Figure 1: Observed Flooding from Superstorm Sandy in Con Edison Service Area



In terms of engineering, our challenge now is to develop new design standards that will prevent or mitigate damage in a storm similar to Sandy, and to prepare for even more severe storms that are anticipated as a result of changing weather patterns. In the immediate future, our goal is to prevent re-occurrence of the damage we witnessed during Sandy. Our plan will develop over time as we gather data on weather trends and work with government agencies and other stakeholders to refine predictive modeling of future weather patterns and achieve a coordinated level of resiliency across all industries and infrastructures.

In the weeks and months following Superstorm Sandy, the Company's design approach has been to focus on flood levels experienced during Sandy as a guide for our immediate actions. In parallel, we are collaborating with outside stakeholders and government agencies to begin the longer-term process for a comprehensive approach to more extreme weather risks. We are working with representatives from the NYC Climate Change Adaption Task Force, NYC Building Resiliency Task Force, New York Building Congress, New York Energy Consumer Council, FEMA, US Army Corps of Engineers, and the International Utility Working Group. We have taken an active role in this dialogue, helping to shape reasonable expectations for the severity of future storm damage, and to develop a comprehensive, holistic approach to hardening our region's infrastructure. We expect these efforts to continue for many years, as regulatory standards and building codes evolve over time. The changes to our design standards will also continue to evolve.

Our immediate plans for storm-hardening are summarized below.

i. Designing Substations and Generating Stations to Higher Elevations

Each station that flooded during Sandy will be hardened to a new flood-level design, to be implemented immediately. The new design will be based upon the highest of the following elevations, explained below and listed in Table 1:

1. Base Flood Elevation (BFE) + two feet. The BFE is the flood elevation, including wave height, that has a 1% chance of being equaled or exceeded in any given year. The current BFE values in Table 1 below reflect the 2007 FEMA Flood Insurance Rate Maps for facility locations that fall within a special flood hazard area (typically zone AE for NYC).
2. Category 1 Hurricane flood inundation elevation. This value is based on the latest (2010) National Oceanic and Atmospheric Administration (NOAA) Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model for the NYC area, as implemented by the NYC Office of Emergency Management.
3. The maximum elevation of water observed by Con Edison at the facility during Superstorm Sandy on October 29, 2012.

The highest elevation among these three sources will be the minimum height at which critical equipment and structures are designed and installed (see Table 1 below for highlighted results). A higher elevation may be chosen on a project-by-project basis based on factors such as feasibility, individual station needs, economics, and design requirements for higher flood inundation elevations.

**Table 1: Design Flood Elevations for Sandy-Impacted Generating Stations and Substations
(Expressed in feet in local datum)**

Borough	Location	Station Local Datum	100-yr Flood (BFE) + 2 feet	2010 SLOSH Cat 1	Sandy 10/29/2012 Actual Water Level
Manhattan	E 13 th Street	M&A	14.1	13.8	14.2
Manhattan	East River SS	M&A	14.1	13.8	14.1
Manhattan	East River Generating Station	M&A	14.1	13.8	14.1
Manhattan	E 15 th Street PURS	M&A	14.1	13.8	14.0
Manhattan	Trade Center	NYC Tunnel Authority	309.3	310.1	307.3'
Manhattan	Seaport	Manhattan Highway	10.3	9.7	9.6
Manhattan	59 th Street Generating Station	Manhattan Highway	9.3	9.2	8.9
Manhattan	74 th Street Generating Station	74 th Street	10.5	8.4	9.3
Manhattan	E 36 th Street	M&A	14.1	13.4	14.0
Manhattan	Academy	M&A	14.1	13.3	11.3
Manhattan	Sherman Creek	M&A	14.1	13.3	13.6
Manhattan	60 th Street Generating Station	Manhattan Highway	9.3	8.4	6.5
Queens	Ravenswood Steam Plant (A-House)	Queens Borough	10.3	8.2	9.2
S. I.	Goethals	M&A	13.1	14.6	15.1
S. I.	Fresh Kills	M&A	13.1	14.5	14.7
Brooklyn	Gowanus	M&A	14.1	14.7	14.6

Legend:

M&A – Department of Marine and Aviation Datum

SLOSH – Sea, Lake, and Overland Surges from Hurricanes. Model used by NYC Office of Emergency Management.

BFE – Base Flood Elevation as specified on FEMA Flood Insurance Rate Maps

Going forward, we will continue to adjust design standards to incorporate new information that becomes available. For example, new FEMA maps released in late February 2013 identify new areas within NYC that could be impacted by floodwaters. We expect that the changes in these maps will be reflected in the NYC building code within two years. We also expect FEMA to issue further changes or refinements to its maps later this year. The SLOSH maps have also consistently been revised since the 1990s to reflect ever-increasing surge levels.

Ultimately, we need to establish a consistent design basis needs for all affected utilities, agencies and other organizations that have a direct impact on the steam and electric infrastructure. Because we cannot wait for these design standards to be established, we are using information from our Sandy experience in the near-term.

ii. Protecting Underground Electric Distribution Equipment

Severe flooding in our underground networks and at our substations causes customer outages. Outages also occur when we preemptively de-energize specific flood-prone networks when severe flooding is predicted, as was the case during Sandy, in order to prevent damage to our equipment and customer equipment, and to protect the public. This action reduces the risk that energized switchgear would come into contact with floodwaters in basements, which would result in even more extensive damage and potentially an even longer restoration process.

The objective of our new design criteria is to reduce the potential damage to our distribution equipment and thus reduce our customers' outage times. Also, as customers upgrade their own equipment, our efforts will also protect their equipment, and could result in faster restoration if customer equipment is not damaged. To identify areas that would benefit from immediate hardening, we reviewed the 2010 SLOSH maps and layered on further information based on the damage we saw during Sandy. Based on this process, we have developed the following priorities:

- In NYC flood zones 1 and 2, all 120/208 Volt transformers will be replaced with off-the-shelf submersible equivalents.
- We will adapt a new submersible network protector for the 460 Volt services (which generally are used to supply larger buildings) to protect installations in zones 1 and 2 from saltwater damage.
- We will install isolation devices, such as sectionalizing switches, to de-energize specific equipment and sections of networks in flood zones 1 and 2, rather than preemptively taking a whole network out of service.

iii. Protecting Overhead Electric Distribution

Sandy's winds were not higher than previously seen in our service area; however the storm did cause extensive damage to our overhead systems, primarily because the storm was large and our service area experienced sustained winds for a long period. As a result, we are looking into further hardening and resiliency designs for overhead systems.

Our objective for overhead design criteria is to lower the number of customers served by each segment of primary supply to fewer than 500 for Con Edison and fewer than 250 for O&R. The basic characteristics of segments in our service areas are shown in Table 2.

Table 2 – Overhead Segment Statistics

	Target # of Customers per Segment	Segments Above Target	Total Segments	Largest Segment
Con Edison	<500	833	1,562	4,129 customers
O&R	<250	382	2,677	1,275 customers

We are investigating other changes to our specifications for hardening the overhead system. To date we have issued design standards for stronger equipment poles – capable of withstanding wind gusts of 110 miles per hour – to be used on main runs and/or heavy tree cover areas, as well as for feeders supplying critical customers. We will continue to make changes to our standards for hardening the overhead system.

iv. Steam Distribution

Prior to Sandy, Con Edison had already implemented our Corporate Coastal Storm Plan, which details protective measures to mitigate the impacts of flooding on Con Edison’s steam system. In particular, the Coastal Storm Plan calls for preemptive shut down of our East River Generating Station, which prevents damage to the steam system in Lower Manhattan. Going forward, we will keep in place the procedures for shutting down the flood-prone areas of the steam distribution system in case of a severe storm.

We will also add new protections for our steam system; most notably we plan to protect our remote terminal units (RTUs), which are a critical part of our steam system’s Remote Monitoring System. We plan to use a watertight shrink-wrap cover that will enclose and protect the RTU box. The design will include features to allow access to open and close the door of the RTU. Con Edison is currently working with a vendor to determine the feasibility of developing a prototype for testing. Once the prototype is developed, tested, and proven to be watertight, Con Edison will install these covers at locations where RTUs are susceptible to flooding based on historical flood data.

B. Conducting International Benchmarking

In completing our plans for storm-hardening measures, Con Edison is drawing on all useful resources, including the experience of other utilities through the U.S. and internationally. To that end, we have actively solicited input from colleagues around the globe.

Con Edison is a founding member of the International Utility Working Group (IUWG), a formal working group of electric utility companies that serve dense urban international cities. The IUWG is comprised of

representatives from utilities in China, Japan, Australia, France, the United States and the United Kingdom. Following Superstorm Sandy, we developed a benchmarking survey on the topic of storm hardening and distributed the survey to IUWG members. The survey focused on two areas: hardening designs for transmission and distribution systems and emergency-response plans during storm events.

Overall, the common themes identified included selectively undergrounding portions of the overhead system, raising critical equipment, and installing floodgates. The majority of the best practices identified by members are either currently installed on the Company's systems or incorporated in its plans for future storm-hardening measures. There is one temporary flood-protection measure identified by UK companies, the Geodesign Flood Barrier, that the Company is now evaluating for use at its facilities that are prone to flooding. The barrier is a steel frame with a waterproof barrier that is adjustable in height and length and can be installed quickly prior to an anticipated flood event. The barrier can then be removed and stored for use in future incidents.

Additionally, Con Edison's 3G Group, which specializes in third generation or "3G" electrical engineering and design, reached out to industry representatives from the Netherlands, a country known for its flood prevention and dispersion expertise, to learn about the industry's measures for protecting its electric system. We spoke with Alliander, a Dutch utility company, and Deltares, an independent research institute co-funded by the public and private sectors. We learned that the hallmark of Dutch infrastructure protection is the "defense in depth" approach, which calls for multiple layers of protection that provide redundancy in the event that one or more of the measures fails. We are implementing this defense-in-depth approach at our East River Steam Generating Station on East 14th Street in Manhattan.

Our information exchange with Dutch industry leaders also broadened our focus to include long-term resiliency solutions that protect not just our energy systems, but the region's infrastructure as a whole. The benchmarking discussions helped us to understand that the Netherlands' expansive dike system, originally designed to protect inland areas from coastal flooding, inherently protects the electric system and eliminates the need for flood-protection technology designed specifically for the electric system. In our conversations with representatives of other infrastructure-based industries, we are exploring possibilities for large-scale regional storm-hardening systems that protect multiple layers of infrastructure.

C. Embracing Third-Generation Design

Con Edison's Regional Engineering department and 3G Group have developed an innovative sub-network design to reduce the impact of storm damage on its electric system. In a sub-network design, a large network is split into sub-sections that can operate separately if needed – for example, if part of the network is flooded. The new design will increase operational flexibility and reduce customer outages throughout the distribution network in the event of a storm response or a heat wave.

We first piloted this design in our Flushing network in Queens, installing dozens of sectionalizing switches with remote-control capability to reduce the likelihood that outages in one part of the network

would lead to broader network outages. The sub-network concept will next be applied to the Bowling Green and Fulton networks in Lower Manhattan. This concept is explained more fully below in the section on Underground System Storm Hardening.

D. Normalizing Our System

After a storm we work around the clock to restore service to all customers that can safely re-connect to our distribution systems. During this process, we may implement temporary solutions, such as a mobile generator, to expedite restoration. While these solutions are fast and safe, they do not address the underlying damage that caused the system interruption.

System normalization is the process of inspecting damaged equipment, making repairs or replacements, and removing temporary solutions so the system can return to pre-storm operating status. All high-priority defects, temporary repairs, and reliability issues on the electric, gas and steam systems were inspected and repaired prior to June 1, 2013. Repairs that require equipment to be at lower capacity or offline are scheduled to take place throughout 2013 at times when the system can support the required outages. Lower-priority repairs will be placed into a work queue and scheduled along with other routine work.

Wherever possible, the Company is incorporating hardening solutions for future storms into the repair process, or deferring permanent repairs until a stronger solution is available. Some examples of this cross-cutting work include raising control panels during a 345 kV transformer replacement, replacing a failed transformer with a submersible design, and relocating emergency diesel generators to higher elevations. Additionally, at substations and generating stations where future installation of flood barriers and gates will protect equipment inside the facility's perimeter, we replaced damaged equipment with an identical model, rather than an upgraded submersible model. This strategic approach to system normalization eliminates potential redundant work and minimizes costs for our customers.

i. Inspection

Electric Distribution

Immediately after Superstorm Sandy, we developed a detailed inspection program to ensure the electric distribution system is restored to pre-storm conditions before June 1, 2013, when our high-demand summer season starts. To meet this goal, we completed an assessment of the overhead and underground distribution systems and made the necessary repairs in advance of the summer. The program is divided into five specific, separate inspection regimens as follows:

- Underground network transformers and protectors
- Underground structures (manholes and service boxes)
- Flush of flood zone vaults (that contain submersible equipment)
- Rapid assessments of overhead feeders
- Overhead system pole by pole inspection for specification compliance (after rapid assessment)

Substations

Restoration after Superstorm Sandy required a full inspection of the substations that were flooded during the storm tide. Based on the station inspections, we developed a detailed tracking matrix designed to return the system to its pre-Sandy operating conditions. In addition to making a number of



smaller repairs, we replaced two major pieces of equipment that could not be salvaged after suffering damage in the storm: in February, we completed replacement of the Gowanus phase angle regulator (PAR) R2, and in April we completed replacement of East 13th Street transformer 13, shown at left. Our electric transmission and substation facilities are all now operating within their respective design bases.

Steam Generating Stations

The East River, 59th Street, and 74th Street Complex steam generating facilities and the steam distribution system incurred significant damage during the storm. We conducted assessments of each of the facilities to determine the extent of damage and identify required repairs. We then developed a detailed tracking matrix to drive the restoration process.

Our assessments of the generating stations are nearly complete, except for the following facilities, which can only be properly assessed after they are subject to another outage:

- East River dock and internals of the stacks
- 59th Street's Pier 98 Dock Heat Trace System and the transformer FC-1 disconnect switch
- 74th Street and 60th Street stack internals

Steam Distribution

After Sandy, we performed visual inspections of all aspects of the steam distribution system — including subsurface structures and customer locations — that were affected by flooding. Con Edison is in the process of repairing or replacing four customer meter stations and two telemetric stations.

On January 6, 2013, the final steam plant affected by the storm, the Brooklyn Navy Yard Cogeneration Plant, was returned to service. Shortly afterwards, metallic debris (iron oxide) was found in strainers at some steam traps located in our distribution system in Lower Manhattan. The traps are intended to remove such debris from the distribution system. Our steam distribution technicians performed

additional inspections in the areas where the debris was found and then further cleaned the nearby steam mains. In all, by the end of April 2013, we had completed 179 inspections for debris. The steam system has now returned to normal operations.

Gas System

Based on our assessments of the gas system, we determined that Sandy caused flood-related damage (salt water infiltration in the valve controls) at two remote-operated valve (ROV) locations in Manhattan. Both recorded high-water-level alarms during the storm. One ROV malfunctioned during a regular monthly test in December 2012 and was subsequently repaired. Inspection, design and repairs for the second ROV are currently being coordinated with the Transco pipeline upgrades for the 134th Street Gate Station, which are scheduled to occur between May and October of 2013.

ii. Interim Adjustments Completed by June 30, 2013

Electric Distribution

The following critical repairs and upgrades to the electric distribution system were completed by June 1:

- Underground network transformers and protectors: 627 repairs
- Underground structures (manholes & service boxes): 19,780 repairs
- Flush of flood zone vaults (transformer manholes and submersible vaults): 2,126 structures to flush
- Rapid assessments of overhead feeders: 959 repairs
- Overhead system pole by pole inspection for specification compliance: 961 feeders to inspect

Steam Operations

The following critical repairs and upgrades to the steam distribution system will be completed by June 30:

- Docks and facilities: Restoration of plant docks and facilities includes the removal of debris and silt from plant intakes and outflows and distribution trap assemblies; repairing damaged doors, gates and moats; replacing tools, equipment, meters and insulation; environmental cleanup; and waste removal.
- Security: Repair of generating stations guard houses; turnstiles; access gates; and security cameras that were damaged or destroyed.
- Fire protection systems: Repair of systems that were compromised at the East River and 59th St Steam Stations.
- Motors and pumps: Repair of over 200 pumps and motors that sustained water damage.
- Instrumentation, controls and telemetry systems: Repair of dozens of storm-damaged transmitters, controls panels and valve controllers in the steam stations, including:
 - Permanent repairs of equipment that was temporarily repaired immediately after the storm
 - Repairs to damaged metering equipment of 52 steam customers

- 69 Remote Terminal Units that require replacement
- Light and power: Cleaning, refurbishment and repair of electrical switchgear, associated breakers and cables, batteries and rectifiers, auxiliary and emergency lighting, and diesel generators throughout the steam stations.

Substation Operations

The following critical repairs and upgrades to substations have been completed or will be completed by June 30:

- Pumphouses: Repairs of over 40 pumps and motors, along with numerous control switches, circuit breakers, alarm panels, and programmable-logic controllers damaged during the storm.
- Security: Repairs to the perimeter access points at East 13th Street and Seaport substations and to the associated camera and personnel access systems; significant temporary repairs to Goethals Substation due to damage sustained during Sandy.
- Control room, facility and fire protection: A series of repairs to restore the control rooms and fire protection systems at E13th St, Gowanus, Goethals and Trade Center substations.

Transmission Operations

The following critical repairs and upgrades to transmission operations were completed by June 1:

- Overhead insulator inspections and repairs: Repair of damaged insulator strings in four locations that remained on the overhead transmission system after the initial restoration of damaged overhead transmission lines

iii. Medium-Term Normalization Projects Completed by December 2013

While the majority of post-Sandy repairs will have been completed by June 30, some repairs will continue into the later part of 2013 due to availability of replacement equipment, the need to impose outages in order to conduct repair work, or a combination thereof. A summary of these longer-term repair items follows:

Steam System

- Docks and facilities: The inlet and outflow flow tunnels at East River Generating Station were impacted by large timbers and debris brought by the storm surge. During an upcoming planned outage, divers will be able to assess the extent of condition of these areas. Any repairs required to restore the tunnels to their pre-Sandy conditions will take place during a planned fall outage period.
- Stacks: The stacks at East River and 74th Street Station were subjected to high winds and will undergo a thorough internal inspection during the scheduled upcoming spring outage. Any required repairs will be performed during the fall outage period.
- Light and power: Two light and power transformers at the East River South Steam Station were damaged and require replacement. Additionally, the emergency diesel generator at 74th Street

Station must be replaced and relocated from the basement to a higher elevation. We expect to complete this work by the end of September.

Substation Operations

- Tertiary reactor associated with the 345 kV transformer TR11 at East 13th Street: The required replacement equipment will not be procured in time for the summer operating period. System Operations has reviewed the unavailability of this reactor and determined that it does not impact our ability to respond to peak load days during the summer period. We are in the process of procuring this equipment; the projected installation completion is year-end 2013.
- Motor operated cell (MOC) switches at East 36th Street: These switches provide remote breaker contact indication only, and should not impact our ability to serve our peak loads during the summer period. We are in the process of procuring this equipment; the projected installation completion is year-end 2013.
- Replacement of substation equipment: Repairs may be needed on equipment that is presently in service but requires testing because it was subject to water intrusion at the time of the storm, including components such as hydraulic pump motors, diesel generators, control wiring, and protective relay systems. The main substations requiring such testing are East 13th Street, Fresh Kills, Goethals, and East 36th Street substations. We continue to troubleshoot this equipment to determine which items must be replaced. These repairs will be performed as outages become available and are projected to be completed by year-end 2013.
- Goethals Substation security: The system sustained significant water damage and requires replacement. We have instituted interim measures and will upgrade this system in conjunction with the long-term storm hardening efforts at the substation.
- Undermining at Farragut Substation: Several sinkholes developed at the station, and a full assessment of the condition requires excavation and review by Civil Engineering after which we will develop a scope of repair. Restoration of the facility to its pre-Sandy condition is expected to be completed by October 1.

Transmission Operations

- Manhole cleanings: By October 1, we will complete inspection and cleaning of the transmission facilities in the 150 manholes that were affected from salt-water flooding during Superstorm Sandy.

E. Storm-Hardening Our Underground System

In the event of a Category 1 or 2 hurricane, flooding caused by rain and coastal storm surges could cause major damage to our underground electric infrastructure, particularly in low-lying areas, as was experienced in Superstorm Sandy. Our networks in Brooklyn, Manhattan, Queens, and Staten Island could be submerged in several feet or more of salt-water.

Con Edison began addressing this risk in 2005 based on lessons learned by electric utilities during Hurricane Katrina. The Company proactively began to require that interconnecting customers in flood-prone areas either install submersible electrical equipment, or raise critical equipment above the ground floor. By taking these steps, we not only mitigated the potential impact of a major flooding event on those customers' equipment, but also reduced the probability that our system would be impacted by a fault current on the customers' side of the meter. Additionally, Con Edison began installing submersible transformers and network protectors as we replaced or upgraded equipment in flood-prone areas.

In the aftermath of Superstorm Sandy, we further assessed the design basis for each underground electric network and developed strategies to further reduce the impact of flooding on underground equipment, including a plan to replace non-submersible equipment more proactively, rather than requiring such designs for only new installations and upgrades. And, as already noted, we have also developed plans to re-configure three networks using smart-grid switches in order to limit the impact of flooding to isolated parts of the networks, protecting the networks as a whole.

With the use of underground smart switches and submersible equipment, coastal networks will be restored in 24 hours after they are pre-emptively de-energized to protect equipment; this approach translates to service being restored 75 percent faster than it was following Sandy.

i. Installing Submersible Equipment in Flood-Prone Areas

If non-submersible equipment is exposed to water while energized, it can cause internal failure, and threaten the integrity of distribution feeders and their associated networks. Moreover, exposing energized equipment to water also could create a stray voltage hazard to personnel, such as first responders, exposed to floodwaters. In addition, the exposure of non-submersible equipment to corrosive salt water — whether energized or not — would result in significant damage to exposed parts, such as relays and motors. The need to repair or replace these damaged parts will lengthen the process of restoring networks to normal operating condition.

To mitigate these risks, and make our low-lying networks even more resilient, we will implement two hardening projects to install submersible equipment. Currently, Con Edison's 265/460 Volt equipment consists of a submersible transformer and a separate network protector that is not submersible and therefore vulnerable in flood conditions. The Company's 120/208 Volt units also contain some network protectors that are not submersible. As noted, before Sandy the Company had been installing submersible equipment in flood-prone areas only when new equipment was needed. As a result of Sandy, we are accelerating our



Submersible 460 volt network protector

underground equipment replacement program in two ways:

1. All 265/460 Volt units in Category 1 and 2 flood zones will receive new, water-resistant network protectors. During flood events, these units will be de-energized through a combination of targeted feeder outages and the installation of flood switches.
2. All non-submersible 120/208 Volt transformer/network protector units in Category 1 and 2 flood zones will be replaced with submersible units. We will remove both the transformer and protector by installing a transformer with an attached protector as a single submersible unit.

After these measures are completed, all of our flood-zone transformers and network protectors will be submersible. The equipment may still be de-energized in the event of localized flooding, but submersible technology will minimize damage and enable us to quickly restore service once floodwaters recede.

ii. Applying Sectionalizing Strategy to Keep More Customers in Service

Usually individual feeders can be taken out of service during Category 1 or 2 storm surges without causing service interruptions for customers. This is because customer demand typically drops off during such an event, allowing multiple feeders to be taken out of service in different flood-prone networks without compromising our ability to meet the remaining energy needs across our region.

However, where a network cannot sustain the loss of these feeders, the entire network may need to be shut down to protect non-submersible equipment. The flooding that occurred during Superstorm Sandy required such a shutdown to prevent catastrophic system failure from flooding. Specifically, the Fulton and Bowling Green networks in Manhattan, and the Brighton Beach network in Brooklyn were shut down entirely as floodwaters began rising to dangerously high levels. The Company was unable to selectively de-energize feeders in these networks because the remaining supply feeders would not have been able to sustain the power requirements of the network's expected customer demand; specific feeders were taken out of service in several other networks.

To avoid future incidents where an entire network must be taken down, we plan to use switches to provide more flexibility and allow the portions of networks located in higher elevations to remain in service under similar conditions. Prior to Superstorm Sandy the Company's long-term plans included ongoing investment in switches to limit the number of customers impacted by heat-related outages. Following Sandy, we plan to expand our use of sectionalizing switches to make our system even more flexible and resilient. This expansion will minimize the extent of damage to networks in flood zones,

Remotely operated underground switch



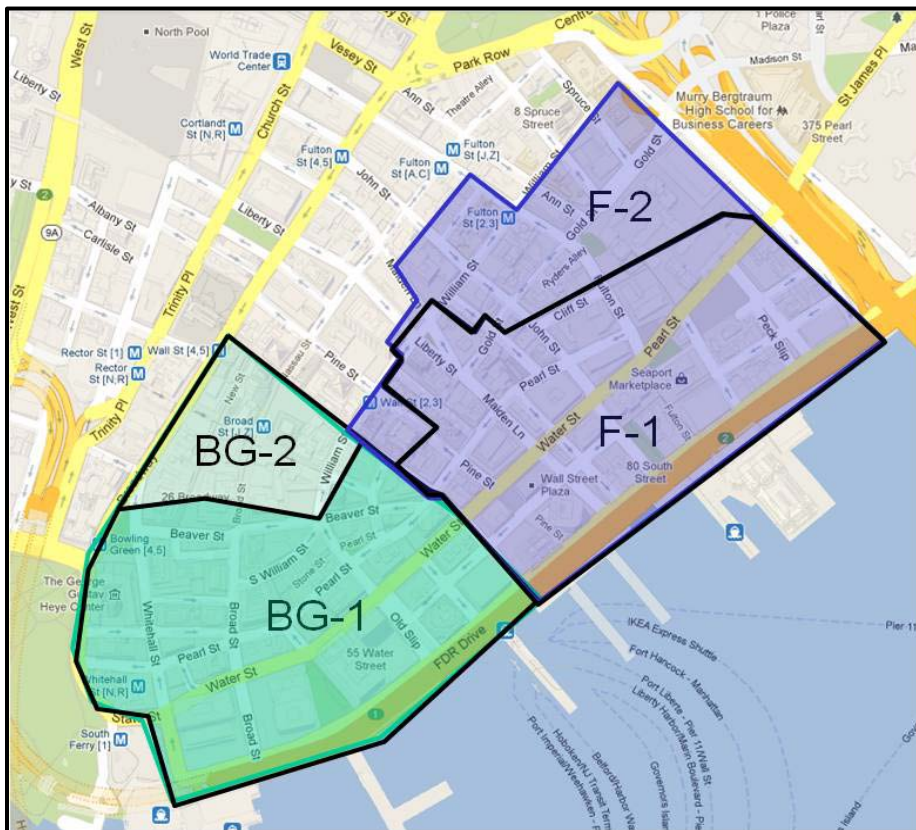
maintain public safety, minimize the need to de-energize entire networks, and allow for an expeditious recovery from such events. To the extent that there are customer-side generation resources – such as combined heat and power, renewables, or back-up generation – that could operate in conjunction with our newly-enhanced design to provide supplemental power, we will work to incorporate them into the system to provide added resiliency and value for our customers.

Our expanded sectionalizing strategy includes the following efforts:

Fulton and Bowling Green Network Re-Design

To avoid entirely shutting down the Fulton and Bowling Green networks during a future flood event, we will install 21 isolation switches on network feeders and implement the 3G sub-network concept. This change will allow the isolation of vulnerable zones and minimize the impact on customers in non-flood zones. Opening the switches in advance of a flood event will divide each network into separate areas, one that will remain energized and one that will be de-energized. As a result, approximately half of the zone’s customers that experienced outages during Sandy — including the New York Stock Exchange and New York Downtown Hospital — would remain in service during a similar event. In addition, we will reinforce secondary and primary cables to facilitate the de-energization plan and to expedite restoration as floodwaters recede and customers are ready to be restored. Figure 2 below illustrates this concept. Areas labeled BG-2 and F-2 would remain energized in the event of major flooding in areas BG-1 and F-1.

Figure 2: Sub-Network Plan for Bowling Green and Fulton Networks



Isolation Switches to Protect Feeders and Customer Equipment

We will install similar isolation switches at an additional 70 locations in nine other networks to de-energize customer equipment associated with high-tension (13,800-volt) installations. This equipment resides in Flood Zones 1 and 2. During Superstorm Sandy, some of the feeders that energized this equipment failed while in service because of customer equipment problems caused by flooding. Feeder failures due to flooding in customer equipment can jeopardize the sustainability of networks during a high-demand period. In order to minimize this exposure, we will install isolation switches that can de-energize and isolate the customer equipment, which will allow other customers to continue to receive service, or to be selectively restored more quickly.

Complete Brighton Beach Network Smart Grid Project

In our Brighton Beach network in Brooklyn, we had previously begun installing isolation switches as part of the Company's smart-grid demonstration project, using federal stimulus funding. The Brighton Beach network was shut down during Sandy because its 460-volt network protectors are not submersible and therefore pose a safety risk when flooded. Thirteen isolation switches are being installed on primary distribution feeders that will enable remote de-energizing of all 460-volt installations in the network. All 13 switches are in service as of June 1, 2013.

F. Storm-Hardening Our Overhead System

In the past two years our overhead system experienced severe damage from Hurricane Irene and Superstorm Sandy. Several additional storms, though smaller in scale, were also devastating, including the February 2010 snowstorm, the March 2010 nor'easter and the October 2011 snowstorm. Prior to 2010, the last year with more than one devastating storm was 2006.

While a majority of customers can usually be restored over several days, complete restoration of the overhead electric system took a week or more for each of these storms, primarily due to extensive damage caused by downed trees and tree limbs, and the multiple impacts of those trees on single electric feeder routes.

Since weather forecasts indicate that storms of this nature may become more frequent, the Company is faced with the prospect of more frequent damage to its overhead electric system. In order to avoid lengthy outages after major events, we plan to further harden the existing overhead system — both to prevent damage and to minimize



the impact of any outages that do occur. Our planned investments will reduce customer outage impacts on the overhead system by an estimated 15 to 20 percent. We will also improve recovery and response operations by reducing damage assessment time and outage duration by at least a similar amount.

The objective of the overhead hardening projects described below is to make the grid stronger and also more flexible and responsive. In addition to mitigating the impact of storm damage on customers, this work will also lower future restoration costs and increase the system's reliability on good weather days. In the case of overhead portions of our system that are undergrounded, the changes will reduce the overall frequency of outages.

Hardening our overhead distribution circuits is the central component of our plan to reduce damage and expedite restoration efforts after storm events. This program involves three main projects: reducing the number of customers served from each feeder segment, installing isolation switches on small open wire spurs off of the main circuit line, and improving reliability by providing additional supply connections to existing distribution system routes. We are also examining the costs and benefits of undergrounding certain sections of the overhead system, as explained later in this section. In addition, the Company will continue its ongoing investment in projects, such as sectionalizing switches, that strengthen our overhead system's resistance to extreme heat.

i. Reducing Feeder Segment Size

Our overhead system upgrade plan will reduce storm impact to customers by reducing the number of customers served by a single circuit to fewer than 500 customers for the Con Edison system, and 250 customers in O&R territory. By making this change, we will reduce the number of customers that are impacted as a result of a single point of damage on the system. We have identified approximately 740 locations where we can deploy additional automatic devices to reduce segment size, and thereby, the number of customers served by each. Specifically, we will take the following actions:

- Deploy vacuum reclosers — intelligent switches that can automatically detect faults and isolate portions of feeders without operator intervention — at 131 locations. We plan to install 33 units in 2013, 33 units in 2014, 45 units in 2015, and 20 units in 2016.
- Install Supervisory Control and Data Acquisition (SCADA) enabled switches in 424 locations. These switches, called gang switches, are remotely controlled devices that allow operators to determine the location of a fault and isolate damaged sections. Having specific information on where the fault is also allows our operators to narrow down where on our system a repair may be needed. We plan to install 70 units in 2013, 98 units in 2014, 168 units in 2015, and 88 units in 2016.



Reclosures

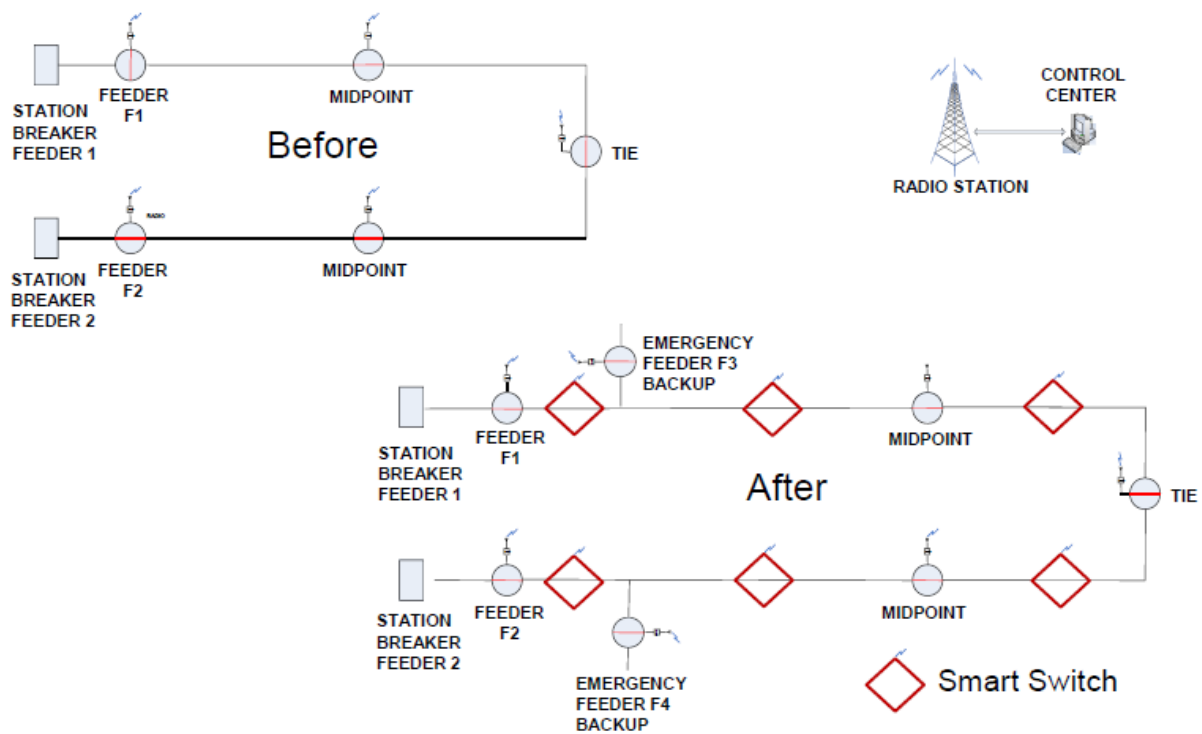
ii. Isolating Open Wire Spurs from Feeder Main Runs

Our overhead distribution system relies on a combination of main feeder lines and smaller spurs off of the main line to distribute power throughout a neighborhood. Usually the spurs — some of which have their own sub-spurs — are strung with open wire. Open wires are generally more vulnerable to damage from contact with trees and other debris than insulated wires. In some cases, damage or faults on an open wire spur can flow up to the main feeder line, potentially causing outages for many more customers down the main line. To reduce the risk that damage on spurs will affect main feeder lines, we plan to add isolation devices on open-wire spurs and sub-spurs that are more than two spans in length (i.e., the distance between three utility poles). We have identified approximately 4,000 locations where these isolation devices can be deployed, and plan to install 3,000 units in 2013 and 1,000 units in 2014. Once the devices are installed, customers in overhead areas will be less likely to experience power outages as a result of damage to lines in other parts of their neighborhood.

iii. Improving Auto-loop Reliability

We plan to improve the reliability of our existing auto-loops — looped circuits that are fed power from both ends. Figure 3 illustrates a generic auto-loop design.

Figure 3: Generic Auto-loop Design



The following measures will be implemented to improve auto-loop design by allowing power to be fed not only from both ends, but also from other points along the feeder circuit:

- Introduce additional supply feeders, or utilize customer-side generation, to allow for continued service during feeder outages
- Divide large auto-loops into several smaller loops
- Upgrade wire and pole sizes to improve storm resiliency. Require poles in storm-prone areas to be 15 percent stronger and able to withstand gusts up to 110 miles per hour.
- Use Hendrix Aerial Cable, which is more resilient than traditional open wire design
- Implement so-called “sacrificial components,” such as breakaway hardware and detachable service cable and equipment, to prevent pole and customer equipment damage during storms



We plan to address the following auto-loops in Con Edison’s service area:

- Armonk loop in Westchester
- Yonkers loop in Westchester
- Riverdale loop in the Bronx
- Graves End loop in Brooklyn
- Marine Park in Brooklyn

These auto-loops were selected based on the following criteria:

- Impact during Superstorm Sandy and previous storms
- Availability of alternate supply
- Supply to critical infrastructure such as hospitals

Table 3 below outlines the number and the type of units we plan to install to improve the reliability of Con Edison’s auto-loops.

Table 3 – Auto-loop Solutions

Component	Total Units
Vacuum Recloser Switches	50
Overhead Wire (spans)	500
Aerial Cable (spans)	250
UG Cable (sections) 2015-2016	100
UG Conduit (feet) 2015-2016	2000
Risers	20
Sacrificial components	1000
Poles	400

Orange and Rockland has created 40 auto-loops and will continue creating auto-loops in conjunction with substation and feeder upgrades and smart grid expansion. O&R plans to install three new auto-loops in 2013, nine new loops in 2014, and five new loops in 2015.

iv. Selective Undergrounding of Overhead Infrastructure

Finally, our plan to fortify our overhead systems also includes our careful consideration of the option of replacing portions of that system with underground equipment. In 2007, Con Edison hired a consultant to study the costs and feasibility of undergrounding our overhead facilities. The study estimated the cost of undergrounding overhead feeders based on the characteristics of six typical feeders (three in Staten Island and three in Westchester). The study recommended an underground loop system similar to our overhead auto-loop design. The recommended design consists of cable installed in a conduit and manhole system with underground vault transformers. Switching would be enabled by a combination of vault-type automatic sectionalizing switches, manual single-phase vacuum switches and disconnectable splices. The 2007 study estimated the costs of such a system to be approximately \$6.2 million per mile, or a total of more than \$60 billion for system-wide undergrounding, clearly a cost that is prohibitive and not justified on a large-scale basis.

Con Edison is currently updating the 2007 study to estimate the current cost of undergrounding. Once the update to Con Edison's undergrounding study is complete, we plan to proceed with feeder undergrounding projects on a selective basis in order to maximize the benefits of these expenditures. We expect to focus on two areas: (1) feeders supplying areas that have experienced the highest storm-damage impact and (2) feeders supplying facilities that are vital to maintain community support following severe storms, such as hospitals, police and fire stations, schools, and stores that sell basic necessities, such as food, medicine, gasoline, and building supplies. We are currently analyzing the overhead system to establish criteria for prioritizing circuits and segments for future undergrounding. At an appropriate phase in the project, the Company will reach out to local communities and government officials to seek community input and feedback on our undergrounding plans.



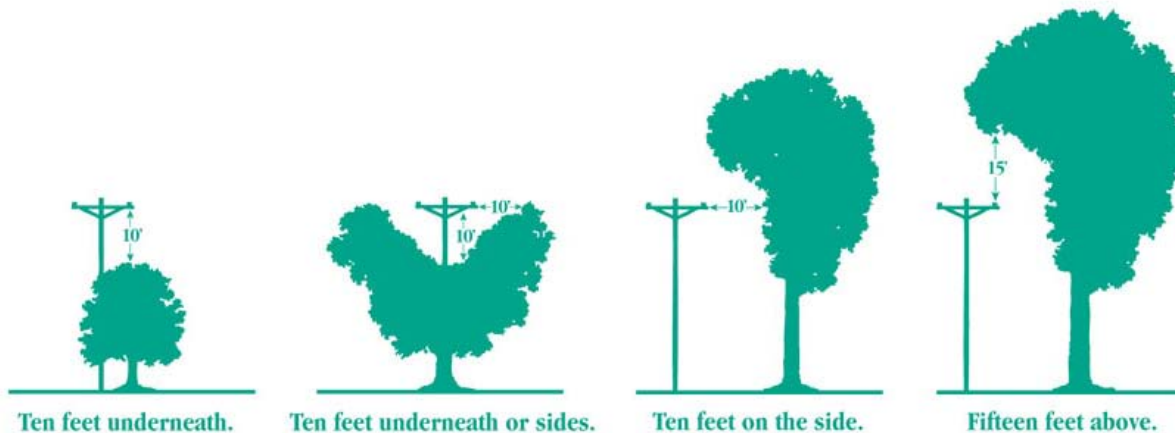
Using the above-described criteria, we expect to underground approximately 30 miles of overhead circuits on a selective basis in Con Edison territory. Based on the 2007 study and early expectations for

the upcoming updated cost, we anticipate that the cost of undergrounding 30 miles of overhead feeders will be approximately \$200 million. We expect to carry out the work in 2015-2016, after the evaluation and input process described herein.

Orange & Rockland's undergrounding plans will identify select existing overhead double circuit distribution lines that have shown a history of higher exposure to incidents, and replace them with underground distribution mainline systems. Transitioning these areas from a double overhead system to either single overhead circuits or fully underground systems will cost-effectively limit customer outages and shorten the duration of outages that do occur. O&R plans to eliminate about four to five miles of double circuit overhead express mainlines per year.

v. Vegetation Management

We continue to proactively work with communities and local governments to trim trees and provide adequate clearance around overhead power lines, making it less likely that customers will experience outages during storms both large and small. In New York City we trim six feet to the side, six feet below, and 10 feet above our wires. We recently met with the NYC Parks Department to affirm this strategy going forward. In the five boroughs, trimming occurs on a two-year cycle for higher-voltage distribution wires (27KV and 33 KV) and a three-year cycle for lower-voltage distributions (4KV and 13KV). In Westchester we have trimmed to 10 feet to the side, 10 feet below, and 15 feet above our wires on a three-year cycle for all voltages, since 2007. In O&R's service territory, we previously trimmed 10 feet to the side, 10 feet below and 15 feet below our conductors. These standards reflected generally accepted industry best practices for the Northeastern United States, taking into account both the types of trees that grow here and the length of the growing season.



Following the recent string of unprecedented storms and extensive damage to our overhead system caused by falling trees and limbs, we plan to make the Company's vegetation management policy more aggressive in certain areas. Incremental measures will reduce the likelihood that customers will experience outages in the first place.

We have already taken the following steps to reduce the danger of tree damage:

- Began a “Hazard Tree” program in April 2013. The Company defines “Hazard Trees” as those that are tall enough to contact the overhead distribution system and are also dead, declining, diseased, or otherwise structurally unsound. Our inspectors, Notification Foresters, and contractor tree crews have been instructed to be more aggressive in identifying Hazard Trees that are rooted outside of our normal maintenance boundaries. We will then work with landowners to find agreeable solutions. All tree removals require written landowner authorization.
- Created a new clearance standard for O&R of 15 feet to the side, 15 feet below and 20 feet above certain conductors. This standard will be applied to all 34.5kV distribution wires, and the portions of 13.2kV circuits that run between the transformer and the first protective device, such as a recloser. (The latter is included in the new standard because it links all customers on the circuit to the transformer. Interruptions on this part of the feeder have the ability to cause outages to all customers on the circuit, whereas interruptions beyond this first portion may only impact half of customers.) This represents an additional five feet of clearance around each conductor.
- Instituted a new Branch Reduction program and training module. The underlying concept of this program is to view limbs as levers that can be pulled down by snow, ice, or wind stresses. By proactively shortening the length we can reduce the likelihood that a branch will break under weather stresses. Training for Company employees and contractors in this new method is underway.
- Released a mailing to customers in North Castle, informing them of our plans to trim trees more aggressively and offering opportunities for feedback. We will also schedule community meetings to inform landowners of our plans to be more proactive in identifying hazardous trees and listen to their feedback.
- Began a study on Urban Tree Health and a Transmission Right of Way Hazard Tree Survey. We are also circulating a 2013 Vegetation Management Benchmarking Survey with other regional utilities to benchmark our vegetation management protocols and identify potential new best practices.

In addition, we will take the following steps in 2013 and beyond:

- Meet with local municipalities, public works departments, and Shade Tree Commissions to explain the benefits of paying extra attention to vegetation management around infrastructure that is critical for the continued operations of municipalities. These ongoing outreach efforts garner support for increased tree trimming, which results in greater clearances.
- Consider revising Con Edison’s engineering specifications to allow for increased tree clearance distances. We are actively pursuing support of this measure from the New York City and Westchester Parks Departments, NYC Planning Commission, NYC borough presidents, district presidents within NYC community boards, and Westchester County municipal boards and officials.
- Continue monitoring and improving our feeder segments that experience regular tree interference and are therefore more likely to have outage issues. The Company tracks tree-related outages and updates its list of worst-performing segments on a quarterly basis. We will continue to track these segments closely and patrol them to identify and preemptively mitigate areas of potential tree damage.

G. Storm-Hardening Substations

Superstorm Sandy shut down five transmission substations. In total, 14 Manhattan networks, one Brooklyn network, and three Staten Island load areas were shut down by the storm. Many of these outages were the result of flooding at area substations.

Before Superstorm Sandy, flood protection of substations was based on historical storm data. As Sandy approached, predictions for the storm surge were very close to the Company's existing flood protection level. To prepare for this unprecedented flooding, we installed additional temporary protection measures, including water barriers and sand bags to protect critical equipment as high as three feet above the predicted surge level. Unfortunately, despite our preparations, these additional measures were insufficient to prevent flooding in our substations after Sandy, mainly because the storm surge far exceeded predictions — in fact, Sandy's surge far exceeded any storm surge in the history of New York City, a record previously set in 1821. As a result, critical stations were forced offline, leading to a large number of customer outages followed by a restoration period of four days or more.

After the storm, multidisciplinary site assessment teams were dispatched to review the damage at all impacted stations and identify the equipment that was damaged by floodwater. Based on these damage assessments and others throughout the Company, as well as input from flood maps and climate discussions, we developed a hardening plan for the affected substations to fortify them against future storms like Sandy, with flexibility built in should design standards change in the future. The most immediate focus was, and is, to implement measures before the 2013 hurricane season, which officially started on June 1, 2013. We have planned additional, longer-term storm hardening for subsequent years.

The substations that were operationally impacted by the storm include East 13th Street, East River, East 15th Street, East 36th Street, Seaport and Trade Center in Manhattan; Gowanus in Brooklyn; and Goethals and Fresh Kills in Staten Island. These stations have already been fortified with the immediate hardening measures described below.

i. Revising Substation Design Standards

During the engineering evaluations of each affected substation, we determined that the observed Sandy flood levels are similar to the 2010 Category 1 hurricane levels as predicted by the National Weather Service's SLOSH Maps, and two feet higher than the 2007 FEMA 100-year flood level.

Therefore, in the "Immediate Storm Hardening" phase, the revised design standard applied to each affected station is based on the higher of the (1) observed Sandy level, (2) The 2010 SLOSH Category 1 hurricane level, and (3) the 2007 FEMA Maps (100 year flood level + two feet). More information on our design criteria is provided in the Common Design Standards section above.

ii. Mitigating the Impact of a Storm Similar to Sandy

In each of the affected stations, our scope of work identifies immediate storm-hardening projects that would mitigate the effects of a storm similar to Sandy. The projects listed below are targeted for completion in June 2013.

- Install new reinforced-concrete protective moats around critical equipment. The moats will allow for operations personnel to maintain and operate equipment while providing protection against floodwaters. Additionally, we will install new secondary flood pumps that provide additional protection against seepage into the moats.
- Seal all electrical conduits and cable troughs that could provide a water path between the outside environment and the protected interior.
- Install new flood doors at egress points to protect against floodwaters.
- Install new gaskets on all cabinets to protect against water infiltration.
- Install expansive polymer foam in the conduits that enter each panel to ensure no floodwater is able to enter and damage equipment.
- Install nitrogen-driven pumps that maintain pressure on critical feeders in the event of a loss of normal power to the pumping plants.
- Secure industrial shrinkable fabric material to protect non-operating equipment within the flood plain. This protective material will be deployed as part of coastal storm preparations (as outlined in the Corporate Coastal Storm Plan) to enhance protection against moisture intrusion.
- Remove existing fencing and raise the concrete threshold level around the perimeter of the station. Install new flood panels behind louvers to protect against additional surge of floodwaters.
- Install new reinforced-concrete wall along the property line of certain stations to protect against floodwaters.
- Install new, higher, reinforced baffle plates behind existing louvers to protect against floodwaters.
- Remove all existing caulking on the joints of precast panels at certain stations and install new watertight joint material.



East River Substation – Red line indicates Sandy flood levels

As of June 1st, the above measures will protect more than 200,000 Lower Manhattan customers that experienced outages during Superstorm Sandy.

iii. Preparing Substations for More Intense Future Storms

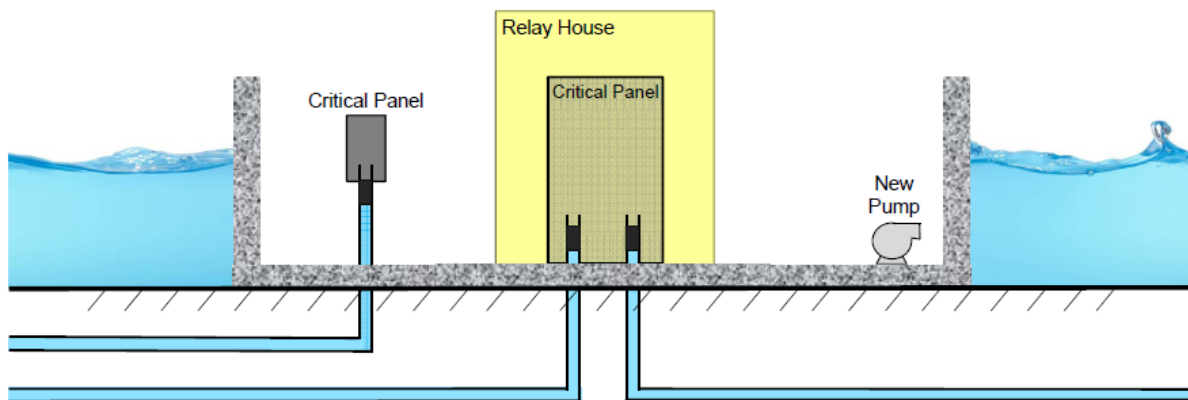
Following the installation of the immediate storm-hardening measures, and pending resolution at the regional level of plans for flood-control elevation standards, we will pursue longer-term storm-hardening projects to further protect our substations against future storm events. In addition to the stations that are fortified with the immediate measures described above, other stations that could be affected by flooding will be fortified in the next phase of storm hardening.

The stations slated for the next phase of storm-hardening measures include West 49th Street, Academy, Sherman Creek stations in Manhattan, and Hellgate and Bruckner Stations in the Bronx. These stations also experienced flooding during Sandy, but their operations were not severely impacted. Nevertheless, it is important that they be protected in the longer term, because a difference in the storm intensity or path, or changes in the resulting flood level, could cause more severe flooding at these locations. The proposed measures will allow the stations to maintain their normal electrical configuration, while

minimizing saltwater damage to critical electrical equipment and preventing widespread customer outages due to a substation shutdown. We have already conducted conceptual engineering work for these longer-term projects. Additional conceptual work and engineering will proceed after we complete the immediate storm-hardening measures described above.

Our longer-term efforts for storm-hardening our substations include plans to:

- Install new relay cabinets distributed throughout the substations at the location of the equipment that they protect. The new cabinets will be able to be moved above the flood zone when a storm is expected. In addition, fiber-optic equipment, which is more resistant to flood damage, will be utilized for communications throughout substations.
- Install additional fiber-optic-based communications equipment to eliminate or significantly reduce copper cable, which is more vulnerable to salt-water infiltration.
- For future equipment purchases, such as transformers and phase-angle regulators, define the purchase specification to ensure that new equipment comes with critical flood-protection controls, including a tap-changer mechanism.
- Raise critical control cabinets in pressurization and cooling plants.
- Install new emergency diesel generators elevated above the flood-control level. Include design provisions to easily remove and reinstall the generator in case it has to be relocated during an emergency. Also, install quick-type emergency connection points that are accessible at the station.
- Relocate substation control rooms to higher elevations; for example, using the available second floor space at East 13th Street. This shift will include the installation of new Human Machine Interface (HMI) equipment and the relocation of L&P transformers as well as AC load boards.
- Install new high-capacity flood control pumps at certain stations.
- Relocate other critical station equipment above the flood-control elevation.
- Make submersible or protect critical equipment that remains in the flood zone.
- Install additional moat walls (diagram below) at other substations and raise existing walls to meet new flood-control elevations.
- Install new sheet-pile surge walls around the perimeter of Goethals substation, and along sections of the perimeter at Fresh Kills and Gowanus stations. At Goethals, the wall will extend approximately 25 feet below grade and up to the flood control elevation above grade. This wall will protect the station from flooding as well as potential infiltration of ground water.



H. Storm-Hardening Generating Stations

As was the case for our substations, we based our pre-Sandy protection plans for steam and electric generating stations on the impact of previous storms. Our post-Sandy assessments of damage at Con Edison's generating stations, like our assessments of damage at substations, led us to conclude that we need to take additional steps to protect our generating stations from storms, including reinforcing station perimeter walls, installing gates and floodwalls, and raising critical equipment.

Three generating stations were operationally impacted by Superstorm Sandy: East River, 59th Street, and 74th Street stations. Our hardening projects at the generating stations follow the same design guidelines that we applied to substation-hardening projects.

i. Mitigating the Impact of a Storm Similar to Sandy

The first-phase, immediate storm-hardening projects listed below have been completed as of June 2013. The objective of these measures is to mitigate the infiltration of water in our generating stations from three primary sources: tunnels, the station perimeter (including doorways and roll-up doors), and pipes and conduits entering the station from the exterior.

- Install new reinforced concrete flood walls to isolate tunnel openings from other areas of the station.
- Install new reinforced concrete flood walls and moats around critical station equipment to protect the equipment against floodwaters that enter the station.
- Install new floodgates and doors in new walls and moats to access isolation zones.
- Install new flood pumps on mobile skids to remove any excess water that enters new isolation zones and moats.
- Seal selected tunnel openings in the station with new plates.
- For manhole covers that link the tunnels and the station floor, install new sealed plate covers with gaskets.
- Intercept all known open drain-piping connections entering the station from the exterior by installing new isolation valves inside the station boundary.
- Install new expansive RTV foam seals at any trench and conduit penetrations into the critical areas of the station to minimize the infiltration of water. These new seals will be installed at all conduits and trenches to ensure that the enclosed critical areas of the station are watertight.
- Install new expansive RTV foam seals in conduits entering all critical panels and cabinets. The expansive foam seals will be installed in all conduits entering the piece of equipment in order to ensure the cabinet or panel is watertight and protected against floodwaters.
- Secure industrial shrinkable fabric material to protect selected non-operating equipment within the postulated flood plain. This protective fabric will be deployed during the Company's 120-hour Corporate Costal Storm Plan to enhance protection from water damage.
- Install new sliding or hinged steel flood control gates, doors and barriers at all station openings, including doorways and roll-up doors.



Expansive foam seal

- Construct new barriers and walls to close all non-required openings, such as doors, roll-up doors, or windows, that are no longer in service.

All of these measures have been implemented at the East River, 59th Street, and 74th Street Generating Stations, as these stations sustained the most damage during Sandy. The measures will ensure that in the event of a storm surge as high as 14 feet, the 59th Street and 74th Street Generating Stations stay online and maintain steam service to customers. The East River Generating Station would be shut down according to normal procedures during a severe storm event, as was done during Sandy, in order to protect the steam system from contact with water in flood-prone Lower Manhattan. Following the storm, East River would be returned to service when possible and if needed, according to Con Edison's Corporate Coastal Storm Plan. However, our other two steam generation stations – 60th Street and Ravenswood Steam Stations – would continue operating during the storm, along with 59th Street and 74th Street, to ensure continuous operation throughout Midtown Manhattan.

Like our substation storm-hardening projects, the overall completion of these items reflects a “defense-in-depth” approach to the storm hardening and flood protection of the generating stations. Also, wherever possible, new installations have enough built-in flexibility to be modified should design standards change.

ii. Preparing Our Generating Stations for More Intense Future Storms

In addition to the immediate measures described above, we have developed a longer-term storm-hardening plan for each of the three steam-generating stations mentioned above, as well as for the 60th Street and Ravenswood Steam Stations. These stations were also flooded during Sandy, but their operations were not as severely impacted. It is important that they be protected in the longer term, however, because a difference in the storm intensity or path and/or changes in the resulting flood level could cause severe impact at these locations in another storm.

The following is a detailed summary of the installation work to be performed at the generating stations under our longer-term hardening plan. We have completed conceptual engineering work for these longer-term projects. Additional conceptual work and engineering will proceed following the completion of the first-phase storm-hardening measures.

- Install sluice gates or reinforced concrete walls in the intake and discharge tunnels to control the inundation of floodwaters from those routes (this will require de-silting of the tunnels).
- Relocate critical mechanical and electrical equipment above the defined flood-control elevation.
- Install submersible equipment within the flood-control elevation.
- Reinforce station perimeter walls to withstand higher flood levels.
- Install pressure resistant/submarine type doors to protect deep basements or structures.
- Install permanent, high-capacity flood-control pumps in additional areas of the stations.
- Install new emergency generators to power flood pumps and to provide additional support to the stations during an emergency.
- Raise existing moats and walls to meet the flood-control elevation.

I. Maximizing the Benefits of Distributed Generation

Our customers have seen increasing reliability benefits from owning and operating their own power generation equipment, either for as-needed use in emergency situations or for continuous, baseload operation in a combined heat and power (CHP) application. We continue to support our customers' ability to actively control their own energy supply. We provide customers with useful information, streamline the interconnection process, and work with a variety of stakeholders on new offerings and arrangements.

We will also continue to develop new ways to maximize use of these customer-based assets, including their potential value in storm resiliency and restoration efforts.¹ To the extent that there are customer-based assets that could operate in conjunction with our electric distribution system to provide supplemental power, we will work to incorporate them into our system to provide added grid resiliency and value for our customers.

i. Combined Heat and Power Systems

For customers relying on CHP systems for their ongoing power needs, such as hospitals, we continue to work with New York City, the New York City Office of Emergency Management, and NYSERDA to identify ways to protect those systems from storm damage. We will support critical infrastructure and essential services that might benefit from use of CHP installations to ensure continued operation during grid outages. NYSERDA already provides a bonus on top of its regular CHP incentives for systems that power "centers of refuge." We also continue to educate customers, developers, and the City on opportunities for using CHP systems in various settings.²

ii. Dispatchable Back-Up Generation

We are considering a program that would provide funding to improve the reliability and the environmental profile of large customer-owned emergency generation while at the same time providing a dispatchable generation resource that Con Edison can utilize to meet electricity demand in a specific area. Under this program, customers located in targeted networks – i.e., networks that are on the cusp of needing upgrades in order to meet growing demand – would agree to let Con Edison decide when their generator(s) should export power onto the distribution system, for example if there is a prolonged heat wave and the Company asks customers to curtail their power usage. Under such an arrangement, customers' back-up generation would make the grid more reliable for nearby customers and help Con Edison avoid the need to make costly infrastructure upgrades. Similar programs have been successfully deployed by other utilities, such as Dominion, Portland Gas & Electric, and San Diego Gas & Electric.

¹ Con Edison customers interested in learning more about distributed generation (DG) in our service territory can view our dedicated webpage, www.coned.com/dg, or reach out to our DG Ombudsperson. Orange and Rockland customers can learn more at <http://www.oru.com/energyandsafety/distributedgeneration/>.

² We have worked with NYSERDA on their newly released "catalogue" of approved CHP designs. The catalogue is available on NYSERDA's website for the CHP Acceleration PON 2568 as Attachment C: <http://www.nyserda.ny.gov/PON2568>.

iii. Emergency Residential Back-Up Generation

For residential customers interested in emergency generation, our corporate website will now include information on how to safely install emergency generators. In addition, Con Edison's meter shop is evaluating an emergency-generator plug that would be installed behind Con Edison meter pans to enable automatic transfer to a customer's emergency generator when utility power is lost. As always, safe disconnection and reconnection to the grid is a top priority for the Company and its customers, both during emergencies and during normal conditions.

iv. Solar Generation

We are also working with solar photovoltaic stakeholders and Department of Public Service staff to identify the technical arrangements that would allow for stand-alone solar photovoltaic generation.

Solar generation relies on grid power for its inverter (the device that converts electricity generated by the solar panels from direct current to alternating current), and can only provide power during daylight, with maximum production during sunny periods. As such, most of our solar customers have arrangements that are not designed for stand-alone operation. Specifically, a typical solar energy system does not include a battery backup system for storing solar-energy production, a costly addition to such a system. Moreover, as a safety-design requirement, customer generation is not permitted to "backfeed" a de-energized feeder.



We are exploring solutions that would enable our customers to rely on their solar energy sources in the event of a system outage. There are battery backup systems that our customers could retrofit, and a device called a "solar plug" that could allow customers to plug in and operate small appliances while the sun is shining. The Company is monitoring development of this solar plug device, and will assess whether the technology could be safely used by solar customers without posing risks to the surrounding grid. A Frequently Asked Questions page on solar and grid-isolated operation is available on the "Smart DG Hub" website:

<http://www.cuny.edu/about/resources/sustainability/SmartDGHubEmergencyPower.html>

J. Storm-Hardening Our Gas System

While our gas system performed relatively well throughout Superstorm Sandy, our post-storm assessments have identified the potential for significant damage if our region were to experience a significant storm in the future. The most critical threat to the gas system is the introduction of water into gas-distribution equipment and tunnels, which can damage pipes, lead to over-pressurization, or



result in service interruptions. By protecting our gas system from water infiltration, we will spare our customers the long and laborious process of restoring each and every gas service, which must be done one customer at a time.

To harden our gas system in the near term, we are accelerating plans to install valves to prevent water from entering high-pressure service lines through the venting system. This measure alone will reduce the likelihood of flooding-related service interruptions for 22,000 gas customers. We are also expanding plans to replace cast iron and bare steel pipe in flood-prone areas because these types of pipe could be more susceptible to water infiltration under flooding conditions. On a long-term basis, we are evaluating multiple defensive strategies to minimize the risk of water intrusion and to prevent damage to controls and electrical components when flooding does occur.

i. Installing Valves to Prevent Water Infiltration

Water infiltration into the vent-line of high-pressure service could result in damage due to over-pressurization of downstream customer equipment. To mitigate the risk of over-pressurization during



Float-check valve

future flooding events, the Company plans to install vent-line protection devices referred to as “float-check valves.” These valves will prevent over-pressurization of the customer’s internal gas equipment due to flooding by preventing water infiltration through the vent-line in a flood condition, and thus allow customers in flood-prone areas to retain their service during flood events. These valves became commercially available in late 2012, after six years of research and development by Con Edison, the industry’s national Gas Technology Institute, together with several equipment vendors. Following Superstorm Sandy, we identified approximately 9,200 existing high-pressure services within hurricane flood zones that would benefit from this new hardening measure. As a result, our plans include installing approximately 2,300 valves in 2013 and the remaining 6,900 in 2014.

ii. Replacing Cast Iron and Bare Steel in Flood Zones

The National Transportation Safety Board and the U.S. Department of Transportation recommend the replacement of cast iron and bare steel gas pipe because of a number of potentially hazardous natural gas leaks associated with these pipe materials. Leaks and/or weakened low-pressure cast iron facilities can also result in water infiltration into the distribution system during a coastal flood. Water infiltration, in turn, can result in poor system pressure, customer outages, and potentially hazardous interruptions of service.

As a result of Superstorm Sandy, our gas system had almost 400 service outages affecting over 4,200 customers in the Bronx, Manhattan, Queens, and Westchester, with 788 customers experiencing service interruptions in the O&R service area. Customer outages resulted from water that infiltrated into the gas mains, mainly caused by shifting ground conditions that occurred during flooding and by long-term corrosion that occurs on bare steel pipe. Another source of water infiltration is damage to customer

equipment located in flooded basements, which then allows water infiltration into the low-pressure distribution system from the customer's side of the service.

To prevent the potential for similar or more significant damage in future storms, we plan to initiate a targeted low-pressure cast-iron and bare-steel replacement program in flood-prone areas of Con Edison's service territory. By replacing this pipe with plastic or protected steel pipe, we will reduce the likelihood of water infiltration. Initial mapping and prioritization of segments for replacement will begin in 2014. The Company plans to replace in 2015 and 2016 between 15,000 and 20,000 feet of cast iron and bare steel pipe in areas with the greatest risk to customer service reliability.

iii. Hardening of Low-Pressure Gas Systems within Coastal Flood Zones

Although the Company's gas system sustained a relatively small amount of direct damage from Superstorm Sandy, there is a risk that in future storms, the low-pressure gas system could be compromised by damage to low-pressure gas mains and by damage to customer piping in flooded basements. These scenarios could result in water infiltration of the gas-distribution system and, due to the limited number of low-pressure valves, migration of infiltrated water into larger sections of the low-pressure gas distribution system. Such water infiltration could lead to customer outages, as the Company experienced on a limited scale during Superstorm Sandy. Furthermore, delays may occur in the restoration process after such an event if significant repairs are needed to customer piping.

We are aware that National Grid experienced these conditions during Sandy in its gas service area in New York City and Long Island. Con Edison gas crews contributed mutual assistance to National Grid's gas restoration effort, and while in the field they made two key observations. First, they learned that National Grid had concluded that converting low-pressure gas systems to high-pressure would help to prevent future outages. Second, they noted that installing additional valves on the low-pressure system enables operators to isolate flooded sections so water does not penetrate the distribution system further.

Based on our own Sandy experiences as well as our field observations on the National Grid gas system, we initiated a study to develop a long-term strategy for hardening the low-pressure gas system within potential hurricane flood zones. The study targeted the replacement of low-pressure cast iron and bare-steel mains in flood-prone areas of Con Edison's service territory. The study had three goals: 1) to determine the best hardening approach to reduce the potential for customer outages due to storm related flooding, 2) to identify options to minimize the risk of water intrusion into the low-pressure distribution system, and 3) to quantify the costs associated with various risk-mitigation options. The study focused on two pilot areas in Manhattan that experienced significant flooding during Sandy. The hardening approaches studied included installation of isolation valves within the existing low-pressure system, replacement of cast iron and bare steel with new plastic or coated and protected steel, and replacement and upgrading of low-pressure cast iron and bare steel facilities with high-pressure facilities.

The study concluded that the best solution is to replace low-pressure cast iron and bare steel pipes with new pipes designed for high-pressure. The study based its findings on the comparative costs of

replacement with smaller-diameter pipe and on the increased benefits resulting from the elimination of potential infiltration due to damage to customer equipment in conjunction with flooded basements. A supplementary benefit of upgrading low-pressure facilities to high-pressure is the added capacity that high-pressure provides, particularly in areas with a higher density of buildings that are likely to convert from heating oil to natural gas under New York City's Clean Heat initiative.³

The next step is to perform an analysis of additional areas in other flood-prone regions of our system, including Queens, the Bronx, and Westchester. This analysis will allow us to determine the relative cost and the risk-mitigation associated with flood-prone areas throughout our gas system and to develop a program that can be implemented based on a desired level of risk mitigation over a specified timeframe. These additional steps and recommended plan will be completed by August 1, 2013.

iv. Evaluating Hardening Measures for Gas Communications Networks

Our plans to harden the gas-distribution system will draw on the work of Con Edison's Gas Operations Supervisory System (GOSS), our supervisory control and data acquisition (SCADA) system. GOSS monitors and controls gas-regulating stations, remote operated valves (ROVs), gate stations, tunnels, and various pressure points on the gas delivery system. This system provides critical data and system functionality to the Gas Control Center, where system pressures and flows are monitored and controlled. As a result of coastal flooding and loss of power to various Verizon communications networks during Superstorm Sandy, communication to approximately 45% of our GOSS/SCADA locations failed. In order to manage the gas system, employees had to visit selected field and equipment locations to manually monitor and communicate gas pressure conditions to the Gas Control Center (pictured at right).



Our plan for hardening the gas-distribution system includes steps to ensure that our GOSS and SCADA communications systems are more resilient in the face of flooding and power outages. To date, we have identified and prioritized critical communications sites. These sites include the various gate stations, remote operated valves, tunnels, supervisory regulators, the Hunts Point Compressor Station, gateway remote terminal units (RTU), electric and steam generating facilities, various regulating stations that have some level of control, and pressure-gauge locations. We will evaluate the power requirements for each critical site to determine the acceptable power-outage duration, type of power requirement and potential solution for each site.

³ In April of 2011, the New York City Department of Environmental Protection issued regulations that will require buildings to convert from heavy forms of heating oil to cleaner fuels, beginning in July of 2012. The goal of NYC Clean Heat is to encourage and assist buildings in converting to the cleanest available fuels.

Our review of the existing system will also identify whether primary and secondary communications are available. We will then develop a plan to implement secondary back-up communications where needed. By the third quarter of 2013, we will have reviewed all RTU and communication paths, as well as the power and communication requirements for the critical sites. The Company has initiated a pilot program with Verizon to replace legacy-wired communications with the latest technology, and we have introduced secure wireless from Verizon Wireless as a backup. The Company has also initiated discussions with Verizon to gain a better understanding of the backup and recovery plans for their wired and wireless communications infrastructure.

v. Evaluating Hardening Measures for Remote Operated Valves

After Hurricane Sandy, a periodic inspection and closure test of a remote operated valve (ROV) in Manhattan revealed a malfunction: a ROV closed completely during the test and caused a low-pressure condition at our East River Steam Plant. Such a complete closure is not by design, and could result in the loss of major feeds into the gas transmission system and widespread customer outages on the transmission and distribution systems. The cause of the valve malfunction in this case was saltwater that had corroded control connections to the valve actuator. This ROV was repaired, and the Company has inspected all ROVs located in coastal flood zones to check for further corrosion. To reduce the risk of similar malfunctions should we experience Sandy-like flooding again in our area, we are evaluating hardening measures for our ROV equipment.

To begin the effort, we compiled a list of the ROVs located in coastal flood zones, based on National Weather Service SLOSH Maps, FEMA Firm maps, Superstorm Sandy flood levels, and FEMA Advisory Base Elevation Maps. This list will continue to evolve as new maps incorporating Superstorm Sandy data are published and made available. The Company will then identify potential water intrusion pathways (e.g., into each underground manhole structure or into equipment), and quantify the potential disruption that could result from such water intrusion.

Lastly, the Company will develop location-specific action plans to address the vulnerabilities identified during the assessment. These action plans will incorporate three distinct approaches: (1) removing critical equipment from the flood plain by raising its elevation; (2) preventing the entry of water into ROV manholes through the use of sealing components and waterproof coatings; and (3) hardening sensitive equipment against water damage by installing water-resistant electronics/instrumentation and waterproofing electrical and communications conduits.

The next phase of the evaluation is underway and is scheduled to be completed by the end of June 2013. The engineering of site-specific remediation measures for all locations requiring remediation is scheduled to be completed by the third quarter of 2013. Additional tasks that will be completed as part of this effort include the construction of site-specific remediation measures. These initiatives are scheduled to be implemented by year-end 2014.

vi. Developing New Water Infiltration Mitigation Devices

Following Superstorm Sandy, we found water in sections of the low-pressure gas distribution system due to leaks in flooded areas, and due to damaged customer equipment in flooded basements. This damaged customer equipment resulted in water infiltration that came from the customer's service equipment into the distribution system, causing outages in flooded buildings and also in neighboring buildings. There is currently no device available that could prevent this type of customer-originated infiltration of water into the distribution system. As a result, the Company will begin an R&D effort to develop a device that can mitigate this type of water infiltration into the distribution system, similar to its efforts in developing a valve for high-pressure service vent lines.

An initial evaluation is complete and the Company has prepared design criteria and project objectives. The next steps include vendor selection, device creation, testing and approval

vii. Evaluating Hardening Measures for Regulator Stations

In preparation for the arrival of Superstorm Sandy, Gas Operations preemptively shut down four district regulator stations that were predicted to be flooded. Due to the relatively mild temperature forecast and resulting lower customer demand, this action did not impact the gas distribution system or disrupt service to customers. However, in the event of a larger surge or at a different time of year, customer outages could result. The magnitude of such outages would depend on the storm surge and the forecasted weather and corresponding gas usage levels.

Regulator station components that would be vulnerable to coastal flooding include atmospheric venting systems for pilots and manholes, station pressure recording equipment, and electronic components associated with GOSS/SCADA control and monitoring. If this equipment is disabled in a flood, it could result in loss of gas pressure monitoring and control of the regulator station, fluctuating pressures, and loss of pressure-protection capabilities.

The Company is evaluating hardening measures that would protect regulator stations from flooding and allow the safe operation of district regulator stations during a coastal flood. This program mirrors our plan to harden ROVs: we have compiled an evolving list of the regulator stations located in coastal flood zones, and will assess this list of regulator stations to identify potential water intrusion pathways (e.g., into each underground manhole structure, into equipment, etc.), as well as the potential disruptions that can result from water intrusion. We will then develop location-specific action plans to address the vulnerabilities identified during the assessment.

Like the ROV plan, these action plans will incorporate three different approaches: (1) removing critical equipment from the flood plain by raising its elevation; (2) preventing the entry of water into regulator station manholes through the use of sealing components and waterproof coatings; and (3) hardening sensitive equipment against water damage by installing water-resistant electronics/instrumentation and waterproofing electrical and communications conduits.

Another option to address flooding risk at regulator stations is to take advantage of opportunities to upgrade low-pressure systems to high-pressure, where doing so would result in the retirement of regulator stations currently located within coastal flood zones. The Company will evaluate such

opportunities on a case-by-case basis, as there are additional factors to consider, including (but not limited to) gas demand growth, presence of cast iron or bare steel pipe, and potential for gas conversions in the surrounding area, and will consider the cost effectiveness of this alternative.

The first phase of this effort — identifying flood-prone regulator stations fed by the transmission system — has been completed. The next step is to identify the impacted regulator stations fed by the distribution system and to identify the systems into which they supply gas. We will use modeling software to determine whether regulator stations in flood zones can be preemptively shut down during a coastal flood event without adversely impacting the rest of the distribution system. This analysis is scheduled to be completed by the end of August 2013.

Additional tasks involved in this effort include the evaluation of regulator stations to determine whether remediation work is required, the engineering of site-specific remediation measures for all regulator stations that cannot be shut down preemptively, and the construction of site-specific remediation measures for all regulator stations that cannot be shut down preemptively. All activities related to this effort are scheduled to be completed by the end of the second quarter of 2015.

K. Reinforcing Tunnels

i. Protecting the First Avenue Tunnel from Water Infiltration

During Superstorm Sandy, water entered several tunnel facilities, including the First Avenue, Ravenswood, Astoria, Hudson Avenue, Flushing, and 11th Street tunnels. These tunnels contain steam mains, gas mains, and/or high voltage electric feeders that may need to be de-energized for safety if the tunnels are significantly flooded. During the storm, significant flooding and a power outage forced the First Avenue Tunnel out of service. The entrances to this tunnel consist of street-level vent gratings that allow water to enter the tunnel during a coastal flood. Tunnel de-watering pumps could not be operated due to the power outage; as a result, the tunnel was flooded by over 500,000 gallons of water. The resulting damage required a lengthy restoration process of pumping out the water, replacing steam pipe insulation as well as other repairs, and restoring service.

To prevent future flooding of the First Avenue Tunnel, Con Edison will design and fabricate vent cover plates that can be installed prior to a storm. These plates will prevent floodwater from entering the tunnel through the open vent gratings. The design will incorporate a vent stack to bleed ambient heat and steam from the tunnel, a new closure plate at the 36-inch steam-main point of entry, and backup power generation so that pumps can remain operational during a power outage. This project would allow faster restoration of steam service and may allow the steam main to remain in service, depending on the nature of the weather event. It will also prevent street-level water infiltration that can damage electrical circuits, controls, piping and tunnel structures. This hardening project will be completed by the end of 2013.

ii. Protecting Tunnel Entrances from Water Infiltration

With the exception of the First Avenue Tunnel, all of our tunnels have “head-house” entrances that are in close proximity to bodies of water. Currently, these head-houses are either sheet metal or masonry structures that are not designed to withstand coastal flooding. To protect the tunnels against future storms, hardened and reinforced concrete structures will be constructed to replace the existing head-houses. The proposed hardening projects for Astoria, Ravenswood, Hudson Ave, 11th Street, and Flushing Tunnels will be completed in 2015 and 2016. The goal of the project is to provide the head-houses and tunnels with perimeter hardening and protection from flooding. The design basis for all storm-hardening work will exceed by two feet the levels prescribed by the 2013 FEMA 100-year ABFE flood maps. The project consists of raising the equipment in the yards surrounding the headhouses above flood levels and protecting equipment such as oil-water separators by constructing flood-barrier walls. The plan also provides for emergency back-up power.

As part of the entrance-hardening plan, certain head-houses will be rebuilt to acceptable standards, while others will be hardened with flood doors and floodgates. Other control measures being taken to prevent water from infiltrating the tunnels include the construction of barrier walls and the sealing of cracks and other penetrations in the interior tunnel walls. We will also add improved pumping operations to pump out water that infiltrates. Lastly, we will install remote cameras and lighting for remote monitoring.

L. System-Hardening Operational Communications Systems

Con Edison owns and operates a private communications network called the Corporate Communications Transmission Network (CCTN). This network enables secure communications for our supervisory control and data acquisition (SCADA) system and our voice and video systems. The network provides a secure computing and electronic storage environment. Over 100 locations host the CCTN equipment, which is used in secured communications rooms, communications huts, and enclosures at various facilities. Since the late 1980s, Con Edison has installed over 400 miles of fiber-optic cable to support our CCTN communications services.

CCTN also provides multiple radio systems that support field crews and smart-grid applications. These private radio systems include an 800 MHz system, called iCON, that is used for voice communications among control centers and field personnel, and multiple applications operating at 900 MHz frequencies that support the distribution automation system (DAS). These systems share an antenna infrastructure throughout Con Edison’s service territory, much like wireless cell towers that connect cell phones in various locations.

The continuous operation of CCTN is essential to the day-to-day operation of our energy delivery systems. During severe weather events, CCTN plays a major role in our ability to complete rapid restorations and coordinate large-scale restoration efforts. To ensure that CCTN is fully functional when we need it most, Con Edison has developed a communications reinforcement program to complement the rest of its infrastructure-hardening projects.

i. CCTN Fiber Loop

A new CCTN fiber loop will be installed to provide telecommunications services to the bulk power transmission substations in Lower Manhattan that experienced prolonged outages to their non-CCTN communications services during Superstorm Sandy.

To complete the required fiber loop, we will deploy four new fiber spans between 2014 and 2016. Additionally, we will replace two vulnerable CCTN huts at critical Company facilities in low-lying areas in Staten Island.

The planned fiber spans offer the following other benefits:

- Reduce reliance on external telecomm carriers
- Avoid construction delays and costs associated with telecomm carriers
- Offer higher reliability level than carrier circuits
- Offer highest level of cyber and physical security
- Allow us to scale capacity over time
- Improve recovery time in the event of communications failures

ii. Reinforcement of Antenna Systems

To ensure that our antennas remain intact during storms with high winds, we will reinforce antenna systems and implement backup generators at several critical CCTN and radio sites.

iii. Long-Term Communications Hardening Projects

The following additional work is planned and will be completed by the end of 2016:

- Evaluate antenna and line systems at all radio sites and radio dispatch facilities with external antennas (more than 50 locations). Redesign, reinforce, and replace antenna systems where necessary.
- Establish backup generators and tanks at the Buchanan, Graymoor and North Castle CCTN radio facilities and procure mobile generators for tactical deployment at other field locations.

* * *

SUMMARY ACTIONS

In sum, we have committed to the following actions aimed at ensuring that our systems are able to withstand future extreme weather events.

DESIGN STANDARDS AND SYSTEM NORMALIZATION

Complete

- 1. Benchmark with international organizations on design standards and storm-hardening**

measures

To be completed

2. Develop new design standards to prevent or mitigate damage in a storm similar to or larger than Superstorm Sandy (December 2013)
3. Make repairs and replacements necessary to return systems to normal operations (December 2013)

UNDERGROUND SYSTEM

Complete

4. Install isolation switches in Brighton Beach network on primary distribution feeders

To be completed

5. Install submersible equipment in flood-prone areas of Con Edison's underground network (2014-2016)
 - a. 120/208 Volt units – replace transformer/network protector units in Category 1 and 2 flood zones with single submersible units
 - b. 265/460 Volt units – install water-resistant network protectors in Category 1 and 2 flood zones
6. Install isolation switches to implement sub-network concept in Fulton and Bowling Green networks (2014-2016)
7. Install isolation switches at 70 underground network locations in Category 1 and 2 flood zones to allow de-energization of high-tension customer equipment (2014-2016)

OVERHEAD SYSTEM

Complete

8. Create new clearance standards for vegetation management in certain areas; implement a Hazard Tree Program and Branch Reduction Program
9. Continue to track and patrol worst-performing overhead distribution segments; preemptively trim in areas of potential tree contact

To be completed

10. Conduct outreach on vegetation management issues to inform municipalities and residents of our programs and give them opportunities to provide feedback (December 2013)
11. Conduct vegetation management studies and benchmarking surveys to identify additional best practices (December 2013)
12. Install devices to reduce overhead circuit size to 500 customers or less for Con Edison, and 250 customers or less for O&R (2014-2016)
 - a. Vacuum reclosers at 131 locations

- b. SCADA-enabled gang switches at 424 locations
- 13. Isolate overhead open wire spurs from feeder main runs (2014-2016)
- 14. Deploy measures to improve overhead auto-loop reliability, such as aerial cable and breakaway components (2014-2016)
- 15. Pursue selective undergrounding of distribution circuits that will have the highest impact on storm-related outages or that serve critical community resources (2014-2016)

SUBSTATIONS

Complete

- 16. Mitigate impact of storm similar to Sandy at substations that sustained significant damage during Sandy: East 13th Street, East River, East 15th Street, East 36th Street, Seaport, Trade Center, Gowanus, Goethals and Fresh Kills substations

To be completed

- 17. Prepare for more intense storms at substations impacted by Sandy as well as other stations, including West 49th Street, Academy, Sherman Creek, Hellgate, and Bruckner substations (2014-2016)

GENERATING STATIONS

Complete

- 18. Mitigate impact of storm similar to Sandy at generating stations that sustained significant damage during Sandy: 59th Street, 74th Street, and East River stations

To be completed

- 19. Prepare for more intense storms at generating stations impacted by Sandy as well as 60th Street and Ravenswood steam stations (2014-2016)

DISTRIBUTED GENERATION

Complete

- 20. Post information regarding safe installation of residential back-up generation on website

To be completed

- 21. Evaluate use of a plug that can be installed behind meter pans to enable automatic transfer to back-up generation (September 2013)
- 22. Identify technical arrangements that would allow for customer-owned solar generation to operate independent of the grid (September 2013)
- 23. Monitor development of solar plug device that would allow customers to operate appliances using the output from a solar system operating independent of the grid (September 2013)

24. Consider developing a dispatchable back-up generation program to improve the reliability and environmental profile of large customer-owned emergency generation (2014-2016)

Ongoing

25. Work with stakeholders to identify critical infrastructure and essential services that would benefit from combined heat and power (CHP) systems during outages

GAS SYSTEM

To be completed

26. Evaluate long-term program for replacement of low-pressure gas systems with high-pressure pipe in flood zones (September 2013)
27. Evaluate measures to harden communications networks that feed Gas Operations Supervisory System (September 2013)
28. Install 9,200 valves on gas high pressure service vent lines within flood zones (2014-2016)
29. Initiate targeted program to replace 15,000 to 20,000 feet of low-pressure gas cast-iron and bare-steel pipes in flood-prone areas (2014-2016)
30. Evaluate measures to harden remote operated gas valves in coastal flood zones, including communication and electric supply components (2014-2016)
31. Develop new device to prevent water infiltration and migration into the gas system from flooded customer equipment (2014-2016)
32. Evaluate and implement hardening measures for gas regulator stations in coastal flood zones (2014-2016)

TUNNELS

To be completed

33. Protect First Avenue tunnel from water infiltration with vent cover plates (December 2013)
34. Construct reinforced concrete head houses for five tunnels (2014-2016)
35. Deploy flood doors, gates, and additional de-watering capability at tunnel entrances (2014-2016)

OPERATIONS COMMUNICATIONS NETWORK

Complete

36. Reinforce Corporate Communications Transmission Network antennas for 2013 storm season

To be completed

37. Install new Corporate Communications Transmission Network fiber optic loops to transmission substations in Manhattan (2014-2016)

38. Redesign, reinforce, or replace equipment at antenna sites where necessary (2014-2016)

39. Establish backup generators at three radio facilities and procure mobile generators for tactical deployment at other radio locations (2014-2016)

II. IMPROVING ESTIMATED TIMES OF RESTORATION AND ENHANCING STORM PLANNING AND RESTORATION PROCESSES

The Company has a long history of preparing for and responding to emergencies across our service territory. We rely on comprehensive emergency management plans, such as our Corporate Coastal Storm Plan (CCSP), to guide our actions before, during, and following major outage events. We refine our emergency plans after each major event to capture lessons learned and to adjust protocols based on actual experience. Superstorm Sandy challenged many of our previously developed plans, and we are in the process of rethinking and updating our plans to account for our challenges and successes responding to this unprecedented event.

During the two weeks following Superstorm Sandy, the Company managed one of the largest restoration efforts in modern history. In addition to implementing our CCSP and managing thousands of Company employees as they fulfilled roles outside of their usual job responsibilities, we also brought in external overhead and underground crews from 30 states and two Canadian provinces. By November 11, 2012, base-camp mutual assistance workers, contracted electricians, damage assessors, and wire guards made up a supplemental external workforce of over 6,000 people. Managing logistics, work schedules, materials, and other resources for so many people gave us a new perspective on large-scale outage management. We are building on that experience to improve our ability to acquire and manage resources in the future.

One of the Company's key priorities is improving our estimated time of restoration (ETR) capabilities, especially in our ability to provide customer-specific ETRs. Customers need accurate information in the hours and days after a major storm in order to make plans for the duration of the outage. We are redesigning our restoration process from the ground up to improve information flow and to restore service faster. Critical to improving our ability to provide ETRs is the ability to expedite and improve our restoration planning process, particularly in the initial damage assessment stage. All utilities have similar challenges related to ETRs, but we are committed to advancing our capabilities as a company and as a leader in our industry.

We will be working with stakeholders, regulators, and other industry members to further refine our storm planning and restoration processes as we move forward, and we will continue to lead the industry to develop new practices and new technologies that will further improve the service we provide.

A. Building on Recent Storm Experiences

The guiding principle for the Company's post-storm review process is our corporate commitment to continuous improvement. We conduct after-action reviews following every major incident in our service area, and we use these reviews to compile a full assessment of our performance. When Tropical Storm Irene and the October 29, 2011, nor'easter snowstorm caused high numbers of customer outages across

our service territory, we responded, recovered, and then performed after-action reviews so that we could continue to improve our processes. In those after-action reviews, we identified and implemented the following improvements:

- *Contractor database.* In response to difficulties obtaining overhead-line crews for outage-restoration work following Irene, Emergency Management developed a database of overhead and underground contractors. The database includes each contractor's capabilities, storm rates, liability insurance, union affiliation, and emergency contact information.
- *Daily briefing bulletin.* To better enhance restoration-related communication in the field, we developed a process to provide a daily briefing bulletin for employees, mutual assistance crews, and contractors. The daily bulletin typically includes safety messages, contact information for key personnel, updates on customer outage counts, restoration priorities, global ETRs, and dry/wet ice distribution information.
- *New snowstorm response standards.* To better respond to winter storms, the Company evaluated new mobilization triggers for storms that involve heavy, wet snowfall when significant foliage is still on trees. Based on our research, we know that precipitation with a snow-to-liquid ratio of approximately 8:1 or less has the potential to cause significant damage to trees and branches. These damaged trees and branches then cause damage to the Company's electric distribution system. The Company has revised its Electric Emergency Response Plan to include a new process to determine the appropriate mobilization level in response to forecasted snow events. Whenever a snowfall of 2" or greater, with a snow-to-liquid ratio of 8:1 or less, is forecast for the Company's service territory, an inter-regional conference call will be held to determine the appropriate mobilization level, with consideration given to the amount of foliage on the trees and predicted wind speeds.
- *Expanded sourcing of critical resources.* The Company has expanded its contract resources to reach beyond local distributors of dry ice, which is critical to restoration efforts. The Company has arrangements with dry ice manufacturers located in New Jersey, Virginia, and Michigan.
- *Wire-guarding improvements.* Following Tropical Storm Irene, the Company assembled a cross-functional team to evaluate ways to enhance our site safety process of "wire guarding." Crews performing this critical function secure downed wires in the community and safeguard the public from those wires. This team identified and implemented a number of enhancements to the existing process, including:
 - Identifying additional workforce that can be trained and utilized for site safety
 - Securing additional vehicles for wire guard personnel through contracts with car rental companies
 - Securing the availability of additional wire guard personnel through contracts with vendors
 - Enhancing the Site Safety Management System used to track down wires and assign safety personnel
- *End-to-end process review.* At the end of 2011 the Company launched an "Outage Management Business Process and Technology Review." In early 2012, we hired a leading management-consulting firm to conduct an end-to-end review of our storm response and restoration

processes. The review documented existing storm processes and identified opportunities to improve our efficiency and effectiveness in storm response, as well as areas where we could leverage existing or new technology to enhance these processes. As part of the end-to-end process review, the consulting firm facilitated a series of workshops with over 120 subject-matter experts, conducted various benchmarking activities, and developed an inventory of opportunities for improvement. These opportunities for improvement were categorized in three major areas: Storm Planning and Readiness, Restoration Planning and Operation, and Execution. The Company has created teams to complete a more in-depth evaluation of these opportunities, as well as to develop implementation plans for those items that we plan to incorporate into our overall storm response program.

Following our response to Superstorm Sandy, we conducted after-action reviews with our teams. These post-Sandy reviews built on our 2011 after-action reviews. The results of the most recent reviews are reflected in this plan and are also documented in the Company's storm filing to the New York Public Service Commission (PSC).

B. Assessing Internal Staffing and Assignments

In light of our experiences during Superstorm Sandy and other recent storm events, Emergency Management and Human Resources have been reviewing and updating employee storm assignments across the Company.

In 2006, after eight damaging hurricanes hit the southeastern U.S. during a two-year span, we began to develop a Corporate Coastal Storm Plan (CCSP) to address our response to a



major hurricane in our service territory. The CCSP identified resources that the Company would need to complete its restoration process in the aftermath of a major storm. Given that our primary resource during large-outage events is our workforce of approximately 15,000 employees, the CCSP includes specific guidelines as to how these employees will be utilized during a large-scale restoration process.

These guidelines are set forth in the System Emergency Assignment (SEA), which is a central component of the CCSP. The SEA details the storm assignments of employees throughout the Company, and ensures that we maximize our workforce for the most effective response possible. Since the SEA program was put in place in 2007, we have made several improvements to the program, based on our experience

handling storms. Each year we conduct a review of the SEA program to refine our emergency assignments. However, Superstorm Sandy was so large that it greatly impacted multiple regions and all of our energy delivery businesses. Sandy's scope forced us to shift employees to different roles based on emergent priorities. Therefore, this year's SEA review process is focused on adjustments that are needed based on our assessment of challenges and successes during Sandy. We are working with senior-level representatives from each of the Company's departments, and with the members of the Corporate Coastal Storm Team, to achieve the following:

- Update storm assignments to reflect recent storm experience. As the Sandy restoration progressed, the type of work needed changed. At the outset of the restoration process, site safety support (i.e., wire guarding) was in high demand, but once large numbers of mutual assistance crews started to arrive, the need shifted towards logistics and support for staging and base camp areas.
- Review assignment changes with participating departments and organizations based upon employee skills. For example, employees with overhead line or logistics experience will get specific assignments that utilize those skill sets.
- Conduct advance storm assignment training, when necessary, and provide just-in-time training for all others.
- Develop on-the-job training modules for each storm role and incorporate into these modules the Company's training catalogue. This will enable the Company's logistics team to track and identify qualified, pre-trained employees for storm assignments prior to future events.

Under the current version of our SEA program, all employees will be given a primary and secondary storm assignment, at a minimum. We will make additional assignments as necessary to address emergency priorities and to allow shifting of personnel based on the needs presented by the situation at hand. For roles that we cannot fill with internal staff or known contractors, we are identifying contractors that can be used to fill these roles during storm response. (See the next section for additional information on this effort.) The Company's internal staffing update and assignment notifications will be completed by June 1, 2013.

Finally, in parallel to our internal efforts, the Company has benchmarked with other utilities to assess their methodology for identifying storm roles and their process for assigning and deploying their employees during and after storms. We learned that most companies have been similarly challenged with managing many priorities, but few have taken the step of designating storm assignments for all employees.

C. Improving Mutual Assistance and Contractor Support

We rely on contractors and mutual assistance utility crews to support many aspects of our storm response. In the days leading up to a forecasted storm's landfall, the Company relies on a formal protocol to guide its acquisition and allocation of mutual assistance and external resources for both Con Edison and Orange and Rockland. The protocol outlines factors that are considered in the decision to

employ mutual assistance crews and other external resources – e.g., likelihood of the event occurring, expected timeframe, potential for the event to cause widespread damage, and other events happening in the same timeframe – and responsibility for key action items as the storm progresses.

The majority of our storm contractors are hired to support overhead restoration, logistics, wire-guarding, and damage assessment. In preparation for future storms, we have identified additional contractors to support each area. After Tropical Storm Irene in 2011, the Company utilized 140 full-time equivalent (FTE) contractors for wire guarding, and 492 FTE contractors for damage assessment. During the Superstorm Sandy response, the Company increased the number of contracts, increasing the wire-guard support personnel by approximately 170% and damage assessment support by approximately 70% compared to Irene.

During future storm responses, local and regional contractors, as well as contractors from outside of our region, will be deployed to regions based on personnel needs. To the extent possible, we have pre-established purchase orders with contractors to facilitate their expedited response.

For forecasted storms, particularly those that are expected to impact entire regions or even multiple regions like the eastern seaboard, securing mutual assistance can be challenging at best, and can require securing resources from more distant utilities. That’s because utility companies hold their crews – both



overhead lineman crews and underground network crews – until they are assured that they are out of harm’s way, which sometimes can last until the day before the storm makes landfall. For large storms, there are many companies seeking mutual assistance. Political factors may also come into play, as states may not release crews to areas where the need is greater, further complicating the process.

Our plan for future storms is to be more ambitious in securing mutual assistance and contractors as a storm approaches. This means we will strive to secure crews early enough to have them in place or on the way as the storm makes landfall. Securing crews earlier makes it more likely that we will have sufficient workers on hand to begin the restoration process when the storm ends. However, there is always the risk that a storm could take a turn and veer away from its forecasted path, obviating the need for the additional crews. In such cases we would release mutual assistance crews to serve in areas where they are most needed, typically where the storm went, but it is possible that a storm could stay out to sea, and no one is impacted. While that would be the best outcome for customers, the Company

would still be responsible for the additional cost of bringing crews to its service territory that were not used. While we would seek to use those crews as best as we can, there could be incremental costs that need to be addressed through a regulatory process. As described further in Section III, we plan to work with the PSC to mitigate this risk.

In parallel, the Company is working with the Edison Electric Institute (EEI) and EEI member companies to improve the coordination of mutual assistance and contractor resources. The overarching goal is to ensure that Regional Mutual Assistance Group (RMAG) processes are structured to facilitate optimal allocation of resources during events that affect our entire region, as Superstorm Sandy did, and to allow for allocation based on need rather than allocation based on which companies made requests earliest. In some cases, requesting support prematurely can result in incurring unnecessary costs for storms that do not ultimately do damage.

The Company is participating in an executive-level working group with fellow EEI members to reach agreement on new processes and principles for mutual assistance, which could be invoked during “National Response Events” that affect multiple companies, states, and RMAGs. During such an event, available mutual assistance resources (both utility employees and contractors) would be allocated proportionally to companies based on their needs. We are also working with the EEI, other utilities, and federal and state government agencies to minimize travel impediments for mutual assistance workers responding to a major event.

Once mutual assistance workers have begun restoration work, they are often the front lines of communication with our customers. We expect them to adhere to the Company’s guidelines for safety and customer service at all times. In Section III of this plan we describe steps we are taking to clearly articulate our expectations for visiting crews and give them the information they need to communicate with customers, including helping them to inform customers of the best way to get timely and accurate information.

D. Expanding Partnerships in Facilitating Restoration

To supplement our contractor and mutual assistance resources we are working with municipal officials to identify new ways to collaborate on storm preparation and response. We have a strong record of partnership with municipalities on vegetation management and post-storm road clearing, and following Sandy’s devastation, officials offered to provide additional help where practicable. As we meet with municipal partners to discuss post-Sandy plans we are identifying potential opportunities where municipalities, working with the Company, could further facilitate the restoration process. We have already invited municipal officials to participate in Company storm simulations (referred to as tabletop exercises), as discussed in more detail later in this section. Other opportunities under consideration include municipalities playing a role in dry ice distribution, as well as facilitating the collection of field information as part of the Company’s damage assessment process, which could include training for municipal employees (e.g., police, fire, etc.) to use new mobile damage assessment tools. Another area is to work on expedited processes for local officials to certify, consistent with their requirements, that

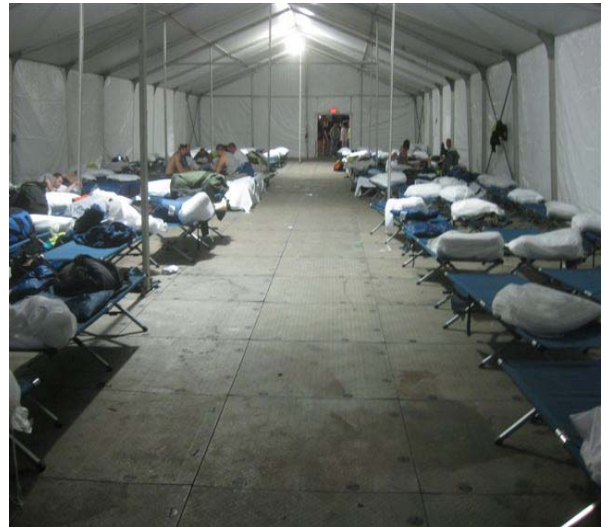
customers that have experienced damage to their equipment are safe to restore. We plan to continue to work with municipalities to identify proactive efforts that, in the event of a future emergency, would facilitate more rapid restoration of customers.

Our plans further engage telecommunications companies. Specifically, we envision a telecom liaison on site in our restoration process, and perhaps a reciprocal liaison arrangement for their process, to improve coordination of restoration activities for both our services and the services of the telecommunication companies, and also to better consider priorities in a joint manner. Moreover, we expect that advance planning would be another benefit of an enhanced relationship and more open dialogue with telecommunication providers, including joint drills and improved emergency planning. We are already participating in a PSC-sponsored effort to facilitate these enhancements.

E. Managing Resources and Logistics

We have identified the following actions that will further enhance our ability to manage resources and logistics during storm response. All of the actions below will be completed by early June 2013.

1. *Identify staging sites and determine the function of each site.* We have identified thirty-three potential staging sites to support restoration operations in New York City, Westchester County, and O&R territory. Each location has been evaluated, and its potential uses have been identified. We developed a matrix to highlight which locations are suitable for vehicle parking, material distribution, and/or full-scale base camps, which would support both overnight accommodations for support crews with a staging location for supplies. We have also completed the following work related to the staging areas:



- *Develop staging area laydown plans.* We have hired vendors that are beginning to evaluate and produce laydown drawings for each location. These drawings will detail how the staging area will be established to maximize vehicle parking, traffic flow, material distribution, and crew-care functions.
- *Develop a staging area model that includes ancillary equipment needed to support the site.* We outlined the critical pieces of equipment and infrastructure needed for a staging area and included the information in our models. Much of this equipment is not owned by the Company and must be acquired through vendor contracts.
- *Create a list of additional support services/items Central Field Services needs when providing storm support.* We have provided our Purchasing department with a list of additional

services required for an effective staging operation. These services include generators, mobile trailers, and other equipment rentals.

2. *Evaluate the effectiveness and cost of utilizing an accommodations vendor.* We confirmed that our crew and workforce accommodations vendor was effective in procuring lodging for the Company during Superstorm Sandy and the nor'easter snowstorm the following week. The cost for these services was reasonable, and using a vendor for lodging needs frees up Company labor to undertake other logistics activities. We will continue to monitor the costs and benefits of utilizing a vendor in future events and we intend to competitively bid future lodging contracts to further manage cost.
3. *Integrate rental car support into the Logistics Operation Control Center (LOCC).* The Company's Transportation department identified the need to establish a rental car coordinator in the LOCC, or in an alternate location, prior to storm events. For employees that do not have access to a vehicle, and are unable to report to their emergency assignments via public transportation, the Company has a policy of providing a limited number of rental vehicles in situations that require "all hands on deck." The rental car coordinator will manage the process of procuring rental vehicles for Company employees, as needed. Our Transportation department has also made arrangements with a rental car provider that will allow Company employees to acquire rental vehicles on an emergency basis at a location near their residence or another location.
4. *Establish contracts with base-camp providers.* Our Purchasing department has met with base-camp vendors and is in the process of issuing an RFP for base-camp services, including sleeper trailers and tents, catering services, showers, hand-washing stations, water, toilets, laundry services, and security.
5. *Set up procedures for resource tracking.* In order to improve the management and coordination of internal and external resources during large-scale events, we created an internal team to implement a software product called Resources-on-Demand. This multi-user software, currently being used by 14 major utilities, was developed to improve the tracking, allocation, and logistics associated with restoration resources. Resources-on-Demand will allow us to track personnel movements, crew size (internal, contractors, and mutual assistance), fuel consumption, equipment, and other associated support logistics during large-scale restoration events. Additionally, the software will enable timely monitoring of resource consumption and cost. The system will also improve our overall resource allocation when restoration efforts involve multiple areas. The system is scheduled for a pilot program, which will begin by June 1, 2013.

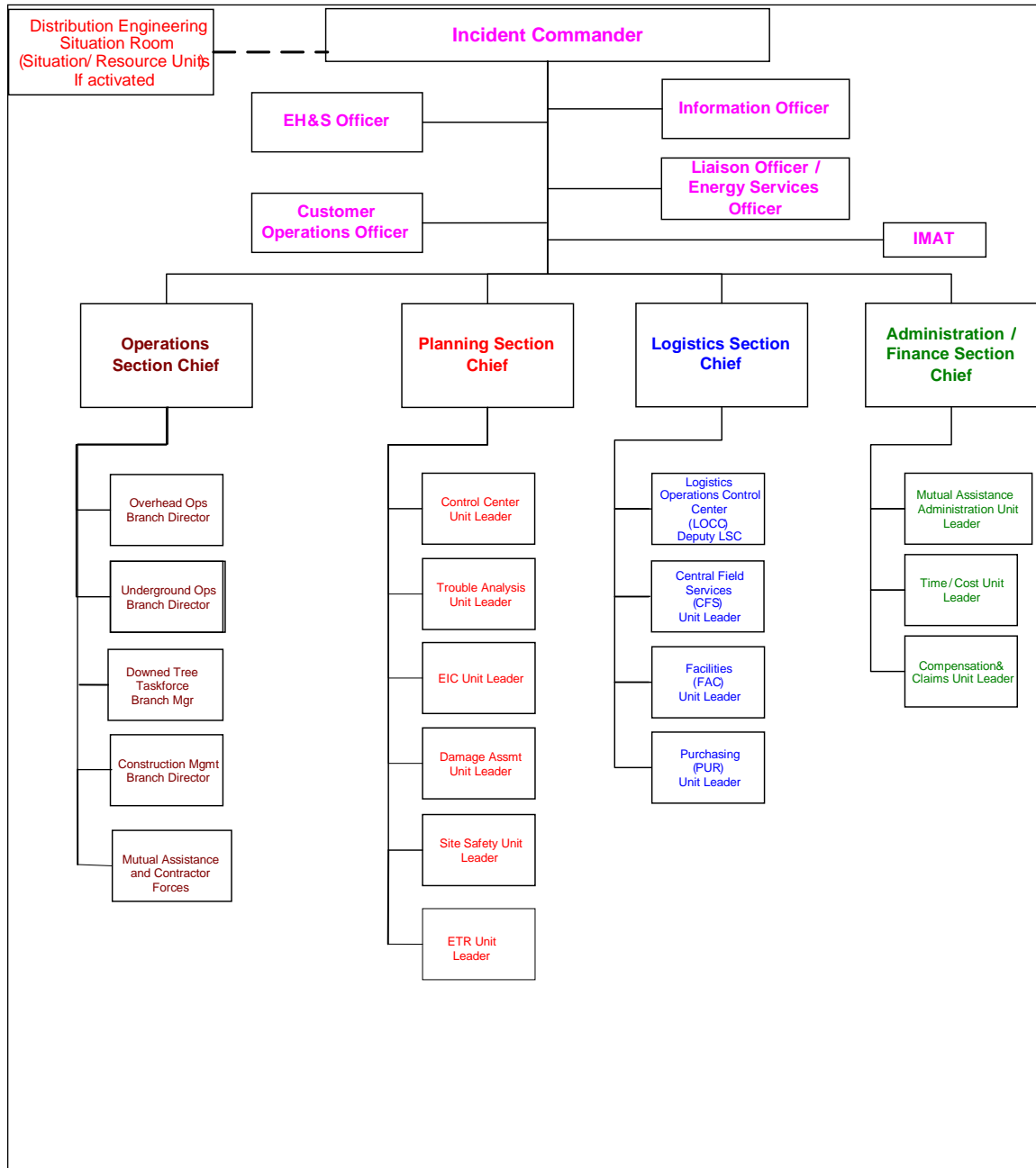
F. Updating Our Emergency Preparedness Plans

In light of the challenges we faced during Superstorm Sandy and other recent storms, we are re-evaluating all of our emergency preparedness plans, incorporating lessons learned and making adjustments to protocols based on real-world experience. Many changes have already been made, as noted below. But we know our job is not done. Part of this ongoing effort involves benchmarking to see what other utilities have done to update their plans and to learn whether there are best practices to be adopted. We have also undertaken additional efforts to consider the spectrum of possible extreme

events that could impact our facilities, systems, and operations. The effort to update our plans is continuous. It is a process, and not a singular event, and will continue to evolve as we continue to learn.

Each year, Con Edison and O&R submit Electric Emergency Response Plans to the New York State Department of Public Service (DPS). The Emergency Response Plans include detailed protocols for operating groups; procedures for mobilizing and staffing the Corporate Emergency Response Center (CERC), which allows for high-level communication and coordination among all groups participating in emergency response, as well as governmental agencies and other stakeholders; System Emergency Assignments for all employees; and an overall incident command structure that clearly defines the chain of command during emergencies. For reference, the incident command structure for Con Edison's Electric Emergency Response Plan is outlined in Figure 4, below. In addition to the electric plans, the Company has developed a number of response plans that cover various types of emergency situations. For example, the Company has plans for major gas and steam leaks and outages, pandemic flu, hurricanes and coastal storms, and circumstances that may threaten business continuity.

Figure 4: Con Edison Electric Emergency Response Plan Incident Command Structure



In addition to our proactive efforts to update our emergency preparedness plans, we are preparing to comply with new statutory requirements related to emergency planning for electric utilities. These requirements are being implemented by the Public Service Commission (PSC) under the Public Service Law. The new law – passed in 2013 as part of the NY State Budget – authorizes the PSC to review and approve utilities’ emergency preparedness plans, and to deny restoration costs if a utility fails to implement such plans.

Accordingly, the PSC recently issued Con Edison and O&R's Emergency Response Plans for public comment. Leadership from the PSC's Department of Public Service have indicated that they will work with each utility to refine its plans based on the feedback received, prior to presenting a final plan to the Commission by December 15, 2013. Based on these new regulatory developments and our commitment to continuously improve, we anticipate that our emergency preparedness plans will continue to evolve.

Below, we summarize the current status of our Emergency Response Plans:

i. Electric Emergency Response Plan

On April 1, 2013, Con Edison and O&R submitted their respective updated Electric Emergency Response Plans to the PSC. Major updates include the following:

- Updated Emergency Response Organization to add new roles related to mutual assistance
- Incorporated use of social media, including preemptive notifications of pending events
- Added new section on preemptively de-energizing an area or neighborhood for safety, or to prevent equipment damage
- Updated heat triggers to include 2013 projected electric peak load
- Updated the organization charts, storm classification matrices, and regional staffing tables in the Underground Contingency Heat Event Response Procedure and Winter Related Underground Contingency Procedure

ii. Corporate Coastal Storm Plan

Updated CCSP and organization-specific coastal storm plans were filed with the PSC on April 1st and included several major post-Sandy changes:

- Incorporated Superstorm Sandy flood levels as the new criteria for flood planning and mitigation at our facilities
- Refined the trigger mechanism for the activation of the CCSP to focus on a storm's projected impact on customer outages and on our energy supply systems based on multiple factors, rather than on a storm's Saffir-Simpson rating, which only considers wind speed
- Shifted decision matrix items forward to take a more proactive approach to storm preparation, including an earlier assignment of an incident commander
- Moved some steps forward, when cost-effective, for better distribution of workload as the storm approaches
- Updated storm assignments based upon need assessments from CCSP team members (as described above in the Internal Staffing Assessment section) with emphasis on service-support needs and logistics capabilities
- Added pre-season requirements:
 - Review and update of materials and equipment required before, during, and after a significant coastal storm
 - Review and update of internal staffing requirements and assignments to support other organizations (System Emergency Assignment)
 - Review and update of staging and evacuation areas

- Incorporated enhancements to address:
 - Restoration of customers' power after flooding, including a new customer self-certification protocol that cuts down on the steps required to restore service
 - Preemptive shutdown of power to protect the electric system
 - Use of social media in communications with customers
- Moved the requirements and decisions to evacuate facilities forward in the decision matrix

iii. Identifying Potential for Extreme Events in Our Service Territory

Con Edison has reviewed the extreme events that could impact its service territory to see if it needed to update any other emergency preparedness plans. We assembled a cross-functional team including representatives from Enterprise Risk Management, Engineering, Insurance, and Emergency Management. The group conducted its own research and also contacted several external resources including consulting firms, Columbia University, and the University of Pennsylvania's Wharton School. Based on its findings, the group took the following actions:

- Developed a list of approximately 35 extreme events, encompassing a range of probabilities and impacts. The events were predominantly natural, but included some man-made events as well. Natural events include earthquake, wildfires, and heat waves. Man-made events include terrorism, cyber-attack, and active shooter scenarios.
- Surveyed Company subject matter experts (SMEs) to determine the extent to which any existing plans, procedures, or policies address the identified extreme events. The group found that most operating departments have plans covering the more common weather events (such as hurricane, heat wave, flooding), while most do not have plans for extreme conditions (such as active shooter, tsunami, or geomagnetic disturbance i.e., solar flare).
- Through our emergency management survey, we asked other companies what extreme events they plan for, and whether they plan for each type of event individually. More than 40 companies responded. While weather and other natural disasters are often planned for, some of the other events that are less commonly addressed include active shooter, civil unrest, mass-casualty incidents, and volcanic eruption. Most survey respondents try to cover these events through a general all-hazards plan rather than through individual event plans.
- Based on the survey results, we are evaluating current plans and will determine if we need to either develop new plans or modify existing plans.

G. Conducting Full-scale Storm Drills

Each year the Company completes a Corporate Emergency Response Center (CERC) Exercise to simulate the core functions of the CERC during different emergency scenarios. In past years we have completed exercises simulating major snow storms, hurricanes, gas transmission line failures, bomb threats and terrorist attacks. Depending upon scenario, we collaborate with various organizations, including other utilities, the NYC Office of Emergency Management, Westchester Department of Emergency Services, NYC Police and Fire Departments, the FBI, and many others to develop and execute each drill.

This year, we focused on the internal processes that are most essential to a timely, successful restoration after a major storm. The 2013 CERC Exercise, completed June 10th, presented an opportunity for both Con Edison and O&R to test critical storm restoration processes, validate their updated emergency response approaches, and identify further opportunities for improvement.

Developing this full-scale exercise was a multi-step process: prior to conducting the full-scale storm drill exercise, we conducted a series of smaller exercises. The first of these was a series of facilitated discussion-based exercises known as “tabletop exercises.” Each of the tabletop exercises focuses on specific critical processes, including pre-storm resources allocation, restoration planning and estimated time of restoration development, damage assessment, site safety, and municipal liaisons.⁴ Next we completed a combination of three additional tabletop exercises and one field exercise that focused on components of our filed Con Edison and O&R Emergency Response Plans (ERP).

These initial steps provided the foundation for the capstone full-scale exercise that took place June 10, 2013. The full-scale exercise simulated the initial response period after a large storm that produced significant damage to the overhead electric system in both the Con Edison and O&R service territories.

Following are highlights of the tabletop exercises and field exercises that we are planning, including new processes we have identified:

- The Restoration Planning Exercise includes facilitated discussion of damage assessment, site safety, and the municipal liaison processes, as contemplated in the 2013 ERP.
- The Pre-Storm Exercise simulates our inter-regional call process in preparation for a storm and focuses on resource acquisition and allocation based on a projected severe weather forecast, in accordance with the 2013 ERP.
- The Logistics Exercise focuses on the logistical planning in preparation to receive outside resources via Company contractors and mutual assistance.
- Field exercises concentrate on four key processes:
 - Damage assessment
 - Site safety
 - Municipal liaison
 - ETR planning

The purpose of the tabletop and field exercises that preceded the full-scale exercise was to further familiarize storm personnel with our updated ERPs. Participants concentrated on an exercise scenario storm modeled after the March 2010 nor’easter. The scenario was designed to allow all four Con Edison Electric Operations regional participants and O&R staff, supported by Damage Assessment, Site Safety and Logistics teams, to actively compare and unify their storm preparations and response actions. The

⁴ The municipal liaison tabletop exercise described in this section refers to an internal exercise to practice the Company-specific procedures associated with the Muni Program. We are conducting a separate series of tabletop exercises with each of our municipal partners in 2013 to focus on interactions within our Muni Program. We provide information on the joint tabletop sessions in Section III of this report.

drills and exercises have given employees a practiced baseline for upcoming storms. They have also given us an opportunity to pilot and further refine many of our post-Sandy projects, such as computer-tablet based damage assessment, use of Resources-on-Demand software for mutual assistance crewing management, transportation, and site-safety enhancements.

Finally, in June, we held the full-scale CERC Exercise, and invited major stakeholders, including New Jersey Board of Public Utilities staff, Pennsylvania Public Utilities Commission staff, NY State DPS staff, NYC OEM, the Westchester County Department of Emergency Services, and the emergency management offices of Bergen, Orange, Passaic, Pike, Rockland, and Sullivan counties to observe the exercise. Participants used the 2013 Electric Emergency Response Plan to respond to a large nor'easter storm with significant power outages.

Participants were tasked with determining resource needs, hiring staff and acquiring resources, and then allocating the mutual assistance/contractor crews between Con Edison and O&R. Participants practiced customer communications before the storm's arrival, at the storm's end, and during initial restoration. They coordinated damage assessment and site-safety resources, as well as logistics. Lastly, the exercise incident commander highlighted post-Sandy storm enhancements to participants and observers at the exercise's end.

H. Increase Material and Equipment Inventory

Utilities in New York State, including Con Edison and O&R, have been increasing their material inventory levels over recent years in response to increasingly severe weather events. After each storm the Company reviews what material and equipment it used to complete the restoration and adjusts its stock to optimize our ability to respond to the next storm. However, after Superstorm Sandy, as crews replaced miles of cable, hundreds of poles and transformers, and other associated hardware and equipment, the inventory of repair materials was quickly depleted; the materials needed far exceeded the amount needed for any previous storm restoration. The Company did not experience any shortages of materials or equipment; each crew left the yard every day with all necessary equipment. But in the two weeks following the storm, the Company was challenged to maintain the inflow of inventory needed to keep the restoration process moving forward.



Overall, Con Edison maintains seven storm trailers, which store 231 unique stock items that are commonly used during restoration.⁵ Of that inventory, 61 percent is stored under “cross-docking”

⁵ Two of the trailers are in the process of being purchased at the time of publication.

agreements in which equipment suppliers are paid to keep inventory off-site and expedite delivery of the equipment and materials as required. Cross-docking is a standard, efficient, and cost-effective way for the Company to manage warehousing costs and diversify its supply chain, thereby minimizing the risk of shortages if a catastrophic event were to happen at one of its warehouses. After Superstorm Sandy, Con Edison increased its cross-dock inventory of the equipment and materials most frequently needed for restoration work (“fastest-moving”) from a three-month supply to a six-month supply.

Orange and Rockland manages its materials using three central locations supported by three storm trailers and one storm container. Based on recent experience, O&R took two proactive steps in 2013: 1) increasing the number of unique stock items used in restoration (and therefore kept in reserve for emergencies) from 50 to 126 items, and 2) increasing items held in reserve by almost five times the amount that was stocked pre-Sandy.

I. Joining Statewide Equipment-Sharing Efforts

We are establishing equipment-sharing protocols among utilities throughout New York State. In February 2013, the PSC launched a collaborative effort for New York investor-owned utilities, DPS staff, LIPA, the NYISO, and NYPA to examine the feasibility, benefits, and costs of establishing a statewide critical equipment inventory and material sharing program. The utilities had begun discussions in advance of the PSC collaborative, and had a structure to address the PSC initiative.

As a first step, on April 15, 2013, jurisdictional utilities submitted individual filings of their current inventories and experiences with materials management during Superstorm Sandy.

In the second step, the group of utilities evaluated a statewide critical equipment stockpile program – including where equipment could be located, how it could be managed and funded, and how participants could be reimbursed for use of the shared inventory. The group’s report was submitted to the PSC on June 3, 2013.

To guide the Company’s participation in this collaboration, the Company formed an Executive Steering Committee, selected a project manager and assembled a response team of internal subject matter experts from various departments, including Emergency Management, Energy Policy and Regulatory Affairs, Business Ethics and Compliance, Purchasing, Central Field Services, Distribution Engineering (both Con Edison and O&R), Law, Gas Engineering (both Con Edison and O&R), Information Resources, and Central Engineering–Transmission Operations. Initially, the team was focused on identifying the equipment that is used most often during storm response, and assessing whether that equipment might be standardized and shared. To that end, the utilities worked on making their inventory information comparable by developing shared categories and subcategories with other utilities.

The collaborative also considered the concept of leveraging the existing NYS utility storage infrastructure that would enable faster connections between utilities before or during an event. Among the Company’s strategic concerns are ensuring that there is a fair prioritization process for allocation of

materials during an event, minimizing the cost to customers of additional inventory and its management, and establishing a timely reimbursement process.

Overall, the collaborative agreed that an equipment sharing program could facilitate improvement to individual utility practices and help coordinate utilities' response to major events. The group's report recommended that New York State utilities leverage existing stockpiles that were previously increased at utility and vendor locations statewide, as well as in emergency trailers, after major storms, including Superstorm Sandy. The fastest-moving electric and gas, transmission and distribution equipment, and supplies were identified and recommended for sharing; it was also explained that some of the items are not recommended for sharing due to storage aging issues.

To implement a sharing program, the group recommended creating a sharing agreement between New York utilities, and leveraging existing national organizations such as EEI (e.g., RMAG/NYMAG) and the National Gas Association (e.g., regional committees) for out-of-state requests. The New York sharing agreement would include mandatory membership on a sharing committee with a rotating chairperson that would schedule pre- and post-hurricane season meetings, as well as ad hoc meetings before and after each predicted storm. Utilities would be compensated for materials and inventory costs as the materials are used by the requesting utility. Last, the report recommends that the PSC pre-approve the sharing of equipment and supplies during emergencies to prevent undue administrative delays during an emergency. The shared equipment and supplies would be reconciled annually with the PSC.

J. Providing More Accurate Estimated Times of Restoration

The Company's Superstorm Sandy experience revealed a number of opportunities to redesign our restoration planning process so that it meets two overarching objectives: providing better estimated time of restoration (ETR) information and providing faster service restoration. Many variables go into ETR development, including the availability of contractor and mutual assistance crews, some of whom must travel across the country to reach our service area. The number of variables to consider combined with the fluid nature of the restoration process makes establishing ETRs a challenging task for all utilities. However, technological advances have opened up new possibilities for developing innovative and practical solutions. Improving the accuracy and timeliness of ETRs is an industry-wide focus, and the Company has made ETRs a top priority. We seek to become the industry leader in this important area of storm response.

We know from experience that customers value timely information about when their own residence or business will be restored. Customers need to get this information early in the restoration process, so they can make appropriate plans for the duration of the expected outage. We also know that customers expect more specific information than ever before, as they become accustomed to technology that gives them immediate access to detailed information in all facets of their lives. For many customers, knowing when their power will be restored is just as important as service restoration itself.

In recognition of our customers' priorities, the Company has developed a three-part vision for improved ETRs:

- 1) Before the storm, set customer expectations by providing an estimate of predicted outage duration — e.g., “Outages expected to last seven to ten days”
- 2) Within 24 hours of the end of the storm, provide an accurate global ETR — i.e., an estimate of when at least 90% of the customers that experienced outages will be restored
- 3) As early as 48 hours of the end of the storm, issue customer-specific ETRs

To achieve this vision, Con Edison is re-examining and redesigning its restoration planning process. Through this redesign, we will improve the process and provide customers with more specific information. We are analyzing each step of the restoration plan — damage assessment, data aggregation (including staffing and materials), and predictive restoration modeling — all in an effort to identify ways to complete these steps more quickly and effectively. To aid in this effort, we are developing and enhancing state-of-the-art tools for gathering and processing all relevant information from multiple sources, tools for simulating restoration scenarios, and tools for scheduling restoration work.

O&R is maintaining close contact with the Con Edison ETR team and will implement a similar ETR process based on Con Edison’s development efforts. In the interim, O&R will provide daily updates on the number of customers whose service is expected to be restored over a rolling three-day timeframe.

Our ETR improvements are part of a long-term, ongoing process. As we develop new technologies that enhance our ETR process, we are also honing our analytical capabilities and moving closer to our goal of accurate and timely customer-specific ETRs. We are committed to advancing the ETR estimation process in order to get to where we need to be as a Company and as an industry leader.

i. Accelerating Damage Assessment Using Mobile Technology

We lay the foundation of an effective restoration plan when we survey the Company’s service area after a storm and assess the post-storm condition of poles, wires, and other equipment. This damage assessment process gives us a more complete understanding of the magnitude of the storm’s impact on overhead electric infrastructure, and allows us to accurately estimate the resources that will be required to restore outages. The current damage-assessment process requires personnel to conduct field visits to document damage, and then to bring that information back to the office to use in the development of restoration plans. The current process is manual, and is similar to that used by utilities across the country. To make this process faster and more effective, we plan to introduce new technology solutions that will bridge the gap from field damage assessment to data acquisition and information synthesis.

Phase I

Our first step is to implement a new intranet-based tool that damage assessors can use while they are still in the field. The Company currently operates an Outage Management System (OMS) software tool that is used to gather and aggregate information on outages. Damage assessments are entered into OMS manually and used to create “trouble tickets” for specific points on the distribution system that need to be restored. Rather than making handwritten notes on a feeder map and bringing the paper back to a central location where it is entered into OMS, assessors will complete a form with all of the relevant information for each location and submit it electronically as soon as they have a wireless signal

on their device. Relaying damage information wirelessly will significantly cut down on the time it takes to complete the damage assessment process in each locality, resulting in faster ETRs at the circuit level. Phase I will be completed in July 2013 and rolled out throughout the Company's service territory.

Phase II

The second step is to pilot and implement a map-based visualization application that allows damage assessors to record and transmit more detailed, visual information about system damage. This application will be pre-loaded onto internet-enabled tablets before damage assessors are dispatched. As assessors patrol their assigned circuits, they will record information on a digital map of the circuit — populating the same data fields in the Phase I intranet form — and take pictures and/or video as appropriate to illustrate the situation in detail. Assessors can also mark up the map and highlight portions of the system that are affected. Data and photos will then be wirelessly transmitted in near-real time back to a central repository.

The new visualization tool will allow planners to identify restoration jobs along the circuit by pinpointing where the damage exists. Pictures of the damage will also facilitate understanding and allow more precision planning and allocation of resources. The process will also create a direct link in the OMS model between individual customer account numbers and the restoration job(s) that will impact their service restoration. Using this functionality, the Company will be able to identify and track the exact projects that will lead to each customer's restoration. These two enhancements — providing more detailed damage information and providing a direct link between "trouble jobs" and customers — will enable our restoration planning team to calculate customer specific ETRs.

The initial pilot of Phase II was conducted in April 2013. The pilot was successful, and we are now in the process of building the software needed to support system-wide rollout of Phase II. Our goal is to implement Phase II throughout our system by the fourth quarter of 2013.

Phase III

The final step in this process is to explore solutions that would allow us to accept damage intelligence information from others, including photos and videos from customers and other external stakeholders, such as municipal officials. The Company is evaluating applications that would allow us to incorporate these pieces of data into the stream of damage information that flows through OMS.

While externally sourced data would augment our information-gathering resources, it also poses some significant challenges. Most importantly, we are in the early stages of developing a process for confirming that the information is accurate and relevant; this process probably cannot be completely automated, but requires human input. Just like a news outlet would not post images associated with an event before affirming the relevance and accuracy of the images, the Company would need to carefully vet externally sourced information. Restoration planning teams would need to be able to verify the origin of the data, sort through each submission to determine what portions of the system are depicted, and confirm the relationship of images to one another if there are multiple pictures of separate pieces of equipment. Issues of accuracy and situational relevance notwithstanding, we are studying promising

technology that would make such a process more feasible, including systems that mark photos automatically with asset location and other identifying information, as well as time and date stamps.

ii. Building the Restoration Work Plan

As the Company receives damage assessment information, it aggregates needed repairs and builds a restoration work plan. Our restoration planners compile a list of all of the jobs that need to be completed in each locality, then take stock of the resources available to do the work. As was the case during Sandy, mutual assistance crews often arrive gradually over a period of days after a large storm, so the work plans are organized to account for the expanding workforce.

Among the many factors that influence the sequence of the work plan are road accessibility, magnitude of damage, complexity of the job, number of customers on damaged feeders, resource availability and timing, and safety of both utility personnel and the public. To make the process of creating work plans more efficient, the Company is enhancing OMS to allow for planners to prioritize jobs based on various criteria such as circuit number, presence of critical customers, and counts of customers impacted.

After the OMS enhancements are complete, the restoration planning team will leverage this new prioritization function to more quickly assemble and organize all of the necessary pieces for a full-scale coordinated restoration plan.

To get additional input on our restoration prioritization efforts, the Company's Emergency Management, Operations, Engineering, and Public Affairs teams are meeting with local elected officials and Department of Public Works representatives to map out critical roads and other essential resources such as supermarkets, gas stations, drug stores, village centers, and commercial strips that help sustain communities during a prolonged outage.

Should these essential resources experience an outage or road blockage in spite of system reinforcement, we will have a process in place to prioritize their restoration. We will also seek to rapidly restore service to these essential customers via pre-determined grid reconfiguration plans that utilize smart-grid switching technology, where applicable, as described in Section I of this report. Prioritizing critical roads and essential customers for rapid restoration is a central component of our efforts to mitigate the impact of severe weather events on the communities we serve.

iii. Automating ETR Calculation and Work Scheduling

As the full scope of the restoration work comes together, we will be able to estimate ETRs at the global, regional, and customer level. Having accelerated the damage assessment process and made it easier for planners to consolidate information about outages and prioritize circuits, the Company will be able to begin calculating ETRs sooner and with greater accuracy. To improve the ETR calculation process, we are developing new modeling tools that will automate ETR calculation and make better predictions of customer-level restoration times.

Global ETRs

The Company is evaluating applications that will assist in the fast, accurate calculation of global ETRs. The applications take outage and staffing information as inputs and perform calculations based on historical job averages. Based on these calculations, the applications then arrive at a global ETR, when 90% of the customers that experienced storm-related outages will be restored. Furthermore, the new application will standardize the process for global ETR calculations, reduce the Company's reliance on subject matter experts and their ability to manually develop global ETRs, and facilitate a more disciplined and repeatable process.

Customer-Specific ETRs

To provide more accurate information at the most detailed level possible, the Company plans to create an ETR engine that will enable us to quickly and accurately predict customer-specific ETRs for each day across the projected restoration time horizon. We envision that this application will account for a wide array of factors, including customer counts, critical customers affected, locality affected, work required, and crews available. The application will feed this information into an algorithm that will then propose the most efficient scheduling of available crews in accordance with their technical capabilities. Thus, our detailed restoration work plan and schedule will be direct outputs of the ETR engine.

iv. Forming a Dedicated ETR Storm Team

Currently, our storm restoration planning is dependent on the knowledge of subject matter experts, who generate a work plan and ETRs based on conditions that are constantly shifting. During restoration efforts, we generally devise a plan each day for the upcoming 24-36 hours. Con Edison plans to establish a dedicated ETR Storm Team — a practice that O&R recently implemented — to manage ETRs across the Company's customer base.

To lead this team, we are creating a new ETR unit leader position in our incident command structure. The ETR unit leader will report to the planning chief, and will be responsible for monitoring and administering ETRs. Additionally, the ETR unit leader will have the authority to monitor and update ETRs based on certain triggers, for example, escalating restoration efforts in order to meet an approaching ETR. By appointing a unit leader to manage ETR actions relative to specified triggers, the Company will reduce inaccurate ETR notifications to customers, increase our ability to measure our performance against explicit targets, and better communicate this key information to customers. The ETR unit leader will also be responsible for setting pre-storm high-level global prediction of ETRs, which will provide customers with reasonable expectations prior to storms.

The unit leader will convey to the ETR Storm Team day-to-day changes to the restoration plan, such as crew reassignments or additions, and adjustments warranted by shifting field conditions. These adjustments will then either be resolved within the existing plan or incorporated into an updated plan. The ETR Storm Team will ensure that all jobs have a reasonable ETR, monitor status of predicted ETRs, review deviations from the schedule, and seek progress updates on near-term ETRs. The team will ensure that ETRs are changed as necessary and that customers are notified of changes in a clear and

timely manner. Any deviations from the schedule must be reviewed by the ETR Storm Team. Generally speaking, the ETR Storm Team and unit leader will add accountability and transparency to every step of the ETR effort and ensure that the Company's commitments are being met.

We recognize that the more we share information and meet explicit and implied expectations, the more confidence our customers will have in our restoration effort after extreme weather as well as during normal times.

v. Re-examining the Role of Smart Meters in Restoration Planning

During a post-storm restoration effort, Con Edison is in a constant process of updating our information on which customers have lost service and which customers' service has been restored. To ensure that we have access to the most current information on our customers' status, we are exploring a new technology called automated meter infrastructure (AMI). AMI would provide the Company with meter-level data that confirms that the restoration process is complete for a particular customer. AMI would enhance the functionality of our existing Automatic Meter Reading (AMR) system, which already provides some meter-level data confirming specific customers' outages and service restoration.

This technology addresses a critical gap in our information during restoration. Until now, outage calls from customers and master-metered residents have been a critical source of information as to the progress of our post-storm restoration efforts. These calls help us get a sense of the magnitude of outage events before we complete our damage assessment. The calls also help to identify where the damage is located, or at least to provide information about the demarcation point between customers that have service and those that do not. But only a small fraction of customers who have lost service call to report outages, and customers with service generally do not call. As a result, it is possible for the Company to be unaware that an individual customer or group of customers is without power for a period of time.

As restoration progresses, the Company has previously relied on outbound customer calls to verify that service has been restored. This process produces inconsistent results, as many customers are not at home or work to receive our call. Furthermore, in some cases, customers that are impacted by a large-scale outage remain out of service after their feeder is restored due to localized issues such as transformer failure or downed service wires (referred to as a "nested outage").

By implementing new technologies to fill in the gaps in our current information system, we will make our restoration efforts more efficient and effective.

* * *

SUMMARY ACTIONS

We have committed to the following actions aimed at improving our restoration process, in particular our ability to accurately and quickly provide customers with ETRs for their homes and businesses.

STORM PLANNING AND PREPARATION

Complete

40. Identify base-camp staging sites and determine function and layout of each site
41. Evaluate effectiveness and cost of utilizing an accommodations vendor
42. Integrate rental car support into Logistics Operation Control Center
43. Enter into contracts with base-camp providers
44. Implement Resources-on-Demand software to facilitate centralized resource tracking
45. Update emergency preparedness plans
 - c. Electric Emergency Response Plans
 - d. Corporate Coastal Storm Plan
 - e. Identify potential for extreme events in our service territory, and modify plans accordingly
46. Conduct annual Company storm drill and tabletop exercises, and invite municipal partners to participate in tabletop exercises designed to strengthen relationships between muni liaisons and municipal officials
47. Increase material and equipment inventory to reflect recent storm experiences, especially Superstorm Sandy
48. Assess internal staffing plans during emergencies, reprioritize staffing levels based on Sandy experience, and hold additional training for temporary storm support teams as necessary
49. Establish purchase orders with local, regional and national contractors to enable acquisition of emergency response contractors on an expedited basis

Ongoing

50. Participate in and continue to enhance statewide critical equipment sharing collaborative, working with New York utilities to implement a program that leverages existing inventory practices and warehouse locations
51. Work with Edison Electric Institute to improve coordination of mutual locations and contractor resources during “National Response Events” that affect multiple companies, states, and regional mutual assistance groups
52. Work with municipal partners to expand municipalities’ role in the restoration process

ESTIMATED TIME OF RESTORATION

To be completed

53. Accelerate damage assessment process using mobile technology, with implementation in several phases (September 2013)
54. Add a feeder prioritization function to the Outage Management System to make the restoration planning process more efficient (September 2013)

55. Automate ETR calculation and work scheduling to facilitate timely, accurate ETR notifications to customers with an initial focus on global ETRs and expansion to customer-specific ETRs (September 2013)
56. Form a dedicated ETR Storm Team and create ETR Unit Leader position in incident command structure (September 2013)
57. Re-examine the role of smart meters in restoration planning, and examine other technologies that could improve the process of establishing ETRs (2014-2016)

Ongoing

58. Work with community leaders to identify essential customers, such as supermarkets and gas stations, that should be prioritized in the restoration plan

III. IMPROVING THE FLOW OF INFORMATION TO CUSTOMERS AND OTHER STAKEHOLDERS

Providing accurate, localized, and up-to-date information is essential to responding effectively when storms cause widespread power outages and other damage. In the wake of destructive storms, clear and timely communications play a key role in helping communities recover. Con Edison places the highest value on these efforts, on par with the Company's infrastructure investments and restoration process improvements. Through new technologies, mobile apps, working with municipalities and governmental agencies, and other efforts, Con Edison is improving its ability to deliver information to customers and other stakeholders when responding to severe storms.

In recent years, we have worked to broaden the ways we connect to our stakeholders through a variety of initiatives:

- We invited media outlets to report from our Corporate Emergency Response Center.
- We created a Municipal Liaison Program to improve coordination with municipal partners during the restoration process.
- We expanded our online presence to help us connect with customers.
- We developed a presence on social media to deliver information to customers how they want it, when they want it. We will continue to expand the opportunities to use social media as a method of preferred communication by dedicating additional resources to these important communication vehicles.

But we know we can do more, and in the aftermath of Sandy, we have outlined steps to expand and augment our communications in order to speed the flow of information from the Company to our customers. Perhaps most importantly, we are working to improve the information we receive from the field. These improvements will have tangible results, as they will allow us to do a better job in communicating accurate — and localized — restoration information to municipal leaders, customers, and other stakeholders.

In this section, we outline our post-Sandy efforts and our plans to improve storm communications. As we pursue the efforts described below, we are guided by the following principles:

- Provide accurate information
- Provide timely information
- Be as comprehensive as possible

A. Consolidating Information with a Communications Checklist

In an effort to provide customers and stakeholders with the best possible information on the Company's storm response efforts, we plan to institute a standardized information-gathering process. At the center of this effort is a comprehensive communications checklist that will be updated regularly and used to

guide our external communications. With the new communications checklist, information on outages, damage assessment, restoration activities, crewing, and logistics will be consolidated in one location. This central tool will enable us to provide more comprehensive information to the public in a timely manner.

B. Strengthening Community Relations

The Company is leading a broad campaign to educate the public about our post-Sandy initiatives to fortify our infrastructure, equipment, and other systems. We are publicizing our plans through traditional media, social media, elected officials, community groups, Company websites, and at public forums and industry conferences. These efforts began in the immediate aftermath of Hurricane Sandy and are continuing with ongoing initiatives and forward-looking outreach efforts.

i. Post-Sandy Outreach

In the wake of the storm, the Company participated in approximately 140 meetings with local elected leaders, municipal officials, and community groups. At these meetings, we detailed the Company's response to the storm, garnered input about what we should improve, and provided information about the plans to strengthen our energy delivery systems over the next four years.

- In New York City, we participated in 70 meetings. More than half of these were public meetings with individuals or community groups in attendance.
- In Westchester, we met with each of the 39 municipalities in the county.
- O&R officials conducted 44 meetings with public officials.
- We hosted a meeting with elected officials at our Rye headquarters.
- We met with more than 20 state legislators in Albany and with every Congressional office in Washington, D.C., to discuss the impacts of Sandy on the Company and its customers.

In the largest volunteer effort ever conducted by Con Edison, the Company partnered with the New York City Mayor's Office to help in the recovery of communities affected by Sandy. Company employees and family members helped remove debris along the Staten Island Bluebelt wetlands system, clean up Brookville Park in Queens, and restore Fort Greene Park in Brooklyn.

Other charitable giving and volunteer efforts included the following:

- Con Edison made a \$50,000 contribution to the Mayor's Fund to Advance New York City in support of Hurricane Sandy relief.
- The Company offered employees a matching gift program for Sandy relief aid.
- Orange and Rockland Utilities donated \$10,000 to the Spring Valley Salvation Army.
- Many of Con Edison's nonprofit partners offered space on their property for our base-camps, to house mutual assistance workers, or to distribute dry ice.

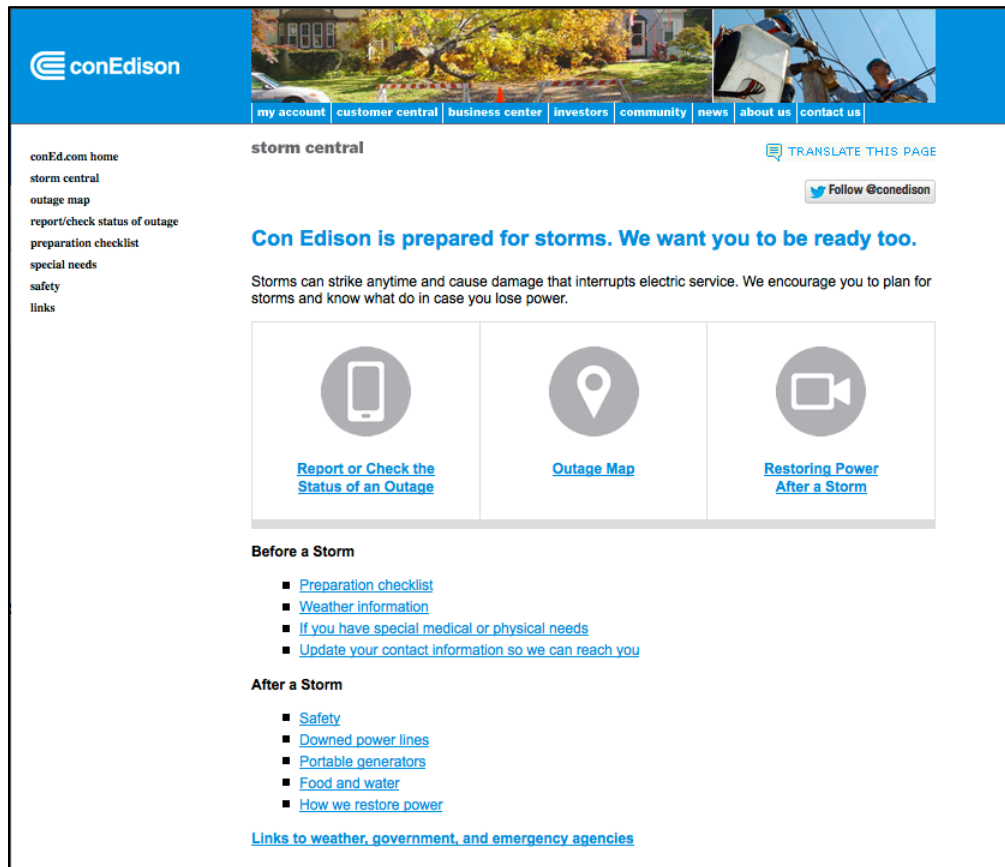
ii. Ongoing Outreach

As we proceed with our storm-strengthening program, the Company is launching an enhanced series of storm-education materials. These materials will help customers and other stakeholders by providing useful information about how to prepare for storms, report outages, and handle the restoration

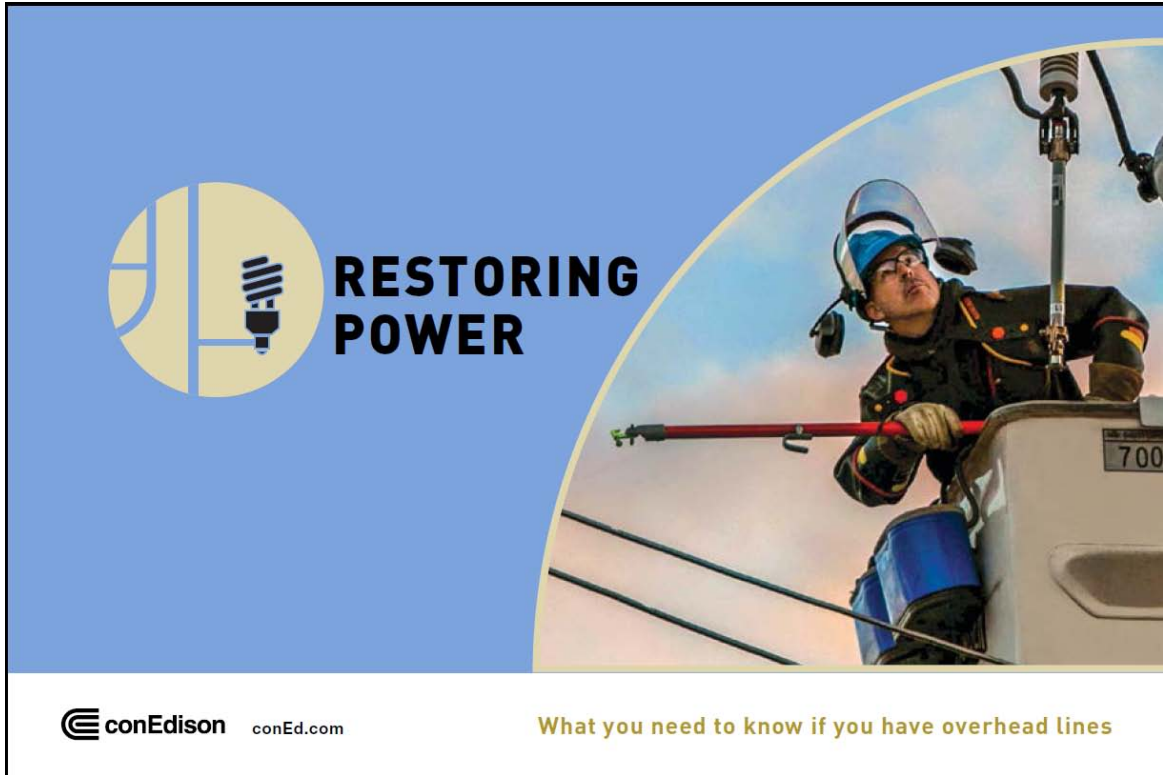
process. The information will be distributed through printed materials, e-mail blasts, improved web storm pages, and videos.

Specifically, we are sending one e-mail blast to customers with underground electric service and one e-mail blast to customers served by overhead wires, explaining what we are doing to strengthen our systems so we can reduce outages and restore service more quickly. The e-mails will tell customers how to contact us if they lose power, conserve energy, and get incentives for upgrading electric equipment. They will include links to a new video explaining the restoration process, the “Report an electric service problem” page, outage map, 100+ tips to save energy, and information on incentives for upgrading equipment.

Our new Storm Central web page will make it easier for customers to find out how to prepare for and what to do after a storm. It will include prominent, visual links to our “Report an electric service problem” page, outage map, and storm-related videos.



A new brochure will explain what we do to restore power to overhead customers. It will also tell customers how to prepare for a storm, report an outage, and find estimated restoration times.



We are also producing a video that explains the process for restoring downed overhead wires quickly and safely. The video will detail how we assess damage, work with local municipalities, and prioritize essential restoration to hospitals and first responders. The video emphasizes the need to keep the public and Con Edison workers safe during the restoration process. The video will be ready for distribution in the event of a storm this summer, and will be featured on the Company's websites.

To reach an even wider audience, we are taking the media on tours of our strengthened facilities. In these media tours, we are highlighting new technologies that will help our systems withstand extreme weather.

The Company continues to meet with local elected officials, community boards, Business Improvement Districts, and other community organizations to apprise them of specific system fortification initiatives in their communities. We are analyzing feedback from community officials and, where feasible, we will reinforce the local energy supply systems to further enhance reliability for essential customers, such as grocery stores, gas stations, and hardware stores, that are necessary to restore a sense of normalcy in the community. As work begins, we will provide local leaders with work schedules and community notices.

A key priority is minimizing inconveniences to our customers. We continue to work with local government agencies to emphasize our need to receive permits and approvals on an expedited basis. Expediting these approval processes is especially important when customer-owned equipment is damaged, and customers, perhaps in large volumes, need local approvals for utilities restoration.

On the state and federal level, the Company will continue its efforts in both Washington, D.C., and Albany to educate government officials on the impacts of Sandy, as well as post-Sandy projects that are in progress, including infrastructure-hardening efforts. We continue to schedule follow-up meetings directly with state lawmakers, the governor's staff, and the New York Congressional delegation.

Among the topics we are actively discussing with government officials are the storm resiliency components of our upcoming rate filing and the need for federal funds to repair and replace damaged infrastructure. Given the changing politics surrounding federal Sandy aid for utilities, we will continue to seek funding opportunities that can save our customers from bearing some of the costs of our infrastructure improvements. To that end, we have met with, and continue to take advantage of opportunities to meet with, the Obama Administration's Hurricane Sandy Task Force, to advocate that the Office of Housing and Urban Development and the Office of Management and Budget change federal funding guidance that excludes utilities from receiving FEMA monies.

Finally, to strengthen our relationships with nonprofits, we will continue to use our Power of Giving Online Community, a social networking site open to our nonprofit partners. On the site, we share press releases, videos, and photos about restoration efforts during weather events. We will continue to work with our partners in the community to identify opportunities to collaborate on mutually beneficial initiatives.

C. Solidifying Municipal Partnerships

Con Edison's Municipal (Muni) Liaison Program was created in the mid-1990s as a way to establish formalized partnerships with the 39 municipalities we serve in Westchester County. O&R established a similar program in 1998, the Community Response Team. Over the years, both programs have been lauded by municipal officials for their effectiveness in addressing the priority restoration and

information needs of municipalities. As part of the Muni Program, Con Edison representatives are dispatched to municipal facilities to serve as on-site resources for company-related matters, and to help coordinate the work of the municipal cut-and-clear crews with the utility crews.

To enhance communication with municipalities in future storms, we plan to:

- Keep muni liaisons in communities as long as the municipality wants the liaison to stay.
- Develop special municipal maps to allow municipal officials to more fully understand restoration plans.
- Create a new secure website, the Muni Dashboard, to provide municipalities with access to maps that have detailed information on road closures, outages, and critical facility information, as well as details on crews assigned to their area each day.
- Conduct storm simulations with municipalities, known as “tabletop exercises,” as a way to enhance storm preparedness.

i. Sandy Experience

During Sandy, we deployed more Company representatives to municipalities for longer than we ever had in previous storms. The most significant challenge the muni liaisons faced was the municipalities’ requests to keep Company representatives embedded in their response centers throughout the two-week restoration period. Prior to Sandy, muni liaisons typically returned to Con Edison following tree-clearing and road re-opening activities. While they were in place, our liaisons were called upon to provide regular updates on restoration plans, crews, outages, and damage assessments. Providing such breadth of information accurately and in a timely manner was an expansion of the liaisons’ previous roles, and revealed important opportunities for further enhancements to the Muni Program.

Following Sandy, both Con Edison and O&R leadership teams met extensively with local government leaders and officials so that the municipalities could voice their concerns. After an initial dialogue, we held individual meetings with municipalities to hear their more specific concerns. We incorporated their feedback into our work to enhance our storm-response processes, encompassed by the post-Sandy action items described here. We then arranged additional follow-up meetings with the municipalities to keep officials up-to-date on the post-Sandy initiatives under way.



As a result of these meetings and our internal muni liaison focus groups, we are enhancing the Muni Program, including by allowing liaisons to remain embedded with the municipality until the municipality releases them. We have also instituted a protocol to hold

separate daily calls for municipal and elected officials during events so we can better manage the needs of both groups. For the municipal calls, we will further subdivide them into regional groups for larger events to facilitate discussion of specific information.

Also, earlier this year our liaisons received supplemental, in-depth training on our Outage Management System, so they are able to access information about outages and restoration plans at a more granular level. During storms that affect the O&R service area, O&R will be deploying Public Affairs managers into the field to work with municipal and government customers, assisting the muni liaisons and providing municipal officials with more direct information on our restoration plans.

ii. New Information Tools

New information tools will help ensure that our muni liaisons have what they need to assist our municipal partners.

Municipal Maps

In the past, as part of our daily conference calls with the municipalities during and after a major storm, we have shared our restoration work plan, including circuits being worked on and crews associated with the work. While this was a welcome communication, it didn't allow the municipalities to fully understand the impact of the work because they did not have a special map of our system, called a feeder map. As a result, one of the most prevalent requests made by the municipalities was for feeder maps, so they could more fully understand our restoration plan and its impact on the municipality. To meet this need, we are developing feeder maps specific to each municipality showing the feeders within and beyond their municipal boundaries. These maps have been shared and explained in detail to almost all of our municipal partners, and this year we will develop maps for remaining municipalities.

Muni Dashboard

In an effort to provide additional transparency around restoration plans and processes, the Company is creating the Muni Dashboard — an online portal to provide municipalities with secure access to maps of their area with detailed information on road closures, outages, and critical facility information. The Muni Dashboard will also give the municipality information on the crews assigned to their area each day, and the work that is underway that will facilitate restoration in their area, even when that work is not visible to the community. We expect to launch a pilot of the Dashboard in June 2013, then work with the municipalities to refine and finalize the tool. Phase 1 of the Muni Dashboard will be distributed system-wide in the fall of 2013.⁶

⁶ In parallel to its work on the Muni Dashboard initiative, O&R also developed a portal to keep the New Jersey Board of Public Utilities (BPU) apprised of outage details in Rockland Electric's service territory. Both of these efforts fulfill specific recommendations set forth in the BPU's *Order Accepting Consultant's Report and Additional Staff Recommendations and Requiring Electric Utilities to Implement Recommendations*, effective February 1, 2013.

iii. Increasing Non-Emergency Interactions

In the past, Con Edison held an annual Muni Program meeting that provided an additional opportunity for muni liaisons to meet with representatives from their assigned municipality and to provide municipal officials with program information and a weather update by the Company's meteorologist. In an effort to improve on this session and provide the municipalities with more information and a better understanding of our restoration efforts, we have enhanced the annual muni meeting.

For 2013, the annual meeting will be broken up into several smaller meetings. In addition to the topics covered at past meetings, the new meeting format will feature a hands-on field demonstration of the Personal Protective Equipment (PPE) used by our line workers, and a simulation of their cut-and-clear activities and restoration work. The meeting will also include a question-and-answer segment, and will wrap up with a tour of the Bronx-Westchester Electric Control Center. Beyond these annual sessions, muni liaisons will be meeting regularly with their respective municipalities to review current restoration priorities, changes in plans, and other relevant information that will support the Company's efforts to meet the municipality's needs throughout the year, and especially during prolonged outage responses.

Similarly, in an effort to improve coordination of storm response procedures, we have begun to conduct tabletop exercises — i.e., simulations of storm situations that are less comprehensive than full-blown storm drills — with each of the municipalities. The tabletop exercise is typically hosted by a municipality in its Emergency Operations Center. Participants include key municipal personnel, assigned muni liaisons, and Company representatives from Electric Operations, Public Affairs, and Emergency Management. To date, these exercises have been well received; going forward, they will become part of our annual preparedness drills with municipalities. Our target is to complete tabletop exercises with all municipalities in our service area by the end of 2013.

D. Partnering with New York City Agencies

The Company has established a formalized structure to coordinate our storm preparation and response procedures with the New York City Office of Emergency Management (OEM) during extreme events. The interaction is not only to convey information about the situation, including customer outages and potentially hazardous situations caused by damaged infrastructure, but also to establish a direct line of communication from Con Edison to OEM and the City agencies that it coordinates during emergencies — FDNY, NYPD, Department of Buildings, and DEP, among others.

For extreme weather events that are forecast in advance, we begin our outreach to OEM before the event. We advise them of our preparations and, to the extent known, potential customer impacts. Following weather events, we hold daily conference calls with City officials to coordinate response crews, discuss Con Edison's restoration progress, and tell the City what we need to make our restoration process more effective (e.g., giving utility crews priority access to closed roadways). Throughout the interactions we address OEM's questions and concerns as they arise. Our formal storm coordination procedures with OEM and other City agencies have been effective during past events — including Superstorm Sandy — and we intend to sustain the same level of cooperation during future events.

E. Enhancing State Regulatory Relations

State agencies and other governmental entities have particular needs when it comes to storm and emergency communications. Con Edison is attentive to these needs, with the goal of serving our governmental partners and supporting their requests for regular updates. We are also working with our regulators to incorporate recommendations from several state-sponsored commissions that are examining utility storm preparation and response.

i. New York Public Service Commission

During extreme events, the Company communicates through established, direct lines of communication with the commissioners of the New York Public Service Commission (PSC) and senior staff members of the Department of Public Service (DPS). This process is in addition to information provided through traditional channels such as among staff members. For extreme weather events that are forecasted in advance, we initiate our outreach before the storm to advise the NY PSC of our preparations and, to the extent known, potential customer impacts. As events progress, we provide regular updates, usually at least daily, to address new developments. Throughout the process we address questions as they arise. This direct exchange has been effective during past events, including Superstorm Sandy, and we intend to sustain the same level of communication during future events.

Con Edison has also proposed a regulatory framework to address storm hardening needs between rate cases. As addressed in its January 25, 2013 rate filing, Con Edison proposed specific storm-hardening measures as well as a storm-hardening surcharge mechanism that would establish a structure and process to allow for recovery of additional costs outside of the rate case process, subject to PSC review. Orange and Rockland will defer the O&M costs incurred during the Company's Superstorm Sandy restoration period. In terms of capital costs associated with storm hardening measures, O&R is incorporating those costs into its capital budget under its current rate plan, and prioritizing capital projects accordingly.

Lastly, we plan to work with the PSC to mitigate exposure to operations and maintenance (O&M) costs incurred in preparation for a storm that ultimately deviates substantially from forecasts and results in a non-event; in such a situation, prudent preparedness planning may result in substantial expenditures. We are working to establish criteria for cost recovery in such situations, and plan to propose a solution that will balance the costs and benefits of being more proactive in advance of forecasted storms.

ii. State Emergency Management Office

The Company's contact with the NYS Emergency Management Office (EMO) during emergencies takes place within an existing structure that incorporates New York City and the New York counties we serve. For significant storms, the EMO sends representatives to New York City and each county. At the same time, the City of New York and county government representatives are sent to Albany to the State Emergency Operations Center (EOC). Previously, the Company supplied liaisons and direct communications directly to city and county governments, which then reported up to the EMO level.

During Superstorm Sandy, the EMO requested staffing from Con Edison, O&R, and all other New York State utilities at the Albany emergency center. We understand that the State is discussing continuation

of this utility liaison role at the EMP Albany location, and we are prepared to staff future events. However, we believe it is important to clarify the roles and expectations of utility staff at the EMO.

Additionally, we are re-evaluating the information systems that New York State, New York City and other NY counties use to manage data during events. The next step in our dialogue is to explore the benefit and costs of converting Con Edison, New York City, Westchester, other counties, and New York State to the same information management system. Doing so would facilitate information flow in a consistent manner, but could require significant capital investment.

iii. State Commission Recommendations

Moreland Commission

Shortly after Superstorm Sandy, Governor Cuomo established a Moreland Commission to investigate utility companies' storm preparation and management and to recommend reforms to the regulation of energy systems as needed. The scope of Moreland's investigation includes utility performance during Superstorm Sandy as well as Hurricane Irene (2011), Tropical Storm Lee (2011), and a December 2008 ice storm that impacted the eastern region of Upstate New York. An Interim Report with initial findings and recommendations was issued on January 7, 2013. While there were few specific recommendations for utilities in the Interim Report, we believe our plan aligns well with the three areas that were mentioned: increasing regulatory scrutiny of emergency response plans; handling customer call center volume during outage events; and providing faster, more accurate ETRs. As described in this plan, we have already taken steps to address these three areas. Specifically, we revised our emergency response plans to incorporate Superstorm Sandy experience and filed those plans with the PSC for review and approval; we contracted for 200+ additional call center agents that can be available 24/7 in the event of a major event; and last, we are implementing plans to provide more accurate ETRs, including providing daily customer ETRs within 48 hours of the end of a storm, benchmarking on ETR processes around the world, and working within our own Company and with industry to forge ahead to create technologies, systems and processes to continue to evolve and improve development of accurate, timely ETRs.

The Company will work with DPS Staff and stakeholders once the final Moreland report is released. Also, if any additional reports or assessments are issued by state entities – including the NYPSC, the Company will continue to work cooperatively.

PSC Scorecard Proceeding

The 2013-2014 budget legislation made several changes to the Public Service Law (PSL) based on Moreland Commission recommendations, including, but not limited to: granting new authority for the PSC to impose civil penalties on utilities that fail to reasonably comply with the PSL, rules, regulations or PSC Orders; and requirements that utility management audits – to be conducted at least every five years – assess a utility's ability to implement emergency response plans.

In the context of the PSL changes, the PSC opened a proceeding in April to develop a scorecard to evaluate utilities' emergency response in three areas: advance preparation (i.e., storm readiness), restoration, and communication during outages. Staff proposed, and issued for public comment, a

scorecard that assigns points based on how a utility performed relative to 31 performance metrics. The proposed scorecard has a total of 1,000 possible points, with 100 points for Preparation, 600 points for Operational Response, and 300 points for Communication. The Company has worked with Staff on previous iterations of the storm scorecard, and will continue to work with DPS and the Commission to reach agreement on a reasonable set of metrics that accurately reflects the on-the-ground realities of storm preparation and response.

NYS Emergency Preparedness Commissions

In addition to the Moreland Commission, Governor Cuomo created three State Emergency Preparedness commissions following Superstorm Sandy: the New York State (NYS) 2100 Commission, NYS Ready Commission, and NYS Respond Commission. The Commissions' primary areas of concern are, respectively, infrastructure, critical systems, and emergency response.

The 2100 Commission released a report ("2100 Report") in January 2013 detailing its preliminary recommendations, with an emphasis on the resilience of the energy system. The Company's storm hardening measures, discussed in Section I of this report, support the Commission's recommendations. Specifically, the plan includes:

- Constructing higher flood walls and moats at substations and generating stations
- Raising critical station equipment such as relay houses and control rooms
- Waterproofing underground equipment in flood-prone areas
- Installing sectionalizing switches and other smart grid technologies in flood-prone areas
- Deploying sectionalizing switches on the overhead system to narrow the impact of outages
- Hardening of the overhead system against wind and tree damage
- Undergrounding of select overhead distribution circuits
- Accelerating gas-pipe replacement programs and protection for components that regulate pressure and flow
- Constructing new head houses at tunnel openings to mitigate water intrusion

The 2100 Report also recommended creation of a utility-equipment stockpiling program. As already described in Section II of this plan, the Company is an active participant in the PSC's collaborative with other utilities and DPS Staff that is examining the feasibility of a statewide shared critical equipment program. The collaborative members filed a report with the PSC on June 3rd offering joint feedback on the costs and benefits of such a program. Overall, the parties agreed that establishing a utility equipment sharing program would further enhance restoration efforts by facilitating communications, sharing of material and equipment, and over time, optimization of inventory levels. The parties recommended that a statewide program managed by the State's utilities at both utility and vendor existing locations would provide the most efficient and flexible program to meet future restoration needs following major events.

Among the 2100 Commission's other recommendations were a series of policy proposals relevant to the utility sector, such as expanding incentives for distributed generation and microgrids, encouraging

development of electric vehicle charging stations, and continuing the State's current energy efficiency and renewable energy programs that are scheduled to phase out later this decade. These policy concerns are more appropriately considered on a statewide basis and should be accompanied by a thorough analysis of the costs and benefits of each proposal or approach, and the potential impacts on utility customers across the state. To the extent practical, our plan will be updated with further plans. As an example, expanding the role of distributed generation may be further incorporated into our plans. As such, the Company continues to be very active in the development of state policies and programs, including working with NYSEERDA, to carry forward these concepts using renewable, energy efficiency and system benefits program funding.

The other two Emergency Preparedness Commissions – NYS Ready and NYS Respond – have not released specific recommendations. We will continue to take into consideration the recommendations of the NYS Emergency Preparedness Commissions as we develop and implement our plans.

F. Improving Customer Communications

Customers are extremely eager for frequent updates during storms. JD Power's Utility Customer Satisfaction Studies and other research consistently find that customers become more satisfied with each additional piece of information that they receive during an outage or other utility emergency. To improve information flow and ensure that our customers are aware of Con Edison's efforts before, during, and after storms, the Company is exploring opportunities to expand the number of ways that we can enhance communications with customers during the 2013 hurricane season and beyond.

i. Event Notifications

We have a robust process for communicating with our customers during severe weather events and other emergencies, and we are improving these processes to make them even more responsive.

Prior to any potential event, we make outbound calls to our special-needs customers, including those who use life-sustaining equipment and those with medical hardships. The calls alert these customers to the impending weather event and recommend that they prepare accordingly. We also contact critical locations, such as hospitals and nursing homes, to alert them to prepare as well.

As soon as we are able to establish a global estimated restoration time (ETR), we initiate outbound telephone calls to customers who reported outages in order to notify them of this information. When we are able to provide a more specific ETR, we make additional calls and provide a timeframe for the customers' specific locations. In addition, we initiate outbound confirmation calls to confirm that service has been restored once we have made repairs in an area. This helps to identify any customers who have individualized service problems that are not part of a larger outage.

We are currently enhancing this process in several ways. We have worked on process improvements to improve the timeliness of each of these outbound calls, and have added calls where we consider it necessary. The global ETR call will be made 12 hours after the event when the restoration period is expected to be less than 5 days, and 24 hours when we expect the restoration to take more than 5 days.

We also will make customer-specific ETR calls on a more aggressive timeframe. For events with restoration anticipated to be less than 5 days, we will make the call 36 hours after the end of the storm and 48 hours after the storm for restoration anticipated to be more than 5 days. With this information, customers will be better able to make plans during the event.

In order to further enhance the communication flow, we will be adding a call on the day before we plan to have crews in an area to confirm the customer-specific ETR that was provided to customers. This additional call will serve both as a confirmation of our plans and as a reminder to the customer. We are also reviewing the scripting of every type of communication (telephone, text, web, mobile applications) that we provide to customers during events in order to ensure that the communications present a clear and concise message.

ii. Blast E-mail Campaigns

For nearly two years, the Company has been using blast-email campaigns to communicate with customers who have provided us with their email addresses. These emails have included storm-prep emails prior to events such as Hurricane Irene and Superstorm Sandy.

To improve upon this process and to build on lessons learned following Sandy, Customer Operations and Corporate Communications recently developed a comprehensive blast email strategy. This effort included the creation of several email templates, which can be quickly updated and deployed during storms and other Company events, and the outlining of parameters that determine when each template should be deployed. These parameters are as follows:

- 24 to 48 hours pre-event:
 - Issue pre-storm email blast to include the following information:
 - safety tips
 - a request for customers to report power outages
 - a link to the Company's online outage map
- 24 to 48 hours pre-event:
 - Issue cancelled meter reading email blast that includes:
 - a link to meter reading instructions and FAQs at conEd.com
- 48 to 72 hours post-event:
 - Issue restoration and recovery email blast to include the following information:
 - safety tips for after the storm
 - the importance of accurate damage assessment to the restoration process
 - global ETR(s)
 - the availability of skilled employees who are dedicated to restoring service as quickly and safely as possible
 - tips for how customers can help during a storm or bad weather
 - an overview of Con Edison's restoration plan
- Post-event (no more than 48 hours after the global ETR is satisfied):
 - issue "thank you" email blast, thanking customers for their patience, understanding, and cooperation

iii. Text Notifications

Because more and more of our customers are relying on mobile phones for everyday communication, the Company is adapting its communications channels to include mobile solutions. We plan to provide customers with interactive communications, outage alerts, and notifications via Short Message Service (“SMS”) Mobile Text Messaging. Mobile communications are especially effective for reaching customers during power outages when other channels are unavailable — assuming customers are able to find alternative charging stations. We are in the process of developing an outage communication tool that will enable users to engage in two-way communication with Con Edison and Orange and Rockland Utilities via text regarding service outages.

Users will be able to register for the service through any phone that can send and receive text messages. The term “users” is deliberate, as this service is not designed only for “customers” of Con Edison and O&R. For example, we foresee this capability being used by multiple family members, or roommates, who wish to receive updates on outages.

After registering for the service, users can alert the Company that they are without power by simply texting “OUT” from any of the registered numbers associated with the account. During the initial phase of the rollout, customers will be able to use this service to request information on their estimated restoration time. Once implementation is completed in August, as estimated restoration times (ETRs) become available, users will be alerted with the information via text to all of the numbers registered to the account. Users can text “STOP” to opt out.

Our full text-messaging functionality will be up and running by the end of the second quarter of 2013, and will be available year-round for customer outage and other emergency communication.

iv. Outage Reporting for Residents of Master-Metered Buildings

The Company serves about 3,200 master-metered apartment buildings, which are home to 440,000 residents. Residents of master-metered buildings do not have account numbers with the Company. However, we want them to have the ability to register their service so they can report outages and receive updates. Currently master-metered residents can report an outage by address via our Interactive Voice Response (IVR) system. In keeping with our expanded outreach via mobile platforms, we plan to offer a mechanism that will enable master-metered building residents to register their service through any phone that can send and receive text updates.

Working with the same vendor handling our text notifications, we have identified a way for residents of master-metered buildings to report outages and receive updates via text messages. The option requires establishing a unique identifier (e.g., a Quick Response Code that is a two-dimensional bar code or number) for each master-metered address. The identifier would be provided to residents, probably by the landlord, so they can register for the service via a texting capable handset (e.g., mobile phone).

This is an add-on feature of the broader Text Notification of Outages project, and is not expected to result in significant additional costs. This feature may require some programming work, but that has not yet been finalized.

v. Mobile Applications

The utility industry, like virtually every other industry, has experienced a rapid migration of its customers from a traditional desktop computing environment to a mobile environment.

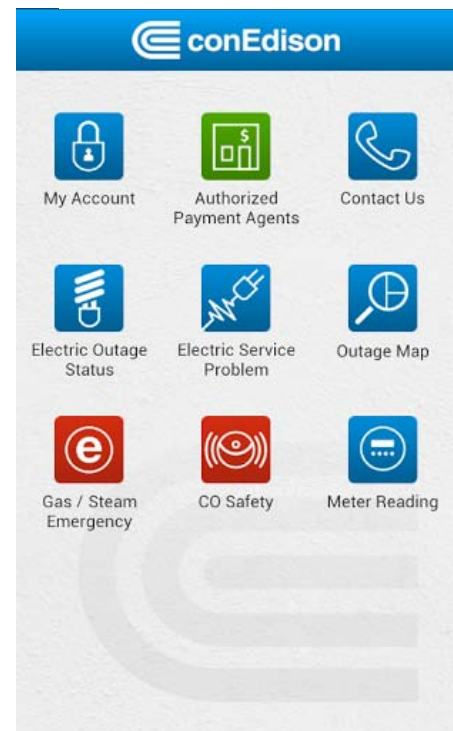
In 2010, when Con Edison first launched its mobile website, 92,000 unique users visited the site 148,000 times. By 2012, the site was visited over 2 million times by 632,000 unique users. These trends are expected to continue for the foreseeable future.

In 2011, during the five days that followed Hurricane Irene, customers visited the Company's mobile website 17,070 times to either report an outage or check the status of an outage that was previously reported. The following year, during the first five days after Superstorm Sandy, customers visited the mobile site 80,940 times to perform the same functions.

These numbers clearly indicate that many customers throughout the Con Edison service territory have adopted mobile devices as a primary tool for communicating outage information to the Company, as well as a way to obtain outage information.

With this in mind, the Company has been working to further enhance the customer mobile experience through the development of both iPhone and Android applications (apps) called "My conEdison." Similar to our website designed for mobile devices, the first version of these apps will provide the ability to report and check the status of an outage, and to view the Company's online outage map.

My conEdison app home screen



Version 2.0 of the My conEdison apps will include a host of new features, including:

- A weather feed
- A storm mode, which will provide customers with easier access to the functions they most need during a large outage, including the ability to report and check the status of an outage and view the Company's online outage map
- Access to the Company's Twitter feed, which was utilized heavily by customers during Superstorm Sandy
- The ability to report a meter reading by taking a photograph of a meter through a tool in our application
- Proactive push notifications for estimated times of restoration and other important information, such as an alert that service has been restored

In addition, the Company has also begun a full redesign of its mobile website to include many of the features that will be available through the mobile apps, as well as banner messages that can be used to communicate updated information regarding a restoration effort.

Both the iPhone and Android apps are available in their respective mobile app stores. Version 2.0 of both apps should be complete before January 2014, along with a redesigned version of the mobile website. Future initiatives also include the development of an iPad app, for which a full list of features will be available at a later date. A projected completion date for the iPad app has not yet been established.

vi. Additional Call Center Agents

The Company maintains a 24/7 telephone operation to address customer questions and concerns. This live service continues and is sometimes augmented during times of power or electrical outages. In advance of a storm, we review staffing, and make a determination to utilize storm riders and/or personnel from non-Company resources.

Although existing resources handle the calls received very effectively, we are always looking for ways to gain efficiencies and reduce costs. To that end, we have arranged for a vendor that will be available to assist with the handling and processing of customer calls and outage tickets during emergencies. After activating the vendor's services for an event, the Company will have access to a pool of 200 or more additional live call agents that can be available 24/7 for the duration of the event. These agents are distributed throughout the continental United States, providing flexibility and scalability to meet staffing needs. This vendor will support both Con Edison and Orange and Rockland Utilities staffing needs.

The vendor will make its best efforts to provide up to 25 agents within eight hours, and up to an additional 75 agents within 24-hours of notice of service activation. The Company has the option to update its staffing forecast throughout the event. Additionally, we may increase the number of agents to above 200. To prepare the vendor agents, a step-by-step training manual was completed and reviewed with the vendor's trainers. Throughout an activation period, we will provide periodic updates to the vendor that will assist their efforts to handle our customers' calls.

The purpose of contracting for additional agents during an emergency is to eliminate the need to have large numbers of employees take shelter at work locations prior to and during the event. This situation is not practicable, as it uses up Company resources that could be better utilized in other tasks once an event is in progress. The augmented remote-staffing model reduces our reliance on sheltering on-location while ensuring that we are adequately staffed to handle incoming customer calls.

vii. Meter Reading Information on Customer Central Webpage

During Superstorm Sandy, several meter-reading trips were cancelled as a result of the storm and of Customer Field Representatives being reassigned to site-safety duties. As a result, a number of customers received estimated bills that did not reflect the period of time that they were without service. This was the case not only for Con Edison customers, but for neighboring utilities, which received a considerable amount of bad press as a result.



Meter reading on My conEdison app

In order to make customers better aware of ways to avoid estimated bills during times when meter reading is suspended, the Company developed a meter-reading webpage, which was included as part of Customer Central, our online customer hub. Customers can also enter their meter readings using the My conEdison mobile application.

The new page (<http://www.coned.com/customercentral/meter-reading.asp>) includes information on the various ways through which customers can submit a meter reading, instructions for locating the date of their next scheduled reading, a video tutorial on reading a dial meter, and written meter-reading instructions.

A link to the page will be included in the blast email that is sent out 24 to 48 hours before a storm event.

viii. Identify Additional E-mail Addresses

Email communications have proven an effective and relatively inexpensive vehicle through which to communicate outage-related information to affected customers. They also provide for more personalized communications. Because each email address in the Company's database is tied to an account number, Con Edison can target those customers impacted by an outage.

During the Superstorm Sandy restoration effort, Con Edison used its database of over 1.1 million customer email addresses to communicate information to its customers, including storm preparation tips, safety information, and updates on the restoration effort. The database represents roughly one-third of our entire customer population.

After benchmarking with other utilities and discussion with an independent panel of experts, we decided to expand our email database and thereby extend the reach of critical storm information. To this end, the Company began exploring the possibility of purchasing email addresses via an email appending service, which matches email addresses in a vendor's opt-in database with customers for whom the Company does not currently have an email address on file.

After speaking with a number of vendors, the Company chose a vendor with which it has an existing non-disclosure agreement regarding confidential customer data. This vendor is expected to provide an additional 300,000 email addresses. The Company expects to receive all addresses that can be provided by the vendor by June 2013. We will then notify customers that the Company would like to communicate with them via e-mail and give them an opportunity to opt out of future messages.

ix. Explore Use of City and County Emergency Notification Systems

One means of communication that we have not previously explored, but that could be useful as we expand our communications with customers, is more frequent use of the emergency information systems operated by New York City's Office of Emergency Management (OEM) and the counties we serve.

Con Edison currently has an agreement with OEM to use the Notify NYC system to broadcast information about outages affecting 500 or more customers. These notifications go out to all New York residents enrolled in the service (approximately 165,000 people). There are also notifications that are sent out on high-load days, to convey the locations of dry ice distribution centers, and in the event of a preemptive network shutdown.

Westchester County OEM, on the other hand, has never employed their emergency notification system. Instead, they refer residents to the State's NY Alert service. The Company is currently exploring the potential for partnership with the State.

G. Improving Customer Interactions During Emergencies

Con Edison personnel, as well as crews from other regions, often provide crucial information to customers during a storm or other emergency. In this role, they need to provide exemplary customer service. With that in mind, the Company is developing new initiatives to ensure its employees, contractors and visiting crews understand safety guidelines, communications procedures, and their role with the public and the media.

i. Mutual Assistance Orientation Session

During the Superstorm Sandy restoration effort, crews from across the United States and two Canadian provinces were brought in to help restore service as quickly as possible. While in our service territory, visiting crews represent Con Edison to its customers on a face-to-face basis. Therefore, it is important that crew members be aware of Con Edison's guidelines for safety and customer service. Additionally, it is important that the visiting crews are knowledgeable to be able to share information and interact with



customers in the field, including when customers should be referred to other communication outlets.

During previous restoration efforts, mutual assistance crews received copies of the Company's safety briefing and a copy of the Electric Operations Mutual Assistance

Handbook. However, during the Superstorm Sandy restoration effort, reports surfaced that some of the crews were providing customers with incorrect information (e.g., that there were delays in restoring service because Con Edison had run out of utility poles).

To better ensure that mutual assistance crews conduct themselves in a manner that reflects our corporate values of safety and customer service, the Company leveraged its experience during Sandy and also benchmarked with Florida Power and Light (FPL) to develop a new Mutual Assistance Orientation Session and to update the Mutual Assistance Handbook. Topics covered include the importance of following approved safety guidelines, information that should be communicated to customers, guidelines for using electronic communications and social media, and what to do if approached by a reporter or other member of the press.

Development of the orientation session and handbook updates was completed in the first quarter of 2013. The new material will be distributed to mutual assistance personnel during future large-scale storm restoration efforts.

ii. Field Operations Centers

Due to the scope and duration of the restoration effort following Super Storm Sandy, the Company made a decision to set up makeshift Operations Centers in affected areas in order to assist customers there. These centers were staffed with representatives from Electric Operations, Customer Operations, Public Affairs, Energy Services, and others. The centers helped to establish a steady flow of information from the Company to its customers and vice versa. It also served as an effective structure to for Outreach Advocates and other employees charged with customer communication to get information from field personnel working to restore service.

In order to institutionalize and improve upon this process, the Company is working to develop an Operations Center Protocol, which will detail the conditions under which Operations Centers should be mobilized. The protocol will also outline an organizational structure, including a list of the organizations that should be represented at each center, as well as the duties of each of these organizations.



iii. Communication Through Wire Guards

During storm-related outages, Field Operations employees and Customer Outreach Advocates are often deployed to serve as “wire guards.” While on duty, wire guards are assigned to areas where electric wires have come down to ensure that members of the public do not approach or try to move the wires. During the Superstorm Sandy restoration, customers began to approach wire guards in search of information. In some cases, guards were confronted by frustrated customers.

Recognizing that wire guards are an important source of information and assistance for affected customers, we plan to provide them with additional training and tools to maximize their ability to not only ensure safety but also to provide critical information.

In the past, employees assigned to serve as wire guards did not always have Company-issued mobile devices or laptops. Once they departed for their 12-hour shift, it was difficult to provide them with additional, updated information. This communication gap has made it difficult for wire guards to send and receive information regarding the status of their work assignments, and to answer questions from customers in the community.

To address these issues, the Company proposes to develop a mobile technology solution, such as internet-enabled devices or smart phone applications, designed to provide wire guards and outreach advocates with specific, up-to-date information that they can pass along to customers. These applications will maximize the role of the wire guards and enable our customers to get information directly from Con Edison personnel in the field.

We are seeking a technological solution that includes the following functionality:

- the ability to update the Site Safety Management System when Wire Guards arrive on site
- the ability to communicate important information via text message, Twitter, or other medium as appropriate
- access to the Company's online outage map
- a weather feed
- access to environmental, health, and safety updates
- access to Company press releases on the restoration status
- the ability to provide job briefings via conference call
- the ability to communicate via phone with the wire guard's supervisor
- a distress signal capability
- GPS to be used for locating wire guards in the field

Before we finalize a timeline for completion of this project, we will complete the process of specifying the precise requirements.

This project poses a number of challenges, particularly relating to the ownership and cost of the devices being used by wire guards. The total implementation cost of this solution will depend on several factors, including the devices needed, how these devices are distributed, whether text messaging is incorporated into the solution, and other options. We believe this project will enhance customer communications during challenging periods.

* * *

SUMMARY ACTIONS

We have committed to the following actions aimed at improving our communications with customers, government entities, and all of our stakeholders.

COMMUNITY RELATIONS

Complete

59. Create new storm education communication materials

To be completed

60. Consolidate Company operations information with internal communications checklist (September 2013)

Ongoing

61. Take media on tours of strengthened facilities
62. Continue meeting with local officials, community organizations, and stakeholders to keep them apprised of storm hardening initiatives
63. Work with local governments on expediting permit approval processes (e.g., service restoration for electric customers that experienced flooding)
64. Educate government officials on infrastructure hardening efforts
65. Continue to seek federal funding opportunities
66. Identify opportunities to collaborate with Power of Giving community partners on storm-related initiatives

MUNICIPAL PARTNERSHIPS

Complete

67. Hold annual meetings and field visits with municipalities on blue-sky days to exchange information on emergency planning, discuss collaboration opportunities and share ideas

To be completed

68. Create new information tools for municipal partners to speed communications and deepen their understanding of the restoration process (September 2013)
 - f. Distribute feeder maps overlaid on municipal maps
 - g. Muni Dashboard

STATE AGENCY RELATIONS

To be completed

69. Clarify roles and expectations for utility staff embedded at the New York State Emergency Operations Center with the State Emergency Management Office (September 2013)
70. Advocate for cost recovery solutions that facilitate storm fortification plans and timely preparation in advance of forecasted storms (December 2013)
71. Explore benefits of converting New York State, Westchester County and New York City to use the same data management system during major events (December 2013)

72. Continue to work with the Department of Public Service and Public Service Commission to reach agreement on a reasonable set of storm performance metrics that accurately reflects the on-the-ground realities of storm preparation and response (December 2013)

CUSTOMER COMMUNICATIONS

Complete

73. Develop and launch new outage applications for Android and Apple devices
74. Contract for additional call center agents on an as-needed basis
75. Provide meter reading information on Customer Central webpage
76. Expand database of customer e-mail addresses
77. Explore use of city and county emergency notification systems
78. Update Mutual Assistance Handbook and develop new Mutual Assistance Orientation Session to prepare mutual assistance crews for customer interactions
79. Develop formal protocol for deployment of mobile Field Operations Centers, including staffing from multiple Company departments
80. Develop comprehensive blast e-mail strategy and templates

To be completed

81. Review scripting of all event notifications to customers to ensure clear and concise message (September 2013)
82. Provide Global ETR notifications within 24 hours of a storm's end (September 2013)
83. Provide Customer-specific ETR notifications within approximately 48 hours of a storm's end (September 2013)
84. Make outbound calls the day prior to customer restoration as a confirmation (September 2013)
85. Provide customers with interactive communications via text message (September 2013)
86. Provide interactive outage reporting for master metered residents via text message (September 2013)
87. Explore options to give Wire Guards mobile communication devices so they can stay informed of important developments and relay up-to-date information to customers while in the field (December 2013)

SUMMARY

Superstorm Sandy was the most harmful and destructive storm our region has ever seen. Over 8.5 million customers in eight states lost power as a result of the storm, including 1.4 million of our customers in New York City, Westchester, Orange, Rockland, Sullivan and Pike counties. The National Hurricane Center estimates that the storm caused over \$50 billion in damage to homes and businesses up and down the eastern seaboard.

In the weeks following Sandy, the Company developed a comprehensive plan to implement the 80 action items described in this plan. These measures will ensure that we are able to continue providing safe, reliable, reasonably-priced energy services to our customers in an era of changing weather patterns and more frequent and increasingly destructive storms.

We have completed 28 of 87 action items that were identified in the weeks following Superstorm Sandy, and have plans to finish an additional 18 by the end of September and another 9 by the end of 2013. In the 2014-2016 timeframe, we will complete 21 additional projects that have longer lead times. Some of our activities are continuous in nature, for example working with our municipal partners to explore new ways to maximize resources during restoration. We will continue to work on the remaining 11 “ongoing” action items in parallel with our other projects.

To fortify our Electric, Gas, and Steam systems against future storms, we are strengthening our infrastructure so it can withstand harsher conditions, particularly coastal flooding and high winds. These measures enable us to continue to provide customers with the level of service and reliability that they have come to expect. In the near term this means shoring up perimeter walls, deploying sectionalizing components, and installing submersible equipment so that our systems can withstand a storm similar to Sandy. Longer term, we will prepare for more intense storms, such as a Category 1 or 2 hurricane, which involves hardening overhead networks to withstand stronger winds and contact with tree branches, installing emergency diesel generators to keep critical equipment online, relocating substation control rooms to higher elevations, replacing cast-iron and bare steel pipe in flood zones, and adding new fiber optic cable loops to maintain communication with remotely-operated equipment.

We are improving our ability to provide ETRs and making important changes to our storm planning and restoration processes to give customers timely information as well as faster service restorations. In preparation for the 2013 hurricane season, we are updating our emergency preparedness plans, completing a Company storm drill, refining our priorities for emergency staffing levels, and developing a new online module that will enable real-time communication of damage assessments from the field. Longer term, we will develop new technology to optimize restoration plans and improve our ability to provide customer-specific ETRs within 48 hours of a storm’s end.

At the same time, we will improve the flow and coordination of information with our customers and other stakeholders. We are meeting regularly with municipalities, government officials, and other stakeholders to gather feedback and share information on our post-Sandy initiatives. As a result of these

meetings, we are poised to pilot a new communications platform that will greatly improve our ability to relay updates to key stakeholders. We are also creating new applications and mobile communication options that will make it more convenient for customers and stakeholders to get updates on what we are doing and provide the most accurate and granular outage and restoration information available.

Making these changes is essential to being a leading energy services provider. However, we still face a number of uncertainties that could impede progress toward our goals, including shifting targets for flood protection standards, technology development delays, and timely rate recovery for our storm hardening investments.

We continue to look for ways to improve through input from our customers, stakeholders and regulators. Con Edison has been recognized for years as a leader in reliability. We want to continue to provide reliable energy to our customers – reliability they deserve and have come to expect. As we implement our post-Sandy initiatives, we will work with stakeholders to address their concerns and reach agreement on desired outcomes.

As we move forward with our storm initiatives we are also contributing to the broader regional conversation on resiliency. Experts from across the Company are collaborating with a broad array of public and private sector stakeholders to identify cost-effective and practical solutions applicable across industries and economic sectors. This is a long term dialogue, and the Company is committed to participating throughout the process.

Keeping the power flowing and our vibrant region energized is a responsibility that we continue to strive to meet in all circumstances. Making our energy systems more reliable and resilient alone is not enough. We must join industry leaders, government agencies, elected officials, businesses, and others to find a broad array of solutions to better protect our region, and to prepare for our future – whatever that may hold.

COMPLETE

1. Benchmark with international organizations on design standards and storm hardening measures
4. Install isolation switches in Brighton Beach network on primary distribution feeders
8. Create new clearance standards for vegetation management in certain areas; implement a Hazard Tree Program and Branch Reduction Program
9. Continue to track and patrol worst-performing overhead distribution segments; preemptively trim in areas of potential tree contact

16. Mitigate impact of a storm similar to Sandy at substations that sustained significant damage during Sandy: East 13th Street, East River, East 15th Street, East 36th Street, Seaport, Trade Center, Gowanus, Goethals, and Fresh Kills substations
18. Mitigate impact of a storm similar to Sandy at generating stations that sustained significant damage during Sandy: 59th Street, 74th Street, and East River stations
20. Post information regarding safe installation of residential back-up generation on website
36. Reinforce Corporate Communications Transmission Network antennas for 2013 storm season
40. Assess internal staffing plans during emergencies, reprioritize staffing levels based on Sandy experience, and hold additional training for temporary storm support teams as necessary
41. Establish purchase orders with local, regional and national contractors to enable acquisition of emergency response contractors on an expedited basis
42. Identify base-camp staging sites and determine function and layout of each site
43. Evaluate effectiveness and cost of utilizing an accommodations vendor
44. Integrate rental car support into Logistics Operation Control Center
45. Enter into contracts with base-camp providers
46. Implement Resources-on-Demand software to facilitate centralized resource tracking
47. Update emergency preparedness plans
 - a. Electric Emergency Response Plans
 - b. Corporate Coastal Storm Plan
 - c. Identify potential for extreme events in our service territory, and modify plans accordingly
48. Increase material and equipment inventory to reflect recent storm experiences, especially Superstorm Sandy
49. Conduct annual Company storm drill and tabletop exercises, and invite municipal partners to participate in tabletop exercises designed to strengthen relationships between muni liaisons and municipal officials
59. Create new storm education materials
67. Hold annual meetings and field visits with municipalities on blue-sky days to exchange information on emergency planning, discuss collaboration opportunities and share ideas
73. Develop and launch new outage applications for Android and Apple devices

74. Contract for additional call center agents on an as-needed basis
75. Provide meter reading information on Customer Central webpage
76. Expand database of customer e-mail addresses
77. Explore use of city and county emergency notification systems
78. Update Mutual Assistance Handbook and develop new Mutual Assistance Orientation Session to prepare mutual assistance crews for customer interactions
79. Develop formal protocol for deployment of mobile Field Operations Centers, including staffing from multiple Company departments
80. Develop comprehensive blast e-mail strategy and templates

SEPTEMBER 2013

21. Evaluate use of a plug that can be installed behind meter pans to enable automatic transfer to back-up generation
22. Identify technical arrangements that would allow for customer-owned solar generation to operate independent of the grid
23. Monitor development of solar plug device that would allow customers to operate appliances using the output from a solar system operating independent of the grid
26. Evaluate long-term program for replacement of low-pressure gas systems with high-pressure pipe in flood zones
27. Evaluate measures to harden communications networks that feed Gas Operations Supervisory System
53. Accelerate damage assessment process using mobile technology, with implementation in several phases
54. Add a feeder prioritization function to the Outage Management System to make the restoration planning process more efficient
55. Automate ETR calculation and work scheduling to facilitate timely, accurate ETR notifications to customers with an initial focus on global ETRs and expansion to customer-specific ETRs
56. Form a dedicated ETR Storm Team and create ETR Unit Leader position in incident command structure
60. Consolidate Company operations information with internal communications checklist

68. Create new information tools for municipal partners to speed communications and deepen their understanding of the restoration process

- a. Distribute feeder maps overlaid on municipal maps
- b. Muni Dashboard

69. Clarify roles and expectations for utility staff embedded at the New York State Emergency Operations Center with the State Emergency Management Office

81. Review scripting of all event notifications to customers to ensure clear and concise message

82. Provide global ETR notifications within 24 hours of a storm's end

83. Provide customer-specific ETR notifications within approximately 48 hours of a storm's end

84. Make outbound calls the day prior to customer restoration as a confirmation

85. Provide customers with interactive communications via text message

86. Provide interactive outage reporting for master metered residents via text message

DECEMBER 2013

2. Develop new design standards to prevent or mitigate damage in a storm similar to or larger than Superstorm Sandy

3. Make repairs and replacements necessary to return systems to normal operations

10. Conduct outreach on vegetation management issues to inform municipalities and residents of our programs and give them opportunities to provide feedback

11. Conduct vegetation management studies and benchmarking surveys to identify additional best practices

33. Protect First Avenue Tunnel from water infiltration with vent cover plates

70. Advocate for cost recovery solutions that facilitate storm fortification plans and timely preparation in advance of forecasted storms

71. Explore benefits of converting New York State, Westchester County and New York City to use the same data management system during major events

72. Continue to work with the Department of Public Service and Public Service Commission to reach agreement on a reasonable set of storm performance metrics that accurately reflects the on-the-ground realities of storm preparation and response

87. Explore options to give Wire Guards mobile communication devices so they can stay informed of important developments and relay up-to-date information to customers while in the field

2014-2016

5. Install submersible equipment in flood-prone areas of Con Edison's underground network
 - a. 120/208 Volt units – replace transformer/network protector units in Category 1 and 2 flood zones with single submersible units
 - b. 265/460 Volt units – install water resistant network protectors in Category 1 and 2 flood zones
6. Install isolation switches to implement sub-network concept in Fulton and Bowling Green networks
7. Install isolation switches at 70 underground network locations in Category 1 and 2 flood zones to allow de-energization of high-tension customer equipment
12. Install devices to reduce overhead circuit size to 500 customers or less for Con Edison, and 250 customers or less for O&R
 - a. Vacuum reclosers at 131 locations
 - b. SCADA-enabled gang switches at 424 locations
13. Isolate overhead open wire spurs from feeder main runs
14. Deploy measures to improve overhead auto-loop reliability, such as aerial cable and breakaway components
15. Pursue selective undergrounding of distribution circuits that will have the highest impact on storm-related outages or that serve critical community resources
17. Prepare for more intense storms at substations impacted by Sandy as well as other stations, including West 49th Street, Academy, Sherman Creek, Hellgate, and Bruckner substations
19. Prepare for more intense storms at generating stations impacted by Sandy as well as 60th Street and Ravenswood steam stations
24. Consider developing a Dispatchable Back-Up Generation program to improve the reliability and environmental profile of large customer-owned emergency generation
28. Install 9,200 valves on gas high pressure service vent lines within flood zones
29. Initiate targeted program to replace 15,000 to 20,000 feet of low-pressure gas cast-iron and bare-steel pipes in flood-prone areas

30. Evaluate measures to harden remote operated gas valves in coastal flood zones, including communication and electric supply components
31. Develop new device to prevent water infiltration and migration into the gas system from flooded customer equipment
32. Evaluate and implement hardening measures for gas regulator stations in coastal flood zones
34. Construct reinforced concrete head houses for five tunnels
35. Deploy flood doors, gates and additional de-watering capability at tunnel entrances
37. Install new Corporate Communications Transmission Network fiber optic loops to transmission substations in Manhattan
38. Redesign, reinforce, or replace equipment at antenna sites where necessary
39. Establish backup generators at three radio facilities and procure mobile generators for tactical deployment at other radio locations
57. Re-examine the role of smart meters in restoration planning, and examine other technologies that could improve the process of establishing ETRs

ONGOING

25. Work with stakeholders to identify critical infrastructure and essential services that would benefit from combined heat and power (CHP) systems during outages
50. Participate in and continue to enhance statewide critical equipment sharing collaborative, working with New York utilities to implement a program that leverages existing inventory practices and warehouse locations
51. Work with Edison Electric Institute to improve coordination of mutual locations and contractor resources during “National Response Events” that affect multiple companies, states, and regional mutual assistance groups
52. Work with municipal partners to expand municipalities’ role in the restoration process
58. Work with community leaders to identify essential customers, such as supermarkets and gas stations, that should be prioritized in the restoration plan
61. Take media on tours of strengthened facilities
62. Continue meeting with local officials, community organizations, and stakeholders to keep them apprised of storm hardening initiatives

63. Work with local governments on expediting permit approval processes (e.g., service restoration for electric customers that experienced flooding)

64. Educate government officials on infrastructure hardening efforts

65. Continue to seek federal funding opportunities

66. Identify opportunities to collaborate with Power of Giving community partners on storm-related initiatives