United Westchester March 2018 Storm Response Report

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We value feedback and welcome comments to this report. Please submit them via email to Westchester County Executive George Latimer (ce@westchestergov.com) and State Assemblyman David Buchwald (BuchwaldD@nyassembly.gov).

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United Westchester List of Early Recommendations

<u>Early Recommendation #1</u>: The Public Service Commission as well as Con Ed and NYSEG should perform an analysis of their ability to forecast the severity of future storms and their process of preparation given the variability in forecasts (or the likelihood of worst-case scenarios).

Early Recommendation #2: Utility companies should invite county, state and federal elected officials to participate in pre-storm conference calls when they are held.

Early Recommendation #3: Utility companies must fully integrate the contact information they receive from elected officials into their emergency response outreach.

<u>Early Recommendation #4</u>: Con Ed should reassess its intergovernmental conference calls. The current municipality by municipality alphabetical (or reverse-alphabetical) roll call of local governments, not only doesn't clearly indicate when county, state or federal officials should participate, but also is inefficient compared to alternatives like grouping the discussion by sub-region in Westchester. In addition, the Con Ed participants on these calls need to be better prepared to accurately answer questions that can be reasonably anticipated.

<u>Early Recommendation #5</u>: Utility companies should forswear the practice of using robocalls to inform customers that their power is back on when the utility is not actually certain that electric service has been restored. More broadly, the utilities should make a strong commitment to provide accurate information in all circumstances, including with government officials and the public.

<u>Early Recommendation #6</u>: The utility companies need to significantly improve their internal communication processes during storm emergencies, so that all relevant employees and contractors, especially those dealing with the public, are well-informed and convey relevant, accurate information. Those charged by a utility with communicating with public officials should be fully supported by the utility with accurate information on damage and restoration, and should either have authority to commit the utility to action or clearly convey the limits of their authority.

Early Recommendation #7: The utility companies and the Public Service Commission should rigorously reevaluate the functioning and reliance on the mutual aid system for power outage restorations, as it seems designed for failure for storms that have a region-wide impact.

Early Recommendation #8: The lack of accurate and consistent information of crew placement significantly hampered coordination of public services and utility-government relations. Electric utilities should devise a better approach for providing government officials information as to how many and what kind of crews are providing services to each municipality (or circuit, in the case of NYSEG).

<u>Early Recommendation #9</u>: NYSEG should commit to providing liaisons to municipalities at the start of storm restoration work, rather than days later. Con Ed should strongly consider strengthening its municipal liaison program, with both broader training and a more active role in providing support to Con Ed on its deployments and having full access to information that could be of use to a locality.

<u>Early Recommendation #10</u>: Utility companies should endeavor to engage all government partners to identify an up-to-date and comprehensive list of critical facilities that are in immediate need of attention when their power goes out. By the time of a storm, there should be no question as to where all of the critical facilities are.

<u>Early Recommendation #11</u>: A dialogue should be initiated between governments and utilities about whether it is possible to better help vulnerable customers that do not rely on life support equipment.

Introduction

In early March 2018, storms resulted in power outages for over 150,000 Westchester utility customers (a figure that likely translates to at least 300,000 Westchester residents).

What follows is a summary of the feedback received on a 21-topic survey of Westchester elected officials that was circulated in the weeks after the storms. This effort to collect feedback on the storm response was coordinated through United Westchester, a voluntary group to which every mayor/supervisor of local governments in Westchester was invited to participate, along with every Westchester county-level elected official and State Assemblymember, State Senator and Congressmember who represents Westchester. 70 elected officials and representatives met on March 23rd and embarked on this endeavor. Over 30 officials responded to the survey, and they represent every level of government serving the people of Westchester. We have attempted to use quotes and cite responses with minimal editing. Some edits were needed to make this document as clear as possible.

This document was not prepared just for the Public Service Commission, but we believe the feedback on many of the topics will inform the Commission's work. This compilation of responses will also be shared with other government officials, the electric utility companies serving Westchester (Con Edison and NYSEG) and the public.

We recognize that many people are interested in immediately drawing conclusions about how to prevent these sorts of extended power outages in the future. We share that interest, and in time expect to work with our partners in government to develop action items, but we also believe it is important to lay out, as definitively and comprehensively as possible, our experience as the elected representatives of the people of Westchester during and after these storms. In identifying problems that need to be addressed, it is our hope that solutions to a whole multitude of issues will be developed (whether by the utility companies voluntarily or through government intervention). Where a municipality or other elected official has provided in their comments an idea for how to solve an issue, those thoughts are recorded in these pages. However, the ideas of any one or two officials, even though contained in this "United Westchester" document, do not necessarily reflect the considered views of the

broader group. Therefore, we caution utility companies or others from adopting these ideas without further consultation with a broader range of government officials. That having been said, where immediately obvious to us we have made **early recommendations** below that we think are likely to be representative of broadly-held views, even though these recommendations only start to address some of the problems we observed. However, this report is much more about the problems it seeks to identify, and even if all of the limited recommendations contained in this preliminary report were adopted in full, a great many issues would remain.

For reference, the following communities are in NYSEG territory: Bedford (for the most part), Lewisboro, North Salem, Pound Ridge, Somers and Yorktown (in part). The rest of Westchester is Con Ed territory.

1. Preparation in Advance of the First Storm

There is a general sense in our group that the utility companies' preparation in advance of the first storm was inadequate (terms like "failure" (Scarsdale) / "failed" (Cortlandt), "little to none" (County Legislator Alfreda Williams) and "very poor" (Bedford) were used). "Con Ed didn't seem to be at all prepared for these storms" remarked Dobbs Ferry's Mayor. This overall reaction is mitigated somewhat by a sense that the work done before the first storm arrived was "typical to any storm" (Tarrytown) and "appeared to be appropriate at the time [for] like past weather events of the forecasted nature" (Elmsford) or that the failures of the utility were more about long-term preparation issues than immediate pre-storm problems (County Legislator MaryJane Shimsky). Nevertheless, some local officials (including Bedford) noted that at least some forecasts were for a stronger storm. "Con Ed's meteorologist claimed on a group call to have been surprised by the strength of the first storm. He denied the existence of the voluminous, dramatic pre-storm warnings" (Rye). As summarized by Sleepy Hollow, "We received emails and weather reports, but we did not feel that Con Ed was prepared to handle the outages." Whatever preparations were made, Con Ed at its April 12th meeting with Westchester elected officials appears to have conceded that they were insufficient to address the actual, as opposed to forecast, storm and outages. Perhaps this is NYSEG's position as well. Congresswoman Lowey wrote that "it appeared that

the companies were too reliant on the predictive power of their algorithms to accurately estimate the expected damage from the storm, the number of work orders or tickets it would take to repair that damage, and the number of mutual aid crews necessary to do those jobs in a timely manner."

New Rochelle noted the crux of the issue in that the combination of "the inherent uncertainty of weather forecasts" and "the high cost of maintaining a significantly larger 'standing army' of field crews" complicates the task of improving preparation in advance of storms. We do, however, make the following request -- Early Recommendation #1: The Public Service Commission as well as Con Ed and NYSEG should perform an analysis of their ability to forecast the severity of future storms and their process of preparation given the variability in forecasts (or the likelihood of worst-case scenarios).

Regarding Con Ed's specific outreach in advance of the storm, as laid out by the Village Administrator of Sleepy Hollow, "We received emails and weather reports, but we did not feel that Con Ed was prepared to handle the outages." Bronxville and Larchmont conveyed similar sentiments. North Castle remarked that Con Ed "[s]eemed to not have a handle on where their resources were or what the response time was."

The Town of Mamaroneck noted that they requested a liaison from Con Ed who arrived on schedule the evening before the first storm. Con Ed also held a municipal conference call on Friday morning March 2, before most of the first storm had arrived. However, we believe that county, state and federal legislators and their offices were not invited to participate on this call. Congresswoman Nita Lowey, whose district includes Rockland County, relayed that "[e]mails [to her office] from Orange & Rockland [Con Ed's sister utility] arrived prior to the storm, while those from Con Ed did not arrive until the weekend after the first storm." Early Recommendation #2: Utility companies should invite county, state and federal elected officials to participate in pre-storm conference calls when they are held. This would allow the government official, rather than the utility company, to determine whether awareness of preparations is something worth the official's time in serving his/her constituents.

In NYSEG territory, reaction to their preparations varied widely. Somers noted that make-safe crews were placed on site at their highway department. On the other hand, in neighboring Lewisboro, it took a "number of days before there were make safe and assessment crews on the ground." Pound Ridge believes that it was in preparation

that all of NYSEG's problems occurred. There, the "[m]unicipal expectation was [that] NYSEG had make safe crews available to towns and their pre-storm memo clearly stated NYSEG had crews deployed and ready for the March 2nd storm. The reality was different. NYSEG had some contractors stationed around [the town] on March 2nd watching powerlines per their instructions from NYSEG. None would respond to our Police Department requests to move to watch the fallen lines that posed a immediate danger to residents or first responders. But the most frustrating part was that NYSEG, including the incident commander / command center shut down Friday night, March 2nd at approximately 11:00 pm. This was in the middle of the storm when trees were still pulling down live power lines. Our teams [including the police and highway departments] continued to work through the night to block off roads with downed power lines and assess the situation. Even the Emergency Number NYSEG provided us shutdown Friday night and was not reopened until Saturday [at] 10:00 am. This was the most serious and dangerous 24 hours and the appearance was NYSEG command was overwhelmed and gravely understaffed to assess the damage real-time. ... This was extremely problematic as there was no way for the fire department to extinguish fires due to live downed power lines interfering with operations."

Pound ridge goes on to say that, "communications were totally cut off and an e-mail correspondence auto-replied that operational staff we're going home to sleep and get some rest. ... One resident and one police officer were nearly electrocuted at 1:00 pm as the resident approached a downed power line that was live. The most frustrating part to local officials was knowing that NYSEG contractors and their vehicles sat at various locations in Westchester, Putnam, and Dutchess County awaiting instructions from NYSEG command. We all saw the pictures of trucks lined up in various parking lots with crews awaiting instruction. [The town's] recommendation going forward is the same recommendation after Hurricane Sandy: pre-stage make-safe crews here 24 hours in advance of a known hurricane, nor'easters, or heavy wind event. The news and weather reports were very clear - the March 2nd storm was going to hit the northeast and hit hard. We knew (just like with Superstorm Sandy) days in advance this storm was coming and was going to cause damage. The only question remained, was how much damage."

More broadly, Assemblyman Kevin Bryne summarized the situation across both Westchester and Putnam Counties: "There were delays in communication between

utility companies and emergency operating centers leading up to the storms. When the declarations of emergency were made, municipal leaders and community leaders complained that NYSEG was not visibly present or communicating with emergency first responders."

Utility companies need to be prepared with available crews or other manpower, equipment and contingency plans when outages that occur that are beyond predictions. Not every power outage comes with advance warning. One official noted that the response of the electrical utilities with an insufficient number of crews gives little comfort to New Yorkers in the age of terrorism, where a series of power outages could occur unexpectedly. County Executive Latimer remarked that in planning for weather-related outages the utilities and their executives need to be proactive.

The remaining 20 items in this questionnaire address what happened after the storms hit.

2. Damage Assessment

Views of the electrical utilities' damage assessment efforts varied from "poor" (Sleepy Hollow) and "limited" (Cortlandt) to at least including "very skilled" crews (once they arrived) (North Castle) or involving assessment personnel that followed protocols (Elmsford).

Damage assessment is, of course, of necessity an ongoing task during the aftermath of a storm. And in that respect the Town of Mamaroneck noted that, "The damage assessment crews that came into the Town were in regular communication with the municipal liaison. The communication problem came later after the crews left the Town and there was insufficient communication regarding the seriousness of the damage and the estimates on restoration." Since damage assessment teams are generally separate from restoration crews, Rye Brook suggests that the damage assessment trucks should be labeled "with removable magnets on doors so residents do not have a false hope that these damage assessors are there to restore power."

There is an underlying concern among many officials as to the accuracy of the damage assessment. "Con Ed never really knew how many customers it had without power." (City of Rye). Both Rye and Mount Kisco conveyed that Con Ed had problems identifying which streets were in which municipalities (for example, addresses in the 10549 Mount Kisco zip code that ConEd calculated as Mount Kisco outages, even if they were in the neighboring towns of New Castle or Bedford. "[I]n Bedford, the actual assessments on the ground on the part of the utilities did not occur for at least three days following the storm." In New Castle, the question posed was "Why [the] response to a very well-forecasted storm [was] ... beyond slow ... nonexistent?"

There is sentiment that utilities seem to be relying on municipalities to perform essential damage assessment functions (Mount Kisco and Congresswoman Lowey, among others). Bronxville notes "Communities had to complete their own damage assessments and report back to the utility providers. There was no dedicated comprehensive damage assessment in our Village." In any case, local knowledge of the area is viewed as valuable in conducting assessments. As County Legislator Cunzio remarked, in her district "there are many streets that start and stop with similar names - multiple streets with the same name." If formalized arrangements were made with local talent, such as law enforcement or elected officials, this could be a positive partnership (County Legislator Covill).

Pound Ridge's experience of voluntarily taking on the damage assessment role is instructive. "This is based on a project undertaken in 2013 where teams of assessors were trained by NYSEG to perform initial assessments exactly as NYSEG assessors. During the storm, Pound Ridge uploaded this data to NYSEG and provided hard copies to the local crews once they arrived. Pound Ridge has 8 damage assessment teams who can conduct damage assessments and upload data through NYSEG's software. Given the difficulty NYSEG faces even getting into Pound Ridge during these events, we are usually able to get this data together within 12 hours and often 24-48 hours before NYSEG damage assessment teams can get in to Pound Ridge. ... This was a point of conversation with former NYSEG President Mark Lynch who applauded this effort and insisted it be undertaken collaboratively and immediately going forward."

However, NYSEG did not use the Pound Ridge system more broadly. For example, in North Salem, damage assessments were not done for days, even though the municipality, like others, updated the NYSEG Municipal Assessment System on a

regular basis, as they said they would do. Lewisboro reports that "[a]fter [Superstorm] Sandy it was agreed by the utility companies that each town would have a utility liaison and a crew assigned to the Town which would work with our Highway, Police and Emergency responders. This did not happen. [The r]esult was slower make-safe, slower assessment and slower restoration."

3. Utility Company Communication with Public Officials (separate from conference calls):

Most utility company communication with municipalities was through organized conference calls or their liaisons, and those topics are discussed later in this report. This section focuses on communications with municipalities on a broader basis.

Some officials describe a "lack of communication" (Croton-on-Hudson) and "poor" communication (Scarsdale). Larchmont remarked that "Answers from Con Ed were slow and the people we spoke with in the office sometimes did not seem to understand the processes on the ground." Westchester County Executive Latimer lamented the lack of clear communication from Con Ed and NYSEG "about the issues they faced, how they were going to tackle these challenges and how far along they were in the process [restoring power to residents]."

A central feature of the utility company's communication with public officials is that it flows through government relations specialists, and this process creates both opportunities and problems. Assemblyman Buchwald and Congresswoman Lowey both noted the value of their respective state and federal contacts, but with important caveats: Buchwald remarked that many interventions by elected officials inherently indicated that some other aspect of the storm response was flawed (in other words, many government requests sought to correct a problem - either substantive or informational - that constituents were having with the utility and couldn't get solved through regular utility processes); and Lowey commented that constituent issues were better handled than those of schools, such as the School of the Holy Child in Harrison (with a Rye postal address), which was without power for four days of school instruction. New Castle "Town officials would like to receive a daily "press release" from Con Ed with information that the municipalities could share with residents (e.g., number of

repairs, transformers damaged and replaced, poles damaged and replaced, etc.)." Most of this information wasn't made available to government officials during the March storms for their own use, let alone for use by the public.

More broadly, some officials came to view the information they received from utility companies as simply not corresponding to what officials and their residents saw on the ground. North Castle said bluntly, "This miscommunication caused havoc and added to the frustration of so many without power for up to 9 days." The town noted that some sense of direct contact with a central command center would be helpful. Though Lewisboro's Town Supervisor "could normally reach an individual at NYSEG, the information I received was frequently wrong. For example, I was always told that restoration of power to the Lewisboro police station was a top priority. In reality this was clearly untrue based on it being one of the last buildings to have power restored." "Municipalities should be viewed more as partners. ...[I]f we cannot be assured that the information we are receiving is accurate then the communication breaks down" (Rye Brook).

There was some sense that things improved after the first few days (Elmsford, Dobbs Ferry). Pound Ridge, as relayed above, noted that "[t]he pre-storm communications have consistently been inaccurate and usually is not what is indicated in e-mails and other correspondence." However, the town went on to say, "[b]eginning Sunday morning, March 4th, when the local crews arrived, utility company communication was excellent since most of it happened face to face. ... The best communication was when we could interact directly with the individuals on the ground and the [mobile] Command Center [that was established by NYSEG in Pound Ridge and that] was directly responsible for the circuits in our town and neighboring municipalities."

4. Utility Company Conference Calls

Daily (and in Con Ed's case, sometimes twice-daily) calls were set up between the utility companies and elected/municipal officials. Assemblyman Kevin Bryne observes that "these calls were largely inefficient and lacked organization." Scarsdale simply designated them as "not helpful," and Dobbs Ferry said that, especially at the

start, they "did not resolve issues." Even when calls were good (which Sleepy Hollow said they were), they rarely led to action (also Sleepy Hollow), did not solve issues (Cortlandt), included inaccurate information (Bronxville, County Legislator Williams, County Legislator Cunzio), or even contained, in the estimation of one local official, an outright lie. Overall, the volume of communication was great, but the value and substance were, at best, limited (New Rochelle, Peekskill).

As a threshold matter, the outreach to let elected officials know of these calls, particularly for Con Ed, was haphazard and disorganized in the immediate days after the storm. Despite the fact that Con Ed regularly - at least once a year - requests all relevant contact information from elected officials, much of that information was ignored. Congresswoman Lowey reports that Congressional offices were not immediately invited onto the Con Ed conference calls, even though both Orange & Rockland and NYSEG looped in the relevant federal offices from the beginning. Assemblyman Buchwald noted that at the state level, legislators' offices were early on only informed of some conference calls by emails from the utility company to a staff member, even though legislators had provided both their official and personal email addresses on their contact information forms. County Legislator MaryJane Shimsky was "stunned" that it took outreach from County Board Chairman Ben Boykin to ensure that the 17 Westchester County Legislators were aware of the elected official conference calls. All of this may be emblematic of a general misperception that utility companies need only focus their attention on the executive branch of local/county/state government, when in fact legislators are heavily involved in communications with the public, constituent services and handling of many issues that go beyond immediate emergency and public works services. Early Recommendation #3: Utility companies must fully integrate the contact information they receive from elected officials into their emergency response outreach. Utility companies should take particular note when elected officials change after elections -- a number of town supervisors took office on January 1, just two months before this set of storms.

As to the organization of the Con Ed calls themselves, there was much frustration about their efficiency in relaying information, but our group has a variety of takes as to sources of that problem and potential solutions.

Some officials viewed the Con Ed calls as well-run (Croton-on-Hudson, New Rochelle) or at least "helpful" (North Castle, County Legislator Cunzio), but New

Rochelle still found that the calls "tended to run too long and often functioned as venting or therapy sessions rather than focused and efficient working discussions, but that is primarily the fault of us participants, rather than the utility." Elmsford noted that "[a]s the days progressed, they became dominated by callers who were unfamiliar with the call process and/or the liaison and restoration process." Accordingly, Elmsford suggests that all participants on these calls take part in the emergency training that, according to Elmsford's Village Administrator, is done annually in each municipality. The Town of Mamaroneck took issue with "the often long speeches that were made by some officials that had no direct connection to the job at hand of transmitting information to the utility on conditions in the various communities."

The Town of Mamaroneck would rather State and County elected officials be sent to a separate call because "local officials on these calls have a great deal to do when coordinating storm response," or that alternatively state/county officials exchange information offline with their local counterparts. Larchmont (a village in the Town of Mamaroneck) may have similar views, as they expressed that "a regional emergency manager conferencing with municipalities and liaisons would be more productive." Congresswoman Lowey's office notes that in fact this sort of bifurcated call system was used by Con Ed at the outset of the storm response -- with local/county officials on a morning call and state/federal officials on an afternoon call -- but the separation of the conference calls was "fruitless" because it necessitated either another set of intergovernmental calls to share information or simply having all levels of government dial into both calls.

In any case, many officials found the intergovernmental information exchange function of these conference calls as their chief benefit. In fact, if the utility companies did not organize these calls, they would need to be created amongst the groups of governments themselves. (Indeed, Westchester County's Emergency Operations Center did organize daily calls with localities, but state and federal officials were not invited onto these calls.) Peekskill saw significant value in being able to hear how other municipalities were addressing challenges. Rye viewed the calls as "a huge waste of time, [except that they were valuable] in hearing from other municipalities how widespread and consistent was Con Ed's failure." Bronxville remarked that "[t]he calls ... enable[d] communities to understand that they were not alone in their frustration [with the utilities]."

In terms of the information being relayed by Con Ed and NYSEG on these calls, the comments centered on much of the information voluntarily offered up at the beginning of each call being too broad to help guide the call to a useful discussion (thereby incentivizing officials to instead focus their comments in the calls on their own local concerns). Bronxville felt the "[c]ommunication was generic, not community specific and was the same information the utility provider (Con Ed) was conveying to customers county-wide." To the extent the information being conveyed at the start of each call was generic/routine, already available on the utility company's website (during a situation like this where virtually all officials had access to the internet), or could have been emailed out in advance of each call, the calls could have been more effective.

The substance of the information Con Ed relayed led to some less than ideal takeaways. County Legislator MaryJane Shimsky says that "officials sometimes got the impression ... that we were told things to mollify us, regardless of whether the 'information' we were told was true." Croton said that some of the information provided on the conference calls did not match what company liaisons were relaying on the ground. Mount Kisco would have much more preferred calls to be focused on action-oriented items like learning from Con Ed the restoration status of priority sites and the numbers of crews in each municipality.

NYSEG was not spared criticism. North Salem said that too much of the information relayed by NYSEG was of no value, and their presentation should be shorter, more direct to the issues at hand, and less focused on the public relations story they want told about them. Assemblyman Buchwald noted that it took multiple requests across many days of conference calls for NYSEG to be willing to share information about how many crews were working on each of their circuits, and then NYSEG stopped sharing that information, which sadly illustrated that the company wasn't focused on making these calls as useful as possible for the public officials on them.

Too often, the response to an elected official's request or question on the conference calls was that the information wasn't available at the moment and someone from the utility would call the official back. This was problematic in at least two respects. First, utilities far too frequently did not make their follow-up calls. For example, but by no means a unique experience, Congresswoman Lowey reports that "questions our office raised in the conference calls and asked for follow-up answers [after] the calls were never answered." Second, many of the questions/requests were matters that the utility

should have been prepared to answer on the conference call. North Castle believes Con Ed "should anticipate the information they need to provide [on these calls] and have it on hand."

At the same time, it is unclear what role utility companies believe these group conference calls are supposed to achieve (besides fulfilling their regulatory requirement to have such calls). The utility companies (and, for that matter, the Public Service Commission, which listened in on each of these calls) seemed unfazed by the great number of inherently local issues -- affecting, say, a single street or single municipality -- that were brought up on these county-wide (Con Ed) or region-wide (NYSEG) calls. A well-functioning relationship between government officials and utilities would see those issues "better addressed in one on one calls" (Lewisboro). Rye Brook noted that the conference calls "should be reserved for system-wide issues, not local issues." Bedford would have appreciated it if the "[people] running the call would have ... stress[ed] more that specific matters should be handled offline," even while recognizing that this would necessitate utility staff being sufficient to be more responsive to those offline calls.

As discussed above, there is some value in hearing the issues affecting residents around the area, but it might be a fair inference that the reason these local issues were being raised so frequently on the group conference calls is that elected officials too often felt that it was a necessary means to get the utility company to pay attention to an issue.

Pulling together all of these comments, a potential big-picture takeaway is that Con Ed and NYSEG failed to provide a substantive enough set of information on these calls, and therefore the calls tended to devolve more into opportunities to air grievances against the utility companies rather than efforts to collectively solve problems.

Tarrytown, echoed somewhat by the Town of Mamaroneck, suggested the Con Ed calls be divided into smaller groups by region, or alternatively by separating the four big cities (Mount Vernon, New Rochelle, White Plains and Yonkers) from everyone else, but this would not work for officials at the county/state/federal level that represent multiple jurisdictions. However, based on our experience with NYSEG calls, which covered a three county region of Dutchess, Putnam and Westchester, it might be useful to organize the Q&A portion of the calls into different regions rather than purely alphabetically (or reverse-alphabetically). NYSEG would, say, call on federal officials, then state officials, then Westchester County, then Westchester County Legislators,

then each of the Westchester towns in NYSEG territory, and only then would move onto Putnam (with the order of the three counties on these calls alternating each day). The specific prompting of each level of government gave everyone a clear indication of when it was time to speak (a process lacking for all except local officials on the morning Con Ed calls). Con Ed could adapt this regional system to its Westchester conference calls. For example, at the very least the Town of Greenburgh and its six villages - each of those six in alphabetical order - could be taken up together, with specific prompts for County Legislators, Assemblymembers/State Senators, etc. who predominantly represent Greenburgh. More broadly, the Sound Shore communities could be taken up as a group on the call (which could be particularly useful for storms that cause coastal flooding). The default grouping of localities could be worked out in advance, recognizing that any particular outage situation might necessitate some adaptation of the default. Bedford notes that to the extent alphabetical order is used, it would be helpful if the pre-call reminder emails listed whether alphabetical or reverse-alphabetic order will be used on the upcoming call.

Early Recommendation #4: Con Ed should reorganize its intergovernmental conference calls. The current municipality by municipality alphabetical (or reverse-alphabetical) roll call of local governments, not only doesn't clearly indicate when county, state or federal officials should participate, but also is inefficient compared to alternatives like grouping the discussion by sub-region in Westchester. In addition, the Con Ed participants on these calls need to be better prepared to accurately answer questions that can be reasonably anticipated. The exact desired structure of the governmental conference call(s) is an open issue on which more dialogue needs to be had.

5. Intergovernmental (Non-Utility Company) Communication

Respondents generally rated communication with the County of Westchester as good and reported helpful working relationships with their municipal neighbors. The Town of Mamaroneck found the Westchester County conference calls well organized and disciplined. Croton-on-Hudson agreed, adding that the Westchester County Emergency Operations Center was able to provide them with a generator and

assistance in getting internet service restored. Mamaroneck shared fuel and equipment with its neighbors.

Other comments rated this topic "[v]ery good to excellent" (County Legislator Alfreda Williams) "very good" (Dobbs Ferry) and "good" (Mamaroneck and Pound Ridge). Larchmont says it has excellent communication with its sister communities. Sleepy Hollow called intergovernmental communication above average, "but we were at the mercy of Con Ed." Bedford found intergovernmental communication good, but believes coordination could be improved. Rye agrees communication was good, "though county/state efforts to wake up Con Ed might have been more useful if they could have been undertaken sooner." For communication between levels of government, town and local police department email lists, which distributed information regularly were of great benefit. Congresswoman Lowey in particular noted the value of this form of interaction.

6. Utility Company Communication with the Public (including websites, robo-calls, text messages)

"The communication with the public caused more upheaval than it cured."

- Mayor Lorraine Walsh, Village of Larchmont

The importance of sharing timely and accurate information about a power outage with the public cannot be overstated. As Pound Ridge notes, "Residents need and expect accurate information to prepare and recover after the storms. They make shelter in place or evacuation plans based on the information provided by utility companies." Residents also make decisions about when to check out of hotel rooms or return from other accommodations (sometimes hours away) in reliance on what the utility companies tell them.

The "failure" (Cortlandt) on the public communications front was nothing less than a series of "nightmares" according to County Legislator Shimsky, with information being conveyed being "inaccurate and often misleading" (County Legislator Alfreda Williams). Congresswoman Lowey described the utility outreach to the public as "generally horrible all around."

Most prominent of the communications problems were the utility company robocalls that went out informing customers that "their power had been restored, when in fact it had not been." (quoting then-State Assemblywoman (and now State Senator) Shelley Mayer, and broadly experienced, but specifically reported by Elmsford, Mount Kisco, New Castle, North Castle, the City of Rye, Rye Brook and Sleepy Hollow). County Executive Latimer noted that "[t]hese types of ... communication flaws create serious issues for those caring for children, the elderly and those with special needs or disabilities." North Castle took issue with Con Ed going beyond reporting facts to the public. New Castle referred to many of the robocalls as "fake news." Instead, utility companies have explained that they use the robocall system to help determine whether power outages still exist after an area-wide repair has been made. Given that, it would seem to be advisable that utility companies stop having robocalls to inform customers of power restorations when the utility is not actually certain that electric service has been reestablished. It is confusing to us why the utility companies, even a number of days into the storm response, and after hearing numerous complaints about these calls did not either turn the robocall system off (the Town of Mamaroneck's suggestion) or modify the message (the City of New Rochelle's suggestion) to avoid false claims of power restoration when their real purpose is to assess the effect of restoration work. A revised call text could say something like, "We are pleased to report that a repair has been made in your vicinity. Accordingly, we are calling to find out if power has been restored to your location. Please call us at if your power is still out. If you do not call us, we will not know that further repairs still need to be made." To the extent an automated response technology is used, at least three options ("power restored," "power still out," and "unsure") need to be provided. The utility companies should also check the technology behind their databases, as Larchmont noted that residents would sometimes get multiple and sometimes contradictory automated calls or text messages at the same time about their outage at a single location, signalling that perhaps multiple problem reports for the same home weren't being merged into a single outage ticket for the utility. (This also raises questions about whether the utility's self-reporting of actual 90% restoration times is accurate).

Early Recommendation #5: Utility companies should forswear the practice of using robocalls to inform customers that their power is back on when the utility is not actually certain that electric service has been restored. More broadly, the

utilities should make a strong commitment to provide accurate information in all circumstances, including with government officials and the public.

The utility company websites, either in the form of maps or other information, also did not work (Congresswoman Lowey, North Salem, Tarrytown, among others). Bronxville remarked that numerous times in the past Con Ed had promised that its online outage map would be improved, but that simply did not end up being the case. Assemblyman Buchwald reported that some local governments went so far as to officially inform their residents to ignore the information on those websites (Bedford confirmed this in their feedback form). This is a thoroughly unacceptable situation, and not what anyone should expect in the 21st Century. The online Con Ed outage map was deemed simply not accurate for Mount Kisco, to such an extent that the village government relied on sending out patrols to identify which areas were without power. Assemblyman Buchwald also distinctly remembers that on a morning Con Ed municipal/elected official conference call an announcement was made that the company knew its website-posted restoration times were inaccurate and needed to be revised, yet many hours later that had not been done -- nor was there a banner on the Con Ed website informing the public that they should not rely on the posted restoration times.

This disjuncture between what the companies knew and what they were willing to reveal to the public has created a trust gap that will take years to repair. "One person reported a Con Ed phone representative who answered a question as to restoration with words to the following effect, 'I've been told to tell you X, but I know that is wrong. I just can't lie anymore. It won't be X, it will be Z or later" (conveyed by the City of Rye).

Some utility company executives have, in our view, tried to minimize the problems of their storm response by framing their utility performance as primarily being one of communications problems. On the public communications front alone, the performance was "abysmal" (Croton-on-Hudson), but as the many non-communications topics in this report indicate, the storm response problems were much more widespread, operational issues.

Instead of providing information that would have resolved public tension, the actual result was "terrible" (Peekskill), "a total failure" (Pound Ridge), "added frustration" (Assemblyman Kevin Byrne), and created "additional hardships for those that went home to no power" (North Castle). Furthermore, "[e]very time [a] utility communicates an untruth, it blows back on local government officials ..." (Lewisboro). "The majority of

complaints the village [of Croton-on-Hudson] officials fielded were from residents upset at Con Edison for their lack of truthful communication." Even worse, sometimes utility company employees falsely asserted that the reason a road couldn't be cleared was because of the local government's inaction. "Con Ed representatives, including line sitters, should be more strongly cautioned to avoid inaccurately pointing fingers at municipal DPWs" (New Rochelle). "More broadly, utility companies should better recognize that elected and public officials are well-placed to convey useful information to the public, but in the aftermath of these storms, those officials frequently concluded that they simply could not trust the information coming from the utilities, and therefore could not pass it onto the public without putting their own credibility at risk.

7. Communication, Awareness & Decision-Making within Utility Companies

"Clearly there was, at least initially, chaos within each utility."

- Supervisor Chris Burdick, Town of Bedford

Although government officials, except perhaps representatives of the Public Service Commission, do not stand in the internal offices of Con Ed and NYSEG during storms such as these, we gain a sense of whether utility officials have full information and are being internally consistent in what they report to their governmental partners. In these respects we by and large feel the companies' performances were "poor" (County Legislator Alfreda Williams, Sleepy Hollow) or a "failure" (Scarsdale). To some degree this topic is addressed in response to other questions (such as remarks on the disjuncture between local utility company liaisons and the rest of their operations), but we seek to address here how much we worry that utility companies may internally be ill-equipped to best respond to an emergency situation.

The lack of full-flow of information within the utility companies, or the lack of willingness to share internal, on-the-ground information with the public, has real world consequences. For example, in Pound Ridge information obtained from NYSEG's central office was "a total failure," whereas "[t]he information flow post-storm from the local command center was timely, accurate to within 30 minutes and sufficient for residents to properly prepare and respond." And so, the Pound Ridge believes that

NYSEG should rely much more on its field offices as a source of "information for website data, robocall information and messaging...."

In both Con Ed and NYSEG territory, manpower resources were not always dispatched efficiently. "There are numerous stories of line crews who were ready to work and be dispatched but frozen in place for many hours at a time until assigned. Another example is a crew was trying to get to an assignment in Purchase College but all roads in were closed. We showed them a way in, but [they] would have to remove a tree limb across a wire but they could not get permission to remove the limb (which they had the capability of doing) as they could not do an unassigned job. Eventually we made some calls on their behalf and got the approval but it shows how inefficient and frozen they were to complete work efficiently. A more decentralized system may be better to improve efficiencies" (Rye Brook). North Castle believes that "[u]tility workers in most cases had no central command to report equipment needs [to] or to obtain assignments or direction" and that Con Ed did not appear to have comprehensive set of cell phone or other contact information for its crews (perhaps because they were mutual aid crews)." Scarsdale "saw crews sitting waiting for direction from Playland for long periods of time and then be given incorrect information." New Castle "[r]esidents [also] observed crews, particularly from mutual aid, that were 'waiting around' in parking lots for job assignments from Con Ed." The City of Rye got the impression that Con Ed supervisors "did not have a real time window into the Con Ed outage management system and that at least part of the restoration assignment processing system was on paper [and that those papers were not readily accessible to them at all times]."

In NYSEG territory, the command structure shortfalls were similar. ""[T]here were frequently crews in the Town who told us they were waiting for instructions and could do nothing until they received those instructions" (Lewisboro). As we understand it, NYSEG gave "[I]ocal operational people ... control over circuits. ... There were several incidents where additional crews (mostly service crews) were dispatched from incident command without input from the local operational commander. This caused confusion and delay because that "circuit commander" then had to cease operations for safety reasons. The way they found out was through their sweeps prior to restoring power and finding other crews working on the circuit without the knowledge of the local operations commander" (Pound Ridge).

A constant refrain among elected officials is that the utility companies responses reminded them of Superstorm Sandy (e.g. County Legislator Shimsky).

Another theme that developed in response to this topic is that government affairs specialists, while generally responsive, either had little or no ability to influence senior management on the storm response or were not kept in the informational loop, thereby hampering their usefulness. This view spanned from local representatives (e.g. to the Town of Bedford) to federal liaisons (such as the one to Congresswoman Nita Lowey's office).

When elected officials see public goals and a utility's own goals not being met, that leads to conclusions like "the corporate structure [at Con Ed] was off" (County Legislator Shimsky) and "[t]here is something culturally wrong in Con Ed" (City of Rye). At the very least, there should be a clearer description to government officials of what the command structure and standard operating procedure are at each utility company during and immediately after storms (paraphrasing County Legislator Cunzio).

New Rochelle sees internal utility company organization during storm recovery events are perhaps the most important issue to be tackled following this past March's Nor'easters. Instead of the current procedure of placing into the crisis management leadership positions personnel whose primary training is in their regular, day-to-day roles, New Rochelle suggests that the utilities "invest in dedicated crisis management teams, whose sole function is to assume leadership of operations during emergencies and to spend the rest of their (mostly down) time planning for and war-gaming such emergencies." This could be a more financially feasible endeavor than some of the ideas that could much more significantly raise rates for ratepayers. This suggestion could be matched with one from North Castle, namely that the utilities conduct quarterly table top drills with various levels of staffing to help plan for different emergency scenarios.

Early Recommendation #6: The utility companies need to significantly improve their internal communication processes during storm emergencies, so that all relevant employees and contractors, especially those dealing with the public, are well-informed and convey relevant, accurate information. Those charged by a utility with communicating with public officials should be fully supported by the utility with accurate information on damage and restoration, and

should either have authority to commit the utility to action or clearly convey the limits of their authority.

A close corollary to this recommendation, is that utility companies should upgrade their internal technology with an eye to significantly improving their flow of information. As Pound Ridge puts it, the utilities should be using the "massive amounts of data they have to make better business decisions. With today's GIS (geographic information systems) and data warehouses, they should have a computer system that models and simulates their entire grid from generation to household." Perhaps the utility companies have such a system, but if so, their performance and their largely uniform local estimated times of restoration signal that these data and models need to be updated. New Castle points out that the fact that Con Ed had a software "glitch" in its outage tracking system used for public data (e.g. website and robocall information), which apparently is different than the system used for operational restoration decisions, and the lack of transparency about the details of this glitch (how it affected their system, how it has been (or will be fixed), how the updated system will be stress-tested, etc.) leads to broader questions as to how Con Ed's personnel and computers communicate with one another.

8. Types of Utility Crews (line crews, tree crews, make-safe crews, mutual aid, etc.)

As might be expected, there is broad consensus that the men and women out in the field performed admirably. "The crews that were out in the field were excellent" (County Legislator Margaret Cunzio). "Once they arrived[, we] found all crews to be hard working and [they] communicated well with Village personnel and the public" (Elmsford). "Crews, when they finally got there, seemed to be capable" (Rye City). "When the crews were in place, they did a good job" (Bedford). "When Crews arrived they were great" (North Castle).

There is, however, overall concern that the number of crews was inadequate for the job at hand ("too few, too late" - Scarsdale), and this is implicitly acknowledged by the utility companies, whose requests for hundreds of mutual aid workers were often declined. County Legislator Shimsky referred to the shortfall as "an unmitigated disaster," noting that "[m]ake-safe crews were in very short supply." New Castle's

particular frustration was with the three days they had to wait for cut and clear crews to arrive, during which time "our roads are blocked, our first responders cannot respond to emergencies and residents are trapped in their homes." Meanwhile, in Croton-on-Hudson, it took until Monday March 5 for any crews to arrive, and those were make-safe crews, with the first line crews not arriving until Tuesday the 6th. A particularly unfortunate aspect of having too few line restoration crews on the ground is that at least one community (Bronxville) felt that their early (post first storm) efforts to work overtime clearing roads led to reduced attention from their utility company, whose crews didn't arrive in large numbers for many days. Pound Ridge, on the other hand, felt that there were a sufficient number of crews.

Regarding the mutual aid system, its shortcomings need to be addressed for storms that impact large regions (County Executive Latimer). Even when mutual aid is dispatched, in a widespread outage situation like this it takes days for those crews to arrive. Accordingly, despite repeated assurances on conference calls with government officials during the storm, there is skepticism that the utility companies, particularly Con Ed, requested mutual aid quickly enough, as we note that Con Ed waited until the fifth regional mutual aid conference call to even begin requesting assistance¹ (Rye Brook, City of Rye, Assemblyman Buchwald). The need for sufficient alternative sources of help, through mutual aid or otherwise, is perhaps especially greater nowadays in light of reduced home-base manpower over the last decade. It may be time to reconsider those internal utility crew numbers in light of public needs. County Legislator Shimsky would like answered what the difference in cost is between a local line crew and an out-of-state mutual aid crew.

Westchester elected officials are open to new ways of thinking about how to respond to an emergency beyond mutual aid. For example, Mount Kisco is interested in whether "[I]ocal contractors should be certified by Con Ed as emergency crews" to work with municipalities as make-safe and line test crews. This could be of particular benefit, given that "the most substantial limitation is the availability of crews to confirm that the wires are off so that tree clearing can take place" (Tarrytown). New Rochelle suggests that Con Ed perhaps could supplement their staff with certified electricians

¹ Public Service Commission filing, "18-00618, In the Matter of Utility Preparation and Response to Power Outages during the March 2018 Winter Storms," Consolidated Edison Company of New York, Inc., "Scorecard for Winter Storms Riley and Quinn, March 1 – 12, 2018," p. 29.

who have overhead experience. This would presumably need to be a structured program for training, notification, oversight, etc. There has also been discussion of pre-positioning equipment so that mutual aid crews need only fly in, rather than drive to the impacted area.

Early Recommendation #7: The utility companies and the Public Service Commission should rigorously reevaluate the functioning and reliance on the mutual aid system for power outage restorations, as it seems designed for failure for storms that have a region-wide impact.

Although some towns (e.g. New Castle) would like to "provide input into the where crews are sent," other officials expressed that they have no particular interest in telling utilities how to organize their crews (except perhaps for the coordination of cut and clear crews with municipal employees to open roadways) (Town of Mamaroneck). In such circumstances, what officials do need is detailed and accurate information to ensure that constituents are not being neglected and because of the need to coordinate other governmental services like emergency services, public works, schools and transportation. Scarsdale would like its Department of Public Works Superintendent to be given "the location and size of the crews throughout the municipality."

It was, however, difficult for municipalities to verify or even believe the information they were being told on the numbers of crews assigned to either their municipality or, in NYSEG's case, the circuits that affect the municipality (County Legislator Cunzio, Assemblyman Buchwald, and see the discussion in the next section 9 below).

Perhaps for this reason, some municipalities would like to have at least a commitment to one active crew in position before or as a storm of this magnitude is hitting (e.g. Bedford, requesting a pre-positioned line crew in addition to their liaison, New Rochelle, seeking a dedicated make-safe crew, noting that the assignments don't necessarily need to be on jurisdictional lines, so long as a crew is guaranteed to be assigned for every given number of closed roads).

Government officials would benefit from the utilities issuing a clear description of the types of crews and their exact functions, all with a standard nomenclature (North Castle, County Legislator Cunzio). There are numerous crew types cited in the comments of officials to our feedback form, some of whom are synonymous, and some of whom are distinctly different (make-safe crews, cut and clear crews, tree crews, line

crews, underground crews, etc.). It would be helpful for all officials to be given an explanation for which tasks are definitively assigned to which type of crew, and to what extent one kind of crew can acillarily perform a task typically associated with another crew type. For instance, if a tree is down with a potentially live wire, is a make safe crew needed before a cut and clear crew arrives, or does a cut and clear crew have its own ability to address the downed wire?

This topic of the different types of crews connects to another point raised by government officials in Westchester, namely the coordination between crews. Both County Legislator Covill and Sleepy Hollow observed a lack of coordination. If utilities or the Public Service Commission are interested, United Westchester could query its list of officials for more details on this front.

Having a nearby base of operations could address some of these coordination issues. County Executive George Latimer and North Castle both request that Con Ed create a staging area in Northern Westchester for storms with extensive damage like the ones this past March. Pound Ridge credited NYSEG for locating a command center in town for the first time in this storm, which helped address the 11 circuits that the serve Pound Ridge along with neighboring Bedford and Lewisboro.

Lastly, though few commented on in the feedback forms, line watchers (the seemingly temporary employees who watch down wires to make sure no person gets too close) could benefit from some more standardized instructions. They too often inaccurately told residents that the wait to clear a situation was on the municipality when in fact separating trees from wires is a utility company responsibility. Rye Brook recommends that line watchers be equipped with cards to hand to residents explaining what they do (or do not do) along with a phone number or email to contact for more information.

Tracking and Number of Utility Crews within Municipalities (or Circuits in NYSEG Territory)

As expressed in the above topic, having information on the location and number of crews is essential for both governmental operations and communications with the

public. "Accurate information on the number of crews working on a circuit is possibly the most useful data for the Town Emergency Command Center," says Lewisboro.

In part, having accurate figures each day for the relevant region (if not specific to Westchester, at least the number of above-ground crews for Bronx-Westchester plus underground crews assigned to Westchester for Con Ed or the Brewster Division for NYSEG) is relevant for getting a global sense of the effort. However, more granular details are of much greater significance.

Especially for the first few days of the storm response, the utility companies kept information about the number and types of crews in each municipality (or circuit, in the case of NYSEG) very close to the vest. Assemblyman Byrne notes that "[t]his information was not readily available during conference calls, and should be in the future." County Legislator Shimsky said that the crew information provided "was inconsistent, and largely depended on the quality of the liaisons." The failure to forthrightly reveal this basic information conveyed a lack of trust in their governmental partners, as well as an unwillingness to explain or be held accountable for any crew assignments that could be interpreted as unacceptably low. Some elected officials (e.g. County Legislator Alfreda Williams) got the impression that the unwillingness to provide this information reflects the utility company central staff's actual lack of knowledge as to how many of each type of crew were assigned to each municipality.

New Rochelle reported a different level of information depending on the type of crew in town. Through their municipal representative, the city received good information about clear and cut crews. However, the tracking of restoration crews was "terrible." New Rochelle notes that while "[t]here is good logic for assigning the restoration activities centrally without municipal influence; there is no logic for denying municipalities and muni-reps information about restoration activities and crew assignments. Con Ed's information and workflow systems should be adjusted to facilitate this kind of real-time, transparent information sharing."

Eventually, in at least some instances, the utilities began to make crew information available to elected and local officials. Bedford felt the municipal/elected official conference calls were best when each municipality was specifically told the the resources actually in place within their jurisdiction (not just those assigned to be there or "on their way"). However, the Town of Mamaroneck noted, "Often the information given in the conference call or off line call did not match the actual number of utility crews in

the Town." The City of Rye "sent out police looking for the crews Con Ed told us were at work. Instead of the 10 crews Con Ed claimed were working in Rye, our police found one crew. A second experiment on a later date showed similar results." North Castle "would find out how many crews we had on the 11AM conference call and then try to find them." In Croton-on-Hudson, they "were unsure at any given time of how many crews [were] working in our limits; the numbers provided by the liaison and Con Edison did not usually agree." Rye Brook's otherwise "great" liaison was "sometimes not aware when/if a crew was in the Village." The inaccuracies may be attributable to internal utility company communications problems, but lack of transparency may instead result from a conscious decision to attempt to avoid accountability. Perhaps this particular storm/set of storms overwhelmed capacity in unexpected ways that limited information sharing. Tarrytown noted that tracking crews within its borders was not a problem after prior storms. Needless to say, local governments should not have to spend their time tracking utility crews, a task that is difficult (Dobbs Ferry) and time consuming.

One technological solution to this whole crew tracking issue is recommended by the Town of Pound Ridge: "Have the utility companies put GPS trackers in all bucket trucks and other ... vehicles and create an app that municipalities can download and open that shows the truck locations. Local municipalities will then be able to easily meet them and provide tree cutting and traffic assistance."

Early Recommendation #8: The lack of accurate and consistent information of crew placement significantly hampered coordination of public services and utility-government relations. Electric utilities should devise a better approach for providing government officials information as to how many and what kind of crews are providing services to each municipality (or circuit, in the case of NYSEG). Though we recognize that these counts are not an exact science (crews in one town can make a restoration that brings power online for a neighboring municipality), the lack of consistent information significantly hampered coordination of public services and utility-government relations. If the definition of a "crew" is too malleable because crews can consist of a range of personnel numbers, perhaps another useful metric can be used.

The lack of robust information sharing was not limited to crew numbers and locations. Bedford, which has a direct ability to compare the two utility companies' performances because it is one of only two towns in Westchester served by both Con Ed and NYSEG, noted that "NYSEG has an internal policy (unlike Con Edison) that they will not share circuit maps with the municipality." This inhibits the town's ability to explain to residents why their power is out, or to with any confidence relay the point, that NYSEG often made, that crews working in another jurisdiction might be making the repair that will bring part of another town back online.

10. Coordination of Utility Crews with Municipal Employees & Others (including training)

"NYSEG failed to work side by side with our DPW. They were on their own. We didn't know when or where they would arrive. This prolonged the outage."

- Supervisor Chris Burdick, Town of Bedford

The lack of coordination of utility crews with what should be their governmental partners frustrated officials in both the Con Ed and NYSEG service areas, and many say this failure contributed to the slow pace of restoration. "Failed, especially at the beginning" (Cortlandt). Bronxville says municipal crews were ready to clear streets of downed trees as soon as storms hit, and in community after community, the absence of coordination meant resources were not used effectively. Bedford says it had the resources, as do other municipalities to help cut and clear following make safe efforts, "But NYSEG failed to work side by side with our DPW." Lewisboro also criticized NYSEG's decision to go it alone ("NYSEG totally failed to take advantage of our Town employees either for their knowledge of the Town or as a labor source"). Sleepy Hollow, Rye Brook and Scarsdale agree that the lack of coordination was a serious problem (with Sleepy Hollow noting that they were ready to assist, but never received a request for assistance from Con Ed). County Legislator Cunzio also notes that Department of Public Works (DPW) crews were ready to remove trees but had to wait until they knew that lines were safe. Rye Brook laments that, despite good training sessions (tabletop scenarios and Con Ed 101), promised procedures were not followed, "especially to have one line crew per

municipality working in partnership with us." And Tarrytown says coordination was challenged by Con Ed procedures. "Getting the message of our priority from the Village, to the Muni-Desk, to the Con Ed liaisons, to the Con Edison utility crews was a problem."

North Castle was disappointed by restoration delayed because utility crews were not on the scene at the start of the work day. Town crews that accompanied the utility staff had to wait in some cases 3 to 4 hours for utility staff to arrive. "In the future the utility work day should begin when the Town support staff work day begins."

New Castle argues the Town and/or our municipal liaison should have more direct input in assigning the crews. Scarsdale believes restorations could have been made more quickly if Con Ed's local liaison and Scarsdale's DPW Superintendent together directed the restoration effort.

New Rochelle had crews working in areas where they were told downed power lines were dead, but they were not. It recommends a universal tagging system for wires on the ground be established providing visual assurance to municipal crews that Con Ed has certified that the power is not live.

The Town of Mamaroneck and Croton-On-Hudson report that when Con Ed cut and clear crews were finally assigned they did work well with DPW employees. Dobbs Ferry was the only municipality rating coordination good.

There was some interest in training town employees or others to check the status of downed wires, interest was limited. The Town of Mamaroneck would be interested in knowing if the utility would train municipal tree crews and certify them to work in these situations.

11. Utility Company Municipal Liaisons

NYSEG seemingly missed an opportunity for robust governmental communication by not having municipal liaisons, but, perhaps realizing its error, eventually designated them, and officials said ultimately having a liaison was a help, when they finally arrived. There were no liaisons initially says State Assemblyman Byrne who adds that local officials voiced strong opposition to NYSEG's lack of liaisons. Lewisboro says the liaison was helpful, but not until arriving several days after the first

storm. North Salem said their NYSEG liaison was great. "This (program) works only if the liaison has direct communication with the local operations people," observes Pound Ridge.

The Con Ed municipal liaison program, though more robust and well regarded ("Very Good" - Bedford and New Rochelle, "Excellent" - Dobbs Ferry, "Wonderful" - Town of Mamaroneck, "Excellent people" - Rye Brook), was not nearly as successful as it could have been in the view of many local officials (e.g. "not extremely effective" - Sleepy Hollow, and see the discussion below). This was in part because Con Ed gave liaisons no direct role in guiding restoration efforts (Scarsdale, saying they "need authority," and County Legislator Covill), and seemingly provided them with incorrect information (Cortlandt, Town of Mamaroneck, County Legislator Alfreda Williams).

Mamaroneck lamented changes to the program since Hurricane Sandy, when the municipal liaisons were given discretion over the citing of the cut and clear crews. "For some reason this discretion was taken away from the liaisons for this recent storm," noted Mamaroneck Administrator Stephen Altieri. He believes the liaisons should again be given discretion over the cut and clear crews. Echoing this, Rye Brook said, "These liaisons need to be more empowered." Rye Brook calls for one line crew being assigned to each municipality to work with the liaison and the municipal crews. "This was the procedure promised to us in the past," and this was a system in use previously.

Larchmont notes the liaisons worked hard with their local DPW, but could not coordinate efforts with the crews dispatched to the village, both because they weren't given access to the scheduling of all crew types and because they were told they needed more training. Rye said that, "on some days, our liaison had no information about where Con Ed crews might be or when and where power would be restored." County Legislator Cunzio says the liaisons "often were not kept abreast of developments, locations of crews and the number of crews." Scarsdale says that "Con Ed liaison[s] should be able to regularly share with the municipality DPW [the utility's crew] dispatch sheets." Croton-on-Hudson reported that, "[Our liaison's] hands were tied by Con Edison red tape on many of the fronts," and the village adds that it took multiple phone calls to get a municipal liaison.

The liaison program would benefit from more standardization. Sleepy Hollow notes their liaison had a computer that listed the outages, and often the information was wrong or there would be multiple tickets for one house. But in Bronxville, their liaison

could not gain access to detailed Con Ed information. "He ... became very frustrated when he was promised resources from someone in the control room but then found out that resources were diverted elsewhere." North Castle (echoing the observations of Larchmont discussed above) believes the liaisons need more training, including in assessment. Bronxville found the liaisons assigned were not the ones who had an understanding of the community and critical facilities nor do they have any basic training in understanding and identifying an electric wire from a cable wire. Scarsdale believes that Con Ed's rotation or turnover of liaisons should try to be made less frequent so that the assigned liaison can become familiar with each municipality and thereby more readily speed up restorations.

Mount Kisco says their liaison was the key in getting full power restoration, in part because absent a liaison, there was no communication.

Early Recommendation #9: NYSEG should commit to providing liaisons to municipalities at the start of storm restoration work, rather than days later. Con Ed should strongly consider strengthening its municipal liaison program, with both broader training and a more active role in providing support to Con Ed on its deployments and having full access to information that could be of use to a locality.

12. Critical Facilities (including schools)

"They did not bring any of my critical facilities up."

Supervisor Warren Lucas, Town of North Salem

Critical facilities can include any of a number of locations, ranging from hospitals (which Assemblyman Byrne notes were, given the highest priority, to emergency services buildings, DPW facilities, waterworks, schools (public and private) and large residential buildings, particularly those that house seniors. The overall take on utility performance with respect to critical facilities ranged from "very good" (Dobbs Ferry, New Rochelle) to "fair" (Scarsdale) to "problematic" (Cortlandt). County Legislator Alfreda Williams simply does not feel these facilities were made a priority. Tarrytown does not

understand why it took a week after the first storm for electricity to be restored to its water pump station. NYSEG's failure to restore power to the police station in Lewisboro was particularly worrisome to local officials.

Utility responsiveness on restoring power to schools was a mixed bag. When schools have to be closed, that causes additional stress on families (Assemblyman Byrne). North Castle noted that the reopening of schools was a particular priority of County Executive Latimer. In New Rochelle, "Con Ed focused intently on restoring power for local schools and was able to do so quickly and effectively in order to minimize disruptions." Congresswoman Lowey, along with Assemblymen Buchwald and Byrne, had some schools out in their districts for several days. That was true for County Legislator Cunzio as well, though she adds that "[w]hen Con Ed was informed of the power being out, they responded quickly," which of course begs the question of why, if a school is a critical facility it required government officials to inform utilities of the outage and the need for quick restoration. Congresswoman Lowey would like the lines that feed to school buildings or other critical facilities given higher "priority in both the make safe and restoration phases of storm recovery operations."

The role of generators at critical facilities, and how they interact with power restoration priorities should be given serious consideration. Sleepy Hollow had less concern over its own municipal critical facilities because it has its own generators. Likewise, all Pound Ridge critical facilities have backup generators other than Pound Ridge Elementary School, which is not used as a warming center or emergency shelter. On the other hand, Assemblyman Buchwald notes that a nursing home in North Salem almost had to be evacuated because it was feared that its limited generator capacity could fail. Despite the fact that North Salem repeatedly in the daily conference calls repeatedly emphasize the dire situation, NYSEG never seemed to make restoring power to that facility a priority. Other nursing home facility remained operational during the storms (Croton-on-Hudson, Scarsdale).

Elected officials were also told that the School of the Holy Child in Harrison was not immediately given top priority because Con Ed thought they had a generator, when in fact they did not.

Of course, just because a critical facility has generators does not mean that restoration of full electric service is not a priority, it may just be an ever-so-slightly lower priority early on in an outage. Croton-on-Hudson reports the following story: "Our well

fields for the water department went offline in both storms. This was compounded by one of the generators failing after operating for three days continuously after the first storm. The village was told that a redundancy system was in place to supposedly keep the well fields operational even if the main power went down but that did not occur."

Early Recommendation #10: Utility companies should endeavor to engage all government partners to identify an up-to-date and comprehensive list of critical facilities that are in immediate need of attention when their power goes out. By the time of a storm, there should be no question as to where all of the critical facilities are. When the weather is calm, once or twice a year, utility companies should circulate to elected officials (at all levels of government) lists of the currently identified critical facilities in their jurisdictions and solicit feedback, perhaps mediated through the county, on whether any location/contact information has changed and/or whether any potential critical facilities are missing from the list.

13. Life Support Equipment (LSE) Customers

During the outage there were challenges in caring for life support equipment customers. Pound Ridge emergency services moved two residents to a hospital. The Village of Sleepy Hollow reported that "We have a resident in a hospital bed at home and he had no power for six days. He had to be transported, very poor."

Assemblywoman (now State Senator) Shelley Mayer observed: "We had residents with children with disabilities without power for days, forced to rely on generators to keep their children alive."

The utility companies have as part of their emergency plans that some LSE customers will have to leave their homes. Indeed, the primary specific utility commitment to LSE customers is limited to phone calls or other steps to check on them, the LSE list is not necessarily aimed at expediting restoration. The information as to these limitations should be more prominently made known to local governments, either directly to the relevant municipality or on the municipal/governmental calls. Thus far, the utilities sharing of information on LSE customers is limited primarily to stating the total number of LSE customers contacted, either by phone or otherwise. Mamaroneck says

sharing more information "would allow us to better serve this population with visits from our police and fire personnel." In addition, clarity on whether local governments can directly provide LSE lists to the utilities would be helpful says Pound Ridge, which since Superstore Sandy has maintained a list of residents relying on life support equipment and checks on them during outages.

Still, most responding to this topic report as did Bedford ("Overall the utilities seemed to handle this well. We did not hear complaints in this regard") or North Castle ("Good, A lot of credit to our police department.") North Salem reports the utility put calls out to those on the LSE list, and that all were taken care of by neighbors or family members. "We did not hear any complaints from any LSE customers" (Croton-on-Hudson).

There were also calls for improved patient education efforts that could better inform and urge those on life saving equipment to sign up for their utility's LSE list. "Con Ed needs to direct people to sign up ASAP" (Scarsdale). "Residents can be encouraged to register their life-sustaining equipment with Con Ed. Residents with special needs should confirm they are on the list" (New Castle). Fears were expressed that many LSE customers were not aware of having to register with their utility (County Legislator Margaret Cunzio: "communication to customers about registering needs to be addressed.") We are interested in learning what sort of outreach is done to identify potential LSE customers other than the small print inserts that are sometimes included with utility bills.

Lastly, medical technology is quickly evolving, prompting New Rochelle to recommend addressing concerns that digital medicine and the internet of all things is changing in terms of what we think of as critical life support. Says the mayor, "I am told (but do not have firsthand knowledge) that the list of devices considered life-supporting needs to be updated to encompass various new forms of technology and that such updating should continue to occur on a regular basis." Legislators are open to addressing this if needed, though if the Public Service Commission or utilities can address this internally, that would be helpful.

14. Other Vulnerable Customers

Many utility customers, including seniors, the disabled, and those with temporary or permanent medical conditions that don't rely on particular equipment, do not rise to the level of life support equipment customers. Nonetheless, there are vulnerable populations that elected officials recognize may need particular attention, but that current utility storm response plans make no provision for. It would be useful if some mechanism, beyond begging the utilities for assistance, could be put in place for situations like the family with an 8-year-old with developmental disabilities or the senior citizen recovering from open heart surgery.

Seniors living in both single family homes and multi-family apartment buildings were most often identified as other vulnerable customers,² and the impact of the extended outages on this group is a concern. Mamaroneck observed, "Other than those residents with life support, the only other population of vulnerable customers would be senior citizens living in the multi-family apartment buildings." At Stuhr Gardens in Peekskill, a Housing and Urban Development owned apartment building that has many senior tenants, power was out for the entire week. A Peekskill official reports a "Con Ed representative mentioned this neighborhood was not identified on their map. These residents lost their refrigerated food and medicine, and suffered with no heat or electricity for the entire week of storms." In Somers, Assemblyman Byrne says the Heritage Hills condominium complex which primarily serves 55+ residents, many of whom have additional medical needs and require assistance to live independently, should have been a higher priority for restoration. County Legislator Alfreda Williams worried that elderly residents not using life support equipment are not recognized by the utilities as having any special standing when power restoration plans are made, and "were ignored or treated as regular customers." Fellow Legislator Shimsky shared the same observation, saying there was from very little to no priority given to other vulnerable customers. Rye observed that Con Ed representatives paid no attention to requests to prioritize restoration efforts for the elderly and the sick holed up in cold dark houses.

Still, in Dobbs Ferry the assessment of support for other vulnerable populations was "very good."

² A senior-only apartment complex may qualify as a critical facility, so to the extent those lists can be made more robust, that would help on this topic as well.

<u>Early Recommendation #11</u>: A dialogue should be initiated between governments and utilities about whether it is possible to better help vulnerable customers that do not rely on life support equipment.

15. Dry Ice/Bottled Water Distribution

"[Dry ice r]eceived after four days of requests, very few [residents] required [it] after all their food was already spoiled."

- Supervisor Carl Fulgenzi, Town of Mount Pleasant

Dry ice and bottled water distribution was deemed helpful primarily in the NYSEG service territory because local governments were allowed to pick up bulk quantities and then locally distribute it directly to residents. Lewisboro, North Salem and Pound Ridge specifically noted the value of going to one of NYSEG's designated locations and then distributing locally. Lewisboro, however, expressed a concern about the uncertainty of dispatching a town truck to the NYSEG distribution point without being sure that there would be sufficient quantities available to justify the trip.

NYSEG distributed bottled water through its centralized distribution sites. Con Ed did not make bottled water available.

Reviews of Con Edison's efforts were more negative. New Rochelle and Peekskill were distribution centers and both rated the distribution good or helpful, but other communities say they were underserved. Numerous officials, for example from Croton, Dobbs Ferry and Rye, noted travel distances to dry ice distribution points were too far, perhaps signaling that there was unmet demand as a result of the travel inconvenience. Communities that did not have local access to dry ice in Con Ed territory pointed out that without power or dry ice, the food in refrigerators is soon spoiled, which we recognize Con Ed is providing compensation for to residents and businesses. Sentiments about delays in dry ice availability were expressed by Cortlandt and Westchester County Legislator Cunzio. On the other hand, North Castle observed that weather was cold, so people used coolers and put groceries outside. However, the town noted that If the weather were warmer the demand for dry ice and additional distribution points would have been much higher.

Con Ed was also criticized for, unlike NYSEG, not providing localities with bulk quantities of dry ice and water to pick up and distribute to residents. "There is no plausible reason why Con Edison cannot allow for municipal pick up of dry ice/bottled water as does NYSEG" (Bedford).

Finally, a suggestion comes from Tarrytown to end dry ice distribution completely and replace it. "The dry ice distribution plan has always seemed to be a waste of time, money and effort." Tarrytown adds, unless it is a complete regional power outage, it would be more efficient if the utilities arranged for ice bag vouchers or coupons to be e-mailed or accessible via website so that people can pick up ice at local grocery stores.

In the end, by allowing municipalities to handle local distribution NYSEG had significantly more satisfied customers than Con Ed.

16. Promised Restoration Times (global, county and local)

"The process for determining and explaining ETRs needs to be overhauled, so that customers can plan around credible timetables."

Mayor Noam Bramson, City of New Rochelle

North Castle officials report that many of their residents (as was the case in other locales) received calls and texts or emails that their power was restored on Sunday March 4 or Monday March 5 when it was not. Con Ed then gave these customers another outage ticket number and a restoration time of Friday March 9 by 11pm, and yet, with the second storm hitting midweek, many of those homes were not restored until March 10 or 11. Residents, especially those who were left without power for 8 days or more, and who were given inaccurate restoration times, were particularly upset, says County Legislator Cunzio. She and nearly all commenting on this topic argue the system to determine promised restoration times needs to be updated, addressed and corrected. "[T]he constant changes in these [estimated times of restoration] led to a very frustrated population" (County Legislator Shimsky). Larchmont said that while it got fairly accurate restoration times from their liaison, the ones sent by Con Ed directly to customers "were ridiculous, confusing and contradictory." New Rochelle sums it up as follows, "Overpromising and under delivering is never a good practice and is particularly problematic when emotions are already running hot."

Things were no better in the NYSEG service territory. The Pound Ridge Office of Emergency Management actually advised residents not to look at NYSEG's website for outage status or restoration times. The town maintained its own records about restorations, shared with residents by posting on the town website, and in emails, text messages and robocalls. The Town of Lewisboro did the same thing, telling residents to ignore NYSEG's online information. North Salem says NYSEG's restoration times were "totally made up," including the fact that they listed homes with power as out, and vice-versa.

More broadly than the customer-by-customer restoration estimates, utilities under their Public Service Commission-approved storm management plans, are directed to establish global, regional and local estimated times of restoration ("ETRs"), with explanations being made clear from the outset to elected officials that these are statements of when 90% of customers in the relevant territory will have their power restored. Con Ed's "inability ... to provide consistent and accurate information ... undermined ... confidence" in "ETRs", reports Assemblyman Byrne.

Rye City called the promised restoration times "inaccurate and/or deceitful;" Elmsford and Sleepy Hollow, respectively, rated them "poor" and "very poor;" Cortlandt and Peekskill, inaccurate; Rye Brook "terrible;" Scarsdale said they were of "no value." Croton-on-Hudson identified ETRs are perhaps their biggest issue, especially when they were promised and then unilaterally changed. "It was clear to us that restoration times would not be met due to conditions on the ground here; yet, Con Edison continued to promise they would be" (Croton-on-Hudson).

The Town of Mamaroneck does not believe the the current methodology for establishing ETRs is working, and would like for us to have discussions with Con Ed to better understand the ETR establishment methodology. Assemblyman Byrne agrees with this sentiment, presumably with respect to both Con Ed and NYSEG. Rye Brook said it's "[b]etter to be honest that people could be out of power for additional days than to have the restoration date moved out one day at a time (and the [online reporting] system changed late in the day), as people cannot make alternate plans." Pound Ridge feels that it may be "less confusing and truthful [to, as necessary,] say restoration times can't be known" rather than posting an arbitrary time that can then be pushed back, sometimes multiple times.

The experience with ETRs has seemingly undermined the willingness of government officials to relay information from the utilities to consumers/constituents. Bronxville says "[t]he inaccuracies in the existing utility robo calls undid the hard work of municipalities in trying to convey accurate information and managing community expectations. Government credibility was diminished by the utility promised times."

17. Calculation / Determination of Restorations

"Estimated time of restoration always seemed like guesses," said Congresswoman Nita Lowey. She and others commenting on Con Ed's estimated time of restoration reports (ETR) say they resulted in many people canceling hotel reservations, or traveling from the homes of friends or relatives, and returning to their homes only to find that power had not been restored.

In the NYSEG service area, North Salem Supervisor Warren Lucas reported that after the second storm he personally did an investigation of an outage affecting Mills Road, believed it would take 3 hours to repair, but was told by NYSEG that they would need 2 or 3 days, so that's what he told residents. In fact, the restoration took just over 3 hours. Pound Ridge Supervisor Kevin Hansan believes that NYSEG is using an algorithm that does not work in a mass outage event, based on calculations that cannot be accurate until assessments are done, and an accurate list of available line and tree crews is in place. He says by guessing, NYSEG disseminates bad information.

County Legislator Cunzio believes that there should be more transparency about the formulas are used to determine estimated restoration times.

Restoration calculations were rated "poor" by Elmsford and Sleepy Hollow, "not accurate" by Cortlandt, "totally inaccurate" by Mount Pleasant, and simply "confusing" by Dobbs Ferry. Scarsdale believes that "[t]here has to be a better way."

There were also concerns about how Con Ed reports its restoration figures in its filings with the Public Service Commission. Assemblywoman Paulin questions the use of averages in reporting the numbers of days customers were without power, rather than the actual days without power. Assemblyman Buchwald questions whether it is appropriate for Con Ed to combine restoration numbers for the Bronx with harder hit Westchester, and whether the combination is an essential element in the company's

assertion that it met its 90% regional ETR obligation. In contrast, NYSEG divides its Brewster Division territory in Westchester, Putnam and Dutchess as three separate regions for ETR calculations. The Bronx/Westchester region is much bigger.

There appears to be a fundamental disconnect between Con Ed, which to this day largely promotes success on its restoration time goals, and elected officials who (with perhaps the exception of Tarrytown which said that ETRs are typically met in their experience) do not perceive Con Ed to have met its operational expectations. This is no doubt in part the result of Con Ed not meeting its stated local ETR goals in 17 of 39 Westchester municipalities. NYSEG, which initially set an ETR of 11:45pm on Monday March 5 and then 11:45pm on Tuesday March 6, but blew past both those goals, more readily admits that it did not meet its 90% restoration thresholds in time. North Castle believes that Con Ed's claim of 90% restoration needs to be vigorously investigated to determine their accuracy.

Lastly, Bronxville would like some recognition that in addition to total restoration numbers, it is important to recognize that every community is important – no matter how small their service area or population. More broadly, it would be helpful to understand what level of importance the Public Service Commission and the utilities put on local ETRs, many of which were not met, but somehow that doesn't seem to be something that the utility companies particularly acknowledge, except where absolutely required, in their post-event communications.

18. Public Service Commission Operations

The Public Service Commission's ("PSC's) role during the restoration period is presumed by some officials to be one of observation, while others weren't sure of their role. Assemblyman Byrne noted they were seen at Emergency Operation Centers and were present on utility municipal conference calls. A clearer understanding of the responsibility of the PSC during storm recovery, and what resources they can provide to government partners would be most helpful.

Thoughts on the Commission's review of the utilities response to the outages was limited to a handful of respondents including County Legislator Shimsky, who said "I'll withhold judgment until I see what they do this time." The City of Rye hopes the PSC

will be effective in reforming Con Ed, while Bronxville wants the utilities held accountable and Croton-on-Hudson calls for an investigation that leads to change in the future. Lewisboro believes the Commission is too focused on "putting ... money into renewable [energy] and ignoring the distribution system." New Castle is urging the PSC to use its authority to consider breaking up Con Ed.

Bedford suggests the Commission increase its oversight of utility storm preparedness by establishing regularly scheduled reviews of each company's storm preparedness operations, not just after an event, as appears to be the current protocol. It is not clear to what extent the existing storm response plan process fulfills this request, but Bedford's comment appears to as much be focused on ability to execute plans than just create them. Furthermore, Bedford calls for the Westchester County Legislature to also hold oversight meetings with the utilities twice yearly.

19. Routine Utility Company Operations & Staffing

Underlying a series of public questions about electric service in our area is a need to better understand what the standard complement of repair staff is at our utilities. Assemblyman Byrne notes concern from his constituents as to the knowledge mutual aid or contractor workers have of our area and equipment.

At the other end of concern is the question of whether standard tasks are being accomplished by Con Ed and NYSEG in a timely manner. County Legislator Shimsky reports that municipal government officials tell her "that wait times for Con Ed to perform routine work has grown a great deal in recent years." The City of Rye likewise remarked on slow routine repair and installation work at Con Ed. Assemblyman Buchwald and the Town of Mamaroneck note broad frustration with the pace of double poll removal across many neighborhoods, though otherwise the Town of Mamaroneck "has not had any notable problems working with [Con Ed]," saying that, "They have been responsive to the Town on issues of road restoration and response to reported gas leaks or wires down." Assemblywoman Paulin believes "Con Ed should add repair crews to survey and replace weakened poles on a more consistent basis."

Many officials are compelled to conclude that staffing levels are likely inadequate, especially given the delay in access to mutual aid (County Legislator Alfeda

William, Croton-on-Hudson, Mount Pleasant, Congresswoman Nita Lowey). Others feel regular electrical utility service is good (Dobbs Ferry, Larchmont, Lewisboro). Bedford feels the Public Service Commission should look into this question of staffing. County Executive Latimer requests details on what the standard complement of linemen is in our area at any given time, and a comparison to this amount in years past. Tarrytown attributes the problems less to total manpower than to "inadequate supervision and coordination."

North Salem relays that its understanding that NYSEG "[I]ine crews are down to one crew in the Brewster office."

20. Preventative Maintenance / Infrastructure Updates & Line Hardening / Technology

Officials across Westchester County see an aging electric distribution system deteriorating due to insufficient preventative maintenance. The experience of officials in the City of Rye, which provided a staging area for mutual aid crews, speaks clearly to this issue. "These (mutual aid) crews universally commented on the poor and aged condition of Con Ed's infrastructure compared to their own systems at home." Rye also relayed that Con Ed employees also remarked on the old infrastructure they had to contend with, including a 40+ year old leaking transformer. Rye therefore concludes that "Con Ed is neglecting its system and that allows storms to take a greater toll."

Congresswoman Nita Lowey believes Westchester has been short-changed by Con Ed spending a lot of the hardening budget on protecting New York City from another Superstorm Sandy, "while the amount of time and money spent doing the same for places north of the Bronx seems to have been very inadequate." Mount Pleasant says the extended outages prove the need for extensive improvements and planning. Two Westchester County Legislators, MaryJane Shimsky and Alfreda Williams, share a dim view of Con Ed spending on maintenance. County Legislator Margaret Cunzio believes that consideration should be given to creating "a 5-year-plan that addresses 20% of the lines and poles each year (in addition to routine maintenance)."

North Salem observes that on the preventative maintenance / new technology front nothing was done (by NYSEG) over many years, but "[i]n a recent meeting with

NYSEG they presented the work they are doing in our area which is finally moving forward."

Bronxville says that areas of repeated system failures and damage should be a priority for the next round of preventative maintenance efforts. Bronxville also calls for past hardening efforts should be evaluated – did they meet expectations or did those too fail?

Larchmont notes that non-urgent post-emergency maintenance (such as replacing weak or leaning polls) is an important part of preventative maintenance, guarding against the impacts of the next storm.

When the conversation moves from maintenance to infrastructure updates and line hardening technology, there is a widely-held concern that Con Ed and NYSEG are making minimal progress. Combined with the slow roll out of smart metering technology in Westchester ("too slow" says Congresswoman Lowey"), they believe the slow pace of infrastructure updates and line hardening contributes to delayed power restoration and communication breakdowns within the companies, with local government officials and with the public.

Pound Ridge says NYSEG should introduce smart metering in its Brewster Division so the company knows exactly where the power is off. The town wants to know what it can do to help accelerate adoption of smart meters "It would also prevent the utility company from incorrectly calling a customer to indicate their power was restored when it was not. This happened often and was a source of great frustration for customers/residents."

North Castle suggests an audit to project the cost of storms and the use of that as a benchmark for allocating dollars for grid hardening, thereby reducing the financial impact of future storms. In other words, if there are going to be costs incurred by the public of a set of future extended power outages, then significant consideration should be given to paying up front for preventative measures that avoid those costs in the future.

Rye Brook and New Rochelle encourage breaking circuits down into smaller redundant sections to reduce the number of households likely to be affected by any single break. Lewisboro conveys that NYSEG needs an investment in switches to minimize the number of homes without power from a single line break. Pound Ridge would like to see the Public Service Commission push for "better redundancy and

isolation by holding [utilities] to specific failure targets, for example a signal pole failure [being allowed to] take[] down no more than 250 households." From Tarrytown comes the observation that Con Edison still has a number of measures to implement that were called for after Sandy. These include breakaway line connectors to minimize storm damage. The Town of Mamaroneck has had success with the installation of a smart transformer, which seeks out alternate power feeders when the primary source is interrupted, at its town headquarters/police headquarters.

Mount Kisco says that it is essential for Con Ed to work with municipalities to clear trees by power lines as soon as possible. Assemblyman Byrne noted the Con Ed post-storm statistic that only 10% of downed wires were caused by trees in the traditional tree-trimming area. Lewisboro agrees with that the focus needs to be on tree trimming outside the utility right of way. One cautionary note: Pound Ridge noted that in February it received numerous complaints of debris left by NYSEG's right of way tree trimming contractor, and the town hopes that "NYSEG change its policy and remove all tree debris." County Legislator Cunzio would like to see a tree replacement program in which Con Ed or NYSEG "remove dead or damaged trees and REPLACE them with trees so we do not lose the landscape of Westchester."

Another infrastructure recommendation came from New Castle, namely that Con Ed should install GPS in their trucks so that the location of work crews can be readily determined. "They did not know where the trucks were."

Moving wires underground came up often but usually with the caveat that this be done in new developments and targeted select projects (Croton-on-Hudson, New Rochelle, Peekskill, Tarrytown). New Castle and Pound Ridge, believe that at least a cost-benefit analysis on this topic should be prepared, and they are probably not alone in this belief. Such a study would help guide planning decisions.

21. Non-Power Utility Companies (e.g. Phone, TV, Internet)

Although most focus after these storms is on electrical utilities, communications companies play an important role in helping return homes and businesses to full functionality.

Reviews of the restoration efforts of Verizon and Altice/Cablevision/Optimum were spotty at best and sharply critical at worst. Internet and phone outages in commercial districts and at local government buildings were criticized for both duration and for the lack of any word on when service would be restored. This lack of communication led to sharp criticism: "Optimum was a horror" (Larchmont) / "Verizon is a complete joke, Optimum disappeared" (North Salem) / "Verizon and Cablevision/Optimum crews are some of the slowest or completely non-responding representatives of any utility" (Tarrytown). "[L]ess responsive than the [electrical] utility. Many of our residents that lost power were without cable and telephone services for longer periods" (Town of Mamaroneck).

While negative reviews were the vast majority there were a few positive or neutral responses responses including: "Good" (County Legislator Alfreda Williams and Dobbs Ferry); Average (Sleepy Hollow); "Cablevision did a good job. Verizon FIOS a poor job" Bedford; "Fios was good" (Larchmont).

Bronxville felt that inconsistent coordination with power companies contributed to extended service outages. "The coordination of this utility work with the electric service provider is essential. Bronxville had to make repeated calls to Verizon to ensure they re-installed their poles so that when Con Ed did show up they would not say they couldn't do anything."

Better communication with local governments and customers is repeatedly called for (e.g. Rye Brook). "They need to have better communication, presence and interaction with local government(s)" (Tarrytown). Croton-on-Hudson complained, "Optimum did not even bother to provide a restoration timetable for customers who were out of service." Also upsetting to homeowners and businesses were appointments made by Verizon and Cablevision/Optimum that were not kept (North Castle). In Pound Ridge the impact on local business was a concern as merchants were without Verizon phone service for over 3 weeks. And Rye had "complaints with respect to very slow and poorly coordinated repairs, though nothing like the complaints about Con Ed."

Larchmont gave up on waiting for Optimum to restore service to Village Hall.

After going 6 days with no internet and no information on a restoration time, they arranged an internet connection through Westchester County Government's IT services.

We also note that neither Verizon nor Altice/Cablevision/Optimum provide publicly accessible outage maps showing the extent of service disruptions. Though

outage of these services is in the first instance often dependent on electricity service restoration, not having comprehensive data available to the public and their representatives inhibits gaining an understanding of to what extent these company outages are not electrical utility related. Telecommunications utilities should make this information publicly available even if it means more accountability.