

Chapter II – Storm Restoration Performance

Page II-35, Table II-9 - NHEC Storm Restoration Performance Evaluation Matrix

Section 1 - Effective Process for Resource Deployment

“Damage assessment personnel should have been pre-positioned to various locations to provide timely indication of storm damage.”

NHEC:

Because NHEC covers such a large area with ten operational district offices dispersed geographically, many of its staff are located in the very areas we serve allowing them to provide timely damage assessments. Additional NHEC employees that are assigned for damage assessment are within one hour or less of their assigned areas. The road conditions, weather are taken into consideration before assigning these employees to field duty for their safety. NHEC’s SCADA & OMS systems provide a very accurate indication that storm damage exists prior to dispatching the assessment personnel.

“Customer Call Centers should have begun ramping up staffing levels to handle incoming customer calls.”

NHEC:

Prior to the storm the Member Services Manager had updated his daily and after hour’s roster for the number of phones to be answered. Given the severity of the storm, the volume of calls actually received exceeded the number that could be answered and the IVR helped tremendously to take member information or to inform them that they were already part of a reported outage.

“Communications personnel should have contacted news media, communities & local officials following 1st indication of an approaching ice storm.”

NHEC:

The weather forecasts several days prior to the storm had warned listeners of the possibility of heavy icing conditions with the possibility of power outages because of falling trees and limbs. The newspapers carried the same forecast, NHEC members including the municipals would have been notified by the media. NHEC personnel were prepared and available to all news media before, during and after the storm. In fact, staff were in touch with community officials and shelters throughout the storm.

Section 2 - Collection Mechanisms for Maintaining Customer Outages

“Systems should have facilitated thorough collection of all available information regarding customer outages.”

NHEC:

The evaluation NHEC received does not correspond to the fact that we did have accurate information on customer outages. Between our OMS, SCADA and IVR systems we feel we

had one of the more sophisticated and utilized systems that was in service at the time of this storm.

NHEC’s OMS did at the time of the December 2008 Ice Storm, and continues to collect all member outage information. All information received from members regarding an outage is input into the OMS system so it is available to the dispatchers and crews.

Section 3 - Efficiency of Restoration Efforts

“Customer call centers should have answered customer calls in a reasonable amount of time & call center reps should have been able to respond to customer inquiries.”

NHEC:

The evaluation NHEC received does not seem appropriate considering calls were answered in a timely manner and an immense amount of information was provided to members through both the Call Center and IVR; members accessing the IVR would hear automated updates on outages and areas affected. NHEC’s IVR system was updated during that time about every 3 – 5 hours. Members would hear the message and updated outage information prior to making any choices in the IVR. According to the PAETEC (our telephone provider) report for the time period from December 11-18, 2008 we received approximately 114,517 calls. Of those 108,391 calls were received by our IVR showing that these calls did not receive a busy signal, however this may indicate that 6,126 calls could have received a busy signal. A percentage of these were members that most likely kept hitting redial until they got into NHEC. There is no indication that our representatives were not able to respond to our members.

The conclusion that can be drawn from this data is that NHEC did not have over 100,000 callers get busy signals, rather potentially 4,000 or 2/3rds of the 6,126 were actually members getting a busy signal. Based on the volume of outages occurring during the early part of the storm these callers were inconvenienced within the first day or two. You can also conclude that NHEC’s automated outage reporting system complemented by the volume of call takers available were able to adequately cover incoming call volume.

Another point to be considered is that during this period members were also calling to conduct regular business so the above numbers are not all outage calls.

“Records should have been sufficient to provide for thorough reconstruction efforts & lessons learned assessment.”

NHEC:

The evaluation NHEC received does not seem appropriate considering we were able to provide extremely accurate data of all outages and restoration efforts of the December Ice Storm to the investigative team so that they could easily reconstruct the event. This information is used as part of a post storm critique at NHEC.

NHEC has electronic records of all plant installed in the field, this provides an effective solution when developing material pick lists and identifying equipment necessary for line reconstruction.

Chapter III – Emergency Planning and Preparedness

Page III-12, Table III- 4 - NHEC Emergency Planning and Response Evaluation Matrix

Section 1 - Content of the Emergency Plan

“The plan includes a clear management strategy for storm restoration.”

NHEC:

This issue was addressed (as the best storm plan) last spring with NHEC’s Vice President of Operations & Engineering, Disaster Recovery Executive and four Operation’s Supervisors. The findings will be reviewed and will become part of the overall restoration plan. This with also be a living document for future changes.

Section 2 - Emergency Preparedness

“The utility has a formal schedule of training and drills.”

NHEC:

NHEC trains support field personnel annually i.e. bird dogs duties, damaged line assessment, secondary service work, general field support, general office/district support, CSR duties and designated personnel on OMS operation. There have been several recent table top exercises and one live drill as part of NHEC’s business continuity plan.

Section 3 - Emergency Organization & Facilities

“The emergency response facility is maintained in a mode to allow for prompt activation.”

NHEC:

The activation of NHEC’s EOC (s) is seamless, for our Cooperative it is a minor switch from regular work to major restoration mode.

“The utility has an Incident Command System.”

NHEC:

The evaluation NHEC received does not correspond to the fact that we do operate in the Incident Command Model, even though it is not formalized on paper. This will be formally incorporated in the plan going forward. NHEC’s Incident Command System starts at the EOC at the Plymouth headquarters and flows down through the 10 operating districts; all of which operate within in a district Incident Command System. NHEC’s Business Continuity Plan clearly identifies that we operate under the Incident Command model and had clearly developed checklists for those who assume that role.

Chapter IV– System Planning, Design, Constructions & Protection

Page IV-18, Table IV-4 NHEC System Planning, Design, Construction & Protection Evaluation Matrix

Section 1 - Effectiveness of Transmission & Sub-Transmission System Planning, Design, Construction & Protection

“Substations were well designed and constructed to handle expected extreme weather conditions.”

NHEC:

NHEC did not experience any outages due to inadequate design or construction of substations. We would like an explanation of this statement.

Chapter V– - Operations, Maintenance & Vegetation Management

Page V-10, Table V-4 NHEC Operations, Maintenance & Vegetation Management Evaluation Matrix

Section 3 -Vegetation & Management Plans

“Vegetation management plans are cost-effective with a long term approach.”

NHEC:

This statement contradicts Chapter 5, Page 27 stating “NHEC has the best vegetation management and line clearance specifications among the four utilities.”

“The utilities vegetation management plan is efficient and environmentally sound.”

NHEC:

This contradicts Chapter 5, Page 27 stating “NHEC has the best vegetation management and line clearance specifications among the four utilities.”

“The utilities vegetation management plan uses an appropriate management cycle.”

NHEC:

We would appreciate an explanation regarding these three items and how this conclusion was made. The fact that NHEC clears ROW ground to sky does have an impact on the management cycle as well as the financials. As you indicated in the report there needs to be a balance between financials and ROW clearing.

We feel the “industry standard” as outlined does not apply to NHEC. NHEC’s ROW Vegetation Management is unique, our ROW’s have written easements giving us the right to clear and maintain a 30 foot width and do the trimming we specify, ground to sky or as high as possible with the available equipment, with arboricultural trimming practices. Our ROW department has established a ROW area that can reasonably sustain electric reliability to our members in a 7 to 10 year cycle. Remember, the other electric utilities do not have the

benefit of written easements, they have to get permissions; and their clearances are minimized for both ground cutting and overhead trimming, which sets the stage for lower cycle re-clearing and trimming practices. It is in this area where the NHEC can stretch the cycle time, with a budget that can balance between financials and maintaining a reliable electrical ROW Vegetation Management program.

We have incorporated a 3 year relearning cycle on 3 phases into our maintenance program concentrated on where most members are served. We will complete this program this year, and will implement these lines in our 2010, 2011, 2012 bids, which began in 2007, again covering the 3 year, 3 phase circuits to the majority of our members.

Also included in NHEC’s Vegetation Management plan are Danger tree removals, at about 90% outside the row. We have had this practice in our ROW program for over 25 years. The old Rural Electrification Association easements have the language to allow us to remove any dead, weak, leaning trees that are tall enough to strike the wires (outside the ROW) in falling. We now have this same language in our present easements.

With our ROW program we strive to storm proof our ROW while we maximize our reliability and minimizes all outages caused by trees. For the long term we must be cost effective, and use arboricultural utility re-clearing and trimming practices that we feel gives us the full use of our easements to maintain NHEC’s ROW Vegetation Management program, which provides true member service reliability that is proven.

Our ROW Vegetation Management works very well at this time, and the 3, 7 and 10 cycle re-clearing is a reliable member service practice for NHEC. In the future as budget enhancements are instituted, further cycle reduction will be achieved.

Chapter VI – Post Ice Storm Actions & Processes

Page VI-7, Table VI-4 Post Ice Storm Actions and Processes Evaluation Matrix

Section 1 - Planning for Post Storm Actions

“The utility has a plan for post storm analysis.”

NHEC:

Reviews of storm activities are accomplished after each storm and recommendations to storm processes are addressed at this time.

Section 2 - Gathering and Use of Storm Information Following the Storm

“The utility collected and archived photographic evidence of damage which occurred on their system.”

NHEC:

Photos are on file of the storm damage and were sufficient for the FEMA filing.

“The utility collected, organized and archived weather information.”

NHEC:

NHEC collected only enough newspaper clippings needed for the FEMA filing.

“The utility performed a forensic review of the damage experienced.”

NHEC:

District crews, bird dogs and line assessors reviewed damages and made suggestions to mitigate the effects of another storm in the near future.

“The utility used the data collected to develop specific plans for improvement.”

NHEC:

District crews, bird dogs and line assessors reviewed damages and made suggestions to mitigate the effects of another storm in the near future.

Section 3 - Post Storm Critique and Self Assessment

“The utility made the post storm assessment procedure part of its emergency plan.”

NHEC:

NHEC has not included post storm assessment **as part of the Emergency Restoration Plan**; however this is a standard practice that is in place to ensure all damages are corrected and for the safety of the public.

“The utility based the size and thoroughness of its assessment on the size of the event including more people as the event analyzed became larger.”

NHEC:

Yes, NHEC did accomplish this through analyzing storm information. The thoroughness is accomplished from well trained employees, not the size or magnitude of the damages.

Chapter VII – System Planning, Design, Construction & Protection

Page VII -15, Table VII -4 Best Practices Evaluation Matrix

Section 2 - System Planning, Design, Construction and Protection

“The utility commonly uses automatic distribution line high-speed source transfer schemes.”

NHEC:

The majority of NHEC’s distribution lines are rural and this type of transfer scheme would not be beneficial. Because of the distance between Co-op substations and the seasonal limitations on complete capacity redundancy, opportunities for high-speed source transfer are extremely limited.

Section 3 - Operations, Maintenance and Vegetation Management

“The utility strives for regular inspection of its entire distribution system on a two year cycle utilizing a combination of circuit inspections, tree trimming inspection and pole ground line inspection.”

NHEC:

NHEC inspection of overhead and underground facilities is on a five year cycle. Presently the Co-op is in the third year of a complete line inspection and ground line testing program utilizing the Polux Pole Testing Equipment. The data is posted on the circuit maps and the percentages of strength left in the pole are archived for future test periods.

“The utility utilizes a four year vegetation management cycle for clearing trees around power lines.”

“The utility adheres to the vegetation practices mentioned above.”

NHEC:

The fact the NHEC clears ROW ground to sky does have an impact on the management cycle as well as the financials. As you indicated in the report there needs to be a balance between financials and ROW clearing.

NHEC feels the “industry standard” as outlined does not apply to NHEC. NHEC’s ROW Vegetation Management is unique, our ROW’s have written easements giving us the right to clear and maintain a 30 foot width and do the trimming we specify, ground to sky or as high as possible with the available equipment, with arboricultural trimming practices. The ROW department has established a ROW area that can reasonably sustain electric reliability to our members in a 7 to 10 year cycle. Remember, the other electric utilities do not have the benefit of written easements, they have to get permissions; and their clearances are minimized for both ground cutting and overhead trimming, which sets the stage for lower cycle re-clearing and trimming practices. It is in this area where the NHEC can stretch the cycle time, with a budget that can balance between financials and maintaining a reliable electrical ROW Vegetation Management program.

NHEC has incorporated a 3 year re-clearing cycle on 3 phases into our maintenance program concentrated on where most members are served. The program will be complete the program this year, and will implement these lines in the 2010, 2011, 2012 bids, which began in 2007, again covering the 3 year, 3 phase circuits to the majority of members.

Also included in NHEC’s Vegetation Management plan are Danger tree removals, at about 90% outside the row. NHEC has had this practice in the ROW program for over 25 years. The old Rural Electrification Administration (REA) easements have the language to allow NHEC to remove any dead, weak, leaning trees that are tall enough to strike the wires (outside the ROW) in falling. This same language is now in our present easements.

With the ROW program NHEC strives to storm proof the ROW while maximizing the reliability and minimizing all outages caused by trees. For the long term, the program must be cost effective, and use arboricultural utility re-clearing and trimming practices that gives NHEC the full use of the easements to maintain NHEC’s ROW Vegetation Management program, which provides true member service reliability that is proven.

NHEC’s ROW Vegetation Management works very well at this time, and the 3, 7 and 10 cycle re-clearing is a reliable member service practice for NHEC. In the future as budgets allow, some cycle reduction will be achieved.

Section 4 - Post Storm Actions and Process

“The utility determines the global estimated restoration times and disseminate that information both within 24 hours.”

NHEC:

NHEC does not accomplish this within a 24 hour time period, many factors come into play such as magnitude of the storm and how many districts are affected and the major deterrent for timely reporting is just being able to travel the roads. In addition, as with most storms many variables are constantly changing making accurate restoration times difficult to achieve, particularly with storms like the ice storm where restoration was achieved in some locations only to lose it again a few hours later and/or lose feeds from other suppliers due to the conditions. NHEC disseminates information to its members on estimated restoration times as they are known, there are, however subject to change given the storm conditions.