



## Thanksgiving Week Storm-2014

Subject: Self-Assessment for Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities

Prepared for: NH PUC Safety Division

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Prepared on: January 28, 2015

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## 1. Purpose

In the aftermath of the December 2008 Ice Storm, the New Hampshire Public Utilities Commission undertook a review of utility emergency preparedness and response. The NHPUC issued its Final Report on December 3, 2009.

Appendix A, entitled “Action Items Checklist”, has the following going forward requirement under Item 5 “Emergency Response Actions”:

5.2: Each affected utility shall file self-assessments with the Commission within 60 days following any State-declared emergency event that implicates utility services. Forensic analyses of weather data should be a part of those self-assessments.

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities prepares this report at the request of the NHPUC Safety Division. By an email dated December 3, 2014, the NHPUC Safety Division requested that the Company file a brief report within 60 days of December 1, 2014, though there was no State-declared emergency.

## 2. Overview of Storm

Liberty Utilities is responsible for providing uninterrupted electric service to approximately 43,000 customers in 21 cities & towns spread out over two geographic regions known as the Lebanon and Salem areas.

The two regions generally operate as independent operations areas on opposite sides of the state with no electric system interconnections between the two regions.

Each has their own weather patterns and they operate individually during most emergencies.

Over a three day period beginning in the early afternoon of November 26, 2014 and ending in the early morning of November 28, 2014, Liberty Utilities experienced customer outages in both regions. The first customer outages were reported at approximately 1400 hours on Wednesday, November 26. At the peak of the storm (November 26 at 2200 hours), there were approximately 2,900 customer outages. The majority of damage was from trees and tree limbs contacting poles and wires due to the heavy wet snow. Storm restoration was completed on Friday, November 28 at approximately 0125 hours.

The State of New Hampshire opened its Emergency Operating Center but did not declare an emergency event during this time period.

Under Puc 307.08 (c):

In the event that commission staff anticipates the occurrence of a wide-scale emergency, staff shall notify the utilities and the utilities shall file crew reports prior to the onset of the wide-scale emergency. Event names shall be determined by the commission and made known to each of the utilities required to report.

The NHPUC Staff did not notify the utilities of a wide-scale emergency, no wide-scale emergency was anticipated for the two Liberty Utilities regions and no Event name was determined by the NHPUC.

### 3. After Action Review

#### 3.1 Pre-Storm Planning

- **Weather Forecasting**

Liberty Utilities began tracking the storm on Sunday, November 23, 2014. At that time, afternoon wet snow was forecasted for Wednesday in Lebanon (1-3 inches) and in Salem (3-5 inches). Morning snow was forecasted for Thursday. By Tuesday, the forecasted snow amounts increased in the Lebanon region (5-7 inches). By Friday morning, the total snow accumulations for both regions were less than forecasted.

- **Readiness Plans and Process**

Liberty Utilities followed its Electric Emergency Management Plan dated July 1, 2014. Under this Plan, a Level 4 Event was anticipated. Level 4 is considered a Moderate Impact Event with Heightened Alert. This Event is typically characterized as having up to 50 Incidents of Trouble and up to 2,100 customer outages.

The Company notified internal personnel and implemented internal storm assignments that were appropriate for a Level 4 Event.

Under Puc 306.09, Company Emergency response Plans shall incorporate projected Event levels consistent with Table 306-1.

<b>Utility</b>	<b>ERP Event Level</b>	<b>% Customers Out</b>	<b>Outage Duration (Hrs.)</b>
	5	$\leq 2$	<12
	4	$>2 \leq 5$	0-24
	3	$>5 \leq 10$	24-48
	2	$>10 \leq 20$	48-144
	1	$>20$	48-240

The Liberty Electric Emergency Management Plan is consistent with the Puc Rules for Electric Service.

A Level 4 Event, as defined by the Company in its Emergency Management Plan, anticipates approximately 2,100 customer outages. A Level 4 Event, as defined by the Puc Rules, anticipates 5% of the customers being out of service. With approximately 42,913 customers, an outage of 5% represents 2,145 customers.

- **Logistics**

Electric Operations prepared for the storm by pre-stocking vehicles with materials and gear. Vehicles were checked and fueled prior to Wednesday.

Electric Operations evaluated the material levels needed for a Level 4 Event. Storm kits include the necessary materials and supplies to respond to an emergency and are kept year round in the two regions. These storm kits are dedicated for storm use only.

- **Crews**

On Tuesday, Electric Operations determined the number of internal company and contractor line and tree crews on the property that were available for Liberty Utilities in each of the regions through Friday. The Company determined that it would neither request more crews nor release crews through NAMAG until the storm had passed.

- **Support Services**

The Company determined that, as a Level 4 Event, there was no need to open its Emergency Operations Centers in Lebanon and Salem. Likewise, there was no need to open its Municipal Rooms.

### **3.2 Communication**

- **Internal**

During blue sky days, as part of its daily activity, every 4 hours, Dispatch and Control sends out weather forecasts to appropriate internal personnel in New Hampshire. During anticipated storm events, Dispatch and Control also sends out Storm Planning Reports.

Additionally, Emergency Management conducts storm planning conference calls that follow a set agenda and frequency depending on the Event Level.

These practices were followed Sunday through Friday of Thanksgiving week.

- **External**

While under no requirement to do so, the Company forwarded by email copies of its Storm Planning Report to the NHPUC Safety Division beginning on Tuesday through Thursday. Likewise, the Company and the NHPUC Safety Division engaged in several email exchanges and phone calls during this time period.

Liberty Utilities used social media postings to communicate with its customers. There was one call received from a newspaper. The Company did communicate with the Fire Chiefs in Salem and Pelham during this time period.

There were no scheduled calls initiated by state government during this period that the Company is aware of.

The Customer Outage Maps were available to the public throughout the storm via the Company web-site.

### **3.3 Restoration Process**

- **Resource Management**

As the Company received more information during the storm, it monitored restoration efforts and increased the number of line and tree crews where needed.

As soon as it was able to, the Company released crews to NAMAG to assist other operators within the state. This occurred on Friday morning.

- **Damage Assessment and Wires Down**

Electric Operations personnel performed all damage assessment and wires down requests. There was no need to utilize non-Operations personnel.

- **Safety**

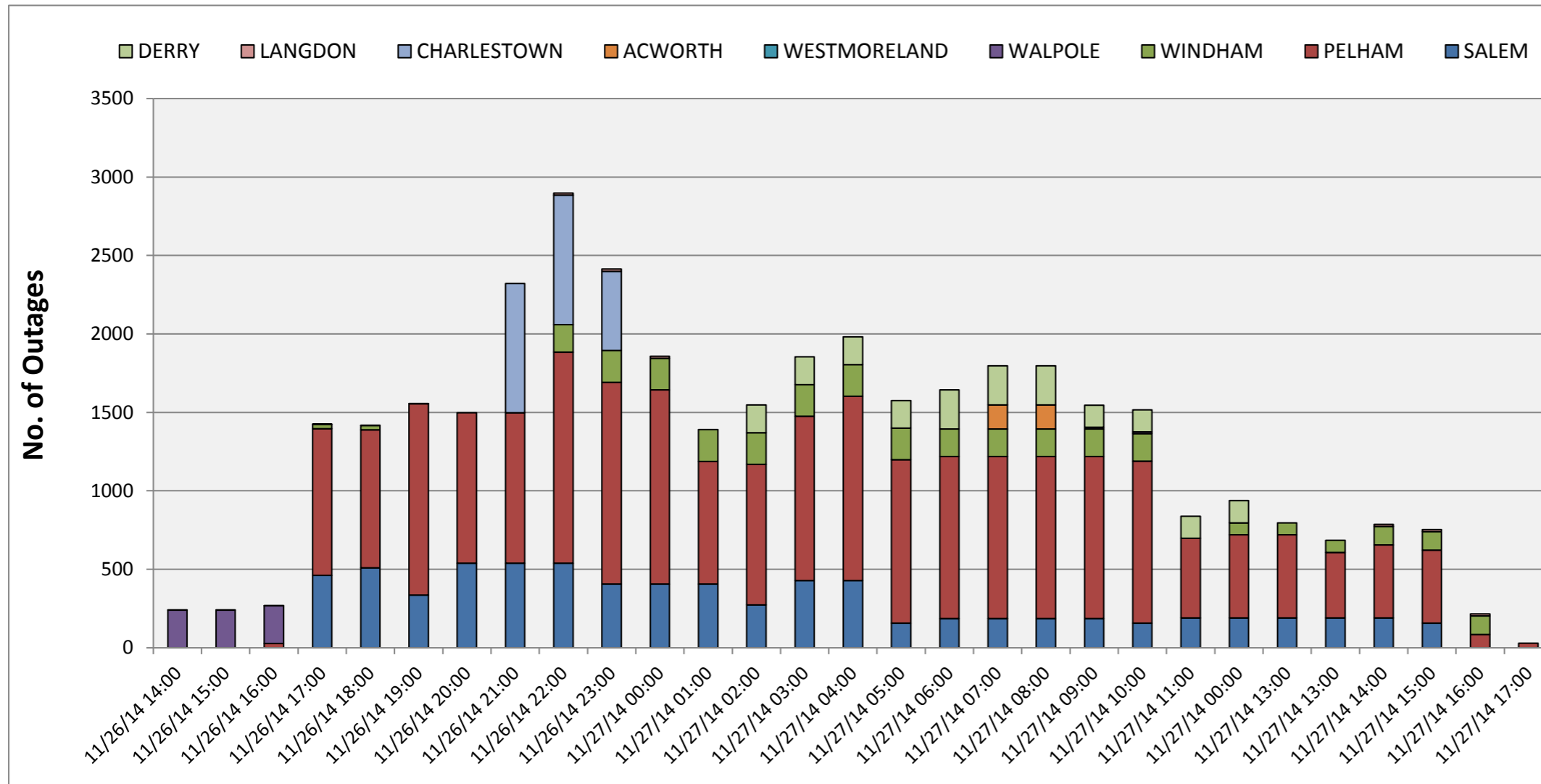
Liberty Utilities did not experience any safety related incidents during the storm. The crews assigned to Mutual Aid to assist others from Friday to Sunday reported that they received the appropriate Safety Onboarding.

#### 4. Appendices

- **Liberty Utilities Crew Summary (Prepared by NHPUC Safety Division – Dec. 3, 2014)**  
[Copy of Liberty Crew Summary for 11 26 14 Snowstorm \(3\).xlsx](#)
- **Customer Outages (Prepared by Liberty Utilities – Dec. 12, 2014)**  
[Copy of Liberty Outages Thanksgiving Storm.xlsx](#)
- **Miscellaneous Storm Data (Requested by the NHPUC Safety Division – Dec. 31, 2014)**

- 1) Peak # of Customers Affected (simultaneously or Coincidentally) 2,900 coincidental / 5,900 non coincidental
- 2) Peak % of Customers Affected (simultaneously or coincidentally) 7% coincidental / 14% non coincidental
- 3) Date and Time of Peak # of Customers Affected 11/26/14 22:00
- 4) Time of First Outage associated with the Thanksgiving eve Storm 11/26/14 14:00
- 5) Peak # of Restoration Crews on system (excluding Tree/Dmg Assrs) This would include Internal Line Crews, Electricians, Contractor Line Crews, Affiliate Line Crews (those that touch that wire) 13
- 6) Wire Reattached/Replaced (ft) 5,000
- 7) # of Transformers Replaced ~5
- 8) # of Poles Set ~10
- 9) # of Cross-arms Replaced ~25
- 10) Total Preliminary Estimated Cost approx. \$150,000

Town	11/26/14 14:00	11/26/14 15:00	11/26/14 16:00	11/26/14 17:00	11/26/14 18:00	11/26/14 19:00	11/26/14 20:00	11/26/14 21:00	11/26/14 22:00	11/26/14 23:00	11/27/14 0:00	11/27/14 1:00
SALEM				461	509	336	539	539	539	405	405	405
PELHAM			27	935	880	1218	958	958	1344	1287	1238	783
WINDHAM				28	28				177	202	202	202
WALPOLE	240	240	240	0								
WESTMORELAND	2	2	2	0								
ACWORTH				2	2	2						
CHARLESTOWN								825	825	506		
LANGDON									13	13	13	
DERRY												
<b>Total</b>	242	242	269	1426	1419	1556	1497	2322	2898	2413	1858	1390



11/27/14 2:00	11/27/14 3:00	11/27/14 4:00	11/27/14 5:00	11/27/14 6:00	11/27/14 7:00	11/27/14 8:00	11/27/14 9:00	11/27/14 10:00	11/27/14 11:00	11/27/14 0:00	11/27/14 13:00	11/27/14 13:00
272	428	428	156	186	186	186	186	156	189	189	189	189
897	1047	1174	1042	1033	1033	1033	1033	1033	509	530	530	419
202	202	202	201	176	176	176	176	176		77	77	77
							10	10				
					152	152						
177	177	177	177	249	249	249	141	141	141	141		
1548	1854	1981	1576	1644	1796	1796	1546	1516	839	937	796	685



11/27/14 14:00 11/27/14 15:00 11/27/14 16:00 11/27/14 17:00 11/27/14 18:00 11/27/14 19:00 11/27/14 20:00 11/27/14 21:00 11/27/14 22:00 11/27/14 23:00 11/28/14 0:00 11/28/14 1:00

11/27/14 14:00 11/27/14 15:00 11/27/14 16:00 11/27/14 17:00 11/27/14 18:00 11/27/14 19:00 11/27/14 20:00 11/27/14 21:00 11/27/14 22:00 11/27/14 23:00 11/28/14 00:00 11/28/14 01:00

189  
466  
119

156  
466  
119

84  
119

29

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13

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6

Time/Date Stamp: 2/4/2015 14:04

				Wednesday, November 26, 2014				Thursday, November 27, 2014				Friday, November 28, 2014				Saturday, November 29, 2014				
				6:00 AM	10:00 AM	1:30 PM	8:00 PM	8:00 AM	4:30 PM	6:30 PM	10:00 PM	6:25 AM	10:00 AM	2:00 PM	8:00 PM	6:00 AM	10:00 AM	2:00 PM	8:00 PM	11:00 PM
1	Distribution 69 KV and Less includes Subtransmission 46kv, 34.5kv,22kv, 13kv, 7.5 kv, 4kv, 2kv and below	Line	Company Line Crews restoring Distribution Circuits	5	5	5	7	7	7	7	7	6	6	0	0	0	0	0	0	
			Affiliate Co Line Crews restoring Distribution Circuits																	
			Contractor Line Crews restoring Distribution Circuits	4	4	6	6	6	6	5	5	0	0	0	0	0	0	0	0	0
			Foreign Utility Line Crews restoring Distribution Circuits																	
		Service	Company Line Crews restoring Service																	
			Contractors restoring Service includes Electricians																	
		Pole <sup>B</sup>	Pole Setting/Digging Operations includes Co, Foreign Utility, Contractor																	
			Contractor Tree Clearing - Working on Distribution Circuits	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0
		Tree	Foreign Utility Tree Clearing - Working on Distribution Circuits			0														
			<b>Sub Total Line Crews</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>3</b>	<b>12</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
		<b>Sub Total Line/Service/Pole Crews</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
		<b>Sub Total All Crews including Tree Clearing Crews</b>	<b>12</b>	<b>12</b>	<b>14</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>15</b>	<b>15</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
		<b>FIELD ASSESSMENT</b>	<b>Company Reported Total Outage Estimates -&gt;</b>																	
2	Distribution see above	Line <sup>C</sup>	Company Damage Assessment Personnel																	
		<b>PUBLIC SAFETY</b>																		
3	Wires Down Appraiser Field Guides Other Support	Line	Company Personnel																	
			Bird Dogs, Location Guides																	
			includes contractors																	
<b>Grand Total</b>				<b>0</b>	<b>12</b>	<b>12</b>	<b>14</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>15</b>	<b>15</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

LIBERTY