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General Counsel

January 8, 2008

Mr. Denny Williams  
Aquila, Inc.  
Mail Stop 8-170  
20 West 9th Street  
Kansas City, MO 64105

Dear Mr. Williams:

The Commission recently opened cases and issued orders directing Staff to investigate the effectiveness of utilities' storm preparation and power restoration efforts for the December 2007 Ice Storms and report its findings and recommendations to the Commission (Case Numbers EO-2008-0215, EO-2008-0218, EO-2008-0219, and EO-2008-0220 for The Empire District Electric Company, Union Electric Company d/b/a AmerenUE, Kansas City Power & Light Company, and Aquila, Inc., respectively). The orders direct Staff to file an initial report regarding the results of its investigation no later than April 3, 2008. Staff anticipates filing an initial report by the date specified followed by additional reports as necessary at a later date. Staff will also consider scheduling a roundtable discussion (or similar forum) to review the results of these reports and analysis on a state-wide basis.

Since all investor-owned utilities in Missouri were affected, Staff is requesting the following information from each of the individual utilities by the dates listed.

A. Description of the event, including statistics related to number of customer outages, duration of outages, infrastructure affected, call center performance data that includes metrics considered by the utility to be most critical during the outage, use of internal and third parties to provide personnel and facilities, and any other relevant information. Submit to Staff by January 25, 2008.

B. Description of remedial actions taken by the utility to recover from the event, including resources utilized (manpower, material, financial expenditures, etc.), outage tracking, crew dispatching, restoration prioritization, customer communications, public official communications, special circumstances encountered, and any other relevant information. Submit to Staff by February 15, 2008.

C. Description of actions taken (since the December 2007 storms) and planned actions to be taken by the utility to prevent or mitigate the effects of future events such as the December 2007 ice storms, including policy/procedure modifications, communications enhancements, vegetation management, reliability monitoring, infrastructure modifications, and any other relevant information. This item should include a review of any previous corrective actions (due to similar events) taken prior to December 2007 and an analysis of the success of those actions relative to this event. Submit to Staff by February 29, 2008.

D. A complete copy of all procedures, policies, guidelines, plans, or other documents that existed prior to December 1, 2007, that were utilized during the December 2007 ice storm events, specifically

relating to Items A and B above. If the Company had a consolidated document such as a "Storm Restoration Plan", please provide it. Submit to Staff by January 18, 2008.

E. A complete copy of any revisions made since the storm, to any of the documents listed in item D. Submit to Staff by January 18, 2008.

F. A copy of all reports and other documentation provided to Company management regarding the Company's operations immediately prior to and during the storm restoration activities. Submit to Staff by January 25, 2008.

G. Copies of all documentation defining the Company's methodology and data collection process to generate statistics (e.g. customer outages, costs, etc.) related to the impact of the storm on the Company's operations and financial conditions. Submit to Staff by February 15, 2008.

Staff has designated storm investigation coordinators for each of the utilities. Please feel free to contact the appropriate person with any questions or comments.

Staff Lead	Lena Mantle	573-751-7520	lena.mantle@psc.mo.gov
Empire	Dan Beck	573-751-7522	dan.beck@psc.mo.gov
AmerenUE	Debbie Bernsen	573-751-7440	debbie.bernsen@psc.mo.gov
KCPL	Mike Taylor	573-526-5880	michael.taylor@psc.mo.gov
Aquila	Lisa Kremer	573-751-7441	lisa.kremer@psc.mo.gov

An outline of the proposed topics and activities that Staff is proposing to be utilized is attached for your information. Please let us know if you have any suggestions for additional topics or activities.

If you have any questions regarding this information, or can't meet the timelines listed, please provide a written explanation why the timeline can't be met and when the information will be available for Staff review. You may contact Lena Mantle at 573-751- 7520 or me at 573-751-7435.

Sincerely,

  
Wess Henderson  
Executive Director

Attachment

cc: Blane Baker  
Bob Berlin  
Nathan Williams  
James Swearengen  
Renee Parsons  
William Riggins  
Thomas Byrne  
Natelle Dietrich  
Bob Schallenberg  
Lena Mantle  
Dan Beck  
Lisa Kremer  
Debbie Bernsen  
Mike Taylor  
Warren Wood

Following are Aquila's responses to the 14 points requested by Commissioner Clayton in his concurrence in Case No. EO-2008-0220 dated January 15, 2008. As noted below, the responses to many of these requests can be found in the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008 and filed in this case, and/or the presentation Aquila made to the Missouri Public Service Commission Staff on February 7, 2008.

**1) Analysis of the age, siting, durability and quality of the utility's infrastructure, including the placement of distribution lines in light of the ice storm outages of 2007.**

This information can be found on pages 51 – 88 and 118 – 119 of the presentation Aquila made to Staff on February 7, 2008.

**2) A comprehensive compliance review of Commission Orders stemming from prior storms and outages applicable to the utility.**

To the best of our knowledge, Aquila has not had any compliance issues or requirements regarding a Commission order from prior storms.

**3) An analysis of all assistance requested or offered and whether the utility accepted or denied the offers of assistance by other entities.**

This information can be found on pages 30 – 33 and Appendix B of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008 and pages 89 – 94 of the presentation Aquila made to Staff on February 7, 2008.

**4) An analysis of the Call Center Operations during the storm and any observations about customer service issues.**

This information can be found on pages 19 – 23 of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008 and pages 41 – 44 of the presentation Aquila made to Staff on February 7, 2008.

**5) An analysis of the utility's current tree trimming schedule and input on whether there is the need to amend the current program or consider alternative programs suggested through other Commission cases.**

This information can be found on pages 40 – 43 and Appendix F of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008 and pages 23 – 33 of the presentation Aquila made to Staff on February 7, 2008.

**6) An evaluation of communication, cooperation and assistance between the affected utilities, citizens and city, county and state officials.**

This information can be found on pages 34 – 38 of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008.

**7) If any of the utility's service area lost electrical service for a prolonged amount of time, provide an analysis of what caused the prolonged outage.**

This information can be found on pages 5 – 7 of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008.

**8) An assessment of the coordination of the efforts to ensure that critical operations facilities such as hospitals, residential care facilities, police and fire department buildings had temporary electric needs satisfied until service from the grid could be restored.**

Aquila management met daily during the restoration process with representatives of the City of St Joseph, County/State Agencies, the Red Cross and the Air National Guard.

During these meetings critical loads were reviewed and through the group effort, temporary power needs were managed.

**9) An assessment of the interdependence among all PSC certificated utilities as well as with utilities not certificated by the PSC in the affected area.**

This information can be found on pages 30 – 33 and Appendix B of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008.

**10) An analysis that includes a comparison of utility performance with other utilities that had significant outages during the same time period.**

Aquila has not performed any analysis comparing its storm response to that of other utilities, nor does it have access to the data necessary to perform such analysis. Further, such analysis is difficult in that no two restoration events are the same.

Aquila does, however, believe that its response to this restoration event, especially from the standpoint of its communications with the public and public officials, was superior to any event it has previously managed.

**11) If damage was caused by vegetation, a detailed overview of the type and extent of damage caused by various scenarios including whether the vegetation was located in the easement or right of way, whether the vegetation fell from outside the right of way, whether the vegetation was diseased or particularly weak, whether the vegetation fell vertically from above the electrical conductors and whether the vegetation had been appropriately addressed prior to the storm in accordance with the utility's vegetation management plan. Further, what percentage of the damage would have been prevented by the utility strictly adhering to its vegetation plan? What percentage of the damage would have been prevented by the utility if strictly adhering to the vegetation management plan proposal attached to this Opinion?**

Information and data is not available to answer objectively whether outage caused by vegetation were the result of vegetation located in easements or right-of-way, whether vegetation fell from outside the right-of-way, whether vegetation was diseased or particularly weak, or whether the vegetation fell vertically from above the electrical conductors. It is, however, our opinion that the vast majority of the outages caused by vegetation were the result of trees and tree limbs falling into the conductor from trees located outside the easement or right-of-way.

Aquila's Vegetation Management Plan prior to the recent approval of the Missouri Vegetation Rule had a three-year trim cycle for three-phase lines and a five-year cycle for lateral taps. Our trimming clearances required a minimum of 6 feet clearance from the conductor (typically obtained 10 feet or greater) and removal of all overhang. Aquila was generally on cycle at the time of the ice storm. Therefore, no substantial percentage of damage would have been prevented by strictly adhering to the Vegetation Management Plan. Aquila is currently revising its Vegetation Management Plan to be in compliance with the new Missouri Vegetation Management Rule.

There is no way to determine what impact a stricter trim cycle and clearance requirements would have had on vegetation caused outages. The 2007 ice storm had ice loading in excess of 1 inch in many locations. A large percentage of the vegetation caused outages would still have occurred by trees and tree limbs falling into the easement and right-of-way from trees outside the easement.

Additional information can be found on pages 40 – 43 and Appendix F of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008.

**12) If the damage was caused by infrastructure failure aside from vegetation contact, identify more detailed reasons how and why the infrastructure failed, i.e., age design, etc., and what can be done to strengthen the infrastructure.**

The majority of the damage sustained by Aquila's system was the result of vegetation contacting lines. However, there were some circumstances in which other failures occurred. For example, the Cooper to St. Joseph 345 kV transmission line locked out without any vegetation contact. While we have not been able to definitively identify the cause of the failure, our best estimate is that a down guy failed for unknown reasons. Aquila has patrolled this area and has found no other circumstances of this component failing.

Aquila as standard practice designs and constructs facilities to meet the design criteria established for a heavy ice loading zone. A combination of ice loading, snow, and winds are all contributing factors which can and in fact do lead to infrastructure failure.

Designing additional strength above and beyond the design criteria for a heavy ice loading zone is certainly one approach that can be considered. Aquila has not analyzed what the cost impact of such action might be.

Additional information can be found on pages 11 – 15 of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008.

**13) An analysis of the economic impact on customers who experienced a disruption of power during the ice storms.**

Aquila has not performed any analysis on the economic impact on customers who experienced a disruption of power during the ice storm, nor does it have access to the data necessary to perform such analysis. Aquila has received feedback from a few customers indicating that they lost food stored in refrigerators and/or freezers, and there were incidents of residents and/or businesses utilizing portable generators during this period. In addition, some residents likely incurred costs to have electricians perform needed repairs that resulted from the ice storm prior to Aquila restoring their service. However, Aquila has no way to quantify these costs.

**14) Any and all recommendation to improve utility response to weather related and day to day electric outages in the future.**

This information can be found on pages 44 – 46 of the *Aquila Report On December 2007 Ice Storm Restoration* issued on February 29, 2008.

Storm Start	Storm End	Extent	Description
	December, 1848	An article in the <b>Columbia Daily Tribune</b> , December 19, 1924: "In December, 1848, sleet occurred which had no parallel in the history of the county. Trees, even of the largest class, were almost literally stripped of branches, rendering the roads in many places impassable. Trees without number were borne to the ground and broken off by insupportable mass of ice upon them. Shade and ornamental trees were greatly damaged and many orchards were ruined."	
12/16/1924	12/19/1924	One of the worst ice storms to affect <b>Missouri</b> in terms of severity, duration, damage and loss occurred. <b>Central and east central portions of the state</b> were hit hardest and after the storm had subsided. Ice ruts, 6 inches deep, were in the roads and made driving next to impossible. There were also reports of livestock frozen in the fields. To this date, the 1924 ice storm is one of the most significant winter weather events to strike Missouri.	Three-fourths of Missouri was covered by a layer of ice that varied from one to six inches thick.
01/08/1930	01/11/1930	Ozark Plateau; Quotes extracted from Climatological Data, January 1930 report: In most of the Ozark Plateau there was considerable damage to trees and utility properties by ice, from rain freezing as it fell, for three to four days beginning about January 8.	
01/07/1937	01/08/1937	The ice glaze was the heaviest in many years in <b>Missouri</b> . About one half of the state was affected, and the effects were severe in a belt extending in a southwest direction from Clark, Lewis, and Marion Counties on the northeast border to the southwest border. A strip about 50 to 75 miles wide in this belt suffered the maximum damages, with ice 1 to 2 inches thick on wires and considerably thicker on ground surfaces.	Mixed with the ice sheet was a heavy fall of sleet, varying in amount from 1 to 6 inches and averaging about 3 inches in most of northern Missouri and the west-central counties.
1/9/1949	1/12/1949	West Texas and southeastern New Mexico through the panhandle and north Texas, northeast across central Oklahoma and the southeastern corner of Kansas into <b>south-central Missouri</b>	Ice storm of unusual proportions; worst in Midland's history; long distance phone circuits out across region; 2 to 3 inch of ice

Storm Start	Storm End	Extent	Description
1/22/1949	2/4/1949	North Texas north across central and eastern Oklahoma, northwest Arkansas and southeast Kansas and northeast into central Missouri	Worst ice storm in company history for Dallas P+L; steel towers crumpled; winds to 35 mph on 1/30 slowed repairs; 2inch of ice on wires; some phone lines had not been repaired from previous storm
1/3/1950	1/6/1950	Eastern Arkansas, western Tennessee, into Missouri	2inch of ice and sleet; worst ice storm in 17 years in Memphis area; one of worst in history in eastern AR
2/13/1951	2/15/1951	Southcentral Texas northeast across eastern Oklahoma and western Arkansas, into Missouri	Communication almost paralyzed in AR; ice on wires 1.5inch in diameter in San Antonio area; worst ice storm in Palestine TX history; timber damage in MO and AR
1/1/1952	1/7/1952	Northeast South Plains, northeast across central Oklahoma and east across north Arkansas and south Missouri	Ice on wires 2inch in diameter with 6inch long icicles in MO
4/17/1953	4/19/1953	Northcentral Oklahoma, east into Missouri	Ice, wind and lightning damaged phone and power lines
12/7/1956	12/10/1956	Northeastern Oklahoma northeast into Missouri and on	Power and communication lines damaged
1/26/1957	1/28/1957	Central Arkansas northeast through southeast Missouri	Most severe ice storm in northeast AR in 20 years; both water and power out in some towns; one of worst in memory in southeast MO;
12/2/1973	12/7/1973	Southwest Kansas, northeast across southeast Nebraska and northwest Missouri, and into central Iowa	Power outages lasted up to 6 days; one of most severe ice storms of record in KS; worst ice in this century in southwest IA; communication towers damaged



Storm Start	Storm End	Extent	Description
12/6/1978	12/10/1978	Central to northeast Arkansas into extreme southeast Missouri	Trees and power and phone lines damaged in AR; worst ice storm in extreme southeast MO since the 1950s; outages lasted up to 1 week
12/29/1978	1/4/1979	Central Texas northeast across southeast Oklahoma, northwest Arkansas and into Missouri	Worst ice storm in 30 years in TX and AR--10 day long outages in some places; gusty winds following ice storm in MO
12/12/1979	12/14/1979	Central north Texas into southcentral Oklahoma; southeast Missouri	Trees and power lines damaged; galloping; gusty winds
3/18/1984	3/20/1984	Southwest Kansas northeast to northwest Missouri and southeast Nebraska	Up to 2inch thick ice--communication towers fell-- one of most damaging and widespread ice storms ever in KS; outages lasted up to 1 week; no water in rural districts
12/13/1987	12/17/1987	Northwest Arkansas and southwest Missouri	Higher elevations in Ozarks affected
12/24/1987	12/30/1987	West North Texas northeast across central Oklahoma, northwest Arkansas, and southeast Kansas, and northeast through Missouri	Up to 1inch thick ice in KS; in MO up to 2inch thick ice, outages lasted up to 6 days, worst winter storm since early 70s, and ice remained longer at higher elevations; up to 3inch thick ice in OK, communication tower down in Tulsa, worst ice storm in the experience of many
12/29/1990	1/2/1991	Arkansas, except south and east, into southwest Missouri	Most severe ice storm since Dec 1983 with outages lasting up to 8 days in AR

Storm Start	Storm End	Extent	Description
10/28/1991	11/11/1991	West North Texas across west central Oklahoma and east central Kansas, and southeast Nebraska and northwest Missouri and into Iowa and MN; south central South Dakota into south central North Dakota	In OK, extensive tree pruning limited damage to power lines; up to 2inch ice and windy in KS, TV tower down; up to 2inch ice in NE; 1.5inch ice and windy in ND, galloping; most costly ice storm in history in IA; up to 3inch of ice in MN
12/1/1991	12/4/1991	West North Texas northeast across central Oklahoma into southeast Missouri	Trees and power lines damaged
1/16/1994	1/22/1994	North Arkansas into southeast Missouri	Power outages lasted more than 1 day in some areas
11/13/1996	11/27/1996	Northwest Arkansas, northeast Oklahoma into south central Missouri and north; northeastern Nebraska, southeast South Dakota and into western Iowa; in cloud icing in western Montana.	Up to 3inch thick ice in SD, outages lasted up to 4 days
1/12/1997	1/15/1997	Eastern Gulf coast of Texas into western Gulf coast of Louisiana; Extreme southeast Missouri	Record ice storm in LA; up to 1inch thick ice in MO, windy, communication tower down
1/1/1999	1/6/1999	Northwest and northcentral Arkansas across southwest Missouri	More than 1inch thick ice in AR; in MO up to 2inch thick ice, outages lasted up to 6 days
01/29/2002	01/31/2002	A long-lived major ice and snow storm blasted much of northwest, northern and central Missouri. Ice accumulations of over an inch were observed from the Kansas City metropolitan area, east and north through Moberly Missouri. For the Kansas City area, the ice storm was ranked as the worst ever.	At one point 409,504 total customers were without electrical power in the CWA, with some residents without power up to two weeks.

Storm Start	Storm End	Extent	Description
01/12/2007	01/14/2007	Southwestern, south central and east central Missouri; mostly along I-44 corridor from Springfield to St. Louis. The January 12-14 Ice Storm had not been experienced since the December 1987 Ice Storm, in terms of power outages. Fourteen other counties along the I-44 corridor also reported at least an inch of ice. The ice accumulations resulted in widespread downed trees and power lines. Approximately 200,000 residences were without power.	Ice Storm left over 200,000 southwest Missourians without power and a landscape resembling a war zone. Officially at the National Weather Service office in Springfield, one and a half inches of ice accumulation was received. Communities across southeast Kansas into western Missouri also received 1 to 5 inches of a snow and sleet mixture.
12/08/2007	12/11/2007	Southwestern and portions of central and east central Missouri as well as northwestern Missouri	The storm reached historical proportions over parts of northwestern Missouri, where some communities in Buchanan, Andrew, Holt, Atchison and Nodaway counties reported ice as thick as 1 inch.

**Source:**

Data from 1848-1937: Dr. Guinan( Missouri State Climatologist) provided this information and he references it to a clipping from *Columbia Daily Tribune, December 19, 1924: Colonel William F. Switzler tells in his History of Boone County of a sleet storm* and an article that he wrote for Missouri Ruralist for which he extracted quotes from *Climatological Data, December 1924 report*.

Data from 1949-1999: American Life Alliance has gathered data on past ice storms from Storm Data(NOAA) and Climatological Data National Summary (US Weather Bureau) and news articles from cities in the affected region. The American Lifelines Alliance (ALA) is a public-private partnership project funded by the Federal Emergency Management Agency (FEMA) and managed by the National Institute of Building Sciences (NIBS), with the goal of reducing risks to lifelines from hazards.

Data for 2000- 2007: Event Archives and Significant weather records of NOAA's National Weather Service Weather Forecast Office.



**Aquila**

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# **Aquila Report On December 2007 Ice Storm Restoration**

**February 29, 2008**

## Table of Contents

Executive Summary .....	3
Overview of Aquila's System .....	4
Description of the Event .....	5
Outage Statistics.....	8
Miscellaneous Storm Restoration Statistics.....	10
Transmission Infrastructure Affected .....	11
Emergency Service Restoration Plan.....	15
Aquila Response .....	17
Call Center Operations Overview .....	19
Outage Reporting & Restoration Process .....	24
Life Support Customers .....	27
Resources Utilized .....	30
Aquila Communications .....	34
Customer Feedback.....	39
Vegetation Management .....	40
Lessons Learned.....	44
Appendix A - Emergency Storm Restoration Plan	
Appendix B - Resources Utilized	
Appendix C - News Releases	
Appendix D - Customer Compliments	
Appendix E - Customer Comments to the PSC and Aquila's Responses	
Appendix F - Vegetation Management Standard	

## **Executive Summary**

A major winter storm (Ice Storm) impacted Aquila's service territory in December, 2007. This storm first started impacting Aquila's system on December 9, but the most significant impacts began on the evening of December 10 when approximately 2.25 inches of precipitation fell in the St. Joseph area, leading to ice accumulations of approximately 1 inch. As a result of this Ice Storm, 83,649 Aquila customers, representing 27% of all Aquila customers, lost power for some period of time. The Ice Storm had the greatest impact in Aquila's North Region, which includes St. Joseph, Maryville, Mound City, and Tarkio, among other communities. In the North Region, 61,677 customers (90%) lost service.

Aquila was prepared for this Ice Storm, having implemented its Emergency Storm Restoration Plan on December 7. Aquila responded quickly to the impact of the storm, with damage assessment across its entire system underway at 6:00 a.m. on December 11 and additional resources on their way to the North Region by 8:00 a.m. that same day.

In total, 942 FTEs aided in Aquila's restoration process. This included linemen and tree trimmers, and included both company and external resources. External resources came from 10 different Midwestern states.

In the North Region, Aquila experienced its first reported outage at 10:46 p.m. on December 10. The last customer's service was restored in the North Region on December 18.

This storm also impacted Aquila's other three regions, with the East Region experiencing the greatest impact, primarily in the Liberty and Platte City areas. In total, 14,630 customers lost service in the East Region, 16% of that region's total customers.

During this restoration event, Aquila launched a public outreach effort unlike any it had ever attempted. This outreach included the general public, media, public and elected officials, and regulators. It included 14 public official and/or media briefings and more than six total hours of radio air time in which Ivan Vancas, Operating Vice President, Missouri Electric, took calls from the public and explained how the restoration effort was being managed. Aquila believes that this outreach resulted in the most successful storm restoration in its history from a public outreach and communications point of view.

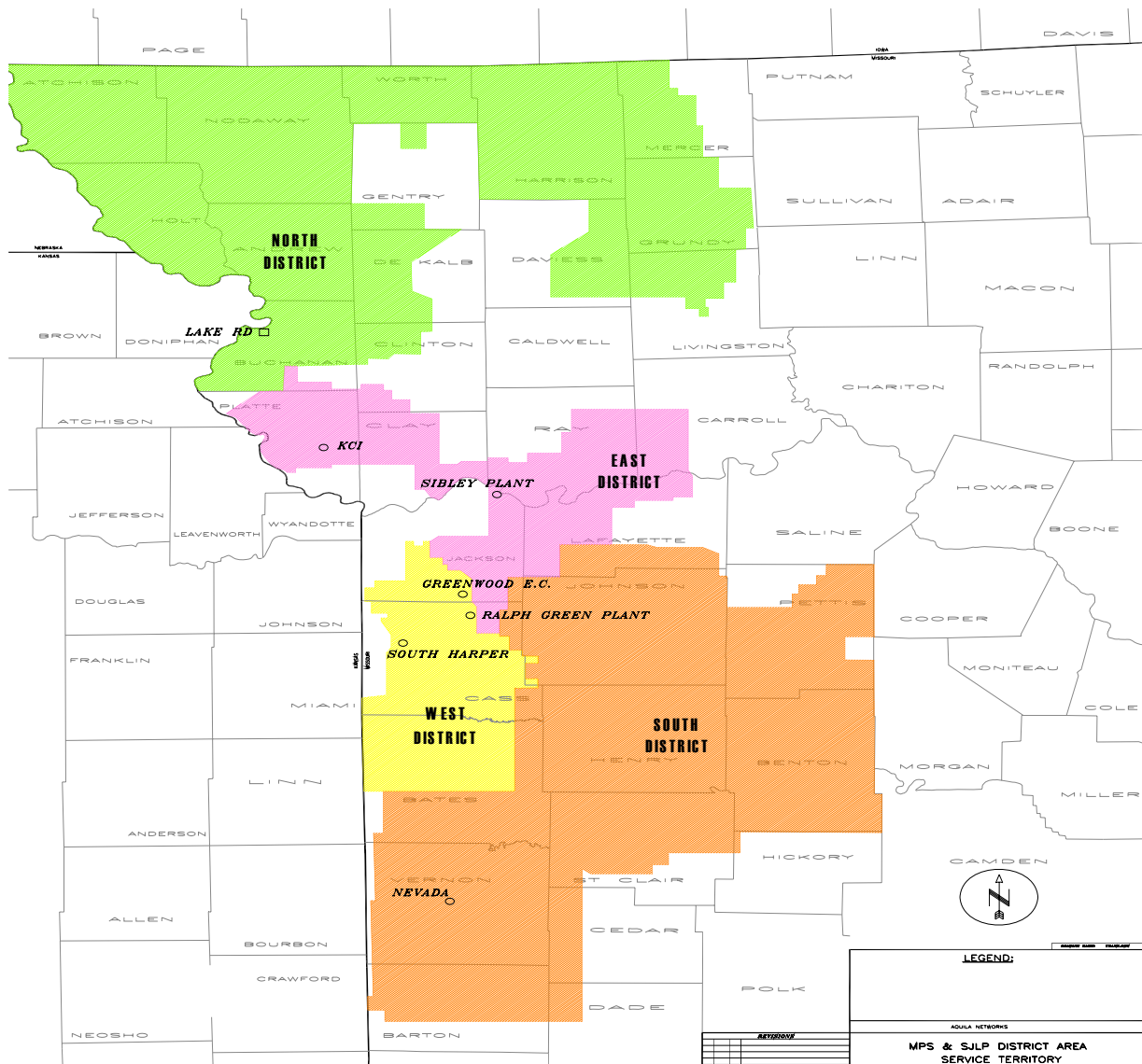
As with any such event, Aquila was able to identify areas in which it performed well and areas in which it could improve. A listing of both categories is found in this report.

Aquila recognizes the significant impact that power outages, especially those lasting several days, have on its customers. Aquila believes that it was well-prepared for this event and managed it effectively. Customer feedback has been generally positive, with most of the concerns focusing on the need to trim trees more frequently. Aquila has included in this report a section on its tree-trimming policy.



## Overview of Aquila's System

- Aquila divides its service territory into four regions: North, South, East and West
- The North Region includes the L&P territory as well as some parts of the MPS territory.
- The storm first affected Aquila's service territory in the South Region on December 9. Outages in that region were relatively few.
- The most significant impact of the storms occurred in the North and East Regions, impacting communities such as St. Joseph, Maryville, Tarkio, Mound City, Platte City, North Kansas City, Blue Springs, and Liberty.



## Description of the Event

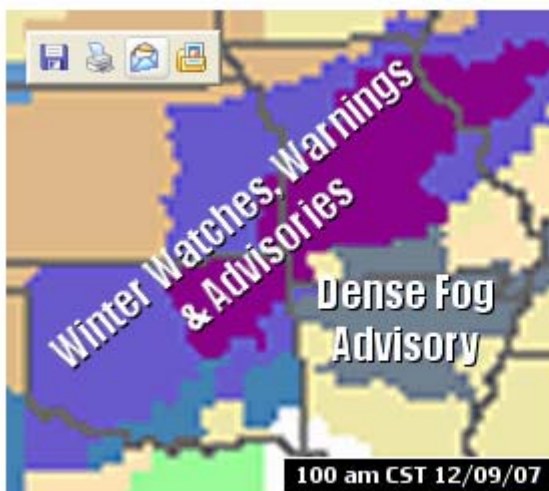
The Ice Storm impacted Aquila's entire service territory, with customer outages reported in all four regions. However, by far the most significant impacts occurred in the North Region and the northern parts of the East Region (Liberty and Platte City). Therefore, this report primarily focuses on those areas.

Following is the December 10 forecast from the National Weather Service (NWS):

STORM SUMMARY NUMBER 6 FOR CENTRAL U.S. ICE STORM NWS  
HYDROMETEOROLOGICAL PREDICTION CENTER CAMP SPRINGS MD 300 PM  
CST MON DEC 10 2007

**...PERIODS OF RAIN AND FREEZING RAIN TO EXPAND NORTHWARD ACROSS KANSAS...NEBRASKA...AND MISSOURI INTO THE EVENING BEFORE A SECOND BATCH OF ICE APPROACHES THE AREA TONIGHT... ICE STORM WARNINGS ARE IN EFFECT FROM PORTIONS OF NORTHERN TEXAS...NORTHEASTWARD INTO NORTHERN ILLINOIS. WINTER STORM WARNINGS ARE IN EFFECT FROM NORTHERN ILLINOIS...SOUTHWESTWARD TO THE PANHANDLES OF TEXAS AND OKLAHOMA...EXTENDING INTO PORTIONS OF THE ROCKIES. WINTER STORM WATCHES HAVE BEEN POSTED ACROSS NORTHERN PORTIONS OF THE MIDWEST...EASTWARD INTO NORTHWESTERN OHIO.**

The following map shows where winter watches and warnings were issued in Missouri.



Precipitation began developing in the Plains late on the 8th/early on the 9th. It was cold enough for freezing rain north and west of Arkansas, with icing from Oklahoma into Kansas and Missouri.



As predicted, Aquila's North Region, including St. Joseph, Maryville, Mound City and Tarkio, as well as Platte City and Liberty in the East Region, experienced significant ice accumulation. The following map indicates where this accumulation occurred.



Following are some photos that were taken in the area, showing the devastation to trees and power lines as a result of this Ice Storm.





## Mound City



## Outage Statistics

Following is data regarding the outages resulting from the Ice Storm, as well as the progress of restoration efforts.

		Total # Customers Out of Power	Total # Customers Served	Total % Customers Out of Power
Southern	Saturday 12/8 10pm to Monday 12/10 5pm	894	56,826	2%
Eastern	Monday 12/10 10pm to Thursday 12/13 11pm	14,360	88,955	16%
Northern	Monday 12/10 10pm to Thursday 12/13 11pm	61,677	68,527	90%
Western	Monday 12/10 10pm to Thursday 12/13 11pm	6,718	93,419	7%
Total		83,649	307,727	27%

As this chart indicates, the Ice Storm hit the North Region the hardest, with approximately 90% of customers out of power at some point. In fact, in the St. Joseph area 91 out of 101 circuits were out at one point.

The East Region was also significantly impacted, with most of these outages occurring in the Liberty and Platte City areas.

The following chart provides data regarding the progress of restorations in the St. Joseph and Maryville areas.

Date	Time	Maryville Cust Out	St. Joseph Cust Out	Cum. Restored
11-Dec	1530	Combined Total 59,000		0
13-Dec	2000	Combined Total 36,500		22,500
14-Dec	1000	Combined Total 13,000		46,000
15-Dec	700	2,900	7,208	48,869
	1530	2,300	5,870	50,807
16-Dec	700	1,446	3,843	53,688
	1130	1,250	2,981	54,746
	1645	1,000	2,287	55,690
17-Dec	700	715	1,703	56,559
	1600	100	653	58,224
18-Dec	900	40	113	58,824

The following chart provides data regarding the progress of restoration in the Liberty and Platte City areas.

<b>Date</b>	<b>Eastern Region by Area</b>	<b>Restored Cust</b>
10-Dec	Liberty 1st outage reported at 11:32 p.m.	0
	Platte City 1st outage reported at 9:03 p.m.	0
11-Dec	Liberty	4056
	Platte City	5838
12-Dec	Liberty	358
	Platte City	1739
13-Dec	Liberty Last cust restored at 8:20 a.m.	1
	Platte City	755
14-Dec	Platte City	70
15-Dec	Platte City Last cust restored at 8:30 p.m.	3

As would be expected, significant restoration progress was made in both areas within the first two – three days, with the remaining customers being restored more slowly as crews moved to repair lines across back lots and private rights-of-way, as well as individual services.

The last customer was restored in the North Region on December 18, and the last customer was restored in the East Region on December 15.



## **Miscellaneous Storm Restoration Statistics**

The following statistics give a good indication of the magnitude of this Ice Storm. Much of this information is covered in more detail in other sections of this report, and is provided here in order to better describe the event.

- Total internal resources (FTEs) – 206
- Total external resources (FTEs) – 736
- Total internal and external resources (FTEs) – 942
- Total man-hours worked – over 83,000

Despite this enormous effort, Aquila experienced no recordable safety incidents in the North Region.

The call center also experienced significant call volumes during this period.

- Call center volume on peak day (December 11) – 53,930 calls
- Total call center calls during the event (December 11 – December 18) – 152,092 calls

Materials replaced during the restoration process, for the distribution system only, included the following:

- Poles – 231
- Cross arms – 357
- Service wire – 44,150 feet
- Bare wire – 21,627 feet
- Insulators – 2,455
- Splices – 101,330

## **Transmission Infrastructure Affected**

In addition to the impact the Ice Storm had on Aquila's distribution system, there was also impact on its transmission system. This section of the report is divided into two parts:

- 69 kV loop from Edmond Street (St. Joseph) to Midway to Nodaway to Maryville to Tarkio to Mound City to Midway
- 345 kV line from St. Joseph to Cooper

### **69 kV loop**

The 69 kV loop north of St. Joseph has 13 substations and extends a total of 125 miles, with approximately 80% in private right-of-way. There are three support points in this 69 kV loop: the Edmond Street substation in St. Joseph, the Midway substation and the Maryville substation. The 69 kV breakers on the 69 kV loop are located at Edmond Street, Midway, Nodaway, Maryville and Tarkio. Thus, any breaker operation requires an average patrol of 25 miles.

Resources dedicated to the 69 kV loop included three PAR transmission crews totaling 15 personnel and two Aquila supervisors. Additional Aquila and PAR personnel were utilized as required for switching and patrolling.

All sections of the 69 kV loop were foot patrolled as required, with some sections patrolled as many as five times. These patrols started on December 11 and were completed with an aerial patrol on December 19. The aerial patrol was completed as soon as the weather would allow and there was a final check to ensure that no additional unknown repair work was required.

The entire 69 kV loop, except for one section, operated at one point or another on December 12 as the conductors were unloading ice. The majority of the operations were caused by the 69 kV conductor unloading with associated damage caused by phase-to-phase contact or phase-to-static contact, since the static wire was not unloading at the same time. There was one tree-related outage when a tree situated off of the right-of-way fell into the 69 kV line.

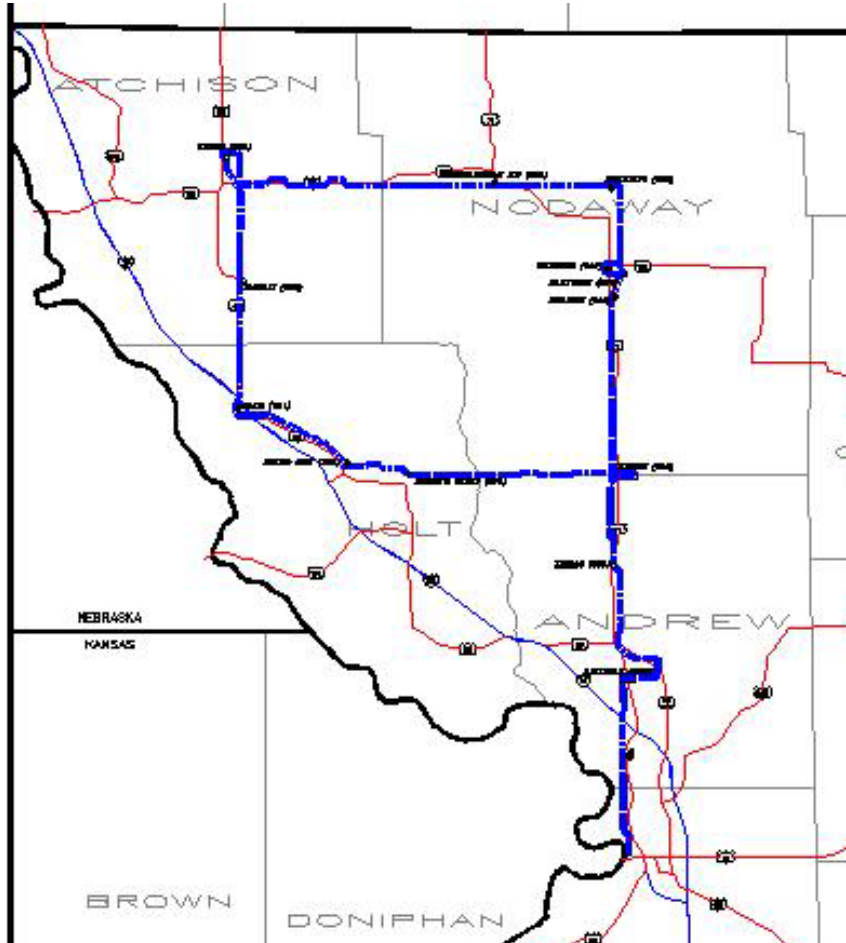
Four of the five sections of the 69 kV transmission loop locked out at some point on December 11 and 12. Repairs were required on three of the five major sections of the loop. The following material and repairs were required on the loop:

- Two 69 kV insulators,
- One 69 kV phase conductor repaired,
- Static wire repaired in six locations, some involved several spans,
- Pole grounds repaired in four locations.

In addition, workers manually removed ice from many spans of static wire. This was required because the phase conductors unloaded and the static wires did not unload, leaving the static wire down between phases on some of the longer spans.

The 69 kV loop repair work was completed and the transmission crews were released on December 17. The aerial patrol on December 19 confirmed that the 69 kV loop required no additional repair work.

### *Map of the 69kV Loop*



### **St. Joseph to Cooper 345 kV line**

The 345 kV line is one of two 345 kV lines that connects the St. Joseph 345 kV substation, just north and east of St. Joseph, to the Cooper nuclear power plant in Nebraska. Aquila owns the portion of the line in Missouri and NPPD owns the portion in Nebraska. NPPD did not have any damage to its portion of the line.

This transmission line outage did not cause any customer outages. It did, where the phases were down, close down the main BNSF railroad tracks between Nebraska and Missouri just east of BNSF's Missouri river crossing, and closed 159 Highway, both for 26 hours.

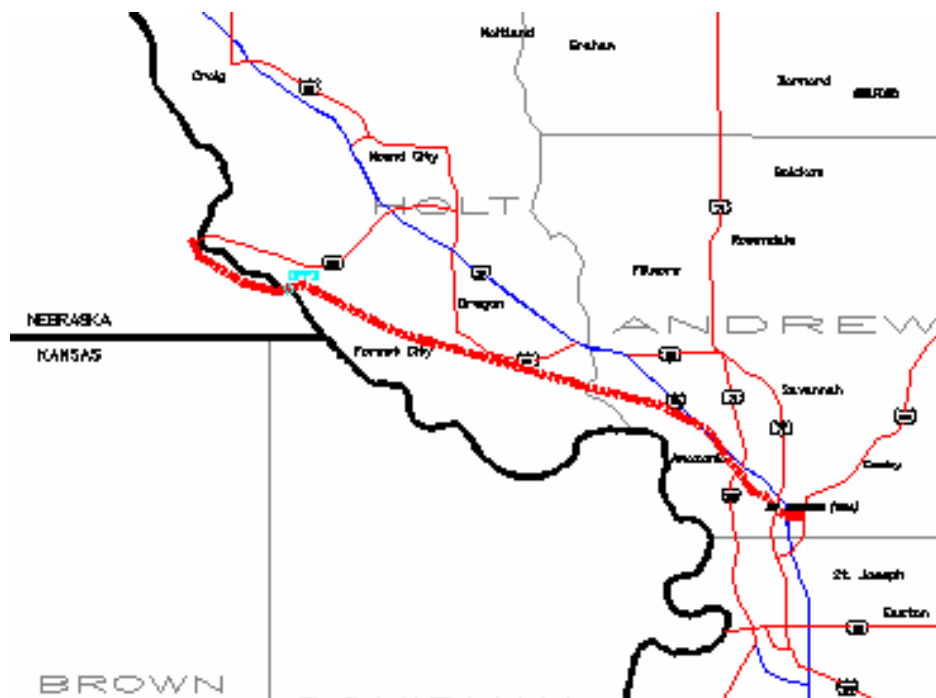
Following was the sequence of events:

- Line locked out at 11:20 a.m. on December 11
- Original estimate for getting this line back in service was January 20, 2008
- NPPD and Aquila both started ground patrols working from both ends.
- Aquila's ground patrol found static wire down in two places at structures #263 and #322. Transmission personnel were dispatched and repair work started once the ground patrol and clearance switching were completed by both companies.
- At approximately 2:00 p.m. on December 11, guyed angle structure #498 failed, dropping line across 159 Highway and BNSF railroad tracks just east of Rulo, Nebraska. The time was confirmed by the Missouri Highway Patrol, since a pickup truck ran into the downed conductors before they closed the highway.
- Since the line was already de-energized and grounded for the static repair work, the first patrol was completed and the repair work was almost 20 miles to the south of structure #498, Aquila was not aware of this event until the BNSF notified Aquila of this event at 6:00 p.m.
- Aquila transmission personnel and electrical contractors were on site by 9:00 p.m. and found structures #485 to #505 had damage or were destroyed.
- Total damage and material requirements could not be determined until daylight.
- Contact transmission crews and a heavy equipment contractor were contacted by 11:00 p.m., with some crews on the road by midnight.
- The first electrical transmission contractors and heavy equipment personnel were on site at 5:00 a.m. on December 12. The entire first day was spent doing stabilization work and damage control and getting the railroad and highway open.



- Highway and railroad tracks were cleared and released at 4:32 p.m. on December 12.
- During the next nine days, the on-site personnel included 48 transmission contract personnel, 10 heavy equipment personnel with 4 D-8 Cats and 2 foundation specialists with a track digger.
- The line was released to go back into service at 6:56 p.m. on December 21.
- Material required for this repair work included nine poles (85' to 115') and 19 cross arms, along with hardware, insulators, braces and conductors on one phase.
- A total of 19 tangent and 1 angle structure were damaged or destroyed, covering more than 2.5 miles
- An aerial patrol was conducted on December 12 with a fixed-wing plane to ensure no additional damage existed. On December 19, after the weather cleared, Aquila again patrolled the line, this time with our contract helicopter, in order to look at each structure in detail.
- Clean-up work was completed on January 5, 2008

#### *Map of the 345kV Transmission Line*



*Photos of the 345 kV Transmission Line*



## **Emergency Service Restoration Plan**

Aquila's Missouri Emergency Service Restoration Plan (ESRP) was updated in 2006 to reflect Aquila's ever changing customer needs and to provide the guidelines and protocols to effectively manage Class II and Class III major service restoration events.

The primary focus the ESRP centers on individual responsibilities and the effective shifting of resources across Aquila's Missouri operating areas. Aquila Missouri operates from four specific regions and Raytown Missouri, which houses Aquila's Central Engineering, Call Center, and Field Resource Center. The regions and service centers are the South Region, including the cities of Warrensburg, Sedalia, Clinton, and Nevada; the West Region, including the cities of Lee's Summit and Belton; the East Region, including the cities of Liberty, Blue Springs, Platte City and Henrietta; and the North Region, including the cities of St Joseph, Maryville, and Mound City.

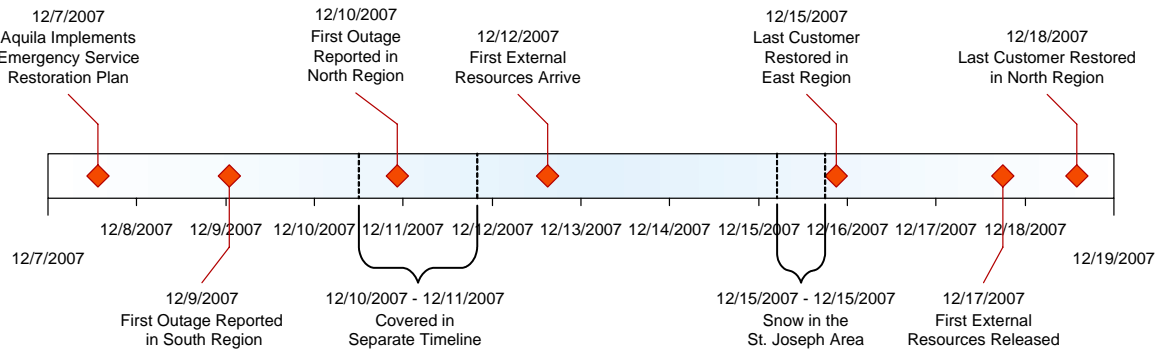
### **ESRP**

Aquila's Missouri ESRP (included as Appendix A) describes and defines the procedures and processes leading up to and during a major Class II/III restoration. The ESRP includes the following:

- A brief overview addressing Aquila's philosophy for restoring electric service as safely and efficiently as practical
- A brief narrative on the scope of the restoration process to include resource assignment, regional requirements, etc.
- Notification protocol to storm team leaders that a major event may be likely
- Pre-event planning, including notification to material vendors, outside resources, and a press release to media to alert the public of potential major event
- Region responsibilities to ensure pre-event processes are identified and in place to include city, state and county maps, transmission and distribution maps, logistical information, etc.
- Processes and procedures to perform the first high-level assessment to identify damage to the system and make recommendations for resources and material requirements. The procedure also identifies the prioritization of systems, including high priority customers such as fire and rescue, police, water and waste treatment facilities, etc.
- Roles and responsibilities of storm team members pre-restoration, during restoration, and post-restoration
- Restoration process responsibility checklists provide the guidelines for each FTE resource, whether internal or external
- Specific processes outlining Aquila protocol when assisting other utilities. Notification of request for assistance is covered in individual roles and responsibilities
- Additional Aquila forms to capture contractor times, high-level assessment forms, customer service repair needs, contractor information check list etc.
- Procedures and processes to hold a post-event meeting to identify what worked well and what could be improved

## Aquila Response

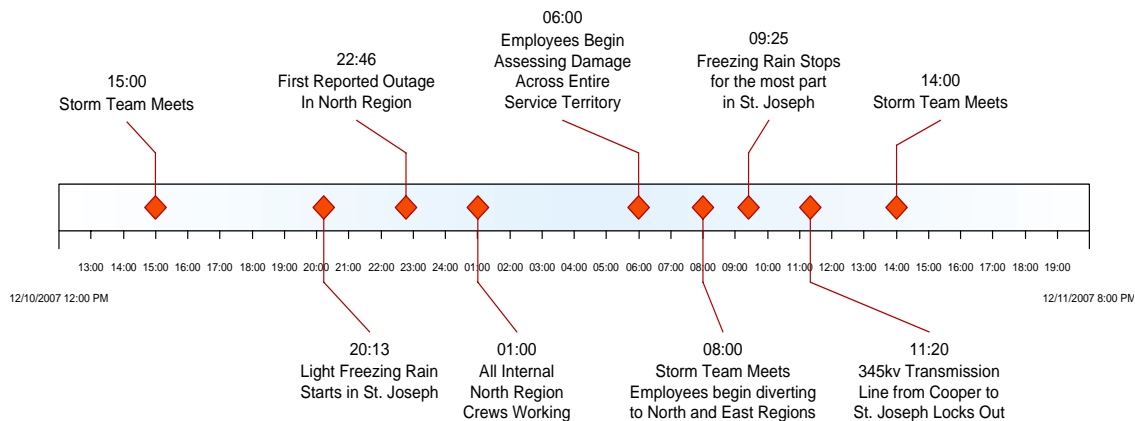
Aquila recognized the potential for this Ice Storm to significantly impact its system well before the event actually occurred. The following timeline provides a picture of the entire event, as well as Aquila's preparation and response.



As this timeline shows, Aquila implemented its ESRP two days before the first outage was reported, and three days before the main storm impacted the North Region.

During this time, Aquila's Storm Team met on at least 19 occasions. As this timeline also shows, Aquila personnel working on the restoration effort encountered difficult weather, with snow falling in the area on December 15 and 16.

The following timeline provides a more granular look at the events that occurred from noon on December 10 through 8:00 p.m. on December 11.



As this timeline depicts, freezing rain began falling in the St. Joseph area at about 8:00 p.m. on December 10. Within approximately two hours, the first outage was reported in the area. Aquila crews immediately began responding to these outages.

In addition, Aquila management had already arranged to have employees deployed to the field at first light on December 11 in order to begin assessing damage to the system. This assessment quickly concluded that most of the damage had occurred north of the Kansas City area, and resources were promptly re-deployed to those areas. More information regarding the resources deployed is found in the section of the report entitled Resources Utilized.

Also during this period, the 345 kV transmission line between Cooper and St. Joseph locked out, and transmission crews began responding to that outage. This is described more fully in the Transmission section of this report.

## Call Center Operations Overview

Aquila provides customers with a toll-free Customer Service number (800-303-0752) and a toll-free Emergency number (800-303-0357). Depending on the selection of the customer within the Voice Response Unit (VRU), the customer can be directed to an automated outage reporting system, or to a Customer Service Associate located in either Lincoln, Nebraska or Raytown, Missouri. Both are staffed 24x7x365.

When calling the Emergency number, the customer is directed by the VRU to select one of the following options: 1) Report a power outage, 2) Customer service inquiries or requests, or 3) Gas leak or gas emergency. If the customer selects option 1) reporting a power outage, the customer is directed to the High Volume Call Answering (HVCA) service where the customer is offered the following selections: 1) Report a power outage, 2) Report a downed wire, blinking lights, partial service, or dangerous situation, or 3) Report a street light or private area light out. Customers are automatically redirected to the Aquila Customer Service Center if they select option 2 or 3, which then queues as a top priority. This is where Aquila experienced some call blockage issues on December 11.

### Key Performance Metrics – Call Blockage Rate

Date	Day of Week	Gross Call Volume (Typical Dec call week)	Blocked Calls (%)		Date	Day of Week	Gross Call Volume (Week of Outages)	Blocked Calls (%)
12/4/2007	Tuesday	8,604	0.2%		12/11/2007	Tuesday	53,930	13.7%
12/5/2007	Wednesday	7,749	0.3%		12/12/2007	Wednesday	22,493	0.2%
12/6/2007	Thursday	7,694	0.3%		12/13/2007	Thursday	17,629	0.2%
12/7/2007	Friday	7,477	0.4%		12/14/2007	Friday	15,644	0.3%
12/8/2007	Saturday	2,799	0.6%		12/15/2007	Saturday	7,150	1.2%
12/9/2007	Sunday	3,186	0.9%		12/16/2007	Sunday	5,869	0.5%
12/10/2007	Monday	12,351	1.3%		12/17/2007	Monday	11,026	0.2%

Customers who called the Aquila Emergency or Customer Service number were able to get connected to Aquila and were not blocked by Aquila. The blocked call percentage on December 11 was primarily the result of the calls coming back to Aquila from HVCA.

If a caller needs to be re-directed to Aquila from HVCA (wire down, street light out, unauthenticated), the HVCA tries to connect to Aquila via a separate toll-free number. The customer first hears "Please remain on the line for the next available customer service associate." If the trunks are full (lines busy), HVCA will continue to try and connect back to Aquila a total of three times. At each attempt, the caller will hear "Your call is important to us. Please continue to hold" and they will also hear music while on hold. At the end of the third attempt, the caller hears "Due to the high call volume, we are unable to answer your call at this time. Please try again later. Thank You. Aquila."

On December 11, when data/reports indicated the most blocked calls, many of the calls counted as blocked were the attempts from HVCA to get through to a customer service representative at Aquila. Because the customer continued to stay on the line, they were not technically “blocked” as much as they weren’t connected on the first try. Most of the customers were eventually connected to Aquila. To see the flow of this for one particular caller, note the call details highlighted below:

12/11/07	11:04:08am	816-305-8074	888-412-2670	560-862-3030	00:00:00	10-
All Lines Busy						
12/11/07	11:04:13am	816-689-2095	888-412-2670	560-862-3030	00:00:00	
10-All Lines Busy						
12/11/07	11:04:22am	816-364-6099	888-412-2670	560-862-3030	00:00:00	
10-All Lines Busy						
12/11/07	11:04:24am	816-232-4508	888-412-2670	560-862-3030	00:00:00	
10-All Lines Busy						
12/11/07	11:04:53am	816-305-8074	888-412-2670	560-862-3030	00:00:00	
10-All Lines Busy						
12/11/07	11:05:05am	816-233-7561	888-412-2670	560-862-3030	00:00:00	
10-All Lines Busy						
12/11/07	11:05:10am	816-232-4508	888-412-2670	560-862-3030	00:00:00	
10-All Lines Busy						
12/11/07	11:05:34am	816-232-3467	888-412-2670	560-862-3030	00:03:38	0-
Call Complete						
12/11/07	11:05:41am	816-305-8074	888-412-2670	560-862-3030	00:01:59	0-
Call Complete						
12/11/07	11:05:49am	816-248-3070	888-412-2670	560-862-3030	00:02:40	0-
Call Complete						

In the scenario above, the call from 816-305-8074 attempted three times to get to Aquila from HVCA and was not connected until the third try. While this was not actually a blocked call, it was counted as two “blocked” attempts in the AT&T data. This information supports that the 13.7% call blockage rate is potentially exaggerated in terms of customers being unable to connect to an Aquila customer service representative.

Aquila recognized that a 13.7% call blockage rate was unacceptable and on December 11 we adjusted the Maximum Call Allowed (MCA) value on this toll-free number to allow for more open channels to get the callers queued in the Aquila Customer Service Center. The call blockage rate decreased dramatically after this adjustment. We have added this toll-free number to our list of numbers to monitor/report during high call volume events.



### **Key Performance Metrics – Service Level, Call Volume, Staffing**

The graph below illustrates the key performance metrics for the Aquila Customer Service Center the week prior to and the week of the ice storm. Gross call volumes were seven times the normal call volume on December 11, with 26,983 calls handled through the HVCA. Service Levels held fairly steady throughout the week and increased staffing was driven by overtime and the use of cross-functional agents in the back office function. Aquila monitors service levels in 30-minute increments to better manage the need for additional staffing and to forecast when additional staff will be needed.

Date	Day of Week	Service Level	Gross Call Volume	Agent Offered Calls	Blocked Calls %	HVCA Redirects	Net HVCA	Peak Staffing By Day (Total Scheduled to work)	Overtime Hours Per Day
12/4/2007	Tuesday	99%	8,604	5,570	0.2%	33	397	69.03	0
12/5/2007	Wednesday	97%	7,749	5,142	0.3%	37	206	61.07	0
12/6/2007	Thursday	96%	7,694	4,968	0.3%	31	330	56.77	0
12/7/2007	Friday	97%	7,477	4,817	0.4%	20	118	54.27	0
12/8/2007	Saturday	93%	2,799	2,054	0.6%	12	136	17.50	51.87
12/9/2007	Sunday	92%	3,186	1,495	0.9%	72	321	17.00	0.25
12/10/2007	Monday	96%	12,351	7,448	1.3%	148	1,236	79.10	1.42
12/11/2007	Tuesday	47%	53,930	15,234	13.7%	5,860	26,983	70.87	82.4
12/12/2007	Wednesday	78%	22,493	10,203	0.2%	1,920	8,102	65.67	65
12/13/2007	Thursday	91%	17,629	8,477	0.2%	1,171	5,722	68.50	62.64
12/14/2007	Friday	61%	15,644	8,569	0.3%	923	3,956	65.50	32.4
12/15/2007	Saturday	52%	7,150	3,451	1.2%	563	2,082	24.00	41.62
12/16/2007	Sunday	88%	5,869	2,525	0.5%	482	2,114	20.00	74.72
12/17/2007	Monday	99%	11,026	7,275	0.2%	363	769	83.50	3.25



## Communications

Aquila used a variety of communication channels to keep employees and customers informed of the outage restoration process. Members of call center management participated in daily operational status meetings, CSA updates communicating key talking points were delivered electronically, and the online reference tool was updated with pertinent outage information. This information was, in turn, communicated to customers. In addition, a CSA debrief was conducted to identify future process improvements.

The Missouri Operations group, led by Ivan Vancas, facilitated daily status meetings with all stakeholders to inform, educate and receive input about the outage restoration process. This information was invaluable as it proved to be the most accurate account of the progress of the restoration process.

Much of the information gathered at the daily operational meetings was communicated to CSAs via the CSA Update e-mail. The CSA Update is a weekly electronic newsletter that updates CSA's on process changes, system enhancements, and other pertinent customer service matters. During the Ice Storm, the CSA Update was sent out daily to keep up with changes/additional information. Access to information was enhanced by incorporating storm updates into our online reference tool, called Compass. An example of the Web page is displayed below. This allowed us to constantly update information in a timely manner and make it accessible company-wide.

The screenshot shows a Microsoft Internet Explorer window titled "Emergency Storm Update - Microsoft Internet Explorer provided by Aquila, Inc.". The address bar displays "http://dept/compass/business/emergency/storm\_update.html". The page content includes a navigation menu on the left with categories like "Exploration Pages", "Affordability", "Appliance Repair", "Billing", "Budget", "Charges & Fees", "CIS+ Basics", "Credit & Collections", "Customer Contact", "EFT", "Emergency", "FRC", "General Information", "Internet References", "Meter Read", "New Construction", "Payment", "Arrangement", "Process Payments", "Products & Services", "Quality", "Reconnect", "Service Order", "ServiceOn", "Turn Off", and "Turn On". The main content area is titled "Emergency Storm Update (Dec. 2007)" and contains several sections: "On this page" with links to "Outage and restoration update", "Talking points for customers", "Talking points for electricians", and "Shelters"; "Outage and restoration update" with text about power restoration and links to "MO outage" and "specific areas"; "Re-reporting outages" with text about a press release and a note about re-reporting; and "Specific area updates on Web" with text about interpreting outage information. At the bottom, there is a table with four columns: "Service Area", "City Name", "Number Served", and "Number Affected".

Service Area	City Name	Number Served	Number Affected
Maryville/Mound City	Langdon	57	18
Marvville/Mound City	Maitland	304	710

Finally, CSA feedback was requested, documented, and delivered to key members of leadership to provide a view of what worked well, what didn't, and what processes, communication channels, etc. could be improved. The value to this piece is that it is the voice of the customer and is critical to Aquila's ability to continue to provide the service that our customers expect and deserve.

The Customer Service Center performance during this challenging week in December was outstanding given the circumstances. Employees were engaged and demonstrated this through their commitment to work long hours and to keep our customers informed.

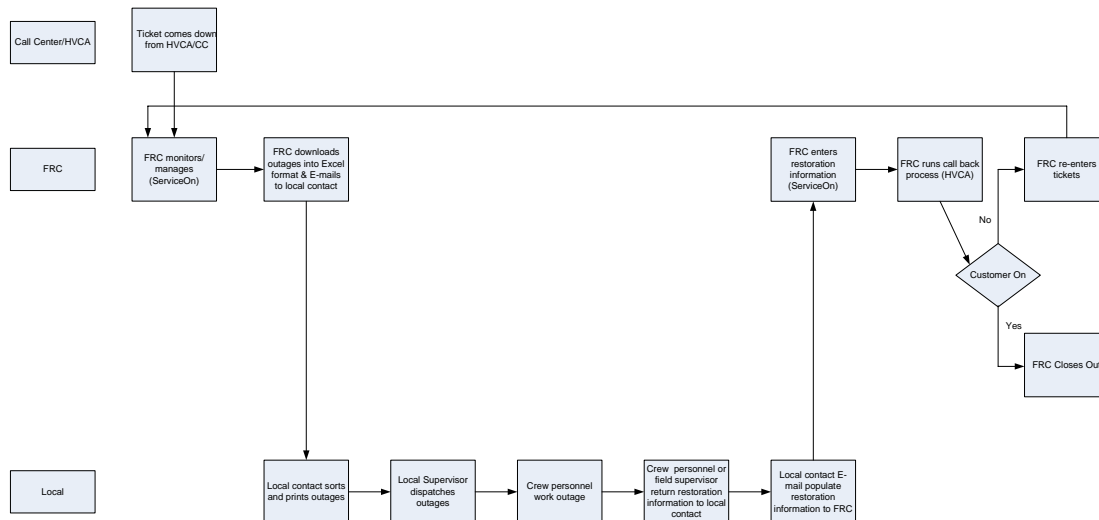
#### Customer Service Center Opportunities for Improvement

- Add message to HVCA informing the customer what needs to be done if their power line and meter can have been pulled away from the house.
- Have cell phone numbers entered in ServiceOn in the area for additional notes and have the customer contacted through cell if possible.
- Have a representative from FRC come in and give a quick briefing on what is on the agenda for the day - i.e. customers restored, customers still to be restored and provide answers to some of the most commonly asked questions.
- CSAs should be able to see when callbacks have been made and service is restored.
- Local office to update/document accounts on customers who have damage that will require an electrician.
- Communicate areas where we were having success.
- Improve the ServiceOn ticket process for duplicate call-ins.
- Provide more information on where the crews are working and what had been completed.

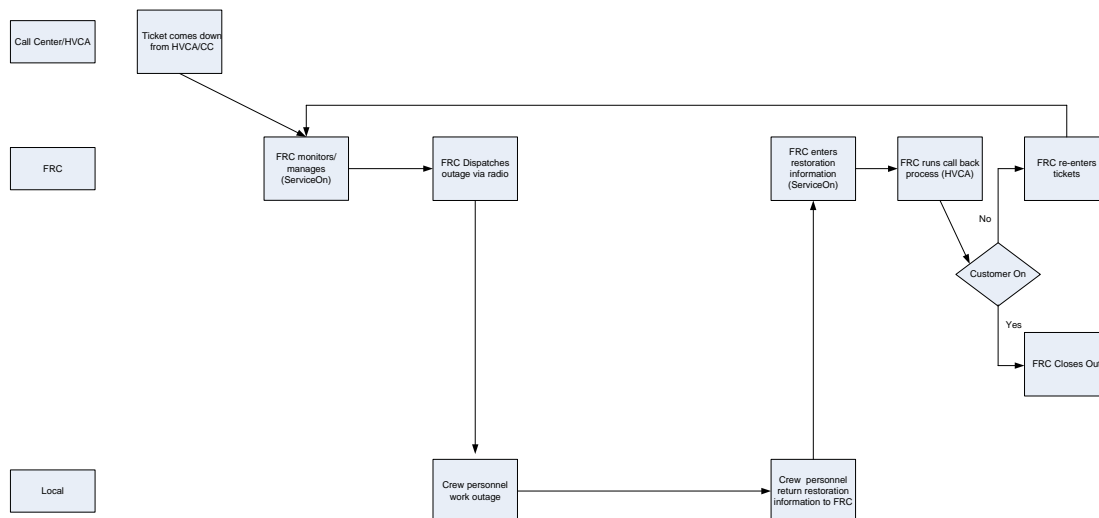
## Outage Reporting & Restoration Process

Aquila utilized its outage management system (ServiceOn) to track and coordinate outage restoration. This system was monitored and managed by the central dispatch operation (Field Resource Center – FRC). The outage information was sent to field operations personnel in local district offices. Local managers were directing the crew personnel. See the major storm dispatch process below, as compared to the normal dispatch process:

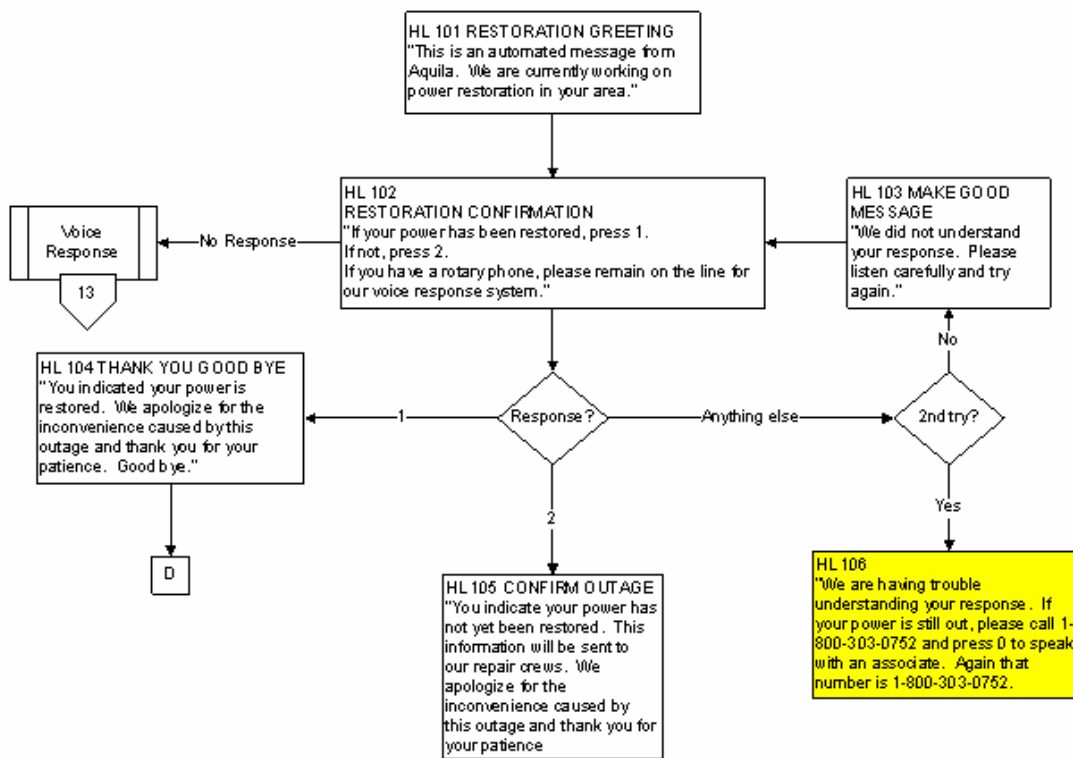
**Major Storm Dispatch Process Flow**



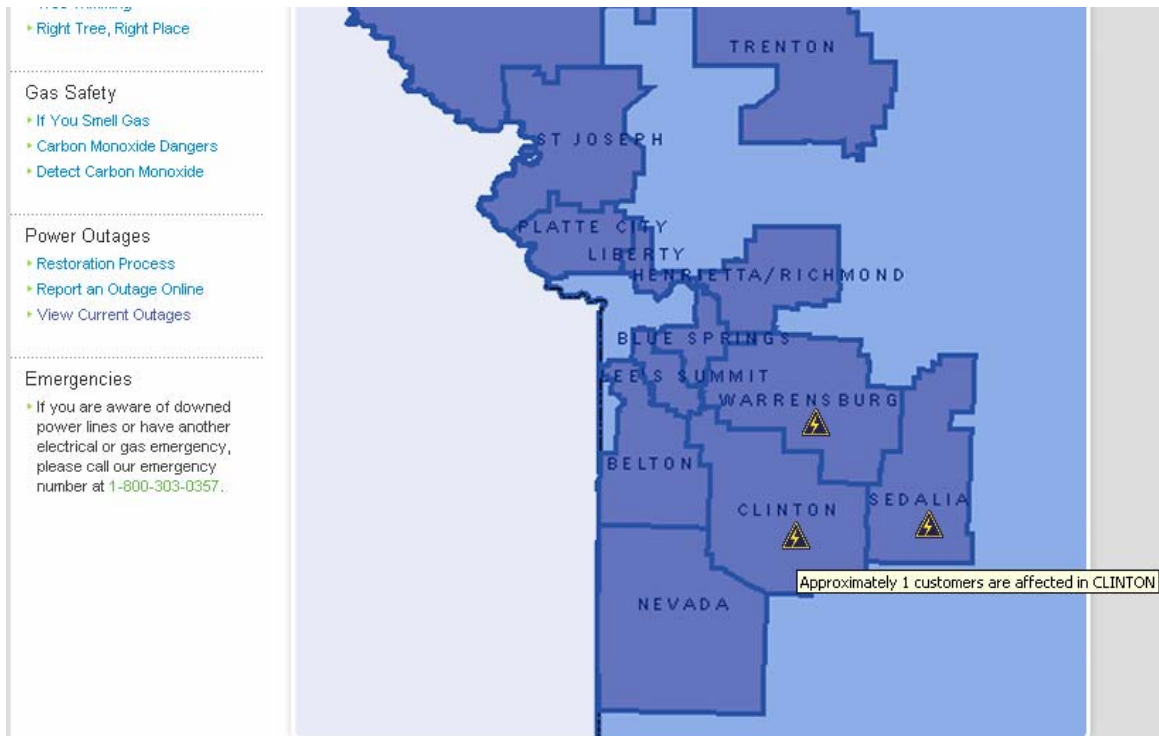
**Normal Outage Dispatch Process Flow**



ServiceOn provided capability to electronically track the number of customers we had out of service, as well as progress in the restoration process. For the most part, input into ServiceOn comes from our High Volume Call Answering (HVCA) system. However, some reports come from Call Centers, which manually enter the information, as well as our Electronic Outage Center (EOC) website. FRC monitors ServiceOn as it predicts and groups outage calls and produces outage tickets. This outage information is sent to local offices, where storm leaders dispatch the outages to crews via paper copies or radio communication. Restoration information is communicated back to the FRC which enters that information into ServiceOn. The FRC then executes “call backs” to customers through our automated call back system. See the call back flow and scripts below. Outage tickets are created for customers who do not confirm that they are restored.



ServiceOn also passes outage data to Aquila's EOC on aquila.com. EOC graphically displays a view of areas that are impacted and the number of customers affected. See the sample image below.



## Life Support Customers

Life Support Customers who have previously registered are identified in Aquila's Customer Information System (CIS). Once these customers report their outage through the HVCA, they are routed from HVCA to a live agent. Their outage tickets are systematically flagged in the ServiceOn system. An outbound call is made from the FRC to these customers to acknowledge receipt of their outage and pass along any pertinent information regarding their specific outage and encourage them to plan accordingly. In the case of this storm, outbound calls were made to check with these customers twice daily. Aquila also passes this information to a "secondary contact" that is flagged in the CIS. See the script below.

*"Hello, this is \_\_\_\_\_ with Aquila, your electric company. I am calling to inform you that we have received your outage report and we are aware of the situation. Please know we are working as quickly and as safely as possible to get your power restored. Because of the nature of this outage, we cannot give you an estimated time that your service will be restored. We therefore urge you to plan ahead and make preparations to relocate to another location that has electricity if the need should arise. We apologize for the inconvenience and assure you we will get you power restored as soon as possible. Thank you."*

## Customer updates

Aquila has several conduits that were utilized to communicate outage status to customers directly. (How we addressed our customers through the media is described later in this document.) First, call center agents were kept apprised via messages from the FRC updated two to six times daily. Second, we utilized the HVCA area-specific messaging whereby a customer calling our emergency number heard a message played regarding their specific area. See the sample script below. Third, the EOC on the aquila.com (described above) was updated twice daily during this storm. Fourth, the customer call back process (described above) as service restoration was attempted. All of these were utilized during this storm.

*As of noon on Saturday December 15th, we still have a significant amount of power outages in St. Joseph and the surrounding areas. At this time, we estimate approximately 6,600 customers in the St. Joseph area are without service, down from the approximately 59,000 customers that were out in our NW MO service territory at the height of this week's ice storm.*

*Crews have all backbone feeder lines repaired and re-energized and are continuing to work to repair the remaining substation, lateral, and individual service lines damaged or knocked down because of the storm.*

*At this time, we still expect to have the vast majority of our customers back on by the end of the day on Monday, December 17. Actual restoration time could be sooner and will vary based on repair requirements.*

*Once again, we'd like to thank you for your continued patience as we work to restore service in these difficult conditions.*