



ST. CHARLES
SINCE 1834

AGENDA ITEM EXECUTIVE SUMMARY

Title: ComEd Reliability and Maintenance Issues – Information only

Presenter: Tom Bruhl

Please check appropriate box:

<input type="checkbox"/>	Government Operations	<input checked="" type="checkbox"/>	Government Services 01.28.13
<input type="checkbox"/>	Planning & Development	<input type="checkbox"/>	City Council
<input type="checkbox"/>	Public Hearing	<input type="checkbox"/>	

Estimated Cost:	\$	Budgeted:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
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If NO, please explain how item will be funded:

Executive Summary:

Presentation of the discussion that occurred with ComEd, and system reliability since the last update.

Attachments: *(please list)*

ComEd Reliability Memo, ComEd Maintenance Chart

Recommendation / Suggested Action *(briefly explain):*

For information only

For office use only: Agenda Item Number: 5 . i

Public Works Department
- Electric Office -



Memo

Date: 11/13/2012
To: Mark Koenen
From: Tom Bruhl
Cc: Richard Gallas
Re: ComEd Update

Staff has met with ComEd monthly since our last update in July of 2012.

Two significant storms created five sustained outages and four momentary outages in July and August. The major event on July 1 occurred on a Sunday and the August 4 storm was a Saturday. Restoration efforts outside of normal work hours create slightly longer outages while ComEd and City staff members report to work. The outages were all investigated by ComEd to document root cause.

Although the sustained outages were numerous and had serious impact on our customers, ComEd and City crews were able to restore all of the substation feeds within hours.

The longest ComEd line outage started in the early morning of July 2, and most heavily impacted the south east quadrant, for four hours and eighteen minutes, when ComEd restored the line. The outage was caused by tree contact with the line.

Both lines into the Dunham Road Substation were lost during the July 1 storm. City crews used an internal tie and reserve capacity on another 35kV line to restore half of the substation within about three hours. ComEd restored the other line approximately an hour later. Both line outages were related to trees. The ability to restore using City owned internal ties and reserve capacity on other ComEd feeds reinforces how important our contingency planning efforts are.

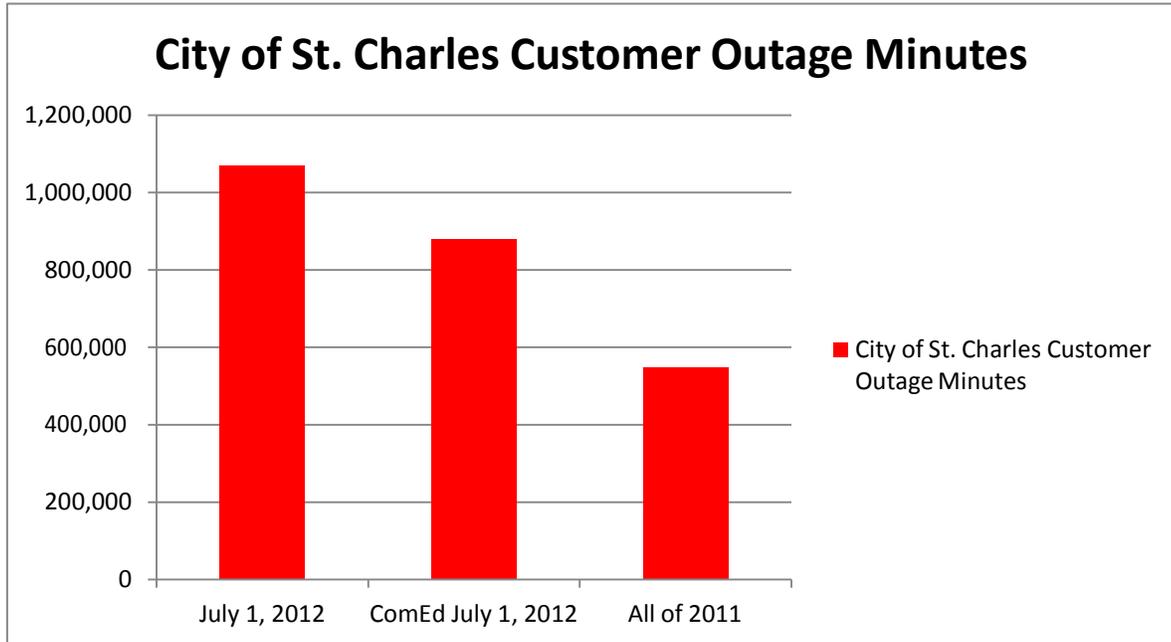
The line coming into N. 12th Street Substation was lost during the July 1 storm. The 35kV line survived the storm, but the 138kV line feeding ComEd's South Elgin Substation was lost. ComEd was able to restore power to the northwest quadrant of St. Charles within 38 minutes.

The storm of August 4 caused a sustained outage to the line into Peck Road Substation. The City crews restored power to our customers using an internal tie and reserve capacity on another line within approximately an hour. The cause of the outage was a lightning hit on a padmounted transformer similar to our LDC unit at RR Donnelley.

On the momentary side, lightning caused four separate line outages during storms. While inconvenient, the momentary outages are much better than the almost certain sustained outages that would have occurred without the protective equipment.

There have been two additional momentary outages, not related to storms. The first impacted the southwest quadrant on September 30. The second impacted the NE and SE quadrants on October 18. Those outages are currently under investigation by ComEd.

In terms of customer outage minutes (the product of the number of customers out of service and the number of minutes they are without power), the July 1 event was 1,068,668 customer outage minutes. ComEd line outages were responsible for 878,928 of those minutes. The balance was due to internal problems on the City distribution system. For the entire calendar year of 2011, the number of customer outage minutes in the City of St. Charles, for all causes, was 548,441. So the July 1 event by itself caused almost double the customer outage minutes that we sustained in all of 2011.



Another key indicator of the significance of the July 1 storm is the number of customers who had a sustained outage. The Electric Utility has approximately 15,500 customer accounts. Over 7,000 customers experienced a sustained outage over the July 1 through July 2 event.

The storm hit at approximately 12:10PM. Within 12 hours, the City and ComEd restored all but 31 customers, which was 99.5% of the customers impacted. All ComEd related outages were restored by just after 4PM.

There have been no sustained outages related to ComEd since August 5.

Staff discussed the installation of LDC2 in the area of the Red Gate Bridge and requested a ComEd quote to provide a 34.5kV feed into this location. We also discussed a second feed into that station. Our effort to obtain a 10th feed is not economically practical at this time. We will continue to work with the ComEd Planning group to investigate reasonable alternatives to bring a diverse 34.5KV feed into our LDC2 at Red Gate Bridge.

The next ComEd meeting is scheduled for December 12, 2012.

Summary of ComEd Maintenance & System Improvements Relating To The City of St. Charles

Line Number and (Sub Served)	Date of Last Tree Trimming ***	Date of Next Tree Trimming ***	Date of Last Thermoscan Inspection	Date of Next Thermoscan Inspection	Date of Last Maintenance Inspection	Date of Next Maintenance Inspection	Improvement Projects on Lines	Projects in ComEd Substation Related to Lines	Other Projects
L7962 (1/2 of City Hall Sub)	3/27/2012	3/26/2016	11/4/2011	12/31/2013	9/27/2012	12/31/2014	Installation of "Spacer Cable" in wooded section North of Q-Center property COMPLETE	All P.M.'S currently on schedule	
L13150 (1/2 City Hall Sub) and (1/2 Prairie St Sub)	8/18/2009	8/17/2013	3/5/2012	12/31/2014	2/3/2012	12/31/2014	Enhanced tree trimming around switch poles on both side of Dupage Airport COMPLETE	All P.M.'S currently on schedule	
L13154 (1/2 N 12th St Sub) and (1/2 Dunham Sub)	8/18/2009	8/17/2013	4/21/2011	12/31/2013	2/6/2012	12/31/2014	Enhanced tree trimming around switch poles on both side of Dupage Airport COMPLETE	All P.M.'S currently on schedule	
L13155 (1/4 Dukane Sub)	7/18/2009	7/17/2013	4/21/2011	12/31/2013	3/22/2011	12/31/2013	Enhanced tree trimming around switch poles on both side of Dupage Airport COMPLETE	All P.M.'S currently on schedule	
L13156 (1/4 Dukane Sub)	6/30/2009	6/29/2013	3/5/2012	12/31/2014	3/6/2012	12/31/2014	Enhanced tree trimming around switch poles on both side of Dupage Airport COMPLETE	All P.M.'S currently on schedule	
L13159 (1/2 Dunham Sub)	7/13/2009	7/12/2013	4/4/2012	12/31/2013	10/3/2012	12/31/2014		All P.M.'S currently on schedule	
L57736 (1/2 N 12th St Sub)	4/19/2010	4/18/2014	3/9/2012	12/31/2014	4/2/2012	12/31/2014		All P.M.'S currently on schedule	
L11167 (1/2 Dukane Sub)	7/12/2012	7/11/2016	4/9/2012	12/31/2013	4/19/2011	12/31/2013		All P.M.'S currently on schedule	
L56931 (Peck Rd Sub) and (1/2 Prairie St Sub)	7/13/2010	7/12/2014	6/1/2012	12/31/2014	11/2/2011	12/31/2013	Lightning arrester enhancement project from Deer Path Rd. to ESSW568 St. Charles COMPLETE	All P.M.'S currently on schedule	New 34kv recloser is currently scheduled to be installed in 2013

* Microprocessor based relays prohibit tripping upon loss of input sources (V,I) due to failure, perform self tests, initiate failure alarms, provide more setting

** Digital SCADA allows more monitoring and control of relays and equipment.

*** The tree trimming cycle is 4 years. However, spot inspection/trimming is also conducted in 2 of the 3 'off-cycle' years.

Enclosed switchgear is less susceptible to foreign interference type outages.

Networked line has sources at separate stations.