



## AGENDA ITEM EXECUTIVE SUMMARY

Title: Presentation of ComEd Reliability Quarterly Report

Presenter: Tom Bruhl

*Please check appropriate box:*

	Government Operations	X	Government Services 01.26.15
	Planning & Development		City Council
	Public Hearing		

Estimated Cost:	\$	Budgeted:	YES		NO	
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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 Outage Trend Graph, ComEd Maintenance Program Status Chart

**Recommendation / Suggested Action** *(briefly explain):*

For information only.

*For office use only:*

*Agenda Item Number: 4.g*



# Memo

Date: 1/15/2015  
To: Peter Suhr  
From: Tom Bruhl  
Re: ComEd Update

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Staff continues to meet with ComEd quarterly and communicate in a timely fashion if outages occur.

ComEd completed investigations of all sustained and momentary outages. City staff is satisfied with the detailed follow-up and corrective actions taken. All outage investigations, except for the 12/19/14 momentary outage, resulted in positive confirmation of the cause and corresponding corrective action. Extensive patrolling of the line, including a thermography scan, was conducted after the 12/19/14 outage and a hot spot was located outside of the zone where the fault was believed to be located.

ComEd continues to do an excellent job with respect to root cause investigation and the corrective actions. On a number of the equipment failure related outages, ComEd patrolled all of our lines looking for similar material and made additional repairs to avoid similar future issues. For the one outage that they could not positively determine the cause, they conducted more extensive testing.

For calendar 2014, there were a total of 15 outages related to ComEd lines. Ten of the outages were momentary "blinks". One of the momentary outages, impacting the southwest quadrant, was actually a 138kV, transmission, problem that knocked out the whole Sugar Grove Substation, and was not a problem on the 35kV line between Sugar Grove and St. Charles. The other five events resulted in sustained outages.

## **Sustained Outages were:**

1/26/14 – L11167 – mostly SE quadrant, small area of NE quadrant – 65 minutes – failed insulator

5/20/14 – L7962 – central part of City – 79 to 108 minutes – ComEd had City switched onto L57739 which subsequently suffered lightning damage

9/2/14 – L13156 – SE quadrant – 33 minutes - failed connector on Roosevelt Road between Kautz and Washington in West Chicago

9/5/14 – L7962 – central part of City – 30 minutes - tree contact

10/3/14 – L13156 – SE quadrant – 49 minutes - broken pole at Kirk Road and bike path

**Momentary outages were:**

3/5/14 – L13150 – central part of City – Mylar balloons in line right by Smitty's

4/28/14 – L57736 – NW quadrant – lightning strike near Sterns Road

5/8/2014 – L11167 – mostly SE quadrant, small area of NE quadrant – customer owned transformer at Fermi catastrophically failed

5/20/14 – L13150 – central part of City & parts of SW quadrant – arrester failure at City Hall Substation caused by event on L7962

6/19/14 – L13154 – NE quadrant – tree contact with 12kV line that is underbuilt below the 34KV line

6/30/14 – L56931 – mostly SW quadrant, small area of NW quadrant – confirmed lightning strike at I-88 and Rt. 56.

6/30/14 – L56931 – mostly SW quadrant, small area of NW quadrant – confirmed 138kV insulator failure

7/7/14 – L7962 – central part of City – confirmed lightning hit

7/12/14 – L13150 – central part of City & parts of SW quadrant – switch failure on 12kV line underbuilt below the 34kV line

12/19/14 – L11167 – mostly SE quadrant, small area of NE quadrant – ComEd patrolled extensively and did not find cause

Statistically, the 15 outages are better than average performance. Over the last 10 years, ComEd has averaged 20 outages per calendar year, and had 19 in 2013. The attached graph shows the improvement over the last four years.

ComEd has also provided a spreadsheet showing the status and schedule for their normal maintenance programs, cells highlighted in yellow depict items that were completed in 2014.

ComEd continues to work with the City with respect to their system planning activities related to summer peak loads, and our contingency plans remain intact.

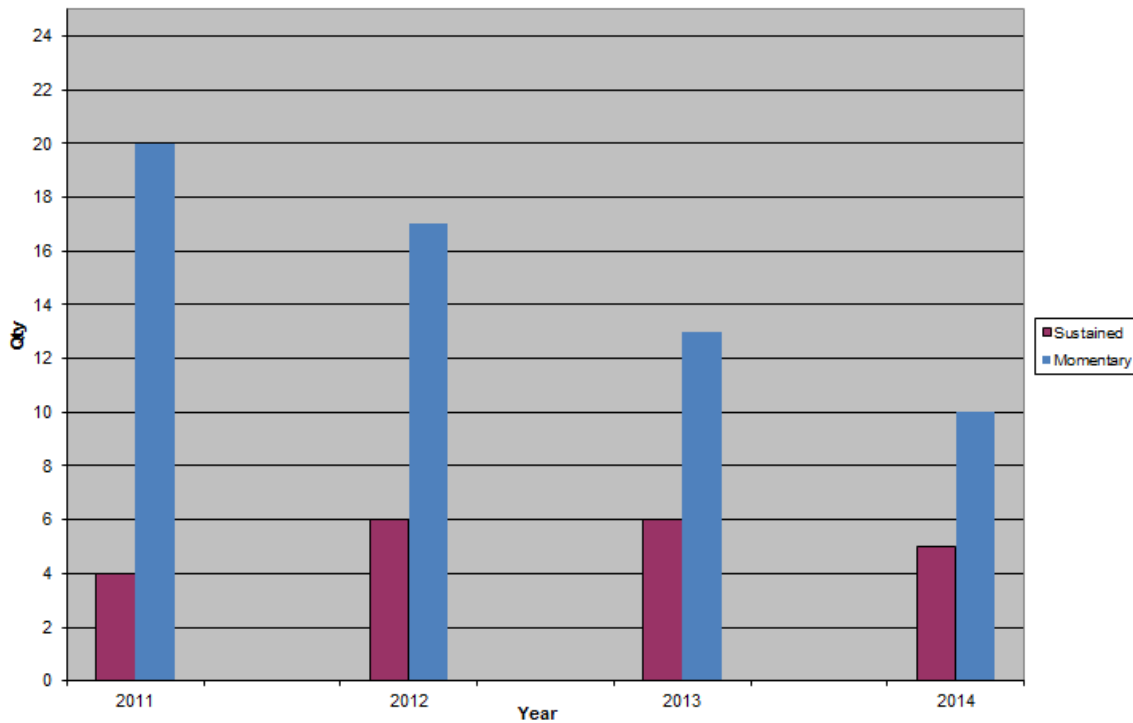
As a follow up task from our Emmitsburg training with FEMA, staff has initiated discussion with ComEd about providing support at an EOC (Emergency Operations Center) in the event of a major storm. Staff will continue to coordinate and plan with ComEd for major emergency response.

**The next ComEd meeting is scheduled for April 8, 2015.**

### Momentary/Sustained Outage Trends:

- 2014 – Total Momentary – 10 Total Sustained – 5
- 2013 – Total Momentary – 13 Total Sustained – 6
- 2012 – Total Momentary – 17 Total Sustained – 6
- 2011 – Total Momentary – 20 Total Sustained – 4

St. Charles- Momentary/Sustained Trends



- 2011 – 2014 – 50% Reduction in Momentaries
- 2012 – 2014 – 41% Reduction in Momentaries
- 2013 – 2014 – 23% Reduction in Momentaries

## 2014 Summary of ComEd Maintenance & System Improvements Relating To The City of St. Charles

Line Number and (Sub Served)	Date of Last Tree Trimming ***	*Target Date of Next Tree Trimming ***	Date of Last Thermoscan Inspection	*Target Date of Next Thermoscan Inspection	Date of Last Maintenance Inspection	*Target Date of Next Maintenance Inspection	Projects in ComEd Substation Related to Lines	Other Projects
L7962 (1/2 of City Hall Sub) and (Red Gate Rd. Sub)	3/27/2012	3/26/2016	4/22/2013	12/31/2015	<b>1/16/2014</b>	12/31/2016	All P.M.'S currently on schedule	Mid Cycle Trimmed in 2014. Replaced poly insulators- 1 location.
L13150 (1/2 City Hall Sub) and (1/2 Prairie St Sub)	8/17/2013	8/17/2017	10/23/2013	12/31/2016	<b>2/27/2014</b>	12/31/2016	All P.M.'S currently on schedule	
L13154 (1/2 N 12th St Sub) and (1/2 Dunham Sub)	8/15/2013	8/15/2017	5/29/2013	12/31/2016	<b>3/12/2014</b>	12/31/2016	All P.M.'S currently on schedule	Replaced poly insulators -2 locations
L13155 (1/4 Dukane Sub)	7/15/2013	7/15/2017	5/29/2013	12/31/2015	2/9/2013	12/31/2015	All P.M.'S currently on schedule	
L13156 (1/4 Dukane Sub)	6/17/2013	6/17/2017	10/24/2013	12/31/2016	11/6/2013	12/31/2016	All P.M.'S currently on schedule	Line inspected for auto splices. 6 auto splices were identified and replaced in Sept. 2014. Replaced poly insulators- 7 locations.
L13159 (1/2 Dunham Sub)	6/30/2013	6/30/2017	<b>3/24/2014</b>	12/31/2016	<b>11/4/2014</b>	12/31/2016	All P.M.'S currently on schedule	
L57736 (1/2 N 12th St Sub)	<b>4/19/2014</b>	4/18/2018	<b>1/16/2014</b>	12/31/2016	<b>4/15/2014</b>	12/31/2016	All P.M.'S currently on schedule	
L11167 (1/2 Dukane Sub)	7/12/2012	7/11/2016	<b>4/22/2014</b>	12/31/2016	1/11/2013	12/31/2015	All P.M.'S currently on schedule	Line was thermo-scanned on 12/22/14 after OA/RA of 12/19/14. One Hot Spot found and repaired.
L56931 (Peck Rd Sub) and (1/2 Prairie St Sub)	<b>6/30/2014</b>	6/30/2018	<b>5/1/2014</b>	12/31/2016	3/22/2013	12/31/2015	All P.M.'S currently on schedule	34kV Pulse Recloser 3159 Installed on Tap to DCW73 Bald Mound.

Target dates can vary slightly due to work load.