

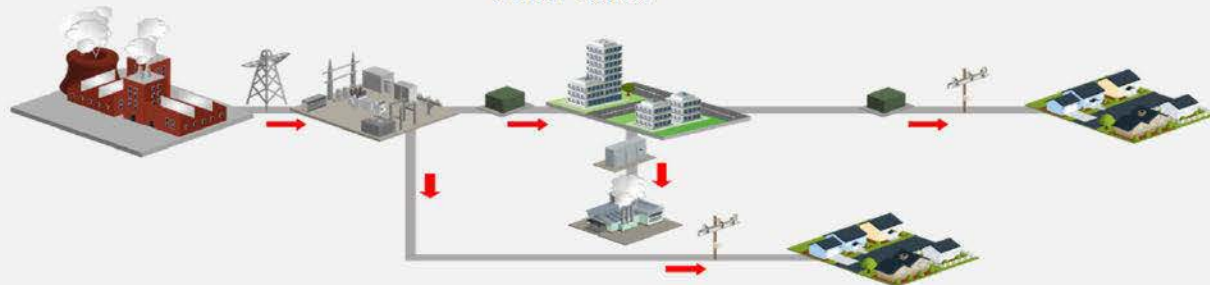
Background on S&C Electric Company

- Founded in 1911
- Specialist in electric power switching, protection, and control
- Headquartered in Chicago, Illinois, USA
- Located in USA, Canada, Europe, Asia Pacific, South America, Mexico and China
- Solution provider for scalable Distribution Automation, Energy Storage and microgrids
- 80% of business is in Distribution of the grid and large Commercial & Industrial users

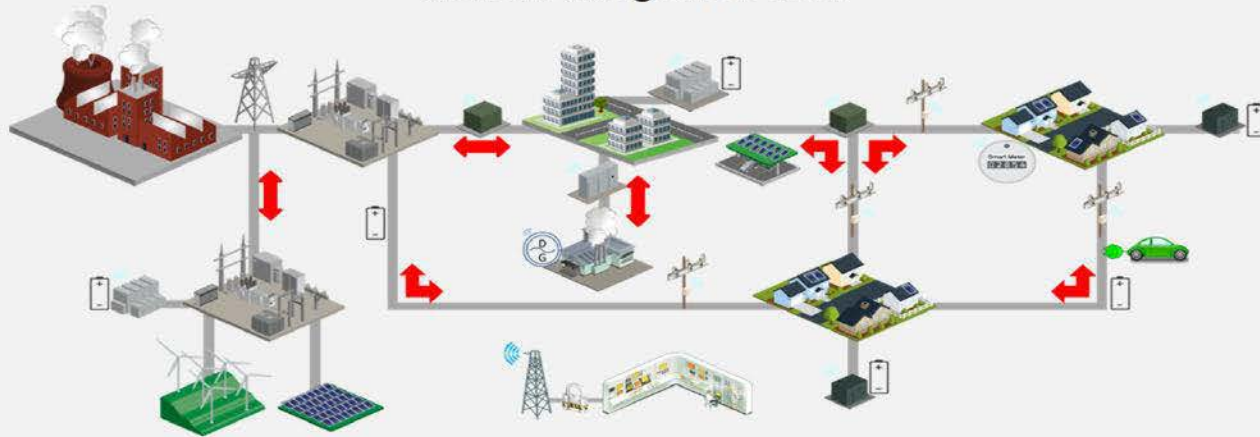




Old Grid



Vision: Integrated Grid





EPB Chattanooga's Smarter Grid



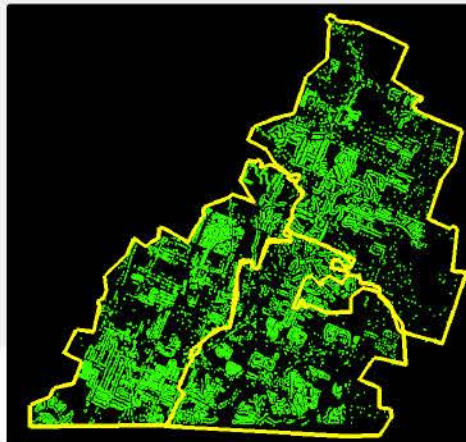
EPB Chattanooga
500,000 customer municipal



Smart Grid
Started with fiber everywhere



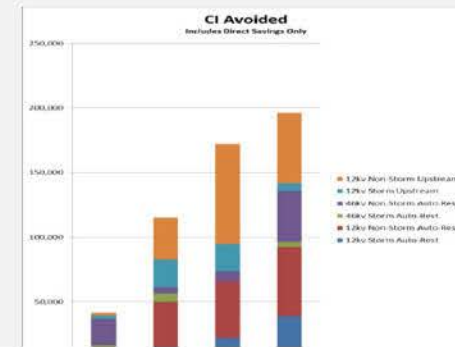
Smart Switches
1200 units on all 12kV



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All customers
restored

Storm Jan, 2013



Source: David Wade, EPB Chattanooga, presented for DOE, Dec. 2014 "EPB's Smarter Smart Grid"





ComEd Files Annual Delivery Update For Year Of Record Reliability

Business Wire [+ Follow](#) Apr 13, 2017 12:20 PM EDT

After five years, Illinois smart grid buildout showing results

WRITTEN BY

David J. Unger
April 27, 2017

Over the past half decade, Illinois utilities have spent billions on building out a smarter, cleaner and more efficient power grid.

PHOTO BY

Michael Kappel /
Creative Commons

While the changes are not without controversy, utilities say reliability has improved while average customer bills have remained flat.

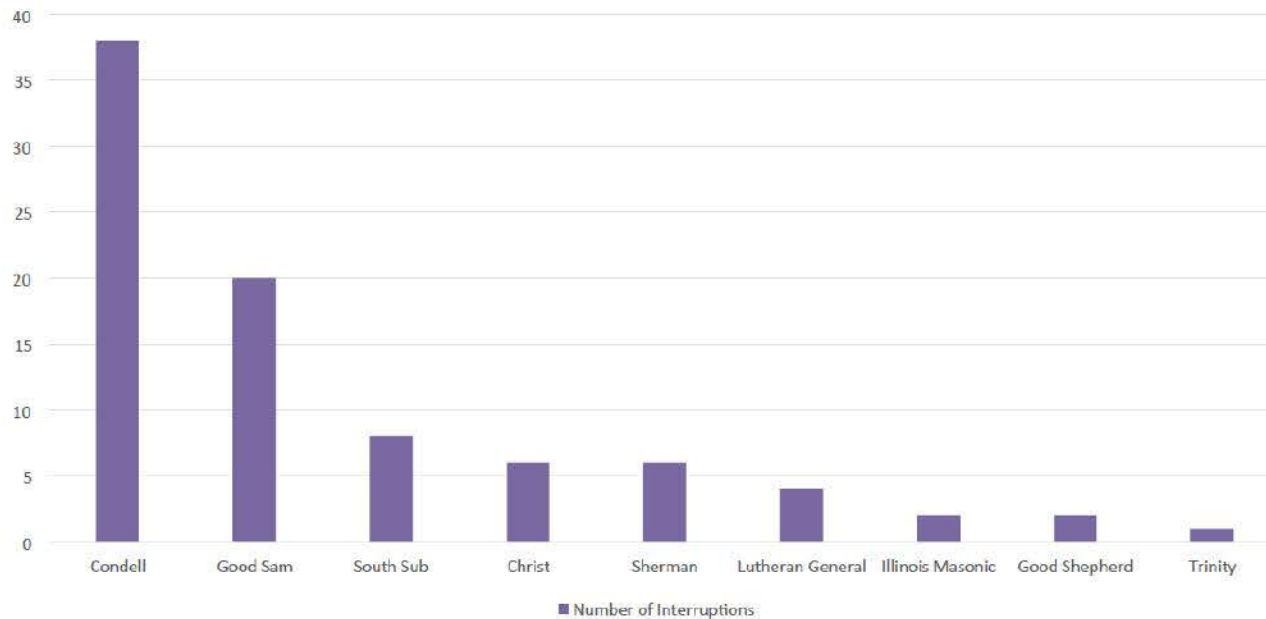
ComEd 2016 Best in Class Reliability Performance Press Release

Monday, 06 February 2017 [MCEDC](#) 252 Hits



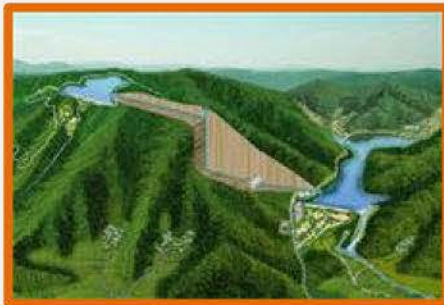
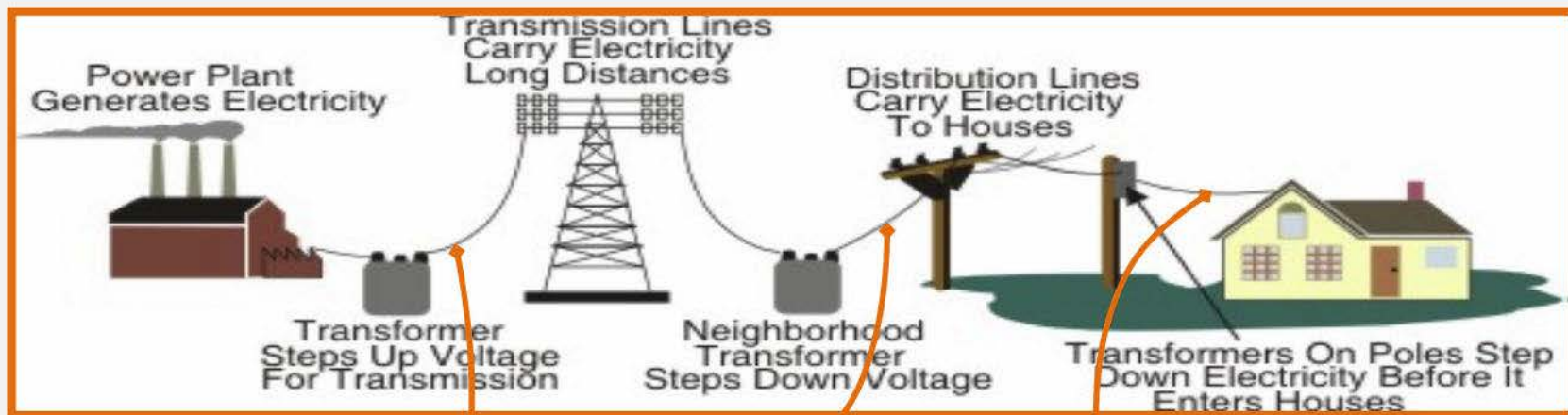
System Power Outages Jan 2016 – Feb 2017

ComEd Interruptions by Hospital





Hierarchy of Grid-Purposed Energy Storage



Source Storage
100's of MW
(Pumped hydro/CAES)



Distribution Bulk Storage
10's of MW
(NaS, Li-Ion, Lead Acid)



Distribution Grid Edge Storage
10's of kW
(Li-Ion)



Microgrids

SPIDERS I – Joint Base Pearl Harbor-Hickam, Oahu, HI

2.4MW microgrid built around wastewater treatment plant

Completed January 2013

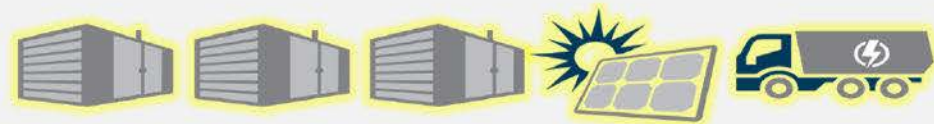


SPIDERS II – Fort Carson, CO

ATO in Process

4.2MW microgrid built around mission-critical base command centers

Completed October 2013



SPIDERS III – Camp Smith, Oahu, HI

ATO Issued

5.8MW microgrid encompassing entire Navy Pacific Command base

Completed January 2016

