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ComEd 2012 Summer Readiness

**Presentation to the
Illinois Commerce Commission
June 6, 2012**

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Executive Vice President & Chief
Operating Officer

Looking back at 2011

- ✓ Illinois experienced extreme weather including unprecedented storm activity that impacted 2.8 million customers
- ✓ An all-time ComEd peak load of 23,753 MW was reached on July 20, followed by 23,670 MW on July 21
- ✓ Despite the extreme weather conditions, ComEd's system performed reliably
- ✓ Enactment of the Energy Infrastructure Modernization Act has enabled ComEd to embark on a multi-year investment program that will strengthen and modernize the electric grid and provide improved service to customers, while also helping consumers save money and supporting Illinois' economic future.



Looking forward to Summer 2012

- ✓ Foundational programs
 - Generation supply and transmission and distribution capacity exceeds forecasted demand
 - Proactive annual distribution and transmission system maintenance is on track
- ✓ Additional preparation
 - Grid modernization programs are underway
 - Major system investment and storm hardening continues
 - Storm response continuous improvements implemented
 - Communication with municipalities and customers enhanced through technology and education



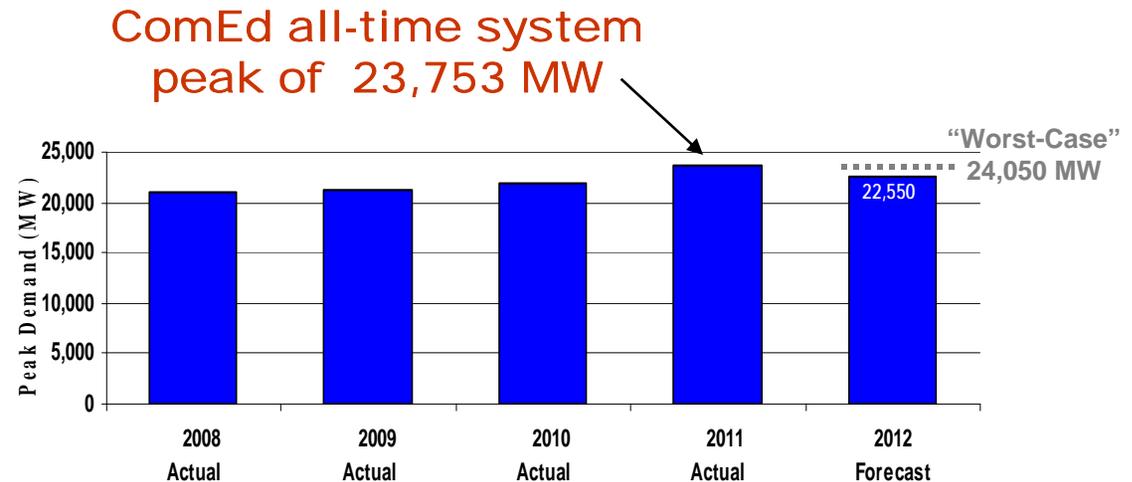
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Sufficiency of Electricity Supply ComEd Zone

David R. Zahakaylo
Director, Energy Acquisition
ComEd

Forecasted Peak Load for ComEd Service Territory

- ✓ The expected 2012 peak summer load under normal peak-making weather conditions for the ComEd Zone is 22,550 MW.
- ✓ “Worst-case” expected peak summer load is assumed to be the 90th percentile weather scenario, which is 24,050 MW
- ✓ ComEd expected share of zonal peak load is 10,175 (45%) with remaining load being served by alternative retail suppliers and wholesale municipalities.

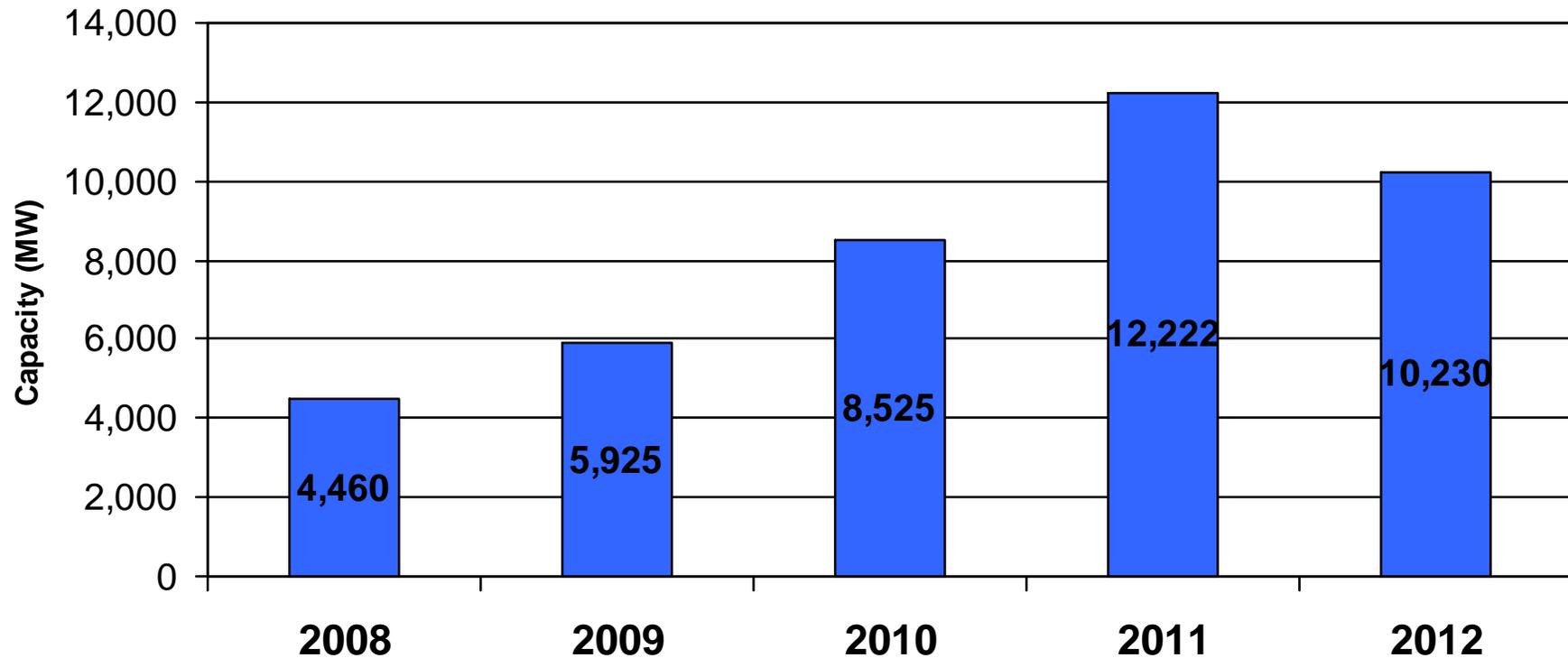


Regional Reliability* – PJM Interconnection

- ✓ ComEd is meeting its capacity obligation through PJM
- ✓ PJM’s expected peak is 153,780 MW
- ✓ PJM’s generation totals 185,180 MW plus 10,230 MW of emergency load management
- ✓ PJM minimum required reserve margin is 15.6%; current reserve level is 29%
- ✓ No transmission constraints are expected to compromise reliability in or into the ComEd Zone

*Includes DEOK (Duke Energy Ohio/Kentucky) integration, which was effective Jan 1, 2012

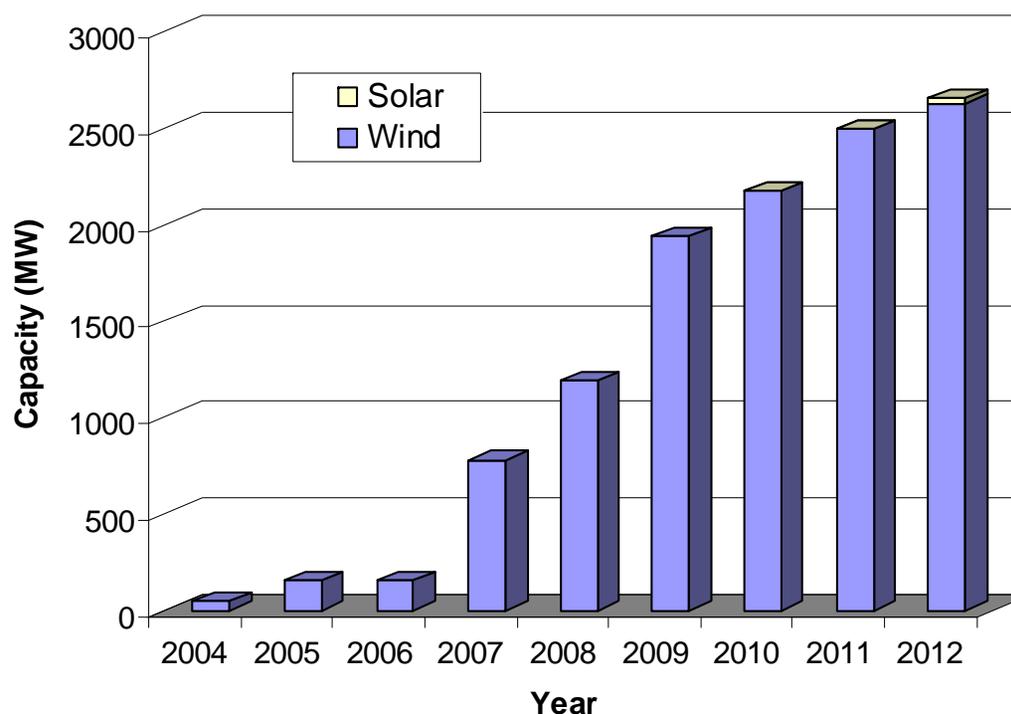
PJM Load Management (Demand Response/Energy Efficiency) For Summer Peak



- ✓ Lower 2012 Demand Response amount reflects elimination of the ILR program
- ✓ 15,755 MW of Demand Response/Energy Efficiency recently cleared in the 2015/16 RPM auction

- ✓ The ComEd Zone has:
 - 17 wind farms with 2,505* MW total capacity
 - 2 large-scale solar facilities with approximately 30 MW total capacity
- ✓ In 2011, wind farms in the ComEd Zone generated the equivalent of 5.7% of the ComEd zonal load.
- ✓ PJM discounts wind farm name plate capacity to 13% and solar capacity to 38% to establish capacity resource values.

ComEd Installed Renewable Capacity



* As of June 1, 2012, includes 500MW which is dynamically moved to TVA



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Delivery System Readiness

J. Tyler Anthony

Senior Vice President, Distribution
Operations

Annual System Capacity and Reliability Work

✓ Capacity Expansion

- 123 Summer Critical Projects – 117 Distribution and 6 Transmission/Substation are complete as of 5/25

✓ Annual Reliability Initiatives

- Targeted reliability, lightning protection, worst performing circuits, proactive transformer replacement and breaker overhauls

✓ System Maintenance and Inspection

- Over 11,000 summer corrective and preventative work items are complete as of 6/1

✓ On-going Substation Fire Mitigation Improvements

- Conversion program focuses on automatic suppression systems and the retirement of Cardox systems

✓ Wind Farm Interconnections

- Approximately 2,505 MW existing wind capacity
- Up to 1,200 MW of new wind capacity is possible in the next 2 years

✓ 2012 Forecasted Load Performance

- No transmission facilities are projected to be loaded above 100% of applicable ratings under normal summer peak scenarios
- No distribution circuits are projected to be loaded greater than 105% of ratings under “worst” case summer peak scenarios
- No distribution substations are projected to be loaded greater than 100% of applicable ratings under “worst” case summer peak scenarios

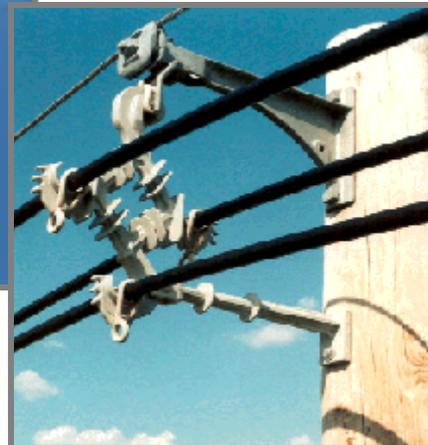


✓ Storm Hardening with Customer Reliability Focus

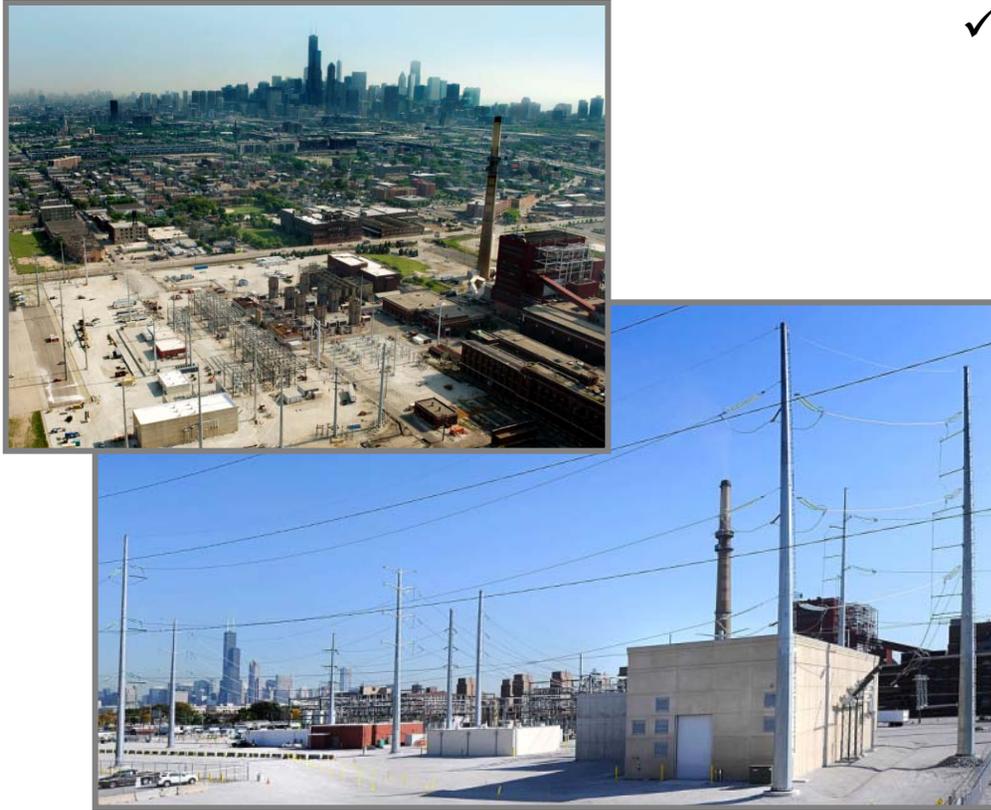
- Spacer cable provides resistance to outages caused by contact with trees and wildlife
 - 12.3 miles of 22 miles planned have been installed thru 5/31
- Enhanced vegetation management, including targeted spot trimming
 - 263 circuits of 263 circuits planned have been trimmed thru 5/31
- Automatic Fuse Devices
 - 191 devices of 211 devices planned have been installed thru 5/31



Distribution Automation



*Spacer
Cable*



✓ Chicago Southern Business District, West Loop 2

- Proactive measure to ensure reliability in the Chicago Southern Business District due to Fisk and Crawford generation retirements.
- Project constructed a new 345kV transmission network in Chicago and new bulk power supply to Fisk, including:
 - New State of the Art Substation at Fisk
 - New Overhead Transmission Line from Crawford to Fisk
 - New Underground Transmission Line from Fisk to Taylor
- Last project in service on 11/20/11

✓ State Line Fossil Separation Project

- Dominion has ceased operation at Station 7 State Line (515 MW) on 4/1/12
- Proactive capacity work is complete to ensure reliability
- Work is underway to relocate equipment in advance of Powerhouse demolition

✓ Comprehensive transmission system investments enhance system performance

- Proactive replacement of four transformers and six breakers at Wilton Center and Plano, one transformer at Crawford, and one phase shifter at Ridgeland Substation
- Transmission cable replacement from Grand to Crosby and from Jefferson to Grand
- Facility rating projects, including tower raising for improved clearance, increased reliability on four transmission lines
- Condition based transformer monitoring installed on all autotransformers (66 new installations and 19 upgrades to existing systems)
- Expansion of fiber network for more reliable coverage, including the installation of 370 miles of fiber cable communications equipment at 60 substations
- Relaying upgrades to 10 transmission lines to five nuclear switchyards
- Transmission pumping plant upgrades at six substations



Installation of Tower Base Extension



Pulling Control Cable at Crawford



Cable Installation at Grand



New Transformers at Wilton Center

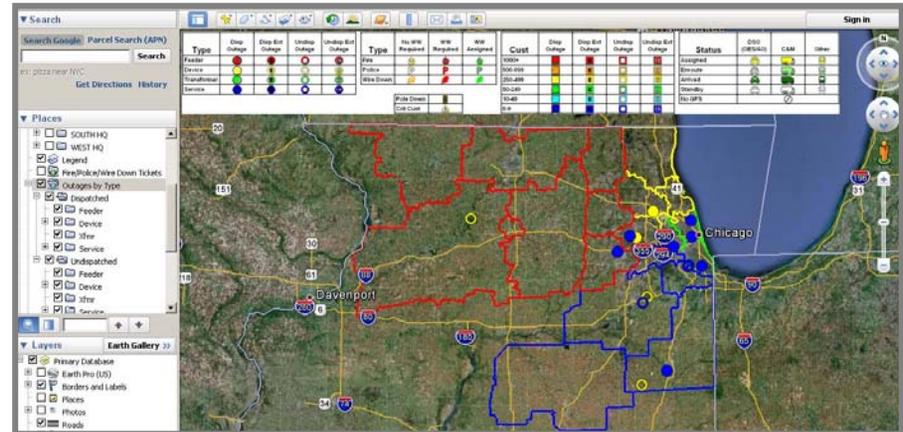
Storm Response and Restoration Improvements

✓ Expanded use of technology

- State of the art Mobile Operations Center places Incident Command closer to customers and restoration activity
- Google Earth application on SMARTBoards allows layering of information to support and establish strategies for storm restoration
- Expansion of GPS deployment for field crews, including contractors

✓ Expanded Operational Bench Strength

- 20% increase in First Responders
- 20% increase in First Line Supervisors
- 14% increase in full time Dispatchers
- Enhanced crew and support staff scalability in partnership with our Contractors of Choice



Google Earth application using SMARTBoard technology

✓ Customer Focused Organizational and Process Improvements

- Creation of a central communication group called a Joint Information Center (JIC) to manage and align all storm communications across all platforms – website, call center, and voice recognition system
- Proactive Estimated Time for Restoration (ETR) philosophy to improve accuracy and timing of information
- Implementation of over 50 process improvements and internal system enhancements resulting from municipal, customer and employee feedback

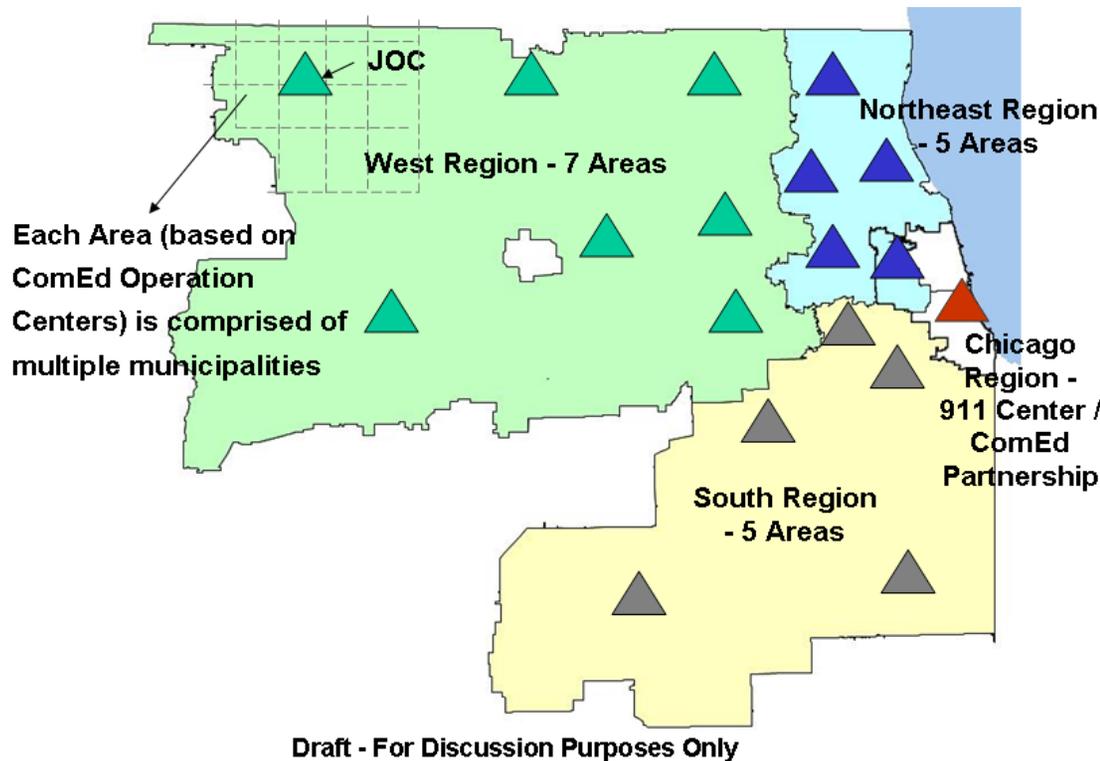


State of the art Mobile Operations Center



✓ Partnering with communities to manage outage restoration

- Collaborative establishment of Joint Operations Centers (JOCs) to facilitate communications and the coordinated restoration of municipal priorities during significant events.



- Up to 17 Region specific JOCs may be set up within hours of a significant event.
 - Pre-identified municipal representatives will collaborate with ComEd and municipal emergency response personnel to restore power to critical municipal facilities during major events.
 - Annual joint training and drills with municipal representatives and ComEd will be conducted to ensure strong familiar working relationships
 - City of Chicago / ComEd coordination unchanged



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Customer Operations

Val Jensen

Senior Vice President

Customer Operations

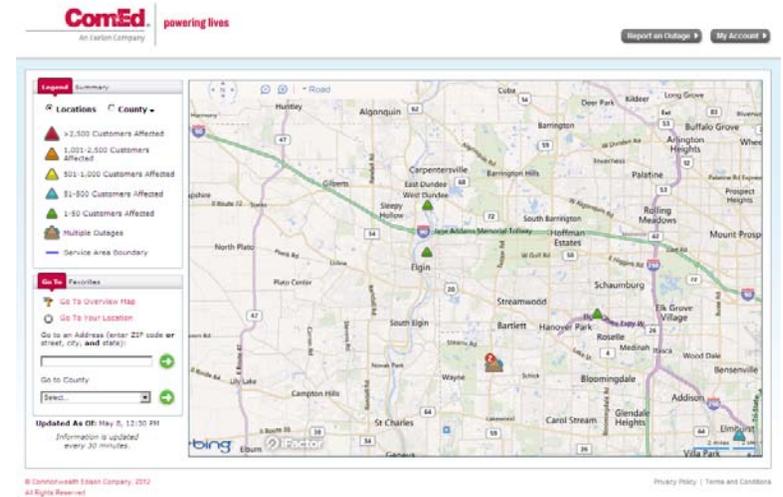
eChannels

✓ Continuing improvements to ComEd.com website regarding outage information

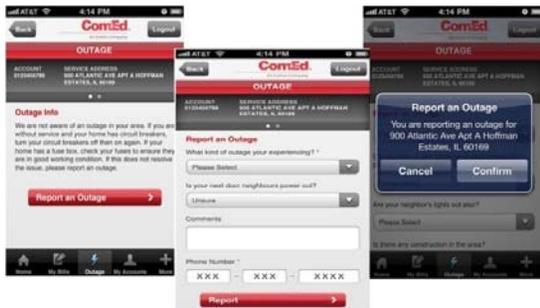
- New dynamic outage map built based on feedback from customers
- During an outage, customers and municipalities can view number of customers affected, probable cause, crew status and estimated time of restoration (ETR)
- Report an outage button placed on home landing page of ComEd.com

✓ Outage Communication System (OCS)

- Establishes a single platform to publish consistent outage information to all external customers
- All customer channels will now receive crew status, customer count, ETR, and probable cause from OCS as the data source
- ETR suppression improved, enabling centralized administration with greater accuracy and capability



✓ Mobile Technology



- Two Way Text Messaging - Customers can now:
 - report an outage and create an outage ticket by sending “Out” to 26633 (ComEd)
 - receive status of an outage
 - enroll for Text Message service
- Mobile Application provides residential customers the ability to:
 - report an Outage & View Outage Information, receive & view Outage Alerts
 - view & Pay Bill (eCheck or Credit/Debit Card)
 - report a Meter Reading
 - find Authorized Payment Agent Locations

Customer Contact Center

- ✓ Today, most outages on the system are initially reported by a call to ComEd's Customer Contact Centers
- ✓ Increased customer service call center network capacity by 1,000 lines
- ✓ For the 2012 peak season:
 - hired and trained 50 additional staff in anticipation of high call volumes
 - trained 20 additional staff members from departments outside the Call Center to provide assistance in times of extreme outage activity
 - added additional work stations to the Call Center to accommodate a larger staff
- ✓ Restructured Customer Operations storm staffing:
 - improved the organizational structure and training, including additional supporting roles in customer operations
 - created new documentation to assist storm responders
 - performed Storm Tabletops and Drills



Field Operations

- ✓ Customer Operations assumed responsibility for the wire watching storm function
 - Trained 55 upgraded Meter Readers in wire watching duties to increase pool of resources

✓ Social Media

- Storm team moved to Joint Information Center (JIC) to ensure alignment of all outbound customer communication:
 - managed centrally by Public Information Officer
 - created new Storm Communication Guidelines for standardization of message and timing
 - increased staffing to three analysts per storm team with ability to staff up to 24
- Opower Facebook application tool will provide customers the ability to:
 - have access to their data and control their energy usage
 - compare energy usage and savings with friends through Facebook
 - post savings and status updates to directly to Facebook
 - link directly to their ComEd account
 - learn about energy saving tips



✓ Online videos

- “When a Storm Hits” created to provide customers a comprehensive overview of our restoration process
- New storm technology instructional videos highlighting new applications use and functionality
 - Mobile application
 - Outage Maps
 - Two way text messaging

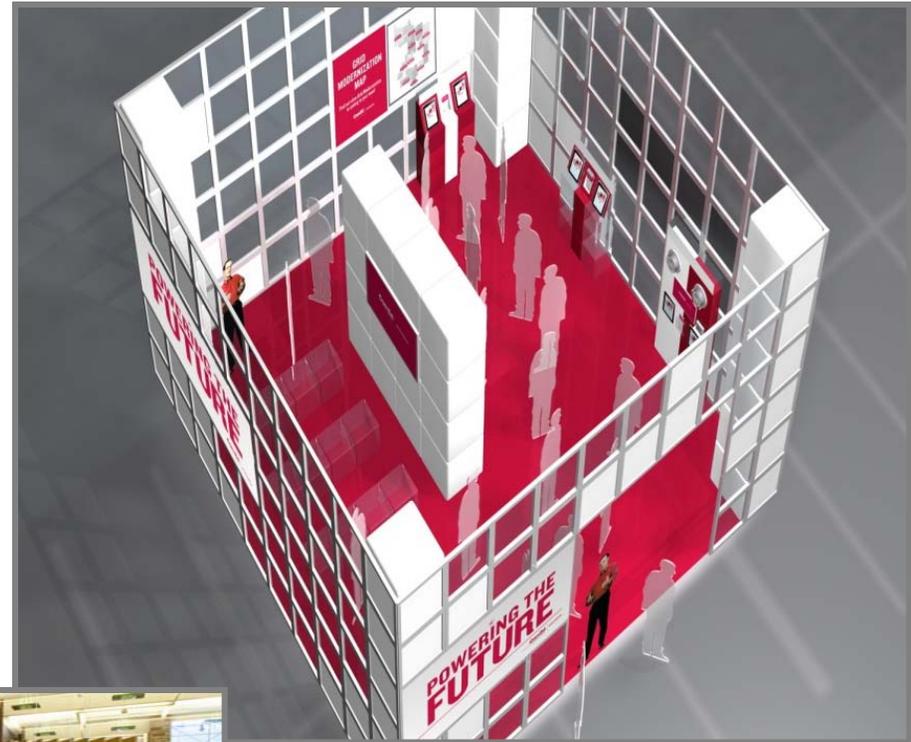
Customer Education and Outreach Efforts

✓ Education, awareness and outreach plan will:

- Provide easy access to information and enrollment in pricing programs
- Engage customers to learn about energy management including smart meters and energy efficiency

✓ Activities will include:

- Experiential Mobile Demonstrations (ComEducation Cube) at community events throughout the summer
 - interactive games, displays and educational materials
- Smart Youth Ambassador Summer Program
- Residential customer email campaign and Energy@Home newsletter



Large ComEducation Cube



*Small
ComEducation Cube*

✓ **The ComEducation Cube will feature three interactive games:**

- Smart Home – focuses on smart meters and energy efficiency and where there are potential savings opportunities
- Energy Efficiency 101 – provides customers with an opportunity to test and add to their energy efficiency knowledge
- Power On! – focuses on giving customers a view of all the various components of building the smart grid



Smart Home

Power On!

Energy Efficiency 101

- ✓ **The Smart Youth Ambassador Summer Program will allow students to work on outreach activities to educate and engage customers at community and congregation events.**
 - Partners facilitating the program include Faith in Place and The Chicago Urban League
 - Students will be recruited from United Neighborhood Organization (UNO), Chinese American Service League, Youth Guidance, and Girl Scouts
 - 70 students ages 15-19 will work from four sites located throughout the ComEd service territory
 - A group of 15 students will continue through the school year with Faith in Place and will provide the core of the summer 2013 Smart Youth Ambassador program

Q & A