ComEd 2013
Summer Readiness

Presentation to the
Illinois Commerce Commission
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Terence R. Donnelly – Executive Vice President & Chief Operating Officer
Val Jensen – Senior Vice President, Customer Operations
Jennifer Montague – Director, Marketing
Michelle Blaise – Vice President, Engineering & Project Management
Opening Remarks

Looking back at 2012

- System performed reliably through the hottest year on record and third hottest summer since 1871 with 17 days >95 and 4 days >100 at O’Hare; reliability was one of the best performances on record
- System withstood peak load on July 6th of 23,603MW; just short of an all-time peak of 23,753MW in July 2011
- Eight reportable and 11 non-reportable storms impacted over 1.7 million customers
- The first year of the Energy Infrastructure Modernization Act (EIMA) Program work successfully executed
- Constructed a new world class training facility in Rockford
- Uninterrupted service for the 25th NATO Summit at McCormick Place as well as the entire Chicago Central Business District
- Increased customer use of ComEd outage eChannels, including over 200,000 hits on the new outage map, won recognition from J. D. Power as “Best Practice” utility for mobile communications
- Storm Task Force Phase I drove the implementation of 60 enhancements helping ComEd to improve restoration times by 15% in major storms; opened first Joint Operating Center (JOC) in DuPage County during the largest storm of the summer on July 1st affecting 378,000 customers
Opening Remarks

Looking forward to Summer 2013

- Generation supply and transmission and distribution capacity exceeds forecasted demand
  - The expected 2013 peak summer load under normal peak-making weather conditions for the ComEd all-time system peak of 23,753 MW
  - “Worst-case” expected peak summer load is assumed to be the 90th percentile weather scenario, which is 23,725 MW
  - ComEd’s expected share of zonal peak load is 4,450 MW (20%) with the 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 155,533 MW
  - PJM’s generation totals 186,884 MW plus 11,175 MW of demand response and energy efficiency
  - PJM’s anticipated reserve margin based on total resources is 29.4%
  - No transmission constraints are expected to compromise reliability in or into the ComEd Zone

*Per PJM news release dated May 14, 2013
Opening Remarks

Looking forward to Summer 2013

- Proactive annual distribution and transmission system maintenance is on track
- Expanding customer communication through technology, education and outreach
- Major system investment and storm hardening continues strengthened by reliability-related infrastructure work under EIMA
- Storm Task Force Phase II was launched to continue to improve storm response and restoration, and improvements were tested early this season during April’s State of Emergency Flooding
- Contingency plans and equipment prepared; employees have been drilled
Responding to Customer Needs: Customer Call Center

✓ **2012 Highlights**
  - Call Center handled more than 1 million calls during storm events in July and August of 2012
    - Three events in July and one in August
    - Overall service level of 80.9%
    - Overall Average Speed of Answer of 35.2 seconds

✓ **Call Center Modernization project was completed in the fall of 2012**
  - Single Call Center located in Oak Brook
  - Two separate facilities for answering phone calls setup and available in the event of a building disaster or large scale storm
  - An additional 1,000 phone lines were added to the infrastructure to assist with peak call volumes during storm season
  - 3rd party contractor available to handle up to 100,000 overflow calls per hour

✓ **For the 2013 peak season:**
  - "On Boarded” 28 part time Customer Service Representative positions, 12 full time positions and 80 temporary positions
Customer Communication: 2012 Year in Review

eChannels

✓ Mobile App
  • Available for Apple and Android devices
  • Allows customers to report an outage, view the outage map and outage status, and manage their ComEd account
  • The app has seen more than 1 million transactions within the first year

✓ Outage Map
  • Provides customers the ability to view the status of an outage location or thematic area (county, zip code, or city/town/village/ward)
  • Outage information provided includes:
    – Customers affected
    – Crew status
    – Estimated time of restoration
    – Probable cause

✓ Outage Alerts
  • Customers can report their outage via text messaging by texting OUT to 26633 (which spells ComEd)
  • ComEd can also send update messages to customer via texting (2-way)
  • The program has more than 100,000 subscribers
Customer Communication: 2013 and Forward

✓ **Mobile Technology Update**
  - New Two Way Text Messaging Feature:
    - Allows customers to text the word “STAT” to 26633 (which spells ComEd) to receive a text message with their current outage status

✓ **Social Media Update**
  - In Facebook, customers can do the following:
    - Report an outage
    - Check outage status
    - View basic account information
    - Access ComEd.com for full self-service options
    - Link to ComEd's Twitter & YouTube channels

✓ **My Energy Tools**: available through the customer’s ComEd.com account,
  - Provides energy management tools including:
    - View usage analytics and comparisons
    - Determine what uses the most energy in your home
    - Discover personal savings tips
  - With a Smart Meter, My Energy Tools become even more powerful:
    - View energy usage by the hour
    - Sign up for unusual usage alerts to avoid being surprised by high bills

✓ **Storm Task Force**
  - Storm Task Force established a 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
    - Ability to increase social media staffing based on customer contacts received through Facebook and Twitter from 3 analyst to 24

✓ **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

✓ **Crew Training**
  - Conducted a series of training from January through May with field crews about the various eChannels technology offerings available for our customers
Award Winning Environmental Stewardship

✓ Energy Efficiency and Reducing Greenhouse Gas Emissions
  • Through our Smart Ideas® program, ComEd provides tools, tips and incentives to encourage residential and business customers to take actions to reduce their electricity use and help the environment by becoming more energy efficient
  • Since 2008, the program has helped customers save more than $400 million on their electric bills through the reduction of more than 4 million MWh of electricity – the equivalent of powering 400,000 homes for one year and, in terms of CO2 reduction, removing 123,000 cars from the road
  • ENERGY STAR® Partner of the Year for Energy Program Delivery (five years running)

✓ Comprehensive SF6 Management Program
  • Reducing leakage of the most harmful greenhouse gas from our electrical power equipment with the removal of 12 large first-generation SF6 circuit breakers from our system and through proactive detection and repair of leaks
  • U.S. EPA’s 2012 Organizational Leadership Award

✓ Habitat Protection
  • Installation of 250 acres of prairie habitat within transmission corridors and more than 600 bird diverters across static power lines in Naperville and in Cook County’s Tampier Slough
  • Launched Illinois’ first Green Region program, which provides a total of $125,000 in grants to Chicago nonprofits and municipalities throughout northern Illinois to conserve open spaces
  • Conservation and Native Landscaping Award from the U.S. EPA and Chicago Wilderness

✓ ComEd’s Environmental Management System has earned ISO 14001 certification for the past five years
Customer Education and Community Outreach

**Engaging customers to learn about smart grid, energy efficiency, and CARE assistance programs**

✓ **Community Events**

- 43 events are planned for 2013 at locations such as Fiestas Puertorriquenas, Northlake Days, Long Grove Strawberry Festival
- Enhancements to events in 2013 include My Energy Tools kiosk, Whirlpool smart appliance contest, and new games (Fridge Raider and Pedal for Power)

✓ **ComEducation Workshops**

- ComEd hosts workshops for local community organizations, churches and senior centers providing customers with information about smart grid, energy management, energy efficiency, and CARE
- Workshop locations are identified by our partners like CEDA and CHA, and External/Legislative Affairs
- We have held 37 workshops to date in 2013 and we are on track to hold about 10 workshops per month throughout the ComEd territory

✓ **Teacher Partnerships**

- Conducting field trips for K-8 students at the Rockford Training facility where they are learning and seeing:
  - The history and science of electricity
  - How energy relates to their lives
  - Ways to save energy at home and at school
  - A kitchen equipped with smart appliances
Customer Education and Community Outreach

✓ **Youth Ambassador Program**
  • For 2013, ComEd’s Smart Youth Ambassador program has partnered with After School Matters (ASM) and will include up to 100 students
  • Youth will work community events, educate seniors, family, and friends on energy efficiency and grid modernization and deliver brochures to local alderman/municipal leaders
  • During the 7-week program, youth will learn about the role energy plays in their lives via the ASM inter-disciplinary STEM initiative. Youth will also participate in a ComEd sponsored Career Day with speakers from diverse set of career experience

✓ **Faith Based Outreach**
  • Workshops train congregational “green” teams on energy management; teams host coffee hours at the congregations using a training kit
  • 120 individuals from 30 congregations will participate in the two training events scheduled in May and June

✓ **Construction Jobs Education Pilot Program (C-JEPP)**
  • Training pilot program sponsored by a coalition of construction industry employers and operated by well-respected not-for-profit organizations committed to providing equal employment opportunities
  • Program will develop a qualified pool of diverse candidates with the potential to move into the construction industry and, over time, increase the utilization of minorities in the contractor workforce
  • Will connect ComEd and participating construction industry employers with highly qualified and diverse workforces
Additional Educational Outreach

• *The Overhead Electrical Line Worker Program* – a partnership with the City Colleges of Chicago to increase diversity in the skilled trades

• *Exelon-ComEd-United Way Stay in School Program* – serves grammar and high school students from the Austin, Bronzeville/Grand Boulevard, and Humboldt Park/West Town neighborhoods

• *Rowe-Clark Math & Science Academy* – charter high school on the West Side prepares students for success in college, with an emphasis on Science and Mathematics

• *STEM Partnership School at Aurora University* – an Exelon Foundation funded program will initially serve 200 3rd through 8th-grade students in the Aurora East, Aurora West, Indian Prairie, and Oswego school districts who have demonstrated proficiency in mathematics and science

• *Exelon Summer Institute at IIT* – Exelon endowment for the Summer Institute program, which focuses on college preparedness in Science, Technology, Engineering and Math (STEM) for students from low-income communities

• *Chicago Public Schools Student Science Fair and ComEd Science Clubs* – ComEd is a longtime sponsor of the CPS Student Science Fair, which highlights the work of 300 CPS students whose science projects were selected from school fairs and subsequent area fairs, and supports ComEd Science Clubs in eight CPS high schools
Customer Education and Community Outreach

✔ CARE supports Customer Assistance Programs
  • Residential Special Hardship
  • Non Profit Special Hardship
  • Military and disabled Veteran's Assistance (CHAMP)
  • Programs synchronized with agencies to support State Assistance programs

✔ CARE Outreach Activities
  • Spring Media campaign – Radio, newspaper, OOH
  • Meetings w/advocates (ongoing)
    – CHA, Rockford/Lake Co./Kendall-Grundy housing authorities
    – St. Vincent DePaul, South Austin Coalition
  • Hosted 12 workshops in conjunction with ComEducation Program during 1st Quarter
  • CARE Fairs are scheduled through June across ComEd’s service territory
  • Provide email and newsletter content to supporting organizations
  • Assistance information mailed to over 5,000 customers with arrearages
  • Monthly Facebook and Twitter postings
Annual System Capacity

✓ Capacity Expansion
  • 120 Distribution & 6 Transmission/Substation Summer Critical Projects completed

✓ 2013 Forecasted Load Performance
  • No transmission facilities are projected to be loaded above 100% of applicable ratings under normal summer peak scenarios
  • No distribution substations are projected to be loaded greater than 100% of applicable ratings under "worst" case summer peak scenarios
  • No distribution circuits are projected to be loaded greater than 105% of ratings under “worst” case summer peak scenarios

✓ Wind Farm Interconnections
  • Approximately 2,700 MW existing wind capacity
  • Up to 1,200 MW of new wind capacity is possible in the next two years
Annual System Reliability

✓ EIMA Update
  • Distribution Automation (DA) – 270 of 630 devices have been installed
    – 110,000 avoided customer interruptions from EIMA work
  • Mainline Underground System – 45 of 83 miles of cable have been replaced and 2,800 of 6,025 manholes have been assessed; 2,130 manholes have been refurbished
  • Underground Residential Distribution Cable – 175 of 364 miles have been replaced/treated
  • Wood poles – 50,500 of 149,000 poles have been inspected/treated and 1,450 of 4,000 poles have been replaced/reinforced
  • Storm Hardening – 6,600 feet of spacer cable installed and 1,400 feet of overhead wire to underground cable have been converted

✓ Additional Reliability Improvements
  • System enhancement work, such as addressing worst performing circuits, lightning enhancement, T&S bus reinforcements and breaker overhauls
  • Preventative and Corrective maintenance
  • Vegetation Management; includes Distribution Cycle Trimming and Annual Transmission Inspection process; In addition, 40 miles of Enhanced trimming was completed as part of EIMA (1,790 trees trimmed; 2,360 trees removed)
  • O’Hare and Midway Airports Reliability Enhancements include:
    – Converting overhead facilities to underground
    – Substation improvements such as moving components indoors, switching from analog to digital technology, and Installing equipment to increase operational flexibility
Major System Investment – Transmission

✓ Multi-year transmission system investments to enhance system performance
  • Increased capacity on 33 miles of high voltage transmission lines
  • Installed substation capacitor banks to support transmission voltage at Burnham TSS
  • Transmission System Investment Program
    – Proactive replacement of 3 extra high voltage circuit breakers at Collins TSS – 9 total program (breakers are at end of life)
    – Condition based transformer monitoring installed on 13 transmission class transformers – 97 total program (to monitor health of equipment)
    – Replace electromechanical relays with microprocessor based relays on 23 high voltage transmission lines - 92 total program
  • Facility Ratings: 11 overhead high voltage transmission lines (312 miles) completed
    – Includes tower raising for improved clearance, increased reliability
  • Back-up generator replacement at 4 substations for oil filled transmission underground cable pumping plants
  • Utilization of new technology for performing work on transmission lines while they are still energized

✓ Generation Retirement Preparedness
  • Five coal-fired generating units within the ComEd zone and located at State Line, Crawford, and Fisk retired in 2012 totaling ~1400 MW
  • ComEd proactively installed multiple transmission upgrades prior to the retirements that ensured maintaining a reliable grid for ComEd customers
Storm Process Improvements

✓ Joint Operations Center (JOC) / Joint Information Center (JIC)
  • JOC process institutionalized and documented
  • Identified over 3,700 Life / Health / Safety accounts in 400 Municipalities

✓ Dispatching
  • Service dispatching shifted to the Transmission and Substation (T&S) organization
  • Utilized additional new OCC dispatchers and workstations to support foreign crews
  • Quarterback Supervisor process drives crew productivity
  • Established a crew to dispatcher ratio of 6:9:1

✓ Damage Assessment & Wire Watching
  • Wire Watching control shifted to Customer Operations, with capability to mobilize Contractors for significant events
  • Patrolling resource pool expanded and equipped with mobile dispatch terminals
  • New electronic Damage Assessment Form utilized by Patrollers ties material to Supply fulfillment process

✓ Contractor Acquisition and Management
  • Logistics Consultant support successfully piloted during the July 24, 2012 storm
  • Tiered staffing protocol utilized to properly staff Foreign Crew Coordinators (FCC’s)
  • Increased coordination with BGE and PECO for mutual aid support

✓ Supply / Staging Centers
  • Utilized SSG and Contractors of Choice for material delivery
  • Incorporated refueling operations at vehicle staging centers
  • Utilized the MOC for Incident Command and on boarding

✓ Feeder Single Point of Contact (SPOC) Task Force/Incident Command
  • Feeder SPOC Task Force teams and Single Feeder SPOCs utilized to provide direct oversight of devastated areas
  • Major and Minor material trailers were deployed with the Feeder SPOC teams
  • Mobile Operations Center deployed to effectively manage restoration in devastated areas

✓ New Technology
  • Google Earth Pro technology for tracking crews
  • Electronic Work Packages utilized
  • GPS issued to Foreign Crews to increase dispatch efficiency and productivity

✓ Communications
  • Estimate Time to Restore (ETR) alignment across all customer systems
  • New ComEd.com outage map and improved outage reports
  • Two-way texting and mobile app for outage reporting
Statewide Drill and EP Symposium

✔ Statewide Drill

- Conduct state-wide exercise focused on restoration of municipal critical infrastructure
  - Open 6 Joint Operating Centers (JOCs) simultaneously reaching approximately 150 municipalities
  - Participants confirmed from IEMA, IDOT, CITGO, Counties, USCG, ISP, Ameren, AT&T, NICOR, and ILNG
  - Demonstrate proactive planning to address disasters
  - Drill state-wide multi-agency coordination for infrequent events
  - Provide an opportunity for proactive relationship building
  - Homeland Security Exercise and Evaluation Program (HSEEP) credit

- Scheduled for June 13, 2013

✔ Emergency Preparedness Symposium

- An executive forum for EEI award winning companies to share optimal strategic approaches for major event restoration
- Agenda to address major storm restoration processes
  - Managing operational performance during major events (includes discussions related to mutual assistance, crew optimization and damage assessment)
  - Shaping key stakeholder expectations (Customers, Regulatory and Media)
  - Keynote speakers include William Quinlan, SVP of EP for Connecticut Light & Power, and Fidel Marquez, ComEd SVP of Governmental and External Affairs
  - National contractor perspective to be presented by Thomas Shiflett, EVP Electric Power Division – Quanta Services
- 36 company leaders from 16 companies have registered to attend
- Scheduled for June 11-12, 2013
Emergency Equipment Availability

- 2MW Generators – 17 ComEd owned units, with 6 additional 2MW generators on right of first refusal from vendor
- 29 Portable Generators (125kVA, 175kVA, and 250kVA) and 28 Temporary Cable Trailers
- Spare Transformer Fleet includes:

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- Deployment plans are in place for all contingency equipment, with operations personnel drilled annually
Q & A