



October 2013 Restoration



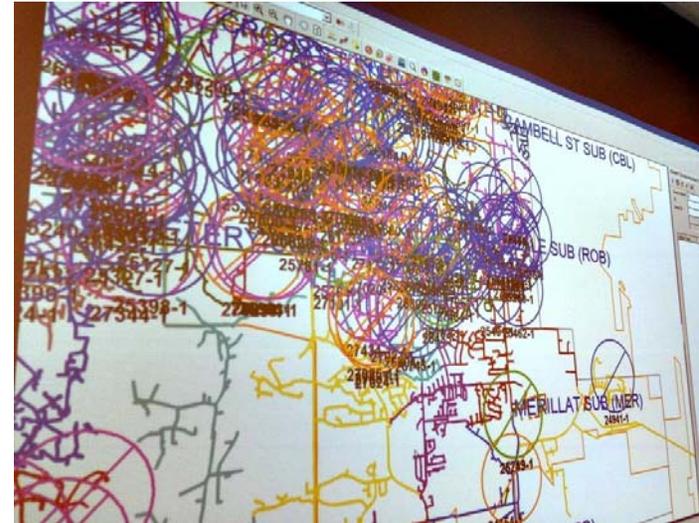
Agenda



- Atlas Hits
- Being Prepared
- Mobilizing Resources
- Outage Statistics
- Storming Mt. Atlas
- Staying Connected
- Customer Response
- Final Thoughts



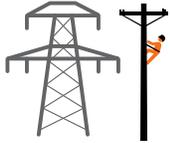
Atlas Hits



- Worst outage in BHP's 130 year history; Declared FEMA Natural Disaster on 11/8/13
- Wind gusts of up to 71 mph were reported during what was determined to be the 2nd worst blizzard in the region's history
- Rain followed by wet snow and wind - leaves still on trees
- Black Hills Area Snowfall: 26" – 55"
- Atlas was second heaviest snowfall on record for Rapid City



Being Prepared



System: significant maintenance and investments in aging transmission and distribution facilities



Connected Meters: automated metering infrastructure



Outage System: reporting, monitoring, and providing updates to customers



Mapping: data cleaning and analysis capabilities



Field equipment: maintenance and upgrades



Personnel: Safety, training, and development (Institutional knowledge)



Vegetation Management: Minimize risk of contact between electric facilities and vegetation



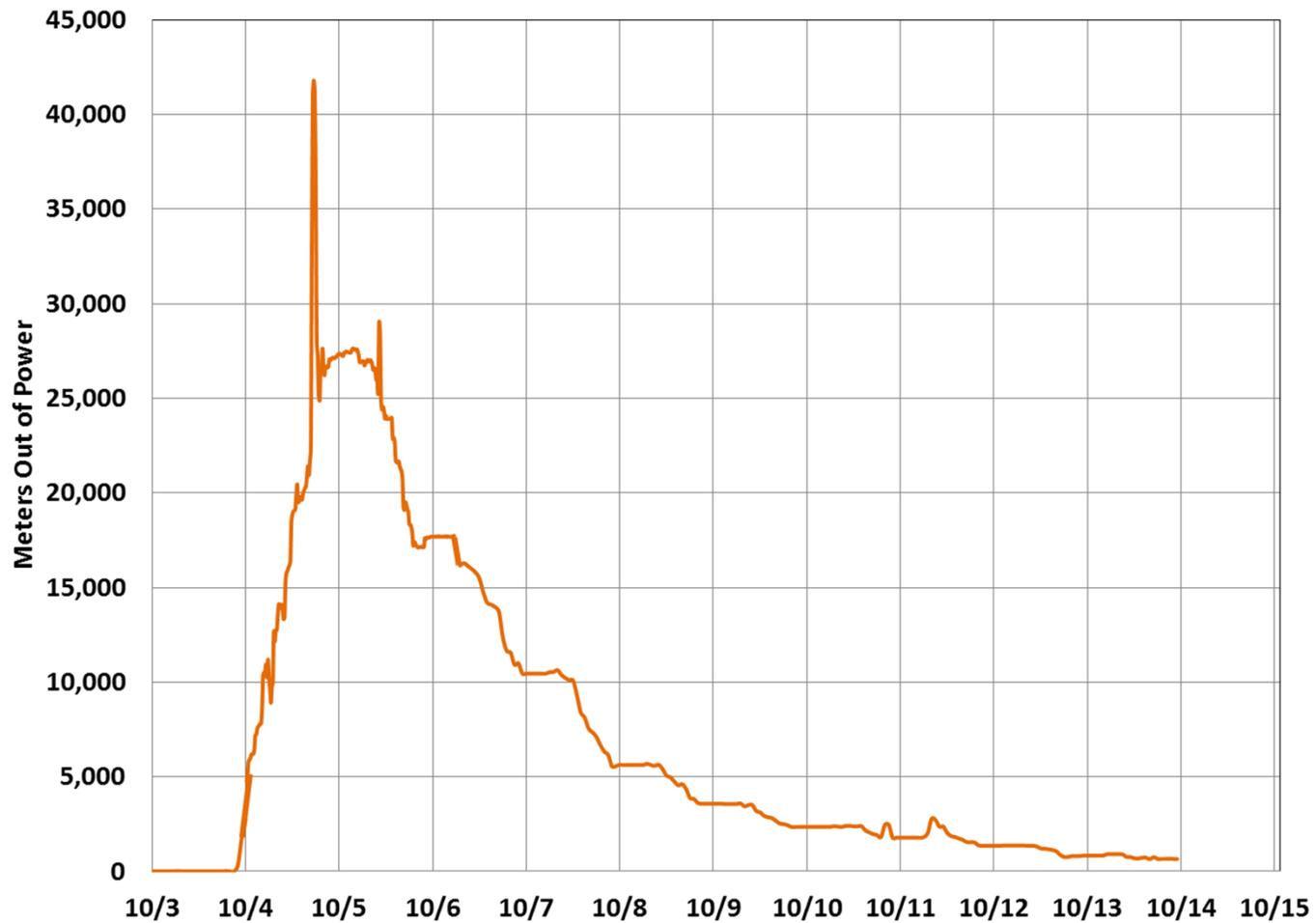
Mobilizing Resources

- Monitored severity of the storm and began coordination with community leaders, local emergency responders, outside contractors, materials suppliers, and sister and peer utilities
- 7 Key Support Areas: Planning (24-72 hr), Operations, Situation/Intel, Logistics, Personnel, Customer, Media
- Crews, equipment and materials prepared in advance of the storm for quick response
- Transportation Coordination
 - Equipment convoy routing and clearance SD/WY/NE DOT, BHP leaders
 - City, county, and private entities assisted with snow removal
 - No-travel and weigh station waivers obtained for BHP workers & inbound field crews
- Recruited helicopters, snow cats, snowmobiles, tracked line trucks and other equipment necessary to work in rugged and snow covered terrain
- All available employees assigned to roles or locations of familiarity



Outage Statistics

Winter Storm Atlas - BHP Outage Analysis



Storming Mt. Atlas

- Over 300 BHC employees from the multi-state region assisted with the outage restoration
- 14 additional line crews (>100 people) from partner utilities in SD, MT, CO, and WY were deployed (Mutual Assistance Agreement provides assistance for emergencies on a reciprocal basis)
- 38 Tree Trimming crews deployed (>100 people)
 - Traveled from Wyoming, Colorado, Kansas, Minnesota, Michigan
 - 11,774 Man Hours worked during storm (Oct. 4th to Oct. 12th = 8 days)
 - Recently trimmed circuits had significantly better reliability during Atlas
- 45,000 hours worked, 40,729 feet of wire installed, 10,255 connectors and clamps used, and ZERO major safety incidents



Staying Connected

Consistent communications with first-responders, community leaders, and customers across multiple channels and formats

- Lincoln NE Call Center and automated notification system
- Social Media & Mobile-friendly website
- Informational YouTube videos to address primary customer issues and questions
- Public Service Announcements
- Daily Community Leader Meetings
- 2-a-day Media Briefings
- School Safety Educational Packets
- Continuous online outage map upgrades



Likes



Final Thoughts

- Limited ability to travel and treacherous working environment in first three days
- Coordination of other first-responders in early stages makes a tremendous difference
- Preparation and learning from previous storms is invaluable
- Access to broader company resources and mutual aid agreements were beneficial
- Overall customer response was very positive during and following the storm
- 95% of customers had power back within 6 days

