

A Strong Response Before, During and After  
**Hurricane Sandy**

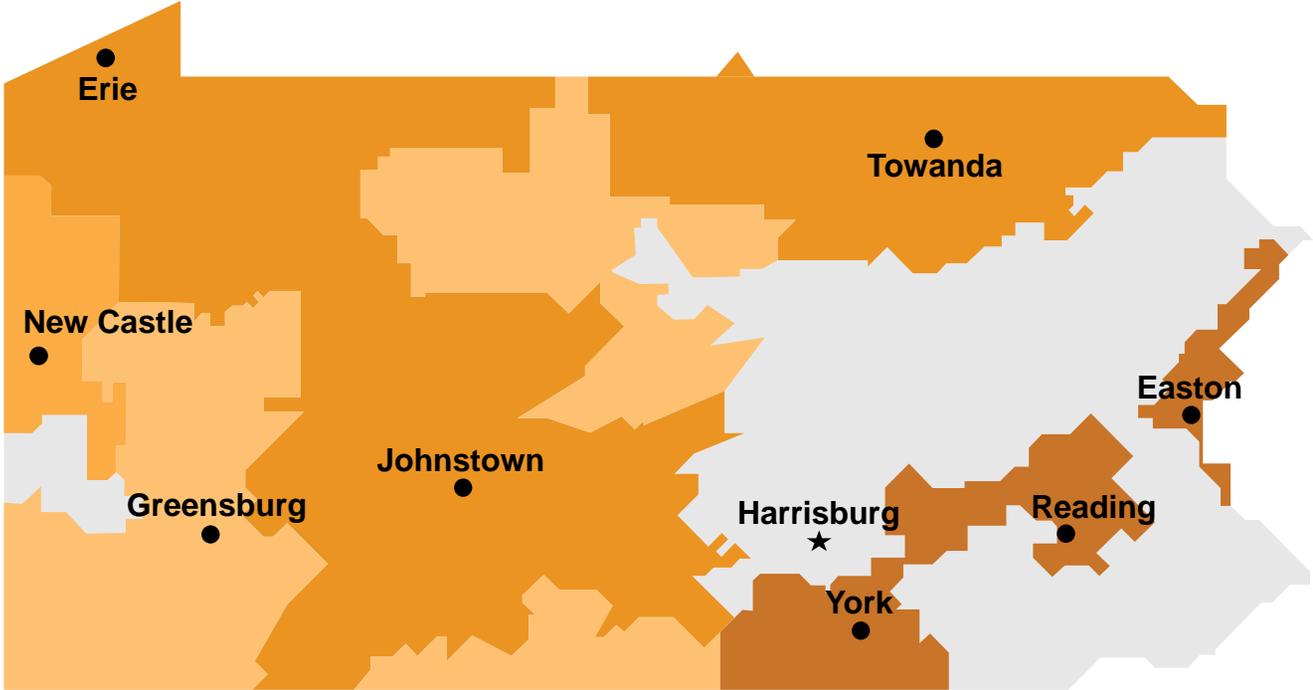
**West Penn Power,  
Penelec and Met-Ed**

Pennsylvania Public Utility Commission  
Special Electric Reliability Forum

January 10, 2013



# FirstEnergy's Presence in Pennsylvania



Penelec
  Penn Power
  Met-Ed
  West Penn Power

	Number of customers	Square miles of service area
<b>Met-Ed</b>	<b>553,000</b>	<b>3,300</b>
<b>Penelec</b>	<b>590,000</b>	<b>17,600</b>
<b>Penn Power</b>	<b>160,000</b>	<b>1,100</b>
<b>West Penn Power</b>	<b>717,000</b>	<b>10,370</b>
<b>Total</b>	<b>2,020,000</b>	<b>32,370</b>

# Planning and Preparation in Advance of Hurricane Sandy

- **Preparations began several days before storm hit**
  - Company meteorologists monitored storm movement toward our service area
- **On Oct. 24, conference calls began between Company leadership, operations personnel and others to plan service restoration efforts**
- **Communicated with Mid-Atlantic Mutual Assistance, New York Mutual Assistance Group, Southeastern Electric Exchange and Great Lakes Mutual Assistance**
- **Communications to customers, local officials and EMAs about preparedness efforts**
- **Ensured Customer Call Centers were fully staffed**

# We Learned and Improved

**Implemented PUC best practices that evolved from Hurricane Irene, Tropical Storm Lee and October Snowstorm**

- **Conducted focus group meetings with community leaders and local EMAs, as well as emergency first responders**
  - Communicate the Companies' restoration process and provide emergency contact information
- **Expanded role of External Affairs Managers**
  - Additional External Affairs managers assigned from other FirstEnergy companies to Pennsylvania
- **Communicated frequently with emergency management agencies, government officials and regulators during the event**
- **Positioned FirstEnergy personnel in multiple EMA (911) centers**

# We Learned and Improved (Continued)

- **Implemented proactive, comprehensive communications strategy – including social media – for reaching customers and media outlets**
  - Companies called critical-needs residential customers to advise them of the likelihood of an extended outage and to consider a back-up plan for any electrically operated life-support equipment
- **Enabled customer access to a mobile version of our 24/7 Power Center outage maps for latest information**
- **Integrated Fairmont Contact Center to provide improvements to the Company’s voice and data networks to further enhance performance during outage events**
- **Deployed “circuit quarantine process” to gain efficiencies and expedite restoration process**
  - Entire circuit is isolated, repaired from beginning to end, and then put back into service
- **Initiated use of third-party company to establish and manage staging sites**

# Hurricane Sandy ... By the Numbers\*

	Hurricane Sandy	Hurricane Irene	October Snowstorm
Customers Affected			
Met-Ed	<b>298,300 (54%)</b>	<b>224,735</b>	<b>277,109</b>
Penelec	<b>96,847 (16%)</b>	<b>60,737</b>	<b>14,286</b>
West Penn Power	<b>39,539 (6%)</b>	<b>0</b>	<b>44,440</b>
Total	<b>434,686 (23%)</b>	<b>285,472</b>	<b>335,835</b>

\*Preliminary figures: Full review of statistics is still in progress. Figures may change as they are finalized.

# Service Restoration Priorities

- **Emergency restoration efforts performed in a staged process**
  - Eliminating known hazards is our top priority
- **Repairs made to high-voltage transmission and sub-transmission equipment, lines and substations**
- **Next, priority given to hospitals, critical care and life support facilities, police and fire departments as well as 911 facilities**
- **Then, focus on circuits serving the largest number of customers, followed by restoration to individual customers**

**Acknowledged Governor's Executive Order regarding high-priority service restoration to shelters, nursing homes and similar facilities**

**Proactively addressed restoring service to election polling stations**

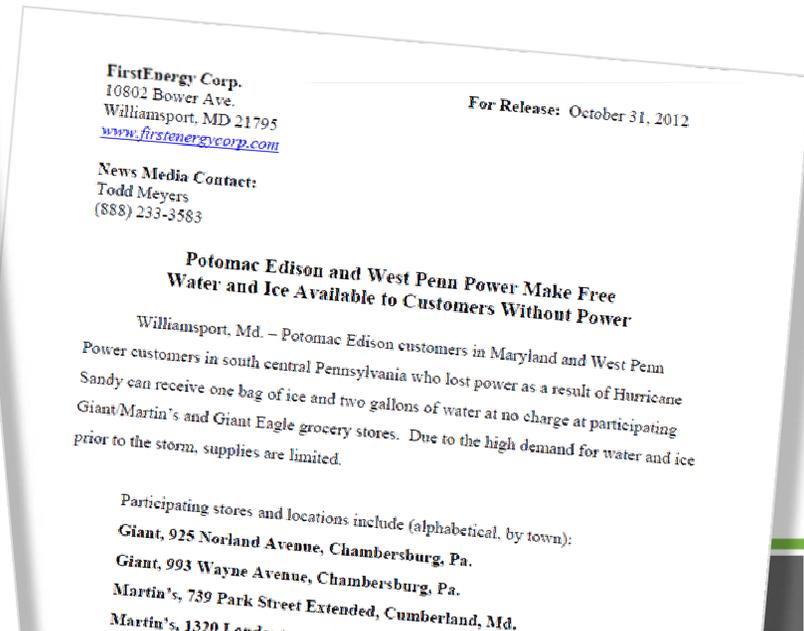
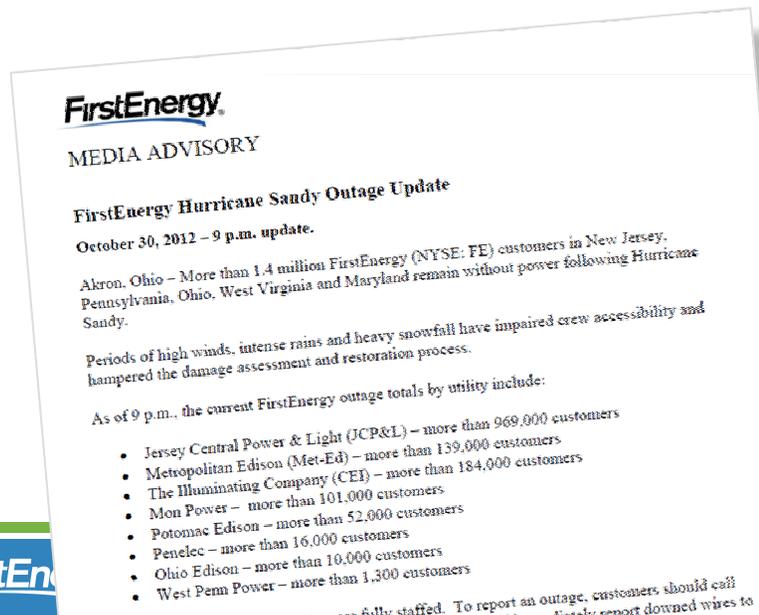


# What Worked Well ...

## Continued to Make Best Use of Existing Communications Channels

### ■ Media relations

- From Oct. 25, through Nov. 7, issued 28 news releases and media advisories to more than 100 media outlets throughout Pa.
  - Provided updates on outages, estimated restoration times, safety tips and availability of water and ice free of charge
  - Responded to nearly 460 media calls, participated in live interviews and provided updates to media outlets



# What Worked Well ... (Continued)

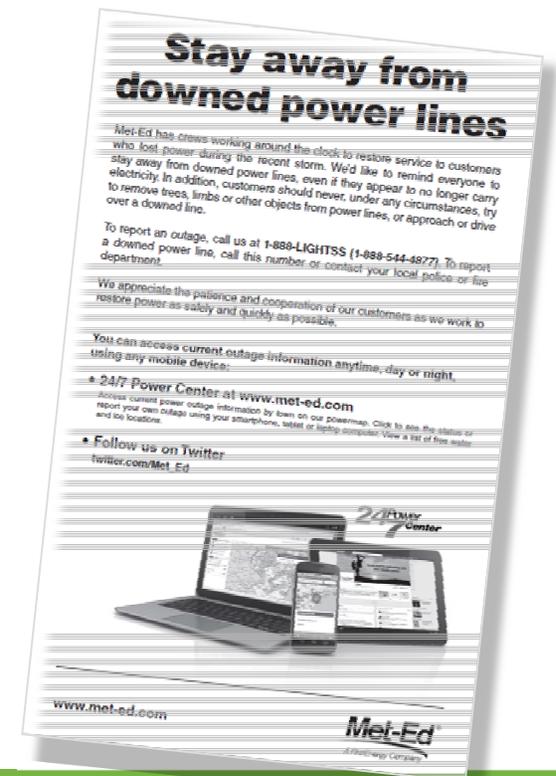
## Continued to Make Best Use of Existing Communications Channels

### ■ Key Communications

- Communicated to customers through Interactive Voice Response (IVR)
- Outreach to public officials and EMAs and critical care customers

### ■ Met-Ed's advertising aligned with service restoration efforts

- Newspaper and radio advertising reinforced public safety tips and importance of customers preparing for Hurricane Sandy
- Concluded with customer “thank you” ads in major newspapers and on our website



# What Worked Well ... (Continued)

## Continued to Make Best Use of Existing Communications Channels

### ■ 24/7 Power Center

- Provided updates, interactive maps, estimated time of restoration (ETRs) and tips for staying safe
- Accessible on desktops, smartphones and mobile devices at [www.firstenergycorp.com/outages](http://www.firstenergycorp.com/outages)

### ■ Social media

- Offered updates on service restoration, safety tips and responses to questions and comments
- Issued 275 Twitter updates
- Twitter followers increased:
  - West Penn from 437 to 685
  - Penelec from 317 to 393
  - Met-Ed Twitter 565 to 2,165



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**David McDonald**  
President, West Penn Power

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# Planning and Preparation in Advance of Hurricane Sandy

- **Conducted multiple conference calls with leadership team**
- **Ensured employee readiness**
  - Developed and communicated safety focus topics
  - Developed site staffing plans for 24/7 coverage
  - Reviewed operational enhancements (circuit quarantine)
  - Developed absentee voting plan for employees
- **Ensured vehicle and site readiness**
- **Evaluated need for West Penn and external mutual assistance crews**



## Hurricane Sandy

### West Penn ... By the Numbers\*

<b>Customers affected</b>	<b>39,539 (6%)</b>
<b>Outage orders</b>	<b>700</b>
<b>Trouble orders</b>	<b>1,500</b>
<b>Sub-transmission and transmission lines impacted</b>	<b>31</b>
<b>Poles</b>	<b>65</b>
<b>Transformers</b>	<b>120</b>
<b>Crossarms</b>	<b>218</b>
<b>Miles of wire</b>	<b>19</b>

\*Preliminary figures: Full review of statistics is still in progress. Figures may change as they are finalized.

# Mobilization of Utility Workers and Support Personnel\*

- **Mobilization of over 900 utility workers, including:**

<b>West Penn Power and mutual aid line workers</b>	<b>247</b>
<b>West Penn hazard response and support personnel</b>	<b>333</b>
<b>Line and forestry contractors</b>	<b>332</b>

- **Forestry contractors were available as of Oct. 24; line contractors began arriving in West Penn on Oct. 30**

\*Preliminary figures: Full review of statistics is still in progress. Figures may change as they are finalized.



# What Worked Well ...

- **Despite challenging conditions, no significant safety incidents occurred**
- **Improving execution of FirstEnergy storm process**
  - Responding to customer-reported hazards
  - Enhancing tree crew management
- **Coordination with state and local officials on multiple issues**
  - Ensure electric service available at voter polling sites
  - Restoration of critical sites
  - Potential shelter openings



# Here's How West Penn is Improving After Sandy

- **Enhancing our role within the EMAs – before, during and after the service restoration event**
- **Reviewing staging sites: capabilities, accessibility and utilization**
- **Ensuring right people in the right roles**
- **Identifying and implementing additional training opportunities**
  - Outage management order processing
  - Storm drills
- **Refining assessment capabilities**



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**Scott Wyman**  
President, Penelec

Pennsylvania Public Utility Commission  
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# Planning and Preparation in Advance of Hurricane Sandy

- **Preparations for storm response began several days before storm struck**
  - FirstEnergy’s meteorologists monitored storm movement toward our service area
- **On Oct. 24, held conference calls with Company leadership, operations personnel and others to plan service restoration efforts**
- **Evaluated need for internal crews and external mutual assistance**
- **Line contractors began arriving in Penelec on Oct. 27**
- **Contacted staging site owners**
  - Prepared staging area at Altoona Curve Baseball Stadium for vehicles and crews

## Hurricane Sandy

# Penelec ... By the Numbers\*

<b>Customers affected</b>	<b>96,847 (16%)</b>
<b>Outage orders</b>	<b>1,000</b>
<b>Trouble orders</b>	<b>1,800</b>
<b>Sub-transmission and transmission lines impacted</b>	<b>42</b>
<b>Poles</b>	<b>80</b>
<b>Transformers</b>	<b>88</b>
<b>Crossarms</b>	<b>243</b>
<b>Miles of wire</b>	<b>11</b>

\*Preliminary figures: Full review of statistics is still in progress. Figures may change as they are finalized.

# Mobilization of Utility Workers\*

- **Deployment of more than 1,100 workers, including:**

<b>Penelec and other FirstEnergy linemen</b>	<b>354</b>
<b>Hazard responders and support personnel</b>	<b>462</b>
<b>Line contractors</b>	<b>108</b>
<b>Forestry contractors</b>	<b>187</b>

- **Included 108 linemen provided by three contractors and 187 external forestry contractor workers**
- **Assistance from other FirstEnergy companies**
  - When Penelec restoration was complete, Penelec and FirstEnergy linemen were sent to Met-Ed to assist in service restoration efforts

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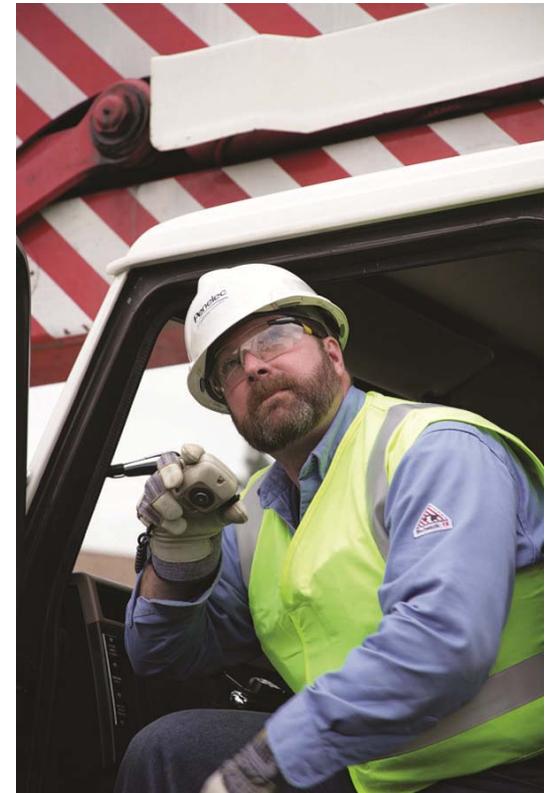
# What Worked Well ...

- **No significant safety incidents occurred despite difficult working conditions**
- **Overall anticipation/preplanning for extreme weather event**
  - Well-executed storm restoration process in early stages of response
  - Materials staging site established in advance
    - Contractors routed through site to obtain materials
  - Scheduled crews the night before storm struck and placed them on 16-hour workdays
- **Area managers called EMAs, local officials and others to provide information updates**
  - Continued to work closely with these groups throughout the duration of the storm



# Here's How Penelec is Improving After Sandy

- **Continue working to provide more accurate, location-specific information to community leaders and customers on ETRs**
  - Only as good as the information we have about extent of damage, repairs required
  - Always exploring ways to improve information gathering process
- **Effective use of helicopters to patrol transmission and sub-transmission system**
- **Implementing operational improvements for prioritizing road clearing**



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**Mike Doran**  
President, Met-Ed

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# Planning and Preparation in Advance of Hurricane Sandy

- **Preparations began several days before storm hit**
  - Company meteorologists monitored storm movement toward our service area
- **Evaluated need for internal and external mutual assistance crews**
  - Determined crews, supplies and equipment based on October Snowstorm metrics
  - Line contractors and FirstEnergy line workers began traveling to Pennsylvania on Oct. 28



# Planning and Preparation in Advance of Hurricane Sandy (Continued)

- **Held conference calls on Oct. 24 with company leadership, operations personnel and others to plan service restoration efforts**
- **Prepared staging areas needed for crews, equipment and supplies**
  - Reading/Oley, Nockamixon, Nazareth and York



# Hurricane Sandy

## Met-Ed ... By the Numbers\*

<b>Customers affected</b>	<b>298,300 (54%)</b>
<b>Outage orders</b>	<b>2,400</b>
<b>Trouble orders</b>	<b>9,500</b>
<b>Sub-transmission and transmission lines impacted</b>	<b>41</b>
<b>Poles</b>	<b>731</b>
<b>Transformers</b>	<b>304</b>
<b>Crossarms</b>	<b>1,511</b>
<b>Miles of wire</b>	<b>53</b>

\*Preliminary figures: Full review of statistics is still in progress. Figures may change as they are finalized.

# Mobilization of Thousands of Workers\*

	Hurricane Sandy	Hurricane Irene	October Snowstorm
<b>Met-Ed linemen</b>	<b>225</b>	<b>202</b>	<b>205</b>
<b>Other FE linemen</b>	<b>183</b>	<b>189</b>	<b>225</b>
<b>Mutual Assistance/ Contractor linemen</b>	<b>830</b>	<b>164</b>	<b>464</b>
<b>Total Linemen</b>	<b>1,238</b>	<b>555</b>	<b>894</b>
<b>Forestry personnel</b>	<b>409</b>	<b>340</b>	<b>381</b>
<b>Support personnel<sup>1</sup></b>	<b>1,405</b>	<b>889</b>	<b>1,159</b>
<b>Total workers</b>	<b>3,052</b>	<b>1,784</b>	<b>2,434</b>

\*Preliminary figures: Full review of statistics is still in progress. Figures may change as they are finalized.

1) Includes hazard, forestry, service and line dispatchers, hazard responders, damage assessors, service workers, system operators and storm analysts.

# What Worked Well ...

- **Despite challenging conditions, no significant safety incidents occurred**
  - Safety remains our number one priority during storm
  - Reinforced safety on daily basis with crews and customers
- **Efficient, well-planned and flexible response**
  - Regional conference calls to plan, pre-stage and prepare for logistics and deployment of crews, supplies and equipment
- **Crews staggered for round-the-clock coverage**
  - Minimal loss of productive time due to getting the right crews and supplies in the right place at the right time



## What Worked Well ... (Continued)

- **Excellent cooperation from mutual assistance workers, including rural electric cooperatives**
- **Through daily calls with the Commission, we coordinated:**
  - Effective use of helicopters to patrol transmission and sub-transmission system
  - Assistance from National Guard in clearing trees from roads



# Here's How Met-Ed is Improving After Sandy

- **Purchasing off-road equipment to better access hard-to-reach areas**
- **Performing engineering studies to determine reasonable, cost-effective improvements to the electric system**



# Here's How FirstEnergy's Pennsylvania Operations are Improving After Sandy

- **Continue working to provide more accurate, location-specific information to community leaders, especially regarding ETRs and amount of storm damage**
  - Exploring ways to enhance information gathering process
  - Conducting meetings with communities and first responders
  - Providing storm process training for employees
- **Planning community focus groups with key representatives from local townships, communities and county governments**
- **Sending daily communications to township management during storm planning and restoration process**
- **Implementing operational improvements for prioritizing road clearing**

# Here's How FirstEnergy's Pennsylvania Operations are Improving After Sandy (Continued)

- **Adopting best practices from PPL/PECO/Met-Ed Review Meeting**
  - Location of staging sites and access to local and state officials
- **Conducting a review of employees to ensure they have been placed in proper storm response organization based on skill sets and levels of expertise**
- **FirstEnergy meteorologists participating in Hurricane Sandy review with National Weather Service**



# Here's How FirstEnergy Companywide is Continuing to Improve

## Providing more information through new communications channels

### ■ Completed

- Mobile website launched November 2012

### ■ In Development for 2013

- Mobile app for Apple and Android devices
- Outbound alerts/notifications via email, text or phone
- 2-way text messaging
- Outage map enhancements
- Expand education and process information on website
  - Customer safety
  - Reporting a power outage
  - Greater emphasis on restoration process
    - Additional content explaining the process and frequently asked questions
  - Storm preparedness
  - Directions to register critical care and well water customers

