Jeffrey J. Hila
Director - Construction

Brian K. Hartel
Manager – Vegetation Management

Delivery Projects & Construction
Public Service Electric & Gas Company
Serving New Jersey for 112 Years
PSE&G Background

- **Utility Overview**
  - New Jersey Based

- **Service Territory**
  - 323 Municipalities
  - 70% of New Jersey’s population
  - 2.2 million Electric customers
  - 1.8 million Gas customers
  - 2,600 Square Miles
  - 14,136 Overhead Distribution Circuit Miles
  - 1,229 Overhead Transmission Circuit Miles
  - 18,000 Miles of Gas Main
Transmission System

- PSE&G’s Transmission System extends beyond our service territory throughout the New Jersey.
- PSE&G’s Transmission System crosses 161 Municipalities and 16 Counties.
Overhead Utility System
Overhead Transmission
Distribution Equipment

- Neutral
- Subtransmission lines
- Cabled Secondaries
- Distribution Primaries
- Single pole cutouts
- Capacitor Bank
- Fused Cutout
- Distribution Transformer
- Primary
- Secondary
- Service
- Cable
- Telephone
!!! WARNING !!!

• DOWNED WIRES MAY REMAIN ENERGIZED
• STAY BACK
• MAINTAIN A SAFE ZONE
• CONTACT YOUR SERVICE PROVIDER
What Happens During a Storm
Weather Related Event

- Wind
- Rain
- Snow
- Ice
- Lightning
Storm Damage
Storm Damage (Transmission)
Storm Safety and Response

Wires Remain ENERGIZED !!!
## Damage Assessment

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Locations</td>
<td>48,000</td>
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<tr>
<td>Poles</td>
<td>2,400</td>
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<tr>
<td>Circuits</td>
<td>2,900</td>
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<tr>
<td>Services</td>
<td>8,300</td>
</tr>
<tr>
<td>Lock Outs</td>
<td>2,900</td>
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</tbody>
</table>

[Images of damaged infrastructure]
“Resiliency”: Ability of an energy facility to recover quickly from damage to any of its components or to any of the external systems on which it depends. Resiliency measures do not prevent damage; but rather they enable energy systems to continue operating despite damage and/or promote a rapid return to normal operations when damages/ouages do occur.

• The Advanced Technologies recommendations are the core and foundation of our “Resiliency” strategy
• Each Advanced Technology component plays a vital role in our Storm Restoration process
• The program will utilize new and significantly enhanced technologies to improve storm/emergency response and improve customer communications
Improved Storm Assessment

Gather Data
- SCADA and Microprocessor Relays
- Fiber Communications

Assess Damage
- Storm Damage Assessment

Execute Work Efficiently
- Work Prioritization and Scheduling

Results
- More frequent updates
- Accurate Restoration Times
System Restoration Process

• PSE&G must first restore power to the switching station transformers (2), transmission lines (3), and substations (4), that feed power to neighborhoods and businesses.

• Once these facilities are restored, PSE&G can restore power to neighborhoods impacted by damaged distribution lines and poles (5), pole transformers (6), and meters (7).
Tree Crews Clear For Restoration
Debris removed by Municipal & State Agencies
Line Crews Perform Restoration
Storm Safety
Portable Generators

Safe operation of a portable generator after a winter storm.

- Generator is not being used in a garage or other enclosed space.
- Generator is at a safe distance from windows and doors.
- Generator is on a flat surface.
- Extension cords are rated for outdoor use and are in good repair.
Generators In All Sizes
Back Feed
!!! ALERT !!!

- DOWNED WIRES MAY REMAIN ENERGIZED
- STAY BACK
- MAINTAIN A SAFE ZONE
- CONTACT YOUR SERVICE PROVIDER
Right Tree, Right Place
Directional Pruning
Who To Call During a Storm

• Road Closures
  ▶ County OEM

• Report Outages
  ▶ PSEG 800-436-7734
  ▶ ACE 800-898-8042
  ▶ JCP&L 888-544-4877
  ▶ O&R 877-434-4100
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http://www.pseg.com/home/education_safety/safety/vegetation_mgmt/index.jsp
Thank You - Questions