



Hurricane Sandy Situation Report # 6
October 31, 2012 (10:00 AM EDT)

http://www.oe.netl.doe.gov/emergency_sit_rpt.aspx

Highlights:

- At 8:00 pm EDT October 29, the National Hurricane Center reported Sandy made landfall near Atlantic City, NJ as a post tropical cyclone. At of 5:00 am EDT October 31, the Hydrometeorological Prediction Center reported that there was no discernible surface circulation for the remnants of Sandy and the storm has weakened into a surface trough of low pressure over western Pennsylvania.
- As of 9:00 am EDT October 31 there are 6,249,397 customers without power in the affected States.

Summary

Electric Outages by State				
Impacted State	Current Customer Outages	Percentage of Customers Without Power	Peak Outages Reported in DOE SitReps	Customers Restored Since Peak
Connecticut	486,927	24%	626,559	139,632
Delaware	2,757	< 1%	45,137	42,380
Kentucky	3,196	< 1%	8,379	5,183
Maine	16,726	1%	90,727	74,001
Maryland	127,037	5%	311,020	183,983
Massachusetts	104,652	3%	298,072	193,420
Michigan	120,637	3%	120,637	0
New Hampshire	70,848	10%	141,992	71,144
New Jersey	2,040,195	51%	2,615,291	575,096
New York	1,933,126	21%	2,097,933	164,807
Ohio	158,243	2%	267,323	109,080
Pennsylvania	852,458	13%	1,267,512	415,054
Rhode Island	64,218	13%	116,592	52,374
Vermont	1,807	< 1%	17,959	16,152
Virginia	40,771	1%	182,811	142,040
West Virginia	225,799	22%	271,765	45,966
TOTAL:	6,249,397			

Note: States with fewer than 1,000 outages are not included in the table. Due to a large number of service providers, including investor owned utilities and cooperatives, the number of customer outages reported may not be comprehensive.

Sources: Outages obtained from company web sites and DOE communications. Total State customers are based on 2010 EIA Customer Data.

- A State of Emergency has been declared for Connecticut, Delaware, Washington D.C., Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, and West Virginia.
- As of 8:00 a.m. EDT, October 31, the U.S. Nuclear Regulatory Commission (NRC) reports three nuclear power units in the Northeastern United States continue to be shut down and one unit

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remains reduced as a result of impacts from Hurricane Sandy. Yesterday (October 30), the NRC confirmed that at the sites of three reactors that shut down during the storm (Indian Point 3 and Nine Mile Point 1 in New York, and Salem 1 in New Jersey) and at Exelon’s Oyster Creek nuclear station, all safety systems had responded fully as designed.

Nuclear Generation Facility	Power Status (10/31)	Status Notes
Millstone Unit 3 (1,233 MW) Dominion Resources Connecticut	Online 80 percent	On October 31, Unit 3 is running at 80 percent. The unit was reduced from full power to 73 percent power on October 29 to minimize potential impacts on its circulating water system due to the storm and help maintain grid stability during the storm. Operators installed flood barriers around the plant as a precaution against storm surges, but did not expect flooding at the station.
Salem Unit 1 (1,174 MW) PSEG Nuclear New Jersey	Offline	PSEG manually shut Salem Unit 1 at 1:09 a.m. Tuesday morning (October 30) per plant operating procedures when four of the station’s six circulating water pumps were no longer available due to weather impacts from Hurricane Sandy. PSEG reported Tuesday that no issues were encountered during the shutdown and the plant was stable. The company declined to estimate when the unit would return to service.
Indian Point Unit 3 (1,040 MW) Entergy Nuclear New York	Offline	Operators shut Unit 3 at 10:45 p.m. EDT on Monday (October 29) due to external electric grid issues caused by Hurricane Sandy.
Nine Mile Point Unit 1 (630 MW) Constellation Energy New York	Offline	On October 29 at 9:00 p.m. EDT, Constellation’s Nine Mile Unit 1 (630 MW) in New York experienced an automatic reactor scram due to a generator load reject. The cause of the load reject was under investigation.
Nine Mile Point Unit 2 (1,143 MW) Constellation Energy New York	Online 100 percent	On October 30, Nine Mile Point Unit 2 experienced a loss of one of two incoming offsite power lines as a result of the same fault that tripped Unit 1. One of the plant’s emergency diesel generators started in response to generate power usually provided by the line. Unit 2 remained at full power during the incident and continued to operate at full power as of 8:00 am EDT October 31.
Limerick Unit 1 (1,130 MW) Exelon Corp. Pennsylvania	Online 100 percent	Exelon restored it Limerick Unit 1 to full power on October 31, after reducing it to 48 percent power October 30 in response to storm-related power outages.
Limerick Unit 2 (1,134 MW) Exelon Corp. Pennsylvania	Online 30 percent	Exelon’s Limerick Unit 2 is reduced to 30 percent power October 31 in response to storm-related power outages.
Vermont Yankee Unit 1 (620 MW) Entergy Nuclear Vermont	Online, 100percent	Vermont Yankee on Wednesday (October 31) was brought up to 100 percent power. On Tuesday (October 30) the unit reduced power to 89 percent in response to a request from the grid operator due to the loss of a transmission line in New Hampshire.



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ESF 12 Actions:

- ESF 12 is staffing the FEMA National Response Coordination Center (NRCC) in Washington, DC; the FEMA Region I Regional Response Coordination Center (RRCC) in Boston, MA, the FEMA Region II RRCC in Colts Neck, New Jersey; the FEMA Region III RRCC in Philadelphia, PA, and the New York State Emergency Operations Center (EOC) in Albany, NY.

Petroleum & Natural Gas Information:

Refineries

- A list of refineries impacted by Hurricane Sandy is presented in the table below.

Table with 7 columns: Refinery, Location, Operating Capacity*, Capacity (B/D) (Shut Down, Restarting, Reduced Runs, Normal). Rows include Hess*, Monroe Energy, PBF, Philadelphia Energy Solutions (Sunoco), Phillips 66, and a TOTAL row.

Note: The table does not include asphalt refineries or facilities already closed in prior years.

*The Hess Port Reading, NJ facility does not process crude, but processes gas oils to produce petroleum products.

Sources: Confirmed by company or on company web site. Various trade press sources

Ports

- As of 9:00 am EDT October 31, the U.S. Coast Guard reports Sector New York ports have reopened but traffic is restricted to commercial vessels with specific approval from the captain. In Sector Southeastern New England, southern Massachusetts ports have reopened but one Rhode Island port remains closed and the other is open with restrictions. Ports have reopened in Sector Boston; Sector Baltimore; Sector Hampton Roads, including the Chesapeake Bay entrance and ports along coastal waters in Virginia and Maryland; Sector Delaware Bay; and Sector Long Island Sound.

Petroleum Terminals

- NuStar Energy's terminals in Linden, NJ are without power and have significant high-water damage.
ExxonMobil stated October 30 that it's Everett, MA, East Providence, RI, and Springfield, MA terminals sustained no damage, no loss of power, and are operating normally.
The table below lists the status of petroleum terminals impacted by Hurricane Sandy.

Table with 5 columns: Company, City, State, Status, Date Stamp. Rows include Colonial Pipeline and Hess.



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Kinder Morgan	Carteret	NJ	Shut	10/30/12
Kinder Morgan	Perth Amboy	NJ	Shut	10/30/12
Kinder Morgan	Staten Island	NY	Shut	10/30/12
Magellan Midstream	Wilmington	DE	Open	10/30/12
Magellan Midstream	New Haven	CT	Open with reduced operations	10/30/12
Motiva	Bridgeport	CT	Shut	10/30/12
Motiva	Brooklyn	NY	Shut	10/30/12
Motiva	Long Island	NY	Shut	10/30/12
Motiva	Newark	NJ	Shut	10/30/12
Motiva	New Haven	CT	Shut	10/30/12
Motiva	Sewaren	NJ	Shut	10/30/12
Motiva	Baltimore	MD	Open with reduced operations	10/30/12
Motiva	Fairfax	VA	Open	10/30/12
Motiva	Richmond	VA	Open	10/30/12
Motiva	Providence	RI	Open with reduced operations	10/30/12
NuStar Energy	Paulsboro	NJ	Open	10/30/12
NuStar Energy	Linden	NJ	Shut, Restart timing pending	10/30/12
NuStar Energy	Virginia Beach	VA	Open	10/30/12
NuStar Energy	Dumfries	VA	Shut, Expected Back 11/1	10/30/12
NuStar Energy	Piney Point	MD	Shut, Restart timing pending	10/30/12
NuStar Energy	Andrews AFB	MD	Shut, Restart timing pending	10/30/12
NuStar Energy	Baltimore	MD	Restart underway	10/30/12
Phillips 66	Riverhead	NY	Shut	10/30/12
Phillips 66	Tremley Point	NJ.	Shut	10/30/12

Petroleum Pipelines

- Colonial Pipeline shut down its mainline serving the Philadelphia, New Jersey and New York harbor markets at 7:00 pm EDT, October 29. **As of 6:00 pm EDT yesterday (October 30), Colonial was bringing backup generators to restore power to the Linden facility so shipments could resume.** Colonial’s southern mainlines (Houston-to-Greensboro, N.C.), as well as a mainline between Greensboro and central Maryland, are continuing normal operations.
- **As of 3:30 pm EDT yesterday (October 30), Kinder Morgan’s Plantation Pipe Line serving Roanoke, VA; Richmond, VA; Newington, VA; and Dulles and Reagan National Airports in VA has resumed normal operations.**
- **As of 6:00 pm EDT yesterday (October 30), trade press report that Buckeye Pipe Line is still without power at its facilities, including terminals, in NY, NJ, and CT and do not have a timeframe for restarting operations. Buckeye is restoring power to booster stations in Pennsylvania with some expected to be online later that evening.**

Natural Gas Pipelines

- **As of 6:00 pm EDT yesterday (October 30), Dominion Transmission’s (DTI’s) Lightburn Extraction facility in West Virginia has experienced a power outage. DTI has curtailed some supplies flowing through its wet gas system.**



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Electric Restoration Information

Connecticut

- The United Illuminating Company (UI) reported yesterday (October 30) that it has mobilized its work force to begin assessing damage to its infrastructure in the wake of Hurricane Sandy.
- Connecticut Light and Power reported Monday (October 29) that more than 1,000 line workers arrived and are working from as far away as the Pacific Northwest, Texas and Washington.

Delaware

- Delmarva Power announced yesterday (October 30) that their crews have begun assessing damage to their service territory and that 90 percent of affected customers should have their service restored by today, with the rest of those in Delaware back online by about 6 PM tomorrow. Delmarva also noted that customers in some shore areas of Maryland may not be back online until Friday.

District of Columbia

- Pepco, serving Washington, DC and Maryland, reported yesterday (October 30) that **the crews working to restore power to affected customers may be switching power lines off to fix local problems**. PHI, Pepco's parent's company, has secured 1,563 line personnel from states as far away as Texas and Mississippi. In addition, they have nearly 600 internal and contract line personnel and 300 tree removal personnel on the system ready for quick mobilization. Nearly 400 customer call representatives are available to answer calls, about 165 assessors are ready to identify storm damage, and around 635 support personnel are working on their special storm response roles.

Illinois

- ComEd, an Exelon company serving the Chicago and northern Illinois areas, opened its Emergency Operating Center this weekend and has increased staffing levels to expedite restoration. ComEd is monitoring and inspecting underground electrical vaults near the lake shore, including in Chicago, to identify any potential issues that could arise from flooding

Indiana

- Duke Energy, on October 29, made 1,200 line workers available to help other utilities restore power in Hurricane Sandy's aftermath. Most of the workers are contractors who normally work in the service areas of Duke Energy and Progress Energy. Line workers directly employed by Duke Energy and Progress Energy will remain in the company's service areas to handle existing and potential outages in those locations.
- Northern Indiana Public Service Co (NIPSCO) has taken specific measures to support restoration, including increasing staffing at customer call center, scheduling extra work crews to handle any system problems, postponing scheduled work that would require equipment to be out of service, and putting work crews out in the field to monitor the system and respond quickly to any problems.

Kentucky

- Kentucky Power, an AEP company, announced yesterday (October 30) that it could be Friday afternoon before all customers affected by the storm are returned to service. The storm caused



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significant damage to power lines, utility poles and other electrical equipment, leading to power outages. In most instances, snow-laden trees and tree branches, weakened by wet soil conditions snapped and fell across power lines and utility poles, leading to the majority of outage cases. Kentucky Power restoration crews began work yesterday, assessing damage and making repairs to circuits affected by the storm.

Maine

- Bangor Hydro and Maine Public Service reported Monday (October 29) that they will have 63 crews available to work the storm and 17 tree crews from Asplundh. Maine Public will have 24 crews available to work and five tree crews from Asplundh. Each utility will assist the other as needed once they've handled outages in their own service territory. In addition, their sister utility from Nova Scotia will assist as needed and local line contractors have been placed on standby as well.
- Central Maine Power Company (CMP) announced yesterday evening (October 30) that it had restored power to all critical facilities such as hospitals, schools, and public safety buildings, and most of its 3-phase feeder lines that provide roadside distribution. CMP expected to have restored power to most communities north of Augusta by last night with the exception of some remote portions of northern Franklin County.

Maryland

- FirstEnergy Corp., whose utilities serve New Jersey, Pennsylvania, Ohio, Maryland and West Virginia, has launched a massive assessment and restoration effort in the wake of Hurricane Sandy, which inflicted significant damage to the company's electric system. Including personnel from FirstEnergy utilities, electrical contractors and outside utility resources, more than 11,800 workers are involved in the service restoration effort, including linemen, dispatchers, hazard responders, damage assessors, mechanics, supervisors and call center representatives. FirstEnergy is working to secure further outside resources to assist with the restoration process, and additional personnel are heading to the hardest hit areas from as far away as California, Colorado, Idaho, Montana, Florida and Canada. As of 7:30 am yesterday (October 30), First Energy reports preliminary estimates indicate the possibility for lengthy outages. While assessment of the damage by utility workers will be ongoing, the slow-moving nature of the storm will slow the process and hamper the conduct of restoration work.
- Pepco, serving Washington, DC and Maryland, reported that PHI, Pepco's parent's company, has secured 1,563 line personnel from states as far away as Texas and Mississippi. In addition, they have nearly 600 internal and contract line personnel and 300 tree removal personnel on the system ready for quick mobilization. Nearly 400 customer call representatives are available to answer calls, about 165 assessors are ready to identify storm damage, and around 635 support personnel are working on their special storm response roles.
- Baltimore Gas & Electric (BGE) announced yesterday (October 30) that it is making progress on assessing damage and undertaking repairs to public safety issues like downed wires and critical facilities such as 911 centers, hospitals and water/sewage treatment plants. As major system repairs are made, large blocks of customers are being restored. As of 6:30 p.m. yesterday, more than 62 percent of all customers who lost power had been restored since the storm began affecting the region. BGE advised that customers should continue to expect outages to last for multiple days due the magnitude of this storm. In the initial stages of clean-up, an estimated time for restoration of the entire system may not be available until damage assessments are finished and BGE works through the first phases of the restoration process to repair the electric system backbone and public safety

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sites. BGE reported Monday evening (October 29) that more than 4,100 employees, contractors and out-of-state linemen, tree personnel and support staff are mobilized at BGE facilities and four staging sites. This includes approximately 1,700 out of a requested 3,000 out-of-state and contract linemen, tree personnel and support staff from Florida, Georgia, Illinois (from ComEd), Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, Tennessee and Texas.

- **Southern Maryland Electric Cooperative (SMECO) reported yesterday (October 30) that all remaining outages are results of downed power lines due to fallen trees and limbs; all transmission lines, substations, and feeders are now operational.** Monday evening (October 29) that it has assembled a team of about 500 field workers—including SMECO linemen, contract linemen, and cooperative linemen, along with tree crews—to restore electric service to affected areas. They reported this is the largest group of assembled linemen and service restoration personnel in their history.

Massachusetts

- NSTAR reported Monday (October 29) that, in advance of the storm's arrival, the company opened its emergency operations center and staffed its regional work centers across the state. Approximately 1,200 contract personnel from as far away as Texas and the Midwest are assisting NSTAR's 3,000 employees in their efforts.
- **In Massachusetts, National Grid reported last night (October 30) that it anticipates that many customers will be restored by midnight Thursday and all customers will be restored by midnight Friday.**

Michigan

- **Detroit Edison reported yesterday afternoon (October 30) that they expect to have 90 percent of customers restored by midnight, tonight, but it will take several days before every customer affected by the storm is back in service.** All available DTE Energy crews are working to restore service. DTE Energy is attempting to recruit assistance from other electric utilities but, most resources are already committed to that massive restoration effort.

New Hampshire

- **New Hampshire Electric Coop (NHEC) announced yesterday evening (October 30) that twenty-four damage assessors spent the day in the field documenting the extent of the storm's damage.** Falling trees and limbs broke approximately two dozen poles and caused damage to the electrical system in approximately 300 separate locations. 60 line and tree crews managed to perform major restorations yesterday. Major repairs to lines serving large numbers of members will continue today and tomorrow, while smaller service line outages will be repaired on Friday and Saturday. NHEC expects to be substantially restored by the end of the day Saturday, November 3. An additional 25 crews will be joining the team today in Plymouth having travelled from electric cooperatives in Illinois.
- As of 8:30 PM on October 29, Public Service of New Hampshire (PSNH) reported some of the 550 requested line and tree personnel from as far away as Louisiana, Mississippi, Missouri, Oklahoma, and Texas arrived to join more than 100 PSNH and local contractor line crews and 100 tree trimming crews already in place for the restoration effort.

New Jersey

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- Public Service Electric and Gas (PSE&G) reported at 3:30 AM today that the utility successfully brought three flooded substations back on line yesterday, allowing service to be restored to the cities of Newark and Elizabeth, and the Newark Airport. Work continues on other stations, including ones that serve Jersey City and Sewaren. The storm surge flooded a large number of substations along the Passaic, Raritan, and Hudson rivers, disrupting service to customers in Hudson, Essex, and Middlesex counties. The magnitude of the flooding in contiguous areas caused PSE&G to take these stations out of service, wait for the flood waters to recede to assess the damage, dry out the equipment, replace equipment when necessary, and re-energize the system to restore service. PSE&G has assembled over 1,550 technicians – 600 PSE&G workers, 950 workers from across the country, and an additional 600 contractors to cut and remove trees. PSE&G is beginning to dispatch crews this morning now that the high winds have started to subside. In a number of areas, restoration work may be delayed until flood waters recede
- Orange and Rockland (O&R), serving New Jersey, New York, and Pennsylvania estimated at 10:00 PM yesterday (October 30) that a majority of its customers without power should have electricity restored within 10 days, but complete repairs and total service restoration could take weeks. These projections are very preliminary and will be adjusted as the full extent of the damage is determined. Because of the widespread damage the hurricane has caused to O&R's electric transmission and distribution system — including 27 transmission circuits down, 17 substations off line and 101 circuits locked out — O&R will have to rebuild much of those systems. O&R has mobilized and deployed about 1,000 O&R employees who were joined by about 800 contractor field workers. More personnel are expected to arrive through the week.
- Jersey Central Power and Light, a First Energy company, has begun damage assessments by helicopter. Due to the extensive damage, restoration estimates are not yet available. First Energy has approximately 7,500 company personnel and out-of-state workers are assisting with service restoration in New Jersey, West Virginia, Pennsylvania, Ohio, and Maryland but anticipate lengthy outages in the storm's wake. While assessment of the damage by utility workers will be ongoing, the slow-moving nature of the storm will slow the process and hamper the conduct of restoration work.
- Atlantic City Electric reports extensive damage to its system. Due to the magnitude of the storm, estimated times of restoration have been suspended until crews are able to assess damage.

New York

- Consolidated Edison reports that, as of 5:25 AM today, problems on high voltage systems supplying power to southern Brooklyn and central portions of Staten Island required the company to cut electrical power. Hurricane Sandy and its aftermath triggered the problems spanning two boroughs. These areas include approximately 160,000 customers. Neighborhoods affected include Gerritsen Beach, Marine Park, Midwood, East Flatbush and Flatbush in Brooklyn, and Tottenville, Annadale, Eltingville, Great Kills, Dongan Hills, and Westerleigh on Staten Island. The company also has reduced voltage by 8 percent to customers in the Ocean Parkway, Flatbush, Bay Ridge, Windsor Terrace, Kensington, Borough Park, Dyker Heights, and Bensonhurst areas. Company crews are working now to repair the problem. Customers in areas serviced by overhead lines may take over a week for restoration to be complete. The company cut service to two areas of Lower Manhattan and to an area of Brooklyn. Con Ed stated that this was done to protect the underground delivery system equipment from flood waters so that the restoration would happen quicker. The electrical equipment which is in flooded area must have all of its components cleaned of sea water, dried, and then tested.



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- Central Hudson estimates that 90 percent of the 103,000 customers affected will have power restored by 11:00 PM Friday. Some restoration activities will continue to take place over the weekend. The utility reported the storm caused damage to one substation and five transmission lines, and seven major distribution circuits were out of service. Central Hudson is deploying 700 employee line personnel, contractors, and mutual aid crews from Florida, Iowa, Indiana, and Wisconsin. It anticipates additional resources will arrive later in the week. The utility must address more than 900 distinct damage locations.
- New York State Electric and Gas reports the first phase of the service restoration process, damage assessment, will begin once the storm passes, perhaps on Wednesday (October 31).
- Long Island Power Authority (LIPA) reports crews are repairing the “backbone” of the electric system, which includes the high-voltage power lines and the substations that distribute power to local communities. Blocked roadways and flood waters have added difficulty to the restoration process. LIPA anticipates some customers to be without power at least 7 to 10 days.
- Niagara Mohawk (National Grid) has restored power to most customers.

North Carolina

- Duke Energy, the nation’s largest electric utility, yesterday (October 30) deployed 423 additional employees and contractors to help restore power to the Mid-Atlantic and Northeast. The new workers join 1,250 Duke Energy workers dispatched Monday (October 29), bringing the company’s total storm contingent to nearly 1,700. Duke Energy crews have been deployed to assist the following utilities in Mid-Atlantic and Northeast states: Dominion Power, AEP, PHI, First Energy, PPL, National Grid, Northeast Utilities, Connecticut Power and Light, and United Illuminating.

Ohio

- First Energy reports, as of 7:30AM yesterday (October 30), that preliminary estimates indicate the possibility for lengthy outages. Approximately 7,800 company personnel and out-of-state crews are assisting with service restoration in New Jersey, West Virginia, Pennsylvania, Ohio, and Maryland. While assessment of the damage by utility workers will be ongoing, the slow-moving nature of the storm will slow the process and hamper the conduct of restoration work.

Pennsylvania

- PECO has restored power to more than half of the customers who lost power during Hurricane Sandy as of 4:00 AM today. More than 3,000 employees and contractors, including 2,000 field personnel, are working to repair this unprecedented damage and restore service to customers. Contractors and workers from Tennessee, Kentucky, Louisiana, Mississippi, and PECO’s Chicago-based sister utility ComEd are working with PECO crews in the restoration. PECO expects work could take up to a week to complete.
- First Energy, which includes PennPower, WestPenn Power, Met-Ed and Penelec, reports the possibility for lengthy outages. Initial restoration estimates available for some counties in Pennsylvania include: Hanover and York – the majority expected to be restored by 11:59 p.m., Wednesday, October 31 and remaining customers restored by evening of Friday, November 2; Boyertown, Reading, Hamburg, Easton and Stroudsburg –the majority of customers will be restored by Monday, November 5, with the remaining customers restored by Wednesday, November 7; Lebanon – the majority of customers will be restored by Thursday, November 1 in the evening, with the remaining customers restored by 11:59 p.m., Saturday, November 3.

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- PPL Utilities reports that the hardest-hit areas are in the Lehigh Valley, the Poconos and northeastern Pennsylvania, and Bucks County. The utility expects outages to last through the weekend. Estimated restoration times should be available today.
- Citizens Electric reports that nearly all customers have been restored as of 6:00 AM today.

Rhode Island

- National Grid has begun restoration efforts with 128 restoration crews and 151 tree crews working to restore power in Rhode Island. As of 10:00 PM yesterday (October 30), power has been restored to over 35,000 customers affected by the storm.

Tennessee

- Appalachian Power (AEP), which services Tennessee, Virginia, and West Virginia, reports that, as of 7:45 PM yesterday (October 30), ongoing inclement weather is making it difficult to assess damage to some electrical facilities. AEP is dealing with significant transmission damage which is typically assessed by helicopter. However, crews have to assess damage by 4-wheel-drive and ATV vehicles, and foot patrol in the most remote, mountainous regions of our territory until it is safe to fly a helicopter. AEP secured more than 400 outside workers are positioned in areas where outages are expected and will assist more than 500 locally-based Appalachian Power employees with service restoration. Additional crews were secured from AEP's sister companies.

Vermont

- Vermont Electric Cooperative reports all outages are restored as of 6:30AM today.
- Green Mountain Power estimated yesterday evening (October 30) that all customers will have power restored by late tonight. Nearly 1,000 employees and personnel from out-of-state and Canada are working to respond to outages.

Virginia

- Dominion Power has restored power the majority of its customer outages. In Northern Virginia, where the storm's impact was greatest, restoration is expected to be completed Thursday night (November 1) in all but a very few locations where flooding or severe damage occurred.
- Northern Virginia Electric Cooperative (NOVEC) anticipates having most customers' service restored by tomorrow night. NOVEC reports its crews and extra line and tree crews from North and South Carolina are assisting in restoring service to NOVEC's customers. Crews are finding scores of broken poles. Many of these broken poles are in rain-soaked right of ways, which makes access difficult.
- Shenandoah Electric Cooperative (SVEC) reports that, as of 4:30 AM today, the majority of customers will have power restored by the end of the day; however, scattered outages may remain due to more difficult to address repairs. SVEC has approximately 425 individuals from other cooperatives, and contractors assisting in the restoration.
- Appalachian Power (AEP), which services Tennessee, Virginia, and West Virginia, reports that, as of 7:45 PM yesterday (October 30), ongoing inclement weather is making it difficult to assess damage to some electrical facilities. AEP is dealing with significant transmission damage which is typically assessed by helicopter. However, crews have to assess damage by 4-wheel-drive and ATV vehicles, and foot patrol in the most remote, mountainous regions of our territory until it is safe to fly a helicopter. AEP secured more than 400 outside workers are positioned in areas where outages



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are expected and will assist more than 500 locally-based Appalachian Power employees with service restoration. Additional crews were secured from AEP's sister companies.

- Rappahannock Electric Cooperative (REC) expects to have most outages restored by the end of the day tomorrow. Some members may still be without power longer, as access to downed lines is proving difficult in certain off-road and mountainous areas. Much of REC's service area is rural and difficult to access under normal conditions. Right-of-way crews continue to clear the paths into highly-damaged areas. The crews will also clear trees and limbs from power lines once linemen are able to reach affected areas. Mutual assistance crews from cooperatives in Alabama, Mississippi, Tennessee, and Georgia are assisting in the effort.

West Virginia

- Appalachian Power (AEP), which services Tennessee, Virginia, and West Virginia, reports that, as of 7:45 PM yesterday (October 30), ongoing inclement weather is making it difficult to assess damage to some electrical facilities. AEP is dealing with significant transmission damage which is typically assessed by helicopter. However, crews have to assess damage by 4-wheel-drive and ATV vehicles, and foot patrol in the most remote, mountainous regions of our territory until it is safe to fly a helicopter. AEP secured more than 400 outside workers are positioned in areas where outages are expected and will assist more than 500 locally-based Appalachian Power employees with service restoration. Additional crews were secured from AEP's sister companies.
- First Energy reported 640 MonPower employees and contractors are secured to restore service in First Energy's MonPower service area, as of 6:00 PM yesterday (October 30). Continued severe weather is limiting access and slowing damage assessment. Preliminary estimates indicate the possibility for lengthy outages.