



U.S. Department of Energy
Office of Electricity Delivery & Energy Reliability

Hurricane Sandy Situation Report # 7
October 31, 2012 (3:00 PM 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.
- **As of 2:00 pm EDT October 31 there are 6,062,526 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	502,465	25%	626,559	124,094
Delaware	2,757	< 1%	45,137	42,380
Kentucky	2,941	< 1%	8,379	5,438
Maine	9,145	< 1%	90,727	81,582
Maryland	103,997	4%	311,020	207,023
Massachusetts	82,809	2%	298,072	215,263
Michigan	35,422	< 1%	120,637	85,215
New Hampshire	55,809	8%	141,992	86,183
New Jersey	2,052,724	51%	2,615,291	562,567
New York	1,948,282	21%	2,097,933	149,651
Ohio	162,637	2%	267,323	104,686
Pennsylvania	800,745	12%	1,267,512	466,767
Rhode Island	50,468	10%	116,592	66,124
Virginia	33,835	< 1%	182,811	148,976
West Virginia	218,490	21%	271,765	53,275
TOTAL:	6,062,526		8,461,750	2,399,224

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.

- **Today (October 31), the US Environmental Protection Agency (EPA), in consultation with the US Department of Energy, issued an emergency waiver of the Ultra Low Sulfur Diesel (ULSD) fuel specifications in mobile nonroad diesel engines in New Jersey. The waiver will be in effect through November 13.**
- 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 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



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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.

Refineries in the Path of Sandy as of 1:00 pm EDT 10/31/12						
Refinery	Location	Capacity (B/D)				
		Operating Capacity*	Shut Down	Restarting	Reduced Runs	Normal
Hess*	Port Reading, NJ	70,000	X			
Monroe Energy	Trainer, PA	185,000				X
PBF	Delaware City, DE	182,200			X	
PBF	Paulsboro, NJ	160,000			X	
Philadelphia Energy Solutions (Sunoco)	Philadelphia, PA	335,000				X
Phillips 66	Linden, NJ	238,000	X			
TOTAL		1,170,200	308,000	0	342,200	520,000

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 1:00 pm EDT, October 31, the U.S. Coast Guard reports that Sector New York ports are closed to all ships except commercial vessels with specific approval from the Captain of the Port. In Sector Southeastern New England, southern Massachusetts ports have reopened fully and both Rhode Island ports are open with restrictions. All ports have reopened in Sector Baltimore, Sector Boston, Sector Delaware Bay, Sector Hampton Roads; and Sector Long Island Sound.

Petroleum Terminals

- NuStar Energy’s terminals in Linden, NJ are without power and have significant high-water damage.
- The table below lists the status of petroleum terminals impacted by Hurricane Sandy.

Status of Petroleum Terminals as of 1:00 pm EDT 10/31/12				
Company	City	State	Status	Date Stamp
Colonial Pipeline	Linden	NJ	Shut	10/30/12
Hess	Groton	CT	Shut	10/30/12
Kinder Morgan	Carteret	NJ	Shut	10/30/12
Kinder Morgan	Perth Amboy	NJ	Shut	10/30/12
Kinder Morgan	Philadelphia	PA	Open	10/30/12
Kinder Morgan	Staten Island	NY	Shut	10/30/12
Magellan Midstream	Wilmington	DE	Open	10/30/12

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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	10/31/12
NuStar Energy	Linden	NJ	Shut, Restart timing pending	10/31/12
NuStar Energy	Virginia Beach	VA	Open	10/31/12
NuStar Energy	Dumfries	VA	Shut, Expected Back 11/1	10/31/12
NuStar Energy	Piney Point	MD	Open	10/31/12
NuStar Energy	Andrews AFB	MD	Open	10/31/12
NuStar Energy	Baltimore	MD	Open	10/31/12
Phillips 66	Riverhead	NY	Shut	10/31/12
Phillips 66	Tremley Point	NJ	Shut	10/31/12

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 8:40 am EDT today (October 31), trade press reports that Buckeye Partners LP is in the process of restarting six oil products pipelines. The resumptions are conditional on favorable reports about the lines and supply availability. Buckeye does not have a timeframe for restarting operations. As of 6:00 pm EDT yesterday (October 30), trade press reported Buckeye was restoring power to booster stations in Pennsylvania with some expected to be online later that evening.

Natural Gas Pipelines

- As of 8:00 am EDT today (October 31), Dominion Transmission’s (DTI’s) power has been restored to Lightburn Extraction facility in West Virginia and is operating normally.

Electric Restoration Information

Connecticut



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- 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. **Today (October 31) the company is working on detailed damage assessment on the ground & in helicopters to efficiently deploy resources for full restoration.**

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, stated that they expect to have all of their customers restored by late tonight (October 31) 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 significant damage to power lines, utility poles and other electrical equipment, leading to power



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outages. 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 today that 11,000 customers remain without power as of noon, but the company expects to have power restored to all customers by late tonight. Hurricane Sandy caused 165,000 outages as it passed through CMP's service area. CMP's crews have restored power to nearly 155,000 accounts since noon on Sunday.

Maryland

- FirstEnergy Corp., whose utilities serve New Jersey, Pennsylvania, Ohio, Maryland and West Virginia, reported today (October 31) that it's assessment and restoration effort in the wake of Hurricane Sandy, includes more the 12,000 company personnel, electrical contractors and outside utility resources are assisting with service restoration efforts. These workers 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.
- Pepco, serving Washington, DC and Maryland, stated that they expect to have all of their customers restored by late tonight (October 31) 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.
- Baltimore Gas and Electric Company (BGE) state today (October 31) that to assess damage and is focusing on the "backbone" of their distribution system - including transmission and sub-transmission feeders, substations and distribution feeders. 1,900 out-of-state and contract linemen, tree personnel and support staff from Alabama, Florida, Georgia, Illinois, Indiana, Louisiana, Mississippi, Missouri, Minnesota, New Mexico, 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



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- NSTAR reported today (October 31) that it expects to restore power to all of its customers by tomorrow night.
- In Massachusetts, National Grid reported last night (October 30) that they expect to have three quarters of the customers without power restored by midnight Thursday (November 2), with virtually all customers in the state back online by midnight Friday. They have more than 300 line crews, 37 substation crews, 250 tree-trimming crews, 131 damage-assessment crews, 360 wires-down crews and more than 380 support personnel working to restore power.

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. The company expects to get a number of crews from Wisconsin by tomorrow morning.

New Hampshire

- New Hampshire Electric Coop (NHEC) announced these mornings (October 31), there are 100 crews in the field and working in locations across the state. Storm damage is widespread, but NHEC is focusing its resources in three areas: southeastern New Hampshire, southwestern New Hampshire and the Lakes Region. A detailed restoration schedule will be available this afternoon after operations supervisors have reported in from the field.
- Public Service of New Hampshire (PSNH) reported today they anticipate arrival of 75 two-man crews from Hydro Québec, along with assistance from crews from Texas, Oklahoma, and New Brunswick to assist with the completion of restoration.

New Jersey

- Public Service Electric and Gas (PSE&G) today (October 31) that some of its customers may be without service for seven or more day. 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. Crews helping in the restoration efforts have come from Florida, Georgia, Indiana, Illinois, Missouri, Pennsylvania, Tennessee, Texas, and Wisconsin, as well as Canada. 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 8:00 AM today (October 31) 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. The company has restored 13 of the 27 transmission lines and 7 of the substations that were damaged by the storm. 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.



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- Jersey Central Power and Light, a First Energy company, has begun damage assessments via foot and by helicopter. **Across the First Energy utilities, more the 12,000 company personnel, electrical contractors and outside utility resources are assisting with service restoration efforts.** These workers 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.
- Atlantic City Electric (AEC) reports extensive damage to its system. **As of Noon today (October 31) AEC estimates 90 percent of customers in the Mainland areas (Cape May, Glassboro, Pleasantville, and Winslow Districts) will be restored by midnight on Sunday November 4. Restoration estimates for the NJ Barrier Islands will be established after damage assessments have been completed.**

New York

- **Con Edison reported today (October 31) that customers in Manhattan and Brooklyn served by underground electric equipment should have power back within three days. The restoration of those customers in other areas served by overhead power lines will take at least a week. Con Ed stated that across its service area the storm knocked down more than 100,000 primary electrical wires in overhead areas.** This morning the company reported that 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.
- 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 (NYSEG) reported today (October 31) that it is moving additional crews and support personnel, as well as contract line and tree crews, into the downstate areas and the Catskill Region that were particularly hard hit by Hurricane Sandy. PSEG anticipates that its power restoration effort in Westchester, Putnam, and Dutchess counties and the Catskill Region will be lengthy.**
- 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



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process. LIPA anticipates some customers to be without power at least 7 to 10 days. **A workforce of more than 5,000 is supporting the restoration effort with additional support is en route .**

- Niagara Mohawk (National Grid) has restored power to most customers.

Ohio

- **FirstEnergy Corp., whose utilities serve New Jersey, Pennsylvania, Ohio, Maryland and West Virginia, reported today (October 31) that it's assessment and restoration effort in the wake of Hurricane Sandy, includes more the 12,000 company personnel, electrical contractors and outside utility resources are assisting with service restoration efforts.** These workers 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.

Pennsylvania

- PECO has more than 3,000 employees and contractors, including 2,000 field personnel, working to repair the damage and restore service to customers. Contractors and workers from Tennessee, Kentucky, Illinois, Louisiana, and Mississippi 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: **in Hanover and York (Met-Ed) the majority expected to be restored by midnight tonight (October 31) and remaining customers restored by evening of November 2; in Boyertown, Reading, Hamburg, Easton and Stroudsburg (Met-Ed) the majority of customers should be restored by November 5 with the remaining customers restored by November 7. In Lebanon (Met-Ed), the majority of customers will be restored by Thursday (November 1) in the evening, with the remaining customers restored by midnight Saturday, In Erie, Oil City, Johnstown, Clearfield and Lewistown (Penelec), the majority of customers should be restored by midnight tonight. In Altoona, Mansfield and Towanda (Penelec), the majority of customers should be restored by midnight November 1. Across the First Energy utilities, more the 12,000 company personnel, electrical contractors and outside utility resources are assisting with service restoration efforts. The utility is working to secure additional resources.**
- 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

- **As of 10:00 AM today (October 31), National Grid has begun restoration efforts in Rhode Island with over 700 crews working to restore power in Rhode Island.**

Vermont

- Vermont Electric Cooperative reports all outages are restored as of 6:30AM today (October 31).
- **Green Mountain Power estimates that that all customers will have power restored by late tonight (October 31).** Nearly 1,000 employees and personnel from out-of-state and Canada are working to respond to outages.

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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 (November 2). 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 **10:30 AM today (October 31)**, 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. **At about 4:30 am today, the transmission provider in the area lost service to SVEC's 69 kV sub-transmission line that serves the Cooperative's Monterey substation, which provides service to Highland County. SVEC continues working with the transmission provider in efforts to identify an estimated restoration time for the members affected by this outage.** 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 it 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.
- Rappahannock Electric Cooperative (REC) expects to have most outages restored by the end of the day tomorrow (November 1). Some members may still be without power longer, as access to downed lines is proving difficult in certain off-road and mountainous areas. **Remaining outages are concentrated in the counties of Greene, Rappahannock, Fauquier and Madison. Damage in these areas is significant and repairs are complicated and time-consuming. Numerous poles and cross-arms have been broken and need to be replaced in remote locations that are difficult to access even with heavy-duty, four-wheel drive line trucks.** 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 it 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.
- **Today (October 31), MonPower (First Energy) reports that damage assessment is underway but is being complicated due to weather conditions. Restoration is expected by early next week for the**



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majority of customers, but because of the difficult terrain and snow on the ground, and additional accumulation expected, some customers in remote areas may not be restored until the middle of next week. Damage assessments will be conducted via helicopter once conditions improve. Across the First Energy utilities, more the 12,000 company personnel, electrical contractors and outside utility resources are assisting with service restoration efforts. The utility is working to secure additional resources.