



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

Hurricane Sandy Situation Report # 11
November 2, 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 November 2 there are 3,491,595 customers without power in the affected States. This is a decrease from the 3,628,739 customers without power reported in Situation Report #10. Restoration estimates and efforts by electric utilities are reported below.

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	232,142	11%	626,559	394,417
Maryland	17,803	< 1%	311,020	293,217
Massachusetts	2,248	< 1%	298,072	295,824
Michigan	10,020	< 1%	120,637	110,617
New Jersey	1,491,529	37%	2,615,291	1,123,762
New York	1,269,392	14%	2,097,933	828,541
Ohio	60,273	< 1%	267,323	207,050
Pennsylvania	304,094	5%	1,267,512	963,418
Rhode Island	5,962	1%	116,592	110,630
Virginia	2,176	< 1%	182,811	180,635
West Virginia	95,956	9%	271,765	175,809
TOTAL:	3,491,595			

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. Customer outages are representative of specific Situation Report reference dates and times.

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

- Today (November 2) the Department of Homeland Security, in consultation with the US Department of Energy, issued a waiver of the Jones Act to allow foreign flagged oil tankers coming from ports in the Gulf Coast Petroleum Administration for Defense District (PADD 3) to deliver petroleum products to ports in the New England and Central Atlantic PADDs (PADDs 1a and 1b). Ships under this waiver must load by November 13th and offload at their destinations by November 20th.
- Today (November 2), the State of New Jersey issued a waiver on the licensing requirements of fuel merchants. This waiver allows fuel merchants in the State of New Jersey to buy fuel from out-of-State suppliers. The waiver will be in place until November 7th.
- On November 1, the US Environmental Protection Agency (EPA), in consultation with the US Department of Energy, expanded the emergency waiver of the Ultra Low Sulfur Diesel (ULSD) fuel



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specifications to allow the use of high-sulfur heating oil in diesel-powered highway and nonroad equipment in addition to nonroad vehicles in New Jersey. The waiver will be in effect through November 20.

- On October 31, the US Environmental Protection Agency (EPA), in consultation with the US Department of Energy, issued an emergency waiver of the reformulated gasoline (RFG) requirements for the States of Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, , and Virginia, and the District of Columbia. The waiver also applies to Alabama, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee to allow for fuel flexibility in the system. The waiver will be in effect through November 20.
- Today (November 2), the U.S. Nuclear Regulatory Commission (NRC) reports all nuclear power units in the Northeastern United States that were shut down as a result of impacts from Hurricane Sandy have been restarted and are ramping up power output. All nuclear power units that were reduced as a result of the storm have been restored to 100 percent power. **Details on the plants and/or units can be found in Situation Report #10.**

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 **Hartford, CT**, the FEMA Region II RRCC in Colts Neck, NJ, **New Jersey State EOC in West Trenton, NJ**, and the New York State 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 11/2/12						
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	335,000	527,200

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 yesterday (November 1), the Port of New York is open to all commercial vessel transits with the exception of the Arthur Kill, Kill Van Kull, Bay Ridge, Red Hook, and Buttermilk Channels. The Kill Van Kull is open to Light Tugs only. Gravesend Bay Anchorage and Anchorage 21-A, B, and C are open. The Hudson River is open to all vessels north of the George Washington Bridge.

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Vessel entry to the Port and anchorage use is limited to vessels with an approved facility berth or orders to bunker or lighter at anchor. Vessels requesting an exception will be reviewed on a case-by-case basis. **As of 1:00 pm today (November 2), Arthur Kill remained closed due to a diesel spill from Motiva’s Sewaren, NJ terminal.** The U.S. Coast Guard has reopened all other port sectors affected by Sandy.

Petroleum Terminals

- Motiva states that four diesel oil storage tanks were damaged at the Sewaren, NJ terminal. The company believes two of these tanks released some of their contents.
- The table below lists the status of 39 petroleum terminals impacted by Hurricane Sandy.

Status of Petroleum Terminals as of 1:0 pm EDT 11/2/12				
Company	City	State	Status	Date Stamp
Motiva	Bridgeport	CT	Open with reduced operations	10/31/12
Hess	Groton	CT	Shut	10/30/12
Gulf Oil	New Haven	CT	Open	11/1/12
Magellan Midstream	New Haven	CT	Open with reduced operations	11/1/12
Motiva	New Haven	CT	Open	10/31/12
Magellan Midstream	Wilmington	DE	Open	10/30/12
NuStar Energy	Andrews AFB	MD	Open	10/31/12
Motiva	Baltimore	MD	Open	10/31/12
NuStar Energy	Baltimore	MD	Open	10/31/12
NuStar Energy	Piney Point	MD	Open	10/31/12
IMTT	Bayonne	NJ	Shut	10/31/12
Kinder Morgan	Carteret	NJ	Shut, Restart in 24-48 hours	11/1/12
Colonial Pipeline	Linden	NJ	Open	11/1/12
NuStar Energy	Linden	NJ	2 of 8 truck bays open	11/2/12
Motiva	Newark	NJ	Shut	10/31/12
NuStar Energy	Paulsboro	NJ	Open	10/31/12
Hess	Pennsauken	NJ	Open	11/2/12
Kinder Morgan	Perth Amboy	NJ	Shut, Restart in 24-48 hours	11/1/12
Motiva	Sewaren	NJ	Shut	10/31/12
Phillips 66	Tremley Point	NJ	Shut	11/1/12
Castle Port Morris	Bronx	NY	Open	11/1/12
Schildwachter Oil	Bronx	NY	Open	11/1/12
Bayside Fuel Oil Depot	Brooklyn	NY	Open	11/1/12
Hess	Brooklyn	NY	Expected to Open Soon	11/2/12
Motiva	Brooklyn	NY	Shut	10/31/12
Skaggs Walsh	College Point	NY	Open	11/1/12
Northville Industries	Holtsville	NY	Open, Expecting Deliveries 11/3	11/2/12
Global Partners	Inwood	NY	Expected to Restart 11/2	11/2/12
Motiva	Long Island	NY	Shut	10/31/12
Global Partners	Newburgh	NY	Open, Expecting Deliveries 11/3	11/2/12

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Status of Petroleum Terminals as of 1:0 pm EDT 11/2/12

Company	City	State	Status	Date Stamp
Global Partners	Oyster Bay	NY	Open	11/2/12
Phillips 66	Riverhead	NY	Shut	11/1/12
Kinder Morgan	Staten Island	NY	Shut, Restart in 24-48 hours	11/1/12
Kinder Morgan	Philadelphia	PA	Open	10/31/12
Motiva	Providence	RI	Open	10/31/12
NuStar Energy	Dumfries	VA	Shut, Expected Back 11/1	10/31/12
Motiva	Fairfax	VA	Open	10/31/12
Motiva	Richmond	VA	Open	10/31/12
NuStar Energy	Virginia Beach	VA	Open	10/31/12

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

Petroleum Pipelines

- Colonial Pipeline reported that yesterday (November 1) that it restarted a large section of the Northeast mainline which was shut down on October 29. The company stated that it expected that this line would make deliveries up to Linden, NJ (then end of the mainline) today. Yesterday, the company reported its Linden, NJ, facility resumed deliveries to Buckeye Pipeline. Colonial said that the Linden facility continues to run on portable generators.
- As of November 2, Buckeye Pipeline reports that power has been restored to Linden Station. However, the company is in the process of transferring from the previously installed portable generators to main power which should be completed by later today. Once completed, all pipelines out of the Linden Station will be on main power. The pipeline is supplying jet fuel to the 3 airports in the New York City area.

Natural Gas Pipelines

- As of 4:25 pm EDT yesterday (November 1), New Jersey Natural Gas (NJNG) has completed the shutdown of part of its natural gas infrastructure including lines serving gas to New Jersey’s barrier islands.

Electric Restoration Information

Connecticut

- The United Illuminating Company has projected it will complete service restoration to 95% of its customers before midnight on Monday (November 5). **The restoration team includes 1,391 FTE's working in the field (519 line workers, 373 line clearance workers, 246 damage assessors, 98 service personnel, and 155 wires down workers).**
- Connecticut Light and Power (CL&P) projected yesterday (November 1) that, assuming good weather, 98 percent of customers will have power by Monday (November 5) or Tuesday (November 6). **The company has 1,500 out-of-state workers, including crews from its NEUtilities sister companies in Massachusetts and New Hampshire.** Workers from as far as Texas and British Columbia are also assisting CL&P personnel on the restoration effort. The utility stated that in severely damaged areas, workers have needed to completely rebuild entire sections of the electric system.



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Maryland

- FirstEnergy Corp. estimated today (November 2) that its Maryland customers will be restored by early evening tomorrow, with the exception of the hardest hit area of Garrett County, which requires further assessment.
- Baltimore Gas and Electric Company (BGE) estimated yesterday (November 1) that the vast majority of its remaining customers without power would be restored by tonight (November 2). Restoration may not be complete until the weekend for smaller pockets of customers or where there has been significant system damage. BGE has more than 5,600 employees, contractors and out-of-state linemen, tree personnel and support staff on the restoration team. This number includes more than 1,800 out-of-state and contract linemen, tree personnel and support staff from Alabama, Florida, Georgia, Illinois (ComEd), Indiana, Louisiana, Mississippi, Missouri, Minnesota, New Mexico, North Carolina, Oklahoma, Tennessee and Texas (Oncor).
- Delmarva Power has restored electric service to the vast majority of customers who lost power as a result of Hurricane Sandy. Most customers are expected to receive service by 6pm tonight (November 2). Delmarva Power has mobilized more than 1,500 service personnel including company teams and crews from as far away as New Mexico

Massachusetts

- NSTAR has restored service to every town in its service territory that was affected by Hurricane Sandy as of 9:00AM this morning (November 2). The few current outages are unrelated to the storm.
- National Grid estimated it will achieve full restoration today (November 2) for all areas with one exception— service restoration to Berkshire, MA is still being assessed. National Grid is being supported in Massachusetts by crews from 31 states & Canada.

New Jersey

- Public Service Electric and Gas (PSE&G) reported today (November 2) that they estimate that they will have virtually all of their impacted customers restored to service within the coming week. The majority of customers will be restored before then. After next Friday (November 9), there may still be isolated pockets of customers who have individual flooding or downed line issues that may take slightly longer. PSE&G has increased the stability of their transmission system to ensure that the high-voltage lines can deliver power. The total number of people who have come from other states to assist is now more than 2,000. This includes additional line personnel, tree crews and substation operators. Crews helping in the restoration efforts have arrived from Florida, Georgia, Indiana, Illinois, Missouri, Pennsylvania, Tennessee, Texas, and Wisconsin, as well as Canada. One of PSE&G's key areas of focus is repairing their damaged switching stations and substations in Hudson and Essex counties so they can energize them and deliver the power to customers; another key focus is repairing overhead infrastructure with crews continuing to clear trees, debris, and downed wires from state, county, and municipal roadways so they can begin repairing overhead infrastructure in Bergen and Passaic Counties.
- Orange and Rockland (O&R), serving New Jersey, New York, and Pennsylvania estimated today (November 2) that the vast majority of its customers without power should have electricity restored by the end of next week with the final restoration occurring through the following week. The company has restored 22 of the 27 transmission lines, all of the 17 de-energized substations, and 40 of the 101 downed distribution circuits. Currently, more than 1,000 O&R employees and over 1,200



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contractors from almost 20 States, including 160 National Guard troops due to arrive tonight, are working to restore power.

- Jersey Central Power & Light (JCP&) reported yesterday (November 1) that the majority of its customers (including those in Monmouth, Morris, and Flemington counties and Toms River township) will be restored by Wednesday (November 7) and customers in the hardest-hit areas could expect to be restored throughout the following week. A significant number of customers will not be able to receive service until damaged roads, infrastructure and homes are rebuilt. In the JCP&L service area the storm caused damage to more than 450 utility poles and 12,000 trees have been cut and removed from JCP&L equipment since Monday (October 29). The restoration of the utility's customers is being worked by 6,400 professionals, including 2,500 linemen and 1,500 forestry workers.
- Atlantic City Electric (ACE) 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). Those in the barrier islands who are capable of receiving power, except for Long Beach Island, should be restored by midnight Sunday. The team of 1,900 restoration personnel working in the ACE service territory includes over 300 mutual assistance crews arrived yesterday (November 1) and more are set to arrive today (November 2). The damage to the system included the loss of service from 20 transmission lines, more than 40 distribution feeders, and seven distribution substations.
- Sussex Rural Electric Cooperative announced today (November 2) that it continues to estimate that they will have all customers who can be reconnected restored by the end of the day today. The focus of their crews is on replacing the 25 poles that were broken as a result of Hurricane Sandy. This is more than five times the number of poles destroyed during Hurricane Irene.

New York

- Consolidated Edison (ConEd) reported today (November 2) that, after yesterday's field assessment, it expects to restore the vast majority of customers who lost power by next weekend, November 10 - 11. The remaining customer restorations could take an additional week or more. Customers served by underground networks in Mid to Lower Manhattan who lost power during the storm will have service by tomorrow. The company stated yesterday (November 1) that it has commitments from more than 1,600 external contractors and mutual aid workers from as far west as California who are expected to arrive in the next few days. Personnel specializing in tree cutting, repairing overhead lines and underground equipment, as well as damage assessment have been assigned. There are more than 100 personnel from Chain Electric from Louisiana assisting with the restoration effort in Staten Island where utility truck access to downed power lines challenged restoration in many areas; more than 900 wires were toppled and many streets were impassable due to flooding, fallen trees or other debris. Personnel also face thousands of wires down in the rest of New York City and in Westchester County, where more than 500 roads are closed.
- Central Hudson estimated this morning (November 2) that the majority of the customers who remain without power to be restored by tomorrow night with some restoration work continuing on Sunday. The majority of outages remaining are concentrated in Ulster County, with smaller numbers (in descending order) in Orange, Sullivan, Dutchess, and Putnam counties. The company estimates that there are more than 500 distinct damage locations that must be repaired by their field forces, including 170 broken poles and 1,100 instances of downed wires. Central Hudson is



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deploying 700 employee line personnel, contractors, and mutual aid crews from Florida, Iowa, Indiana, and Wisconsin.

- New York State Electric and Gas (NYSEG) reported this morning (November 2) that the vast majority of the remaining service interruptions in NYSEG's downstate service areas are expected to be restored by midnight Sunday (November 4). The remaining customers will have service restored by midnight Wednesday (November 7). The majority of customers who remain without power are in Westchester County, with smaller numbers of outages (in descending order) in Putnam, Sullivan, Dutchess, and Ulster counties. More than 2,100 company and contract personnel are working on the massive power restoration effort, primarily in Putnam, Westchester, Sullivan, Dutchess, and Monroe counties.
- Long Island Power Authority (LIPA) reported this morning (November 2) it expects to restore power to the majority of its customers by the weekend of November 10-11. LIPA has restored power to 19 of 21 hospitals, energized supply to the Ronkonkoma and Babylon lines of the Long Island Rail Road, and restored power to 37 of the 50 substations that were out of power. The company is being supported by over 1,200 crews from Niagara Mohawk Power Corp (National Grid), other utilities, and qualified contractors from as far as California and Texas. The teams are currently assisting with restoration efforts, supported by more than 4,500 people behind the scenes from virtually every LIPA department, assisting with activities such as call handling, logistics, and damage assessment.
- Orange and Rockland (O&R), serving New Jersey, New York, and Pennsylvania estimated today (November 2) that the vast majority of its customers without power should have electricity restored by the end of next week with the final restoration occurring through the following week. The company has restored 22 of the 27 transmission lines, all of the 17 de-energized substations, and 40 of the 101 downed distribution circuits. Currently, more than 1,000 O&R employees and over 1,200 contractors from almost 20 States, including 160 National Guard troops due to arrive tonight, are working to restore power.

Ohio

- Ohio Edison, a FirstEnergy Company, announced last night (November 1), that all remaining customers are expected to be restored by late afternoon tomorrow (November 3). The majority of customers in Erie, Ottawa, Huron and Medina Counties were restored by midnight last night (November 1). In Lorain County, the majority of customers were restored by noon today.

Pennsylvania

- PECO expects to be able to restore service to approximately 90 percent of customers impacted by the storm by tonight (November 2) and most remaining customers should have service restored during the weekend. Some customers in the most damaged and isolated areas may be without electricity until early next week. An additional 400 support personnel from Maryland and PECO's sister company ComEd are joining the PECO workforce today to help restore service to our customers. In all, more than 4,100 employees and contractors (of those, 3,200 are working in the field) are working to repair this unprecedented damage and restore service to customers. These include workers from utilities as far away as Tennessee, Kentucky, Louisiana, Mississippi, Maryland, Florida. PECO announced today that the hardest hit areas in Bucks County include Bristol, Middletown Township, Falls Township, and Northampton Township; the hardest hit areas in Montgomery County include: Abington Township, Cheltenham Township, Upper Dublin and Springfield Township.



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- First Energy, which includes PennPower, WestPenn Power, Met-Ed and Penelec, reported PennPower and WestPenn Power are both fully restored. In the Met-Ed service territory, 95 percent of customers will be in service by the end of the day tomorrow (November 3) and the remainder will be restored early next week. For Penelec, the majority of customers in Erie, Oil City, Johnstown, Clearfield, Lewistown, Altoona, Mansfield and Towanda are restored. Across the First Energy utilities, more the 12,000 company personnel, electrical contractors and outside utility resources are assisting with service restoration efforts.
- PPL Utilities reports today (November 2) that the goal remains to restore power to 80 to 85 percent of all affected customers across its system by 11pm today and to have the lights back on for all — including the Lehigh Valley, parts of Bucks and Montgomery counties, the Poconos and northeast Pennsylvania — by 11 pm Sunday (November 4).
- Orange and Rockland (O&R), serving New Jersey, New York, and Pennsylvania estimated today (November 2) that the vast majority of its customers without power should have electricity restored by the end of next week with the final restoration occurring through the following week. The company has restored 22 of the 27 transmission lines, all of the 17 de-energized substations, and 40 of the 101 downed distribution circuits. Currently, more than 1,000 O&R employees and over 1,200 contractors from almost 20 States, including 160 National Guard troops due to arrive tonight, are working to restore power.

Rhode Island

- National Grid stated this morning (November 2) that it is working to complete restoration in Rhode Island by midnight tonight. Possible isolated customers might need to be restored tomorrow.

Virginia

- Dominion Power reported that it restored service to all affected customers yesterday evening (November 1), except for a very few locations where flooding or severe damage occurred.
- Northern Virginia Electric Cooperative (NOVEC) restored power to its remaining 300 members at this morning (November 2). NOVEC crews were assisted by crews from North and South Carolina and Maryland.
- Shenandoah Electric Cooperative (SVEC) restored power to all of its member owners yesterday (November 1). SVEC brought in additional manpower, including crews from six cooperatives, and two contractors, from Alabama, North Carolina, and Virginia to facilitate this restoration. In total, SVEC has approximately 425 men and women working to restore electric service.
- Appalachian Power (AEP), which services Tennessee, Virginia, and West Virginia, revised its restoration estimates for Virginia this morning (November 2), noting that Lebanon (Russell) has been revised to 4pm today, Tazewell (Tazewell) and all surrounding areas has moved to 11 pm tonight, Clintwood (Dickenson) and all surrounding areas has moved to 5 pm tomorrow (November 3), and Grundy (Buchanan) and all surrounding areas should be 90 percent restored by tonight. More than 90 percent of customers in all affected areas will have power restored by Sunday night (November 4).
- Rappahannock Electric Cooperative (REC) had restored service to most of its member owners at 4:30 PM yesterday (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.



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West Virginia

- Appalachian Power (AEP), which services Tennessee, Virginia, and West Virginia, reports that, in West Virginia, most of the remaining outages are in Boone, Fayette, Lincoln, Kanawha, Raleigh and Wyoming counties. Many areas (including Nicholas, Summers, and Greenbrier counties and the towns of Pt. Pleasant, Beckley, Bluefield, Hico, Logan, Williamson, and Welch and their surrounding areas) will be 90 percent restored by tonight (November 2). Some (Kanawha, Boone, Cabell, Puntman, Clay, and Roane counties) will not until Sunday night (November 4). More than 50 distribution substations were taken out by the storm and 14 remain out of service; the majority of these stations were restored yesterday (November 1). **The restoration times for Pineville, Ripley, and their surrounding areas has been pushed to tomorrow (November 3) at midnight.** More than 110 circuit breakers were taken out of service due to the storm and all but about 29 have been restored. Approximately 55 transmission lines were affected by storm and 30 remain out of service.
- **Mon Power, a FirstEnergy subsidiary, reported today that the majority of affected Mon Power customers are expected to be restored by early next week. Restoration times estimated last night (November 1) include: Calhoun county and the town of Cowen should be restored today (November 2); the town of Webster Springs should be in service Sunday (November 4); Upshur County should be restored Tuesday (November 6); Grant County should be in service Thursday (November 8); and Mineral County and the remainder of Webster County should be restored next Friday (November 9).** Yesterday (November 1), officials said that more than 1,100 Mon Power employees, contractors, and outside utility crews are continuing damage assessment and restoration efforts to restore power. Although snow and freezing rain continue to hinder the crews, they are making progress. Approximately 550 miles of the more than 900 miles of transmission lines damaged by the storm have been restored as of late yesterday (November 1).