



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

Hurricane Irene Situation Report #10

August 31, 2011 (10:00 AM EDT)

http://www.oe.netl.doe.gov/emergency\_sit\_rpt.aspx

Highlights:

- Hurricane Irene made landfall on Puerto Rico as a Category 1 hurricane on Monday August 22 and landfall near Cape Lookout, NC as a Category 1 hurricane at 8:00 am EDT August 27.
In response to Irene the following States declared a State of Emergency: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Vermont, and Virginia.

Electricity Information:

Electricity Outages by State

Table with 5 columns: Impacted State, Current Customer Outages, % of State Customers Without Power, Peak Outages Reported in DOE SitRep(s), Customers Restored Since Peak. Rows include Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Vermont, Virginia, and a TOTAL row.

Note: 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 2009 EIA Customer Data.

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- As of 8:00 am EDT August 31, the impacted States report a total of 1,837,279 customers without power. This is a decrease from the 2,850,857 reported as of 1:00 pm EDT August 30 in Situation Report #9. Restoration estimates and efforts by electric utilities are reported below.

**Petroleum & Natural Gas Information:**

- In the Northeast, the ConocoPhillips has begun restarting its Linden, NJ refinery and two refineries are operating at reduced rates (Sunoco, Marcus Hook, PA and Philadelphia, PA). The ConocoPhillips refinery in Trainer, PA and PBF refineries in Paulsboro, NJ and Delaware City, DE have returned to normal operations.

Refineries in the Path of Irene as of 8/31/11 8:00 AM EDT							
Refinery Impacted	Location	Capacity (B/D)	Capacity (B/D)				
			Normal Operations	Shut Down	Restarting	Reduced Rates	Back to Normal
ConocoPhillips	Linden, NJ	238,000			238,000		
ConocoPhillips	Trainer, PA	185,000					185,000
Sunoco	Marcus Hook, PA	178,000				178,000	
Sunoco	Philadelphia, PA	335,000				335,000	
PBF (formerly Valero)	Paulsboro, NJ	160,000					160,000
PBF (formerly Valero)	Delaware City, DE	182,200					182,200
<b>TOTAL</b>		<b>1,278,200</b>	<b>0</b>	<b>0</b>	<b>238,000</b>	<b>513,000</b>	<b>527,200</b>

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

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

- The current status of pipeline operations in the Northeast is summarized in the following table.

Pipelines in the Path of Irene as of 8/31/11 8:00 AM EDT							
Type	Name	Start	Terminus	Capacity (barrels/day)	Shut Down	Reduced Rates	Operating
Product	Colonial	TX	NJ	2,400,000			2,400,000
Product	KinderMorgan/ Plantation	LA	VA	600,000			600,000 <sup>A</sup>
LPG	Enterprise Products Partners (TEPPCO)	TX	PA	330,000			330,000 <sup>B</sup>
LPG	Enterprise Products Partners (Dixie)	TX	VA	100,000			100,000
Product	Buckeye Eastern Products System	NJ	PA, NY	900,000			900,000 <sup>C</sup>
Crude oil	Portland Pipe Line	ME	Quebec	410,000	410,000 <sup>D</sup>		

A = Plantation line resumed normal operations on all pipeline segments.

B = TEPPCO pipeline segments A-3, A-4, A-5 (all in PA) were isolated on August 26, and back to full operating capacity on August 30.

C = Buckeye lines returned to near normal operations on August 29.

D = Portland-Montreal 24” main line was isolated and shut down before storm; the pipeline is expected to begin operating at reduced rates on August 31.

- The current status of terminals reporting as shut down is summarized in the following table.



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

Impacted Terminals in the Path of Irene as of 8/31/11 8:00 AM EDT

Table with 4 columns: Company Name, Location, Shut Down Date, Restart Date. Rows include ConocoPhillips, Enterprise Products Partners, ExxonMobil, Magellan Midstream Partners, Motiva Enterprises, and NuStar.

Est. = estimated, exp. = expected

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

- The U.S. Coast Guard reports that Baltimore, North Carolina, Philadelphia (Delaware Bay), New York City, New Jersey, Virginia (Hampton Roads), Long Island Sound, Boston, and Providence are all open.

Electricity Restoration Activities by State:

Connecticut:



- The United Illuminating Company (UI) reported yesterday (August 30) that its assessment crews identified 103 damaged poles, 450 sections of electric wire which will need to be replaced and 2,000 trees in need of clearing. UI has crews in from Florida, Missouri, North Carolina, Wisconsin, and Indiana and in total there are 208 crews working. This includes 88 overhead line crews, 59 tree-clearance crews, 29 patrol crews and 32 service crews. The company plans to provide updated restoration times today (August 31). Connecticut Light & Power (CL&P) reported August 29 that it could be a week or more before all of its customers are restored. As of August 30, 900 line and tree crews were working across the state with additional crews arriving daily. These crews are from Canada, Florida, Ohio, Kentucky, Pennsylvania, Tennessee, the Carolinas, Alabama, Michigan, and Massachusetts. By Friday (September 2), CL&P expects to have nearly 1,200 crews in the field.

Delaware



- DELMARVA Power expects to complete the restoration by noon Thursday (September 1), with the vast majority restored by midnight today (August 31).



## District of Columbia:



- Pepco, serving D.C. and Maryland, continues to estimate that it will restore service to all of their customers by Thursday evening (September 1).

## Maine:



- Central Maine Power Company (CMP) stated on August 30 that the company expects to complete all storm repairs by late Thursday night. CMP said that additional crews were brought in from out of state, increasing the field workforce to more than 750 workers, assisted by hundreds of support personnel. CMP has completed about 95 percent of its system assessment, and all of the three-phase lines have been re-energized. Crews have found 259 broken poles, and replaced more than 205 through the afternoon of August 30.
- Bangor Hydro estimated that all customers would be restored by last night (August 30).

## Maryland:



- Baltimore Gas and Electric Company (BGE) expects to restore service to the vast majority of customers to by late Friday (September 2), with some scattered outages extending into Saturday (September 3). BGE has more than 5,000 employees, contractors, and out-of-state linemen working on restoration today (August 31).
- Pepco, serving D.C. and Maryland, continues to estimate that it will restore service to all of their customers by Thursday evening (September 1).

## Massachusetts:



- National Grid reported August 30 that they expect to have restoration estimates for New England communities by the end of the day. The company has 3,500 restoration and support personnel supporting its response effort. As of August 30, a damage assessment in Massachusetts was ongoing. So far the company has found 125 poles need to be replaced. National Grid also said 20 of 27 transmission lines that were out of service have been restored.
- NSTAR estimated today (August 31) that all customers will be restored by 10:00 pm Saturday (September 3). A list of expected restoration times by community is posted on their website.

## New Hampshire:



- Public Service of New Hampshire (PSNH) estimates that it will restore power to 99 percent of its customers by midnight tonight (August 31). The company's 120 line and contract crews already in place were joined by another 100 additional contract crews yesterday (August 30) from as far away as Tennessee, Missouri, and Ohio.



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

- New Hampshire Electric Co-op (NHEC) estimates that all affected customers will be restored by noon today (August 31). NHEC had 165 people in the field and an additional 25 were to arrive yesterday (August 30) from Pennsylvania. NHEC crews have been joined in the field by utility crews from five Massachusetts municipal electric companies and four private utility construction companies.

### New Jersey:



- Jersey Central Power and Light (JCP&L) continues to estimate that the majority of their customers will be restored by the weekend with full restoration by early next week. JCP&L has more than 4,000 employees assisting with restoration.
- **Public Service Electric & Gas (PSE&G) expects complete restoration of customers in Bergen, Hudson, Essex, Passaic, Burlington, Camden, Gloucester and Mercer counties by Friday (September 2). In the central NJ counties of Union, Middlesex, and Somerset affected by flooding PSE&G expects to restore service to all customers by Sunday (September 4). PSE&G has 6,000 employees supporting the restoration effort, including including crews from Wisconsin, West Virginia, Florida, Missouri, Ohio, Pennsylvania, and Tennessee.**
- Atlantic City Electric expects to have all customers restored by midnight Friday (September 2). Hundreds of Atlantic City Electric and mutual assistance crews are working to restore customers.
- Orange & Rockland (O&R) continues to report 95 percent of the customers affected should see service return by midnight Friday (September 2). The rest of the customers who lost their power in the hurricane will be restored to service over the weekend.

### New York:



- National Grid expects to restore power to customers in Troy by the afternoon of August 30, to customers in Hudson and Saratoga by noon August 31 and the remaining customers by midnight Thursday (September 1). **The company reports more than 3,000 people are dedicated to the effort and as of August 30, National Grid has line crews (249 company, 352 foreign) and tree crews (215 company) dedicated to the effort.**
- Orange & Rockland (O&R) continues to report 95 percent of the customers affected should see service return by midnight Friday (September 2). The rest of the customers who lost their power in the hurricane will be restored to service over the weekend. More than 180 O&R, contractor and mutual aid crews from as far as Michigan and Texas are assessing damage and conducting system repairs.
- Con Edison, serving New York City and surrounding area, expected New York City customers to be restored late August 30 and most customers in Westchester County to be restored by late Thursday (September 1). **As of August 30, ConEd had line crews (144 company, 135 foreign), tree crews (127 foreign), service crews (101 company) working to restore power.**
- Long Island Power Authority (LIPA) reported 95% restoration is expected by midnight Friday September 2. **LIPA has line crews (154 company, 341 foreign), tree crews (80 company, 161**



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

foreign), service crews (274 company) and others deployed totaling 2,300 restoration personnel across Long Island.

- Central Hudson Gas and Electric Corporation reports that most of their outages are in the hardest-hit counties of Ulster, Albany and Greene, where restoration work has been hampered by severe flooding, impassable roadways and infrastructure destruction. The company estimates the majority of the customers in Columbia, Dutchess, Orange, and Putnam counties will be restored by today (August 31), while customers in Ulster and Greene counties can expect to be restored by Sunday (September 4). A workforce of line crews (55 company, 43 out-of-state), tree crews (41 out-of-state) and service crews (19 company, 12 out-of-state) is working to restore electricity.
- New York Service Gas and Electric (NYSEG) reports 90% restoration is expected by Friday (September 2), with the exception of the Oneonta area. NYSEG has line crews (149 company, 60 foreign) and tree crews (224 foreign) working to restore power.

## North Carolina:



- Dominion Virginia Power stated that they are on track to restore 75 percent of affected customers by tonight (August 31) and 90-95 percent by Friday (September 2). The company plans to have estimated restoration times for individual customers today (August 31).
- Progress Energy is aiming to restore power to 99 percent of affected customers by midnight tonight (August 31).

## Pennsylvania:



- Met-Ed estimates that the majority of their customers should be restored by midnight Friday (September 2).
- Pike County Power reports that the remaining customers out are located predominantly in the Matamoras area. The utility estimates that restoration will be completed by Friday (September 2) evening or Saturday (September 3) morning, depending on further damage assessments.
- PECO, serving southeastern Pennsylvania, reports that more than 4,000 workers are working on restoration, and expects most customers to be restored tonight (August 31). Service for a small number of customers with more extensive damage will be restored by the weekend.
- Penelec estimates that restoration is expected by midnight tonight (August 31).
- PPL has more than 2,300 employees and contractors involved in the restoration effort. The company was estimating 3 to 5 days to restore substantially all customers. PPL reported that it has 18 miles of power lines to replace, in addition to 900 damaged poles, 700 insulators, and 4,638 fuses to fix.
- UGI Electric reported yesterday (August 30) that customers remaining without power are located in Northern Luzerne and Southern Wyoming Counties. The utility is reporting more damage and services down as they work. The utility anticipates full restoration might take several days. They have all available crews and field personnel, but are finding extensive damage, which is slowing down the restoration process. UGI is working with local contractors to help provide mutual aid.

## Rhode Island:



- National Grid reported August 29 that there is substantial damage to their system and expects restoration to last well into the weekend in some of the hardest hit areas. The company has 3,500

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restoration and support personnel supporting its response effort. **On August 30 National Grid posted outages by community within the state.**

**Virginia:**



- Dominion Virginia Power stated that they are on track to restore 75 percent of affected customers by tonight (August 31) and 90-95 percent by Friday (September 2). Storm restoration for Virginia customers in the Washington, D.C. metro area was expected to be completed last night (August 30). The company plans to have estimated restoration times for individual customers today (August 31).

**Vermont:**



- Central Vermont Public Service (CVPS) stated yesterday (August 31) that complete restoration could take weeks. The company has 140 line trucks in the field with 600 contractors assisting in the restoration efforts.
- Vermont Electric Cooperative (VEC) reported at 11:45 pm on August 30 that the final restoration for VEC power outages caused by tropical storm Irene had been completed.
- Green Mountain Power (GMP) said August 30 that service has been restored to all customers who could receive power.

**ESF 12 Actions:**

- ESF 12 is staffing the FEMA National Response Coordination Center (NRCC) in Washington, DC, the Region I Regional Response Coordination Center (RRCC) in Boston, MA, the Region II RRCC in New York, NY, the Region IV RRCC in Atlanta, GA, and the Joint Field Office (JFO) in Albany, NY. ESF 12 staff are staffing the Virginia Emergency Operations Center (EOC) and the Maryland EOC. ESF 12 staff are coordinating restoration activities with the State of Connecticut. **ESF 12 has been demobilized from the Region III RRCC in Philadelphia, PA.**