



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

Hurricane Irene Situation Report #5

August 28, 2011 (3:00 PM 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. The National Hurricane Center (NHC) reports as of 11:00 am EDT, Tropical Storm Irene has maximum sustained winds of 60 mph. The storm is moving north-northeast at 26 mph and the center of the storm is passing over southeastern New York State and southern New England.
In response to Irene the following States declared a State of Emergency: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Rhode Island, Vermont, and Virginia.

Electricity Information:

Electricity Outages by State

Table with 3 columns: Impacted State, Electric Customer Outages, % of State Customers Without Power. 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.



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

Sources:

Outages obtained from company web sites and DOE communications.
Total State customers are based on 2009 EIA Customer Data.

- As of 2:00 pm EDT August 28, the impacted States report a total of 5,946,246 customers without power. This is an increase from the 4,010,345 reported in Situation Report #4. Preparation and restoration efforts by electric utilities are reported below.
Long Island Power Authority (LIPA), in response to the mandatory evacuations and to ensure the safety of first responders, shutdown power to Fire Island, Robert Moses Beach, Captree Beach, Gilgo Beach, West Gilgo Beach and Oak Beach on August 28.
Calvert Cliffs Nuclear Power Plant Unit 1 tripped yesterday (August 27) when a large piece of siding blew off the building and hit a main transformer. The facility is safe and stable, but an "unusual event" was declared. After the accident, the facility's Unit 2 was stable and operating at 100 percent power.
The Oyster Creek Nuclear Power Plant in New Jersey performed a voluntary controlled shut down last night (August 27).
PJM stated today (August 28) that its transmission system experienced minimal impacts and none of these impacts affected the overall reliability of its grid. Adequate generation capacity has been available, according to PJM, even though some generation facilities in their footprint were affected by Irene. PJM is the regional transmission organization (RTO) that coordinates the movement of wholesale electricity in 13 States (including Delaware, Maryland, New Jersey, North Carolina, Pennsylvania, and Virginia) and the District of Columbia.
ISO New England (ISO-NE) reported today (August 28) the bulk power system is operating reliably. The region has experienced outages on the bulk power system but these outages are not presenting any reliability issues. ISO-NE is the RTO for Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

Petroleum & Natural Gas Information:

- One refinery has shut down (ConocoPhillips Linden, NJ) and other refineries on the East Coast are operating at normal or slightly reduced rates.

Table with 8 columns: Refinery Impacted, Location, Capacity (B/D), Normal Operations, Shut Down, Restarting, Reduced Rates, Back to Normal. Title: Refineries in the Path of Irene as of 8/28/11 1:00 PM EDT

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.



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

Pipelines in the Path of Irene as of 8/28/11 1:00 PM 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	A		
LPG	Enterprise Products Partners (TEPPCO)	PA	PA	330,000	B		
LPG	Enterprise Products Partners (Dixie)	TX	VA	100,000			100,000
Product	Buckeye	NJ	PA, NY	N/A	C		
Crude oil	Portland Pipe Line	ME	Quebec	N/A	D		

A = Plantation pipeline segments 14W from Greensboro, NC to Newington, VA and 14R in Richmond, VA are down due to power failure on August 27

B = TEPPCO pipeline segments A-3, A-4, A-5 (all in PA) isolated on August 26, estimated restart on August 29

C = Buckeye lines running NJ-to-PA, PA-to-NY, and intrastate ME, estimated restart on August 29.

D = Portland-Montreal 24" main line was isolated and shut down until storm passes on August 28.

- On August 28, Colonial Pipeline reported that service has been restored in Selma, NC, and the company is working to restore service to Norfolk, VA, where there are power losses and standing water at some facilities. There have been no interruptions in the pipeline's service to Linden, NJ and New York Harbor.
- The current status of terminals reporting as shut down is summarized in the following table.

Impacted Terminals in the Path of Irene as of 8/28/11 1:00 PM EDT

Company Name	Location	Shut Down Date	Restart Date
ConocoPhillips	Linden, NJ	Exp. 8/28/11	
Buckeye Partners	Linden, NJ	8/27/11	8/29/11
Buckeye Partners	Inwood, NY	8/27/11	8/29/11
Buckeye Partners	Long Island City, NY	8/27/11	8/29/11
Buckeye Partners	JFK and LaGuardia airports, NY	8/27/11	8/29/11
Enterprise Products Partners (TEPPCO)	Providence, RI	8/27/11	
Enterprise Products Partners (TEPPCO)	Eagle, PA	8/26/11	exp. 8/30/11
ExxonMobil	Providence, RI	exp. 8/28/11	
KinderMorgan	Cateret, NJ	8/26/11 (unconfirmed)	
KinderMorgan	Staten Island, NY	8/26/11 (unconfirmed)	
Magellan Midstream Partners	Selma, NC	8/27/11	exp. 8/28/11
Magellan Midstream Partners	Richmond, VA	8/27/11	exp. 8/28/11
Magellan Midstream Partners	Wilmington, DE	8/27/11	
Magellan Midstream Partners	New Haven, CT	exp. 8/27/11	
Motiva Enterprises	Providence, RI	8/26/11	
NuStar	Virginia Beach, VA	8/25/11	exp. 8/30/11
NuStar	Wilmington, NC	8/26/11	
NuStar	Piney Point, MD	8/26/11	
NuStar	Salisbury, MD	8/26/11	
NuStar	Andrews AFB, MD	8/26/11	Exp. 8/30/11
NuStar	Baltimore, MD	8/26/11	
NuStar	Dumfries, VA	8/26/11	
NuStar	Linden, NJ	exp. 8/27/11	

exp. = expected



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

- The U.S. Coast Guard has shut all coastal and inland port from Virginia through Pennsylvania, and in Long Island Sound. The Port of Wilmington, North Carolina has reopened, but there is still restricted access into and out of the port through the Cape Fear Channel. Operations in other North Carolina ports are still restricted. The ports of New York and New Jersey are open with restrictions as assessments of facilities are beginning. Boston Harbor is now open, but under restrictions.

## Electricity Restoration Activities by State:

### Connecticut:



- Connecticut Light & Power reports as of 10:30 am today (August 28) they surpassed the outage record set by Hurricane Gloria in 1985 with over 486,000 customers now without power.

### Delaware



- Delaware Electric Cooperative, which services customers in Kent and Sussex county, expects to restore power to all of its customers today (August 28). The Cooperative has 15 repair crews along with three assessment crews in the restoration.
- DELMARVA Power stated today (August 28) they have no estimated time of restoration. The utility has 100 crews, including crews from PA, TX, LA, and OH, assisting in restoration activities.

### District of Columbia:

- Pepco, serving D.C. and Maryland, is completing damage assessments and restoration efforts today (August 28) as the weather permits. The company anticipates having restoration information for their system tonight. Pepco through the Mutual Assistance has 1,000 extra linemen, which they had to release some crews can get more from the south.

### Maryland:



- Pepco, serving D.C. and Maryland, is completing damage assessments and restoration efforts today (August 28) as the weather permits. The company anticipates having restoration information for their system tonight.
- Baltimore Gas and Electric (BG&E) expects that customers may experience multiple outages throughout the next several days, including extended outages while the utility continues restoration work. The hardest hit areas of service territory include Anne Arundel, Baltimore, Calvert and Prince George's Counties, and Baltimore City. The company has approximately 3,700 employees, contractors, and out-of-State linemen in place to assist with widespread customer outages from Hurricane Irene's impacts. BG&E today (Aug 28) announced that it has restored electric service to 93,000 customers and continues to work aggressively.



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

### Massachusetts:



- National Grid, servicing customers in Massachusetts, New Hampshire, New York and Rhode Island, has activated its storm emergency plan bringing in extra crews, pre-staging crews and materials, and identifying flood-prone areas.

### New Jersey:



- Atlantic City Electric has initiated its Incident Response Plan regarding the effects of Hurricane Irene. In order to limit storm damage and ensure the safety of customers and emergency service personnel, the company may need to de-energize the transmission infrastructure in flooded communities. **Atlantic City Electric will not begin damage assessments until weather permits.**
- Public Service Electric & Gas (PSE&G), serving New Jersey, expects the number of outages to climb as Hurricane Irene moves north. The utility is estimating that power restoration may take several days to a week. **PSE&G expects in addition to widespread electric outages, the heavy rain and storm surge may result in natural gas outages. Water could enter the utility's gas distribution system, as well as flood customers' basements and gas appliances.**

### New York:



- **Con Edison, serving New York City and surrounding area, reported this morning (August 28) that storm surge water levels do not indicate the need to shutdown any lines in downtown Manhattan or Brighton Beach Network**
- New York Public Service Commission reports utilities in New York are continuing to supplement internal crews with mutual aid. Combined, the investor owned electric utilities have secured over 770 external crews, of which approximately 360 will be used to support Con Edison's restoration activities. These figures do not include crews reporting to Long Island Power Authority. The crews have been secured from as far away as Colorado, Kansas, Texas, Mississippi, Wisconsin, Michigan, Illinois, and Indiana. Most crews are arrived Friday (August 27), ahead of the storm, to expedite restoration activities. In addition, Con Edison has supplemented its staffing with 205 damage assessors to survey the impact of the storm.
- Severe Weather Procedures have been initiated in New Jersey by Exelon/Amergen and in New York by Entergy.

### North Carolina:



- Progress Energy Carolinas reported today (August 28) that it anticipates it will take several days to complete repairs. The company plans to complete a damage assessment by tonight and will provide



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

a return to service estimate for all its customers. The company has 1,200 crew members, including crews from five States, assessing Irene damage and restore service.

- Dominion Power reports damage assessment continues, overall estimate of restoration times to be available to all customers by noon Monday (August 29). Dominion has over 5,000 line workers from six States assisting crews in the restoration.

### Pennsylvania:



- PECO, serving southeastern Pennsylvania, has mobilized more than 2,500 field personnel and hundreds of back-office employees to respond to the effects of Irene.

### Virginia:



- Dominion Virginia Power reports they have full generating capacity and no issues with storm related access to their sub-stations and major infrastructure. They are currently assessing damages to those facilities and distribution networks at the present time, overall estimate of restoration times to be available to all customers by noon Monday (August 29). Dominion has over 5,000 line workers from six States assisting crews in the restoration.
- Rappahannock Electric Cooperative (REC), servicing 22 Virginia counties has dispatched crews to begin full restoration efforts today (August 28) after assessing the storm impact throughout the night. Due to the extent of damage, the Cooperative anticipates an extended restoration period.

### 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 III RRCC in Philadelphia, PA, and the Region IV RRCC in Atlanta, GA. ESF 12 staff have been activated to the Virginia Emergency Operations Center (EOC).