Hurricane Florence | Report #2

EXECUTIVE SUMMARY
As of 2:00 PM EDT, Hurricane Florence was 110 miles east-southeast of Wilmington, North, moving northwest at 10 MPH, with maximum sustained winds of 105 MPH. Portions of the Outer Banks of North Carolina began to experience tropical storm-force winds Thursday morning and on the forecast track, the center of Florence will approach the coasts of North and South Carolina later today, then move near or over the coast of southern North Carolina and eastern South Carolina late tonight or early Friday.

Electricity Sector Summary
- North Carolina has begun to experience power outages due to Hurricane Florence. As of 3:00pm, there were 8,427 customer outages (<1%), across the state.
- Over 40,000 workers from 17 states have been mobilized to support restoration efforts. Crews, mutual assistance crews, and equipment have been pre-positioned outside the potentially impacted areas.

Oil & Natural Gas Sector Summary
- There are reports of localized retail fuel station outages due to increased demand from evacuees. Overall supply of gasoline across the region is at, or above, the 5-year range. States are working closely with industry to expedite resupply shipments to impacted areas.
- Ports across the area potentially impacted by Hurricane Florence have closed or are open with restrictions.
As of 2:00 PM EDT, Hurricane Florence was 110 miles east-southeast of Wilmington, North Carolina and 165 miles east of Myrtle Beach, South Carolina, moving northwest at 10 MPH, with maximum sustained winds of 105 MPH (category 2). Hurricane-force winds extend outward up to 80 miles from the center and tropical storm-force winds extend outward up to 195 miles. Florence is expected to continue moving northwest with a decrease in forward speed today. A turn to the west-northwest and west is expected tonight, followed by a slow west-southwestward motion Friday night and Saturday. On the forecast track, the center of Florence will approach the coasts of North and South Carolina later today, then move near or over the coast of southern North Carolina and northeastern South Carolina late tonight or early Friday. As of 8:00 AM Thursday, tropical storm-force winds have were impacting portions of the Outer Banks along the coast of North Carolina.

Florence is forecast to produce 20 to 30 inches of rainfall across Coastal North Carolina and into far northeastern South Carolina, with isolated totals up to 40-inches. Across the rest of South and North Carolina and into southwest Virginia, 6 to 12 inches is expected, with isolated totals up to 15-inches. Florence is also forecast to produce significant storm surge, with amounts of 9 to 13 feet between Cape Fear and Cape Lookout, 6 to 9 feet from Cape Lookout to the Ocracoke Inlet and from North Myrtle Beach to Cape Fear. Storm surge of 2 to 6 feet is possible across other coastal areas within the impacted areas, if storm surge occurs during high-tide.

A hurricane warning is in effect from South Santee River, South Carolina to Duck, North Carolina, as well as the Albemarle and Pamlico Sounds. A hurricane watch is in effect from Edisto Beach, South Carolina to South Santee River, South Carolina and a tropical storm warning is in effect north of Duck, North Carolina to Cape Charles Light, Virginia, as well as the Chesapeake Bay, south of New Point Comfort.
### ELECTRICITY SECTOR

#### POWER OUTAGES

**ELECTRICITY OUTAGES AS OF 3:00 PM EDT 09/13/2018**

<table>
<thead>
<tr>
<th>Impacted State</th>
<th>Current Confirmed Customer Outages</th>
<th>Percent of Confirmed State Customers without Power</th>
<th>24-hr Peak Customer Outages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgia</td>
<td>562</td>
<td>&lt;1%</td>
<td>N/A</td>
</tr>
<tr>
<td>North Carolina</td>
<td>8,427</td>
<td>&lt;1%</td>
<td>N/A</td>
</tr>
<tr>
<td>South Carolina</td>
<td>1,028</td>
<td>&lt;1%</td>
<td>N/A</td>
</tr>
<tr>
<td>Virginia</td>
<td>1,380</td>
<td>&lt;1%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,397</strong></td>
<td>-</td>
<td>*</td>
</tr>
</tbody>
</table>

*There is no sum of the Peak Customer Outage column because peaks for individual utilities occur at different times; a total would not reflect peak outages.*

**Note:** Note not all outages reported at this time are due to Hurricane Florence.

### NUCLEAR GENERATION

- Per Nuclear Regulatory Commission procedures, nuclear power plants will shut down two hours prior to forecast arrival of hurricane-force winds.

### BACKGROUND AND PREPARATIONS

- Restoration efforts and estimated restoration times will not begin until the storm has passed and weather conditions permit. Crews are unable to operate in heavily flooded areas and when wind speeds are greater than 30 MPH.
- Utility restoration crews in South Carolina are coordinating and preparing with debris removal crews in ahead of the response window.
- The potentially affected area is served by several utilities, including investor owned utilities, municipal utilities, and cooperative utilities. The three associations that represent these unities and manage the mutual assistance networks, Edition Electric Institute (EEI), American Public Power Association (APPA), and the National Rural Electric Cooperative Association (NRECA), have been in regular contact with DOE and the potentially affected entities.
- Over 40,000 workers from 17 states have been mobilized to support restoration efforts. Crews, mutual assistance crews, and equipment have been pre-positioned outside the potentially impacted areas.
  - This workforce includes crews and support personnel from the potentially impacted companies, contractor resources, and additional workers from mutual assistance partners outside the expected impact area. Additional electric companies outside of the storm zone continue to monitor and assess the situation and are ready to provide assistance.
PRODUCT PIPELINES
- Pipeline operators are following storm procedures.
- No issues have been reported at this time.

PORTS
- On September 13, the U.S. Coast Guard (USCG) reported that reports dredges and survey boats are ready to support port restoration.
- The USCG has set the following conditions for Southeast ports.

<table>
<thead>
<tr>
<th>Port Sector</th>
<th>Port</th>
<th>Status</th>
<th>Date Stamp</th>
<th>2016 Inbound Products (b/d)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maryland NCR</td>
<td>Baltimore, MD</td>
<td>Port Condition Whiskey. Open with restrictions.</td>
<td>09/10</td>
<td>29,000**</td>
</tr>
<tr>
<td></td>
<td>Washington, DC</td>
<td>Port Condition Whiskey. Open with restrictions.</td>
<td>09/10</td>
<td>2,000</td>
</tr>
<tr>
<td>Hampton Roads</td>
<td>Norfolk, VA</td>
<td>Port Condition Modified Zulu. Select waterways closed. Ports open with restrictions.</td>
<td>09/12</td>
<td>7,000</td>
</tr>
<tr>
<td></td>
<td>Newport News, VA</td>
<td>Port Condition Modified Zulu. Select waterways closed. Ports open with restrictions.</td>
<td>09/12</td>
<td>3,000</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Wilmington, NC</td>
<td>Port Condition Zulu. Closed.</td>
<td>09/12</td>
<td>6,000</td>
</tr>
<tr>
<td>Charleston</td>
<td>Charleston, SC</td>
<td>Port Condition Zulu. Closed.</td>
<td>09/12</td>
<td>22,000</td>
</tr>
<tr>
<td>Savannah</td>
<td>Savannah, GA</td>
<td>Port Condition Yankee. Open with restrictions.</td>
<td>09/13</td>
<td>15,000</td>
</tr>
</tbody>
</table>

*Transportation fuels only (gasoline, distillate, and jet fuel)
**The Port of Baltimore also had 11,000 b/d of petroleum products shipped outbound in 2016.
Source: U.S. Coast Guard Homeport, U.S. Army Corp of Engineers, EIA Company Level Imports
PETROLEUM REFINERIES
- There are no refineries in the immediate impact zone of Hurricane Florence (NC, SC, GA, VA).

PRODUCT TERMINALS
- No petroleum product distribution terminals have reported issues at this time.
- No ethanol rail terminals have reported issues at this time.

FUEL STOCKS
- For the week ending on September 7, the Lower Atlantic Region (WV, VA, NC, SC, GA, FL) had 27.9 million barrels of total gasoline stocks, or 10% higher than the 5-year average for this time of year, according to the U.S. Energy Information Administration (EIA). Also, the Lower Atlantic Region had 12.5 million barrels of total distillate stocks, or 5% lower than the 5-year average for this time of year. For these fuels, inventory levels include volumes at refineries, bulk terminals and blenders, and in pipelines. EIA does not survey inventories held at retail stations.

RETAIL FUEL STATIONS
- There are reports of localized retail fuel station outages due to increased demand from evacuees. States are working closely with industry to expedite resupply shipments to impacted areas.
EMERGENCY DECLARATIONS & WAIVERS

EMERGENCY DECLARATIONS
To provide vital supplies and transportation services to a disaster area in the United States, emergency declarations may be issued by the President, Governors of States, or Federal Motor Carrier Safety Administration (FMCSA). These declarations trigger the temporary suspension of certain Federal safety regulations, including Hours of Service, for motor carriers and drivers engaged in specific aspects of the emergency relief effort. See 49 CFR 390.23 for the actual emergency regulation.

Sources: U.S. Department of Transportation; Governor Office Websites

FUEL WAIVERS
The Environmental Protection Agency (EPA), working with the Department of Energy (DOE), responds quickly to address fuel supply disruptions caused by hurricanes or other natural disasters by issuing emergency waivers of certain fuel standards in affected areas. The table below lists fuel-related waivers issued by the EPA:

<table>
<thead>
<tr>
<th>State(s)</th>
<th>Waiver</th>
<th>Effective Dates</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina, South Carolina</td>
<td>RVP requirements</td>
<td>09/11 - 09/15</td>
<td>Active</td>
</tr>
<tr>
<td>North Carolina, South Carolina</td>
<td>RFG comingling regulations</td>
<td>09/11 - 10/01</td>
<td>Active</td>
</tr>
<tr>
<td>Georgia, parts of Virginia</td>
<td>RVP requirements</td>
<td>09/12 - 09/15</td>
<td>Active</td>
</tr>
<tr>
<td>Georgia, parts of Virginia</td>
<td>RVP requirements; amended</td>
<td>09/13 - 09/15</td>
<td>Active</td>
</tr>
<tr>
<td>Georgia, parts of Virginia</td>
<td>RFG comingling regulations</td>
<td>09/12 - 09/30</td>
<td>Active</td>
</tr>
<tr>
<td>Southern Virginia</td>
<td>RFG requirements</td>
<td>09/12 - 09/30</td>
<td>Active</td>
</tr>
</tbody>
</table>

Sources: U.S. Environmental Protection Agency; State Governments
In order to minimize or prevent the disruption of an adequate supply of gasoline for evacuees in the designated areas, the EPA has issued temporary waivers of:

- **Reid vapor pressure (RVP) requirements** at 40 C.F.R. § 80.27, thus allowing regulated parties to produce, sell or distribute winter gasoline (including gasoline blendstocks for oxygenate blending (BOBs)) with higher RVP than normally allowed during the high ozone season. On September 13, EPA issued an emergency waiver that amended the September 12 waiver to further increase the allowable RVP for conventional gasoline in Georgia. These waivers are effective through September 15, 2018, which is the end of the high ozone season.

- **Reformulated gasoline (RFG) regulations** at 40 C.F.R. § 80.78(a)(7), thus allowing the commingling of any RBOB with any other gasoline, blendstock, or oxygenate in the designated areas.

- **Reformulated gasoline requirements** in Southern Virginia RFG areas, thus allowing regulated parties to produce, sell or distribute conventional winter gasoline instead of RFG in those areas.

**OTHER FEDERAL WAIVERS**

- On September 13, PHMSA issued an Emergency **Stay of Enforcement for pipeline and LNG facility operators** affected by Hurricane Florence. Under the stay, PHMSA does not intend to take enforcement action relating to operators’ temporary noncompliance with qualification requirements found in 49 C.F.R. §§ 192.801–192.809 and 195.501–195.509, or pre-employment and random drug testing requirements found in 49 C.F.R. § 199.105(a), (c) arising from the use of personnel for pipeline activities related to response and recovery. The stay will remain in effect until October 28, unless PHMSA determines an extension is required.

- On September 12, PHMSA issued a **Waiver of the Hazardous Materials Regulations** (HMR, 49 C.F.R. Parts 171-180) to allow the EPA and USCG to conduct their ESF #10 response activities to safely remove, transport, and dispose of hazardous materials. Persons conducting operations under the direction of EPA Regions 3 or 4 or USCG Fifth or Seventh Districts within the Hurricane Florence emergency areas of South Carolina, North Carolina, and Virginia are authorized to offer and transport non-radioactive hazardous materials under alternative safety requirements imposed by EPA Regions 3 or 4 or USCG Fifth or Seventh Districts when compliance with the HMR is not practicable. Under this Waiver Order, non-radioactive hazardous materials may be transported to staging areas within 50 miles of the point of origin. Further transportation of the hazardous materials from staging areas must be in full compliance with the HMR. This Waiver Order will remain in effect for 30 days from the date of issuance.