Tropical Depression Florence | Report #7

EXECUTIVE SUMMARY
As of 5:00 AM EDT, Tropical Depression Florence was 20 miles south of Columbia, South Carolina, moving west at 8 MPH, with maximum sustained winds of 35 MPH. A turn toward the northwest with an increase in forward speed is expected today, followed by a turn toward the north and northeast on Monday. On the forecast track, the center of Florence will move across the western Carolinas today and then recurve over the Ohio Valley and Northeast on Monday and Tuesday. The number of power outages in North and South Carolina appear to have stabilized and restoration efforts are underway.

Electricity Sector Summary
- The following outages have been reported at as of 8:00 AM:
  - North Carolina: 684,392 customer outages (13.8%) – Decrease of 8.3% since last report
  - South Carolina: 54,653 customer outages (2.2%) – Decrease of 42.6% since last report
- Crews in the impacted area have begun to perform damage assessments and restorations as the weather and flooding permit.
- Utilities are expected to begin to provide initial estimated restoration timelines early this week.
- DOE is working with utilities on access and routing to impacted areas.
- Restoration efforts will be limited until the storm moves out of the area. Crews are unable to operate in heavily flooded areas or when wind speeds are over 30 MPH.

Oil & Natural Gas Sector Summary
- All ports have reopened except Wilmington, North Carolina.
- There are localized retail fuel station outages due to increased demand from evacuees.
  - Gasoline inventories at terminals and pipelines in the Lower Atlantic region were 10% above the 5-year average as of September 7.
  - States are working with industry to expedite resupply shipments to impacted areas.
  - Resupply shipments were suspended during the storm.
- A regional hour-of-service waiver is in effect for the impacted area and surrounding states.
TROPICAL DEPRESSION FLORENCE

As of 5:00 AM EDT, Tropical Depression Florence was 20 miles south of Columbia, South Carolina, moving west at 8 MPH, with maximum sustained winds of 35 MPH. A turn toward the northwest with an increase in forward speed is expected today, followed by a turn toward the north and northeast on Monday. On the forecast track, the center of Florence will move across the western Carolinas today and then recurve over the Ohio Valle and Northeast on Monday and Tuesday.

An additional 5 to 10 inches of rain, with storm totals of 15 to 20 inches, is expected in western North Carolina. An additional 4 to 6 inches of rain is expected across southern North Carolina into northern South Carolina, while 2 to 4 inches is forecast for west-central Virginia. All hurricane and tropical storm warnings and watches have been terminated. Flood and flash flood warnings are in effect throughout the impacted area.
ELECTRICITY SECTOR

POWER OUTAGES

Outage Map (as of 8:00 AM EDT)

<table>
<thead>
<tr>
<th>Impacted State</th>
<th>Current Confirmed Customer Outages</th>
<th>Percent of Total Customers in State without Power</th>
<th>24-Hour Peak Customer Outages</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina</td>
<td>684,392</td>
<td>13.8%</td>
<td>845,952</td>
</tr>
<tr>
<td>South Carolina</td>
<td>54,653</td>
<td>2.2%</td>
<td>167,476</td>
</tr>
<tr>
<td>Virginia</td>
<td>702</td>
<td>&lt;1%</td>
<td>4,960</td>
</tr>
<tr>
<td>Total</td>
<td>843,336</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.

ELECTRICITY IMPACTS & RESTORATION EFFORTS

- Crews across the impacted area have begun to perform damage assessments and restorations as weather conditions permit.
- As of Saturday evening, September 15, Duke Energy had restored power to more than 637,000 customers in North Carolina and South Carolina, out of more than 1.1 million total affected customers. **Note total affected customer is all customers affect during a storm, not current or peak outages.**
- Crews in Georgia were staged to provide assistance in North and South Carolina once the storm passes.
- Restoration efforts and damage assessments will be limited 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.
NORTH CAROLINA

684,392 Customer Outages ↓ 8.3% since Sep 15, 8:30 AM EDT | 845,952 24-hr Peak Outages

- **Significantly Impacted Utilities**
  - Duke Energy (Carolinas): 398,906
  - Brunswick Electric Membership: 72,326
  - Jones Onslow Electric Membership: 51,270
  - Lumbee River Electric Membership: 33,283

- **Customer Outages by Region:**
  - Eastern North Carolina: 588,496 customer outages
  - Central North Carolina: 76,336 customer outages
  - Western North Carolina: 19,560 customer outages

SOUTH CAROLINA

54,653 Customer Outages ↓ 42.6% since Sep 15, 8:30 AM EDT | 167,476 24-hr Peak Outages

- **Significantly Impacted Utilities**
  - Duke Energy (Carolinas): 33,562
  - South Carolina Cooperatives: 19,154

VIRGINIA

702 Customer Outages ↓ 62.1% since Sep 15, 8:30 AM EDT | 4,960 24-hr Peak Outages

BACKGROUND AND PREPARATIONS

- The affected area is served by several utilities, including investor owned utilities, municipal utilities, and cooperative utilities. The three associations that represent these utilities 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.

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

**PRODUCT PIPELINES**
- Pipeline operators are following storm procedures.
- No issues have been reported at this time.

**PORTS**
- 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 Normal. Open without restrictions.</td>
<td>09/15</td>
<td>29,000**</td>
</tr>
<tr>
<td></td>
<td>Washington, DC</td>
<td>Port Condition Normal. Open without restrictions.</td>
<td>09/15</td>
<td>2,000</td>
</tr>
<tr>
<td>Hampton Roads</td>
<td>Norfolk, VA</td>
<td>Port Condition Normal. Open without restrictions.</td>
<td>09/15</td>
<td>7,000</td>
</tr>
<tr>
<td></td>
<td>Newport News, VA</td>
<td>Port Condition Normal. Open without restrictions.</td>
<td>09/15</td>
<td>3,000</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Wilmington, NC</td>
<td>Port Condition Zulu. Remains closed due to power loss &amp; toppled containers breaching perimeter fence.</td>
<td>09/14</td>
<td>6,000</td>
</tr>
<tr>
<td>Charleston</td>
<td>Charleston, SC</td>
<td>Port Readiness Condition IV. Open without restrictions.</td>
<td>09/16</td>
<td>22,000</td>
</tr>
<tr>
<td>Savannah</td>
<td>Savannah, GA</td>
<td>Port Readiness Condition IV. Open without restrictions.</td>
<td>09/15</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).

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 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

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>Expired</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>Expired</td>
</tr>
<tr>
<td>Georgia, parts of Virginia</td>
<td>RVP requirements; amended</td>
<td>09/13 09/15</td>
<td>Expired</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

Note: RVP waivers were effective through September 15, 2018, which was the end of the high ozone season. The waiver is no longer required.
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 were effective through September 15, 2018, which was 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.

- On September 14, EPA issued No Action Assurances (NAAs) as requested by North Carolina, South Carolina, Virginia, and Georgia to help avoid delays in fuel distribution. EPA policy allows the Agency to issue NAAs in cases where it is necessary to avoid extreme risks to public health and safety and where no other mechanism can adequately address the matter. Under these NAAs, EPA will not pursue enforcement actions against tanker trucks under air quality regulations governing the testing for tank tightness and associated documentation.

- On September 14, EPA issued two No Action Assurances (NAAs) as requested by Virginia and North Carolina regarding the loading and unloading of fuel at bulk gasoline terminals, pipeline breakout stations, marine tank vessel loading operations, and gasoline loading racks. Pursuant to these NAAs and the conditions contained in them, EPA will not pursue enforcement actions for violations of the Clean Air Act vapor recovery requirements for these fuel loading and unloading operations in those states.