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Superstorm Sandy: DOE's Efforts to Help the Nation Recover

November 30 marked the end of the 2012 Atlantic hurricane season—another busy season in a multi-decadal period of high activity in the Atlantic that extends back to 1995. During this current period of elevated activity, over 70 percent of the hurricane seasons have been above the 30-year (1981-2010) seasonal average. These periods of high activity in the Atlantic basin, according to the National Oceanic and Atmospheric Administration (NOAA), will typically last from 25 to 40 years.

DOE senior program manager, Anthony Lucas, briefs President Obama, FEMA Administrator, Craig Fugate, and other officials at FEMA Headquarters. *FEMA photo/Aaron Skolnik*

In keeping with this busy climatic pattern, the 2012 season produced 19 named storms, 10 of which became hurricanes, exceeding the seasonal average of 12 named storms and 6 hurricanes. During the course of the season, only one hurricane became a major hurricane (Category 3 or higher on the Saffir -Simpson Hurricane Wind Scale), representing the lowest number of major hurricanes to occur in the Atlantic basin since 1997, and slightly below the seasonal average of 3 major hurricanes. 2012 was the third consecutive season with nineteen named storms in the Atlantic, just one of seven seasons in the last 162 years with the same number. 2012 was also the second consecutive season that the Atlantic and the Northeast suffered the devestating consequences of a named storm.

An Unprecedented Storm

The 2012 season got off to an early start with the formation of tropical storms Alberto and Beryl during the month of May—well in advance of the official start of the Atlantic hurricane season on June 1. While there were four U.S. land-falling storms during this past season, it is catastrophic Hurricane Sandy—or Superstorm Sandy—for which the 2012 Atlantic hurricane season will always be remembered.

Hurricane Sandy, classified as a strong post-tropical storm prior to making landfall near Cape May, New Jersey, earned the moniker "Superstorm Sandy" because it resulted from the somewhat rare integration of a warm-core tropical cyclone and a strong mid-latitude cold-core cyclone, ultimately evolving into what amounts to a hurricane within a nor'easter. Superstorm Sandy was a colossal system that generated the lowest pressure ever recorded at landfall in the Northeastern United States, and with tropical storm-force winds extending over 500 miles from the center of an immense circulation that stretched for nearly 1500 miles. Sandy's torrential rainfall, coastal storm surge, and wind and inland flooding, along with extreme blizzard conditions, caused 8.6 million customer power outages across 21 states. A state of emergency was declared in the northeast in 12 states and the District of Columbia. The Department of Energy's response efforts in the wake of Superstorm Sandy focused on three areas: providing situational awareness, assisting with power restoration, and addressing fuel shortages and distribution issues.

Situational Awareness

DOE produced and publicly disseminated twice-daily situation reports which provided a detailed summary of the impacts to the energy sector—power outages and the status of restoration activities as well the status of petroleum refineries, pipelines, storage terminals, natural gas pipelines, and nuclear power plants. In addition, DOE activated and staffed the Energy Response Center (ERC) at DOE Headquarters.

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From the ERC, DOE utilized Environment for Analysis of Geo-Located Energy Information (EAGLE-I) to monitor the Nation's energy infrastructure in real-time, geospatially map complex energy assets and systems, and create and distribute energy-related maps and visualization products.

Over 30 DOE staff members deployed to various Federal Emergency Management Agency (FEMA) sites to support Federal response efforts, working closely with other Federal partners, state and local government entities, and representatives from the energy sector. DOE staff deployed to the National Response Coordination Center (NRCC) at FEMA Headquarters in Washington, DC; the FEMA Region I Regional Response Coordination Center (RRCC) in Boston, Massachusetts; the Region II RRCC in Colts Neck, New Jersey; the Region III RRCC in Philadelphia, Pennsylvania; and the New York State Emergency Operations Center (EOC) in Albany, New York.

Power Restoration

Secretary of Energy, Steven Chu, second from right, OE Deputy Assistant Secretary Bill Bryan, second from left, and FEMA Deputy Administrator, Rich Serino, far left, discuss power restoration with Public Service Electric and Gas Company engineers at the Hoboken electrical substation. *FEMA photo/Jocelyn Augustino*

Restoring power to the millions of Americans impacted by Superstorm Sandy was a top priority. To facilitate restoration, an assessment team of experts from OE, accompanied by Deputy Assistant Secretary William Bryan, performed damage assessments of some of the hardest hit areas, and met with local officials and utility representatives to discuss their needs. Secretary of Energy Steven Chu also toured the devastated region where he consulted with utility crews, state and local leaders, and industry officials to discuss ongoing response and recovery efforts. The Secretary, along with Deputy Secretary Daniel Poneman and Assistant Secretary Patricia Hoffman, participated in daily conference calls with DOE senior staff and with CEOs and other executives from the impacted utilities to ensure the Department was doing everything possible to aid the restoration process. Based out of FEMA's NRCC, DOE also led an interagency Energy Restoration Task Force which was established to more efficiently coordinate and deploy the resources of the Federal Government and eliminate impediments to the restoration process. Three of DOE's Power Marketing Administrations, Bonneville Power Administration (BPA), Southwestern Power Administration (SWPA), and Western Area Power Administration (WAPA), sent 235 staff and about 200 pieces of equipment to help restore power to downed lines and repair substations.

Fuel Issues

For the first time since the creation of the Northeast Home Heating Oil Reserve, the President directed DOE to loan ultra-low sulfur diesel fuel from the reserve to the Department of Defense for distribution to state, local and federal responders in the New York and New Jersey area for emergency equipment such as generators and water pumps, and to fuel responder vehicles and equipment. To ease fuel shortages, DOE loaned the Defense Logistics Agency (DLA) additional fuel from the reserve for fuel distributors in the State of Connecticut. Additionally, DOE, in coordination with Federal partners, helped to issue fuel waivers to allow for some flexibility in the variety of fuel products that could be used. DHS, in coordination with DOE and other Federal partners, issued a waiver of the Jones Act, thereby permitting foreign-flagged vessels to ship petroleum products from the Gulf of Mexico to Northeastern ports. The Department of Energy also established a team to assist local authorities restore power to gas stations and help them obtain gasoline supplies.

President Obama meets with Cabinet officials at FEMA to discuss Sandy response. *FEMA photo/Jocelyn Augustino*

The Department of Energy and its federal partners remain engaged in ongoing efforts, including the Hurricane Sandy Rebuilding Task Force, a White House sponsored federal activity to support state and local governments as they create a process through which to rebuild stronger, safer, and more resilient communities.