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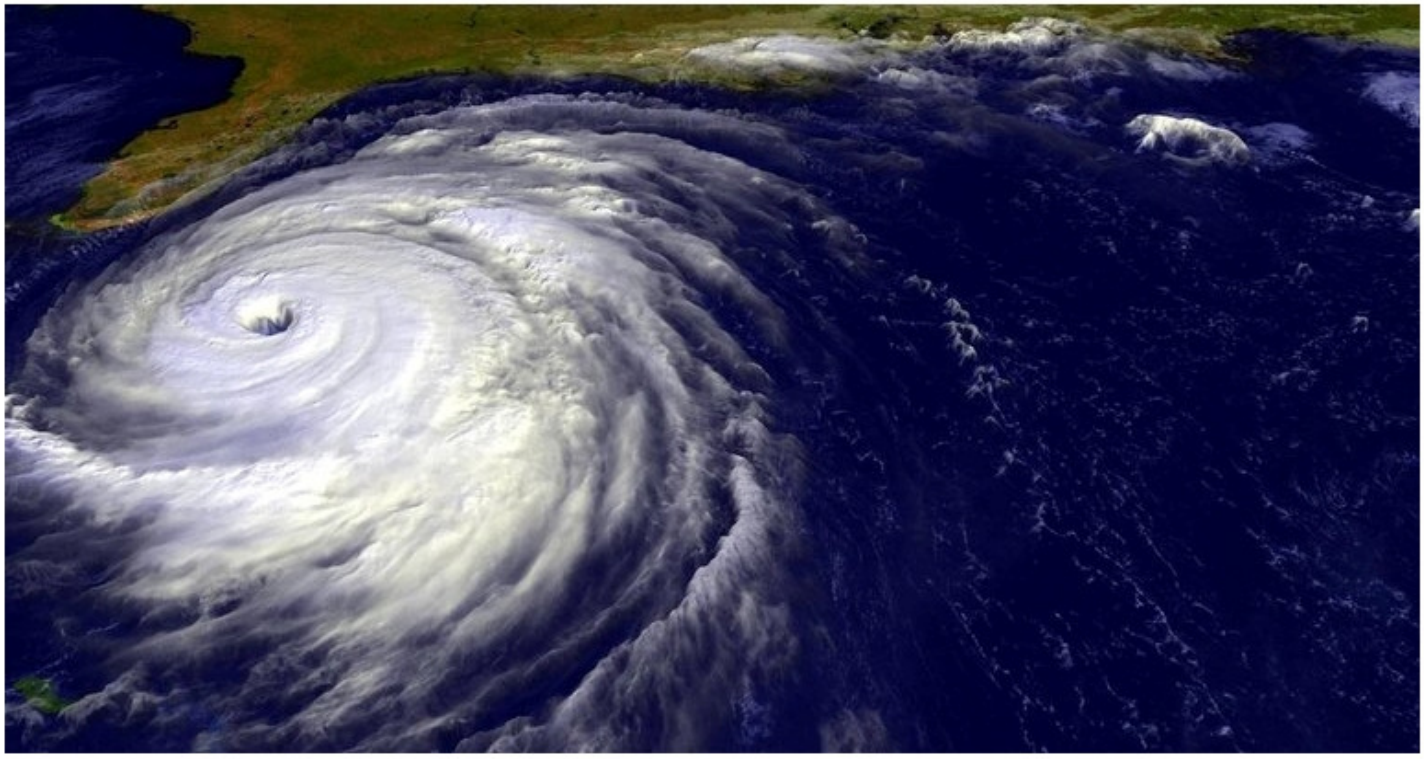
GOVERNMENT TECHNOLOGY

Map Mashes Hurricane Information with Energy Infrastructure Data

BY SARAH RICH / JULY 10, 2013

A new map from the U.S. Energy Information Administration displays information that predicts the path of hurricanes along with GIS data on energy infrastructure, allowing those in the energy industry to keep an extra close watch on natural disasters as they unfold.



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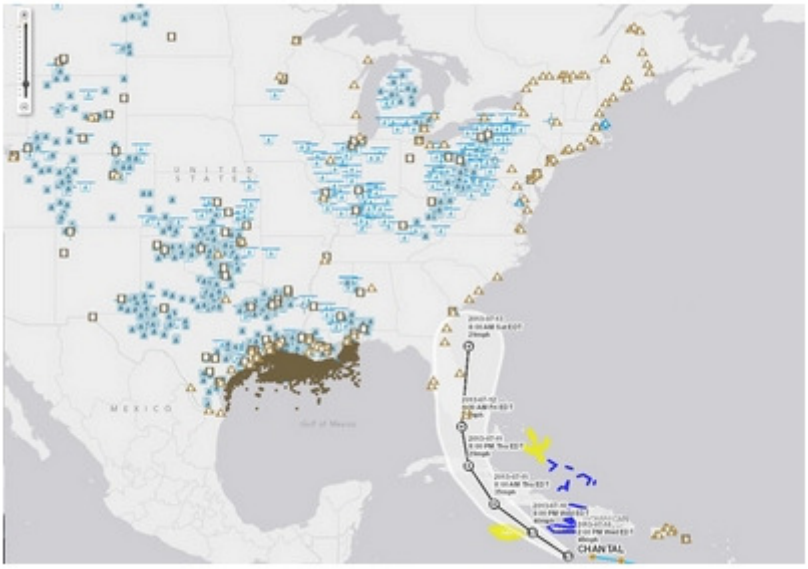
Hurricane season is well in progress, and won't wrap up until the end of November. And in looking back at last hurricane season, when Sandy rocked the East Coast, hundreds of lives were lost and countless people were displaced from their homes. But that's not all that was affected -- so was our energy infrastructure.

"High winds took down power lines. Rising seas flooded electric substations. Within 24 hours of Sandy's landfall, more than 8 million utility customers lost power," wrote David Sandalow, former Assistant secretary for Policy & International Affairs Fuel at the U.S. Department of Energy. "Fuel distribution networks were paralyzed. Critical terminals for petroleum and petroleum products were badly damaged. Many service stations lost power and couldn't pump gas, leading to long gasoline lines in the New York/New Jersey area."

But this year's hurricane season may prove a bit different for the energy sector, thanks to a newly updated interactive map, pictured below, made available by the U.S. Energy Information

Administration (EIA). Now, those in the energy industry may keep an extra close watch on the natural disasters as they unfold.



What was an existing state map launched by the agency last September now includes more than 20 layers of GIS data to plot the nation's energy infrastructure and resources. The data can be mashed up with real-time tropical storm and hurricane information from the National Hurricane Center, so resources like offshore production rigs, pipelines, coastal refineries power plants, and energy import and exports sites can be monitored as the severe weather occurs, according to the EIA.

The National Hurricane Center, part of the National Oceanic and Atmospheric Administration, uses separate tools for tracking hurricane paths and carrying out public advisories.

EIA spokesman Mark Elbert said the agency's existing state map served as a state energy portal on the geography of states, and incorporating the additional data layers from the National Hurricane Center leverages what the EIA had already developed with the state map.

Previously when the EIA would update the map with hurricane information, there was no interactive component and information was not available in real time. When a hurricane or tropical storm would come through, updates would get posted periodically; however, there was always a delay in presenting the most up-to-date information.

When viewing the map after clicking the "full view" setting, users can see data layers such as information on active storms and the rank of their severity, recent storms, official hurricane warnings and wind speed. The data layers listed in a column next to the map allows users to check individual boxes to decide how many or how few of the data layers they wish to see at one time.

"For example, you can click on the interstate pipelines, and it will give you a great deal of the pipelines, including the offshore ones out to the rigs so you can see the infrastructure there," Elbert said.

Having access to data that mashes up energy resources with real-time storm information is particularly beneficial to those in the energy industry, said EIA spokeswoman Amy Sweeney, because it gives them a sense of how markets might be affected.

Last year when Hurricane Isaac came up from the Gulf of Mexico and pushed its way up the Eastern Seaboard, several areas where natural gas gets produced lied in its path. As a result, the storm

affected natural gas drilling platforms and processing plants. Sweeney said when situations like these occur, processing plants are vulnerable to getting shut in, which could lead to a certain percentage of the capacity of natural gas production to be curtailed.

Storm destruction at or near natural gas production could therefore affect gas prices. Sweeney said similar situations occur with petroleum when hurricanes and tropical storms come across oil refineries.

But by having information like what percentage of processing plants are out of commission, Sweeney said, “You can do some analysis that some customers in this area are going to be without power; without natural gas. It’s providing good baseline information."