

Hurricane Irma Causes Massive Power Outages

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When Hurricane Irma slammed into the Florida coast, it caused one of the largest natural-disaster related power outages in U.S. history. The blackouts were far worse than those caused by previous hurricanes that hit Florida.



Irma's Power Outages Worse Than Previous Hurricanes

Hurricane Irma caused far more damage to the power grid than did earlier hurricanes. In 1992, Hurricane Andrew knocked out power to 1.4 million people. In 2002, Hurricane Wilma caused 3.2 million Florida Power and Light (FPL) customers to lose power, the largest in the company's history to that point. In 2012, Hurricane Sandy cut power to 8.2 million households in seventeen states along the Eastern seaboard.

Irma crushed that record. FPL serves 4.9 million customers, half of Florida's residents. The storm caused 4.5 million FPL customers to lose power. All in all, half of Florida's 20 million residents lost power due to the storm. 80% of FPL accounts in Miami-Dade County were affected, as were 70% of all accounts in Palm Beach.

Especially hard hit were the Florida keys. The Governor of Florida urged everyone in the keys and in southern Florida to evacuate to the north, and many did.

Other states up the East Coast suffered as well. One million Georgia residents were without power.

FPL proactively shut down certain substations before they flooded so that they could be recovered more quickly. It shut down one of its two nuclear reactors near Homestead Air Force Base in southern Florida, but kept the other reactor active, as it did with its other nuclear reactors across the state.

Irma has set the record for power outages except for two failures that were helped by human failings. In 1965, most of Connecticut, Massachusetts, New York, and Rhode Island lost power when a power line went down and the remaining lines couldn't handle the extra load. Thirty million people were affected. 800,000 were trapped in the New York City subways.

A mass outage in 2003 took out power to about fifty million people when an overheated power line sagged into trees. An emergency alarm system that should have notified staff that a power line was lost failed. The result was that the power was shifted to the other power lines, which then overheated also and failed. This resulted in the largest blackout in the history of North America.

FPL Warned That Restoration of Power Could Take Weeks

FPL warned customers and businesses that restoration of power to more than two million homes could take weeks. As it did after Category 5 Hurricane Andrew struck Florida in 1992, FPL noted that its crews could not get out and begin restoration activities until the hurricane had passed.

Power workers came from California, Massachusetts, Texas, Colorado, and Wisconsin to help FPL with its power restoration efforts.

FPL set priorities for power restoration:

1. Its own power plants, substations, and damaged transmission lines.
2. Critical facilities such as hospitals, police and fire stations, communication facilities, water treatment plants, and transportation providers.
3. Major thoroughfares that host supermarkets, pharmacies, gas stations, and other needed community services.

Puerto Rico Gets Hit Hard – Twice

The island of Puerto Rico is heavily in debt. It has accrued more than USD \$70 billion in liabilities and an additional USD \$50 billion in pension obligations. Because of this debt, Puerto Rico has been unable to build resilience into its power grid.

As a consequence, when Hurricane Irma skirted Puerto Rico to its north, a great deal of the Puerto Rican power grid was decimated, leaving the island with little power. Hurricane Maria followed on the heels of Hurricane Irma and took out the rest of Puerto Rico's power infrastructure.

As of this writing, Puerto Rico is totally without power anywhere on the island.

Summary

The effects of many natural disasters such as hurricanes (unlike earthquakes such as the devastating quake that recently hit Mexico City) give plenty of warning. It is imperative that citizens take precautions to avoid being harmed. For instance, stock up on food, water, and gasoline – both for your automobiles and for electric generators. Be prepared to move to upper stories if there is going to be flooding.

And above all, consider evacuation, as many did as Hurricane Irma approached.

Acknowledgements

Material for this article was taken from the following sources:

[Irma causes one of the largest natural disaster power outages in U.S. History](#), *Mashable*; September 11, 2017.

[Hurricane Irma cuts power to nearly 2 million in South Florida; FPL warns of slow recovery](#), *Sun Sentinel*; September 11, 2017.

[Hurricane Maria: Puerto Rico left entirely without power](#), *The Telegraph*; September 21, 2017.