

RAPID: Socio-Technical Restoration of Hurricane Isaac Power Outages

Abstract

This project focuses on the Louisiana power outages caused by Hurricane Isaac on August 29, 2012. The hurricane resulted in loss of power to some customers in at least 24 parishes. For New Orleans, the size of the power outage caused by the hurricane is second only to Hurricane Katrina. The power outage and restoration process led to broad, vocal criticism of the two major private power companies serving Louisiana from the public and government officials. The goal of this project is to understand how power restoration speed, power utility actions, and other factors influence the real and perceived impacts to customers, as well as reactions of the public and government officials. In other words, are public and government criticisms of power restoration speed rooted in measurable impacts to customers with increasing outage times? As part of this project, we will document the power outage patterns and identify the social, economic, and ecological impacts related to them. We will document the reactions to the power restoration activities and performance from a sampling of customers, emergency managers, and government officials. We will characterize restoration decisions of the two major power companies, as well as the context that might have influenced these decisions. We will collect detailed data from area business with respect to power outage characteristics, impacts, and reactions from the businesses. We will analyze project data to explore whether outage time results in a quantifiable difference in business impacts, as well as whether outage patterns effected some types of customers more so than others. Data collection for this project will be done through document compilation, field interviews, direct observation, and phone surveys. We expect to find that public and political calls for faster or improved restoration is not based on measurable impacts of increasing outage time, but for other reasons that are specific to different type of customers and government functions.

This research will contribute to reducing power outage impacts to businesses, households, and government services. The results of the project will also help to set reasonable, objective guidelines and criteria for restoration performance of power companies. Utility providers and emergency management agencies will benefit from this research through eventual improvement to power restoration practices with respect to both technical performance and public or government relations. Alternatively, consumer strategies can be developed based on results of this work to avoid negative impacts from outages. This work will establish a basis for other researchers to investigate the merits of new tools, policies, and practices for improving community recovery from disasters with widespread power outages.