Storm Insight: Power restoration prediction

Case study

For one utility client, E Source predicted 95% restoration of power within roughly 10% of the actual completion time.

The challenge

Determining the number of external resources to bring in during outage events is a costly decision. Furthermore, being able to tell customers and the media when restoration will occur builds credibility for a utility.

Utilities should rely on data to inform decisions on how many external resources to request and when those resources will get the lights back on.

The approach

E Source can help utilities predict:

- Incidents restored given resource availability, including timing and damage severity
- Customers interrupted (initial and current) and restored, including timing
- Embedded outages given initially estimated outage events, infrastructure, and weather conditions

The impact

Using detailed data on the number of resources available, E Source was able to predict 95% restoration of power within roughly 10% of the actual completed time for a utility client.

E Source also expanded the models to determine when to move resources across the utility's service territory with an area level accuracy of approximately 15%.