Storm Insight

An AI solution to predict storm-induced outages and mobilize crews, increasing grid reliability and making better use of storm management budgets

The challenge

Major storm events are becoming more frequent and stronger, and with these storm events come outages. In response, utilities must quickly prepare and mobilize crews to affected and high-risk areas.

While time is of the essence, moving crews from one region to another is slow and expensive. Mobilizing mutual assistance from other utilities is even harder. Relying on local weather forecasts and in-house expertise rarely provides enough lead time for utilities, and delayed responses have serious financial and customer satisfaction consequences.

This problem of lead time is where E Source comes in. The E Source Storm Insight application provides accurate and prompt predictions for *how, when,* and *where* forecasted weather events will affect the distribution grid and guides your utility's decisions for a cost-effective response.

E Source Digital Grid Solutions

E Source offers the industry's most powerful storm-outage prediction solution as part of its Digital Grid Solutions suite, which also includes Capital Optimization and Vegetation Management. Each E Source Digital Grid solution increases risk-spend efficiency—a breakthrough approach that uses data, AI, and machine learning to accurately *predict* risk across the grid and accurately price that risk. This enables our clients to prioritize mitigation efforts or capital improvement decisions based on the financial, safety, or reliability benefits they will deliver.
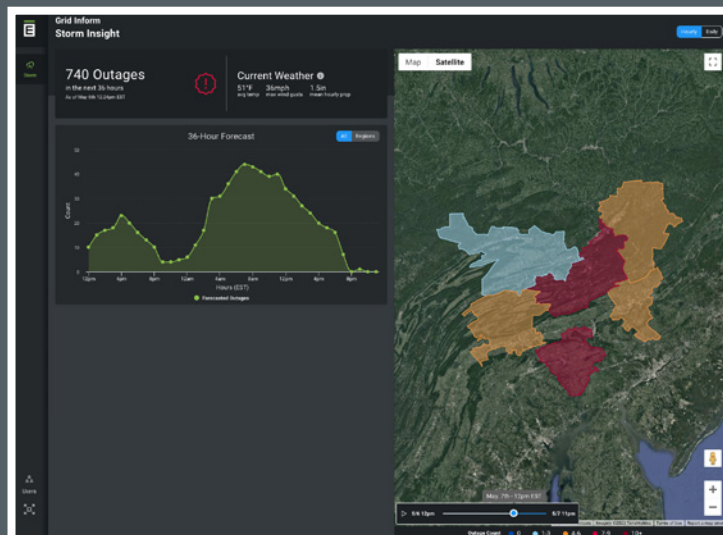
An intuitive, visual tool

The Storm Insight solution visualizes your data along with our risk predictions in a modern, scalable, and secure web application.

In this application, you can:

- ⊕ Pan, zoom, and view aggregated information at varying resolutions and system levels

- 🔔 Set predicted outage thresholds to automatically trigger notifications and visual warnings

- 👥 Give your storm response teams access to distribution system outage predictions up to five days before a storm event

- ⚠ View outage prediction trends

The E Source Storm Insight application is highly configurable. It's built from the ground up to use your data, speeding time to value.

How it works

- ▶ Ingests your utility's existing data sets, such as outage history and maintenance costs

- ▶ Combines your specific data with industry-leading data sourced from a third party weather vendor

- ▶ Provides a high spatiotemporal resolution forecast to adjust E Source's AI outage prediction models

- ▶ Creates a dynamic digital replica of your grid and pairs it with real-time hourly weather forecasts, predicting potential storm-induced outages on your distribution grid three to five days in advance

- ▶ Identifies the regions and times of day that are at highest-risk for weather-induced power outages

- ▶ Helps your utility prioritize recovery efforts to maintain grid reliability and limit expenses

The benefits

- ▶ **Increase** outage prediction accuracy by more than 20% three to five days ahead of a storm

- ▶ **Coordinate** crews and mutual assistance in advance, improving response time

- ▶ **Boost** outage prediction accuracy more than 30% and plan a disaster response one day ahead of a storm

- ▶ **Plan** crew sizes and decide when and where to send crews, reducing costs 10% to 20%

- ▶ **Achieve** less prediction variability during the prediction window

E Source is dedicated to helping utilities transform into the Sustainable Utility— one that's environmentally responsible, equitably delivers safe and reliable energy, and is financially stable.

To address your storm management challenges and optimize your grid investment with the E Source Digital Grid Solutions suite, contact us at **digitalgrid@esource.com** or visit **www.esource.com/public/digital-grid-solutions**.

E Source