



Complete weather intelligence for utilities from DTN

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In recent years, severe and increasingly volatile weather has significantly impacted utility companies and their bottom line

Super storms have caused thousands of outages, forcing utilities to spend unplanned dollars on recovery and restoration.

In fact, severe weather — including thunderstorms, hurricanes and blizzards — is responsible for 58 percent of all major outage events since 2002, according to the U.S. Department of Energy.*

Outages caused by storms and exacerbated by aging assets are increasingly difficult to manage. They're also more costly as public expectations rise and regulatory scrutiny intensifies.

But it's not just severe weather that can impact your energy company's bottom line. Utilities can be challenged by their response to day-to-day weather as well, particularly when it comes to predicting energy demand. Up to 90 percent of load forecasting errors can be chalked up to inaccurate weather forecasts, resulting in costly over-generation of power.

With weather having such a significant impact on an energy company's operations and profitability, weather-readiness isn't just an operational goal — it's a business necessity.

What does it mean to be weather-ready?

DTN has developed a wide range of solutions to help energy companies increase their weather-readiness. With the right weather intelligence, you can:

Understand the threat posed by approaching weather events

Now you can know more about forecasted severe weather. With Energy Event Index (EEI) forecasts from DTN, you'll get an analysis of risk on a 1- to 5-point scale, customized to your utility. This advanced insight into the approaching weather event will help you:

- Make better internal and external staffing decisions
- Improve emergency preparedness
- Restore power sooner, keeping customer satisfaction high
- Improve your internal communications of the risk
- Deal more effectively with public utility commissions

Make more informed decisions

At DTN a professional and degreed meteorologist provides a live consultation when a utility needs information and perspective to connect the dots between the weather data and how a specific territory or service will be impacted.

Our meteorologists can help you make more informed decisions regarding weather events. From driving forecasting innovation and analysis behind the scenes, to providing live consultations before, during and after a weather event, professional meteorologists ensure that you are equipped with the most accurate weather forecasting data and that you have a clear understanding of its impact. Their services may include:

- Load forecasting
- Emergency management
- Outage preparation
- Risk assessment
- Effects on your specific service territory or generation sources

Respond appropriately to potential outages

As storms are imminent, make better callout and holdover decisions with accurate near-term forecasts. Have the right staffing level at the right time. Track storms in real time with local radar to see where storms are headed, so you can stage your crews to respond to outages. You'll be able to see where wind, lightning, ice and storms are in your service territory, and know whether things are intensifying or subsiding.

* "Economic Benefits of Increasing Electric Grid Resilience to Weather Events", a report by the White House Council of Economic Advisers and the DOE's Office of Electricity Delivery and Energy Reliability.

Protect your crews

Real-time storm visualization gives dispatchers situational awareness to help keep crews in the field safe. But since they are often too occupied during a storm, you can also give crews their own ability to be automatically alerted to danger. Crews equipped with weather apps with GPS-based alerting will be immediately notified if lightning occurs near their position, or if winds are increasing that may cause a danger to bucket truck operation.

Prevent outages through proactive inspection

Lightning is responsible for a third of transmission line outages, whether directly or indirectly. Lightning damage may not cause an immediate outage in a distribution system but the equipment may fail days or weeks later. With DTN's lightning inspection solution, you can do targeted inspections after a storm, and make repairs before incurring an unplanned outage.

DTN's weather intelligence solution will automatically correlate the lightning strikes of the past 24 hours with the location of your substations or other assets and deliver a standard, daily report from which to coordinate your maintenance and inspection tasks.

Key features of a daily report typically include:

- Identification of all assets that have had lightning activity in close proximity
- Lightning strike date, time, amplitude, and exact location to help you prioritize inspections

You can also have immediate alerts sent for strikes near substations. All report data is permanently archived, giving you a database you can query for further inspections, maintenance planning, and analysis of where lightning protection is needed.

Integrate weather into your systems
Seamlessly integrate real-time weather information and forecasts from DTN's WeatherSentry web services API into your operations system for situational awareness, dispatch, fault analysis, maintenance and other applications.

- Highly reliable
- Supports spatial and temporal analytics
- OGC-standard compliance for GIS layers
- Technical support available 24 hours a day, 365 days a year

For hyper-local weather information, gather data with your own weather sensors using DTN's compact weather station. The information you collect can be used immediately in any of your applications. With professional grade components, DTN's weather station features rugged external connectors and Lufft compact weather sensors. Installation is simple, and data can be transmitted via Ethernet or cell signal.



Make more accurate load forecasts

DTN's accurate weather forecasts yield load predictions that most closely reflect actual demand. As a result, whether working with gas or electric power, you can significantly reduce costs by avoiding excessive base loads and reducing use of costly peaking resources.

These forecasts from DTN provide highly accurate information that can improve a number of areas within a utility's operations, including:

- Generation load forecasting
- Trading
- Energy efficiency
- Demand management
- Demand response
- Building analytics

DTN: The choice of the energy industry

As weather volatility continues to be the norm, utilities that focus on becoming weather-ready will be better able to protect their profitability and ensure a high level of service for their communities. More utilities rely on DTN for weather intelligence than any other service. Our 35 years of experience has led to a forecast accuracy rated #1 for ten years straight. Staffed by 50 experienced meteorologists, our meteorological operations center provides expert consultation to our energy customers on a 24-hour basis. In short, no other weather services company is better qualified to partner with your utility company on your weather-readiness goals.

