Vegetation Management

An AI solution to accurately predict vegetation-induced outage risk and optimize mitigation returns

The challenge

Vegetation is a top cause of power outages and decreased system reliability for utilities across the US, making vegetation management one of the industry's most strategic, and expensive, operations and maintenance programs. Average annual budgets range from $30 million to $100 million or more. And due to the system-wide scope of the challenge—many utilities have trees growing along hundreds or thousands of miles of transmission and distribution lines—vegetation-induced outage risk is literally everywhere, making vegetation management one of the most difficult programs to execute effectively.

E Source Digital Grid Solutions

E Source offers the industry's most powerful Vegetation Management solution as part of its Digital Grid Solutions suite, which also includes Storm Insight and Capital Optimization. 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 E Source Vegetation Management solution makes AI-driven insights actionable by visualizing your data along with our risk predictions and mitigation recommendations in a modern, scalable, and secure web application.

- Virtually fly over your grid and zoom in on your assets and environment at multiple resolutions to identify your highest-risk areas.
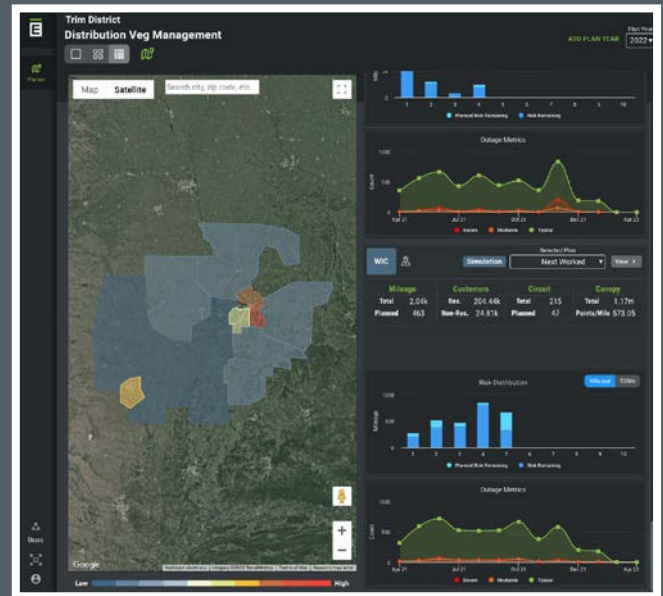
- Apply intelligent filters to quickly prioritize your vegetation management work.

- Use the Scenario Planner in the Vegetation Management application to design and modify vegetation management work plans to ensure that you're trimming the right vegetation at the right time. Modifying cadence-based work plans based on risk makes the resulting work more efficient, stretching valuable budget dollars.

The Vegetation Management application is highly configurable. It's built from the ground up to use your data, speeding time to value.

How it works

- **Ingests and harmonizes** a utility's historical outage, system, and maintenance-cost data with over 400 high-value, third-party sources, including remotely sensed (lidar and satellite), geographic, topographic, and weather data

- **Uses this data** to populate a dynamic—always learning and improving—digital replica of the grid and develop models that can predict outages meter by meter across the entire system with astounding accuracy

- **Determines the reliability and cost benefits** of the mitigation efforts needed to address these outage risks, guiding utilities to outcomes that optimize their vegetation management budgets and reliability performance

The benefits

- **Optimize** your vegetation management budget to achieve more than 20% improvement

- **Increase** grid reliability and public safety by identifying and targeting high-risk spans

- **Understand** the safety and reliability implications of budget changes and make informed adjustments through streamlined vegetation management scenario planning

- **Gain** midcycle or hazard-tree budget efficiencies for quick wins

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

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

E Source