

# Capital Optimization

An AI solution for understanding the financial and reliability impacts of capital investments before they're made, maximizing customer value

## The challenge

For utilities, capital investment decisions have always been difficult to make. But as utilities work to modernize the grid, increase safety and reliability, and meet growing electrification needs, the stakes today are even higher.

Utilities can't make decisions based on one or two factors. They need to make capital investment decisions considering *all* available factors and data.

And these potential challenges include:

- Aging infrastructures
- Climate change impacts
- Limited operations and maintenance (O&M) budgets
- Rate regulations
- Sustainability and equity demands
- Expensive capital improvements

Most importantly, utilities need to know which investments will deliver the most effective and cost-efficient results before they're made.

## E Source Digital Grid Solutions

E Source offers the industry's most advanced Capital Optimization solution as part of its Digital Grid Solutions suite, which also includes Storm Insight 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

With data spread across several systems, utilities often struggle to effectively use the information.

The E Source Capital Optimization solution makes AI-driven insights actionable, pulling your data from various platforms and visualizing this information. From there, the application enhances the visualizations and pairs them with E Source's risk predictions and recommendations in a modern, scalable, and secure web application.

## How it works

From deciding when and where to place underground power lines to upgrading assets across your transmission and distribution (T&D) footprint, the Capital Optimization application makes the data work for you.

This application:

- ▶ Ingests your utility's historical grid-asset, maintenance cost, and capital investment data
- ▶ Combines your data with third-party sources to enhance your utility's specific dataset, making it "prediction ready"
- ▶ Populates a constantly evolving digital grid replica that models and predicts the benefit of capital improvements at various system and circuit levels
- ▶ Deploys tested and tailored data science models to help your utility optimize capital decisions, increase reliability, and respond faster to urgent events

## The benefits

- ▶ **Identify** the "right work" to improve safety and reliability
- ▶ **Predict** the interplay of capital investments on current and future O&M costs
- ▶ **Justify** moving O&M line items to capital expenses
- ▶ **Standardize** risk reduction and capital optimization approaches across internal delivery operations and external regulators
- ▶ **Prioritize** your capital investments to achieve the greatest impact

**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 capital investment challenges across your T&D systems, contact us at [digitalgrid@esource.com](mailto:digitalgrid@esource.com) or visit [www.esource.com/public/digital-grid-solutions](http://www.esource.com/public/digital-grid-solutions).

