

CASE STUDY

Estes Park Light and Power + Tantalus

Real-Time Grid Visibility for a lean mountain utility

Estes Park Light and Power serves nearly 12,000 customers across 300 square miles of Colorado mountain terrain, with a large share of those customers seasonal or absent during winter. When storms hit, the utility cannot wait for someone to call in an outage. By deploying TRUConnect™ AMI for smart metering and TRUGrid™ Transformer for real-time grid intelligence, Estes Park gained visibility across its entire service area. Today, crews are dispatched before the first call comes in, transformer decisions are based on actual load data, and the team runs its operations without the redundant OMS systems neighboring utilities rely on.

Background

Estes Park Light and Power is a municipal utility, but its service territory extends well beyond the town into the surrounding rural and mountain areas. With roughly 300 square miles to cover, close to 3,000 miles of distribution line, and just under 12,000 customers, the utility's footprint resembles an electric cooperative more than a typical city utility and carries above-average infrastructure costs per customer.

The community adds its own complexity. Estes Park is a Rocky Mountain tourist destination. About 40 percent of in-town units are vacation rentals or vacant at some point during the year, and outside of town limits the majority of customers are seasonal residents. Significant portions of the territory sit unoccupied through the winter months, which are also the months when storms hit hardest.

Sarah Clark serves as AMI Coordinator, a title that covers only part of her actual responsibilities. She also handles DER coordination, outage operations management, crew dispatch, and assists with invoicing and work orders. That breadth of responsibility is common at utilities of Estes Park's size, and it sets a clear standard for the tools the team uses: they need to work reliably without requiring a separate system running alongside them.

The Solution

Estes Park selected Tantalus because its network could read the utility's existing drive-by-read meters directly. **TRUConnect AMI** is a purpose-built smart metering network that communicates with pre-existing AMR infrastructure and relays that data without requiring a full system replacement. Estes Park phased the transition to AMI over eight years using its own crew, spreading costs while outage notification came online progressively during the rollout rather than only at completion. The network is supported in the field by a **TRUSense Gateway**, a fiber-connected device that coordinates meter communications across its coverage area, with three more ready for deployment.

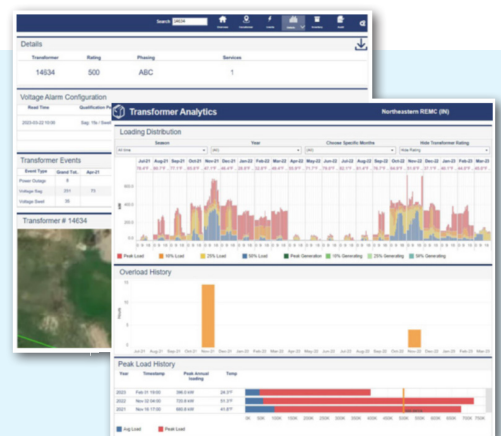
As full deployment neared, Estes Park joined a small group of pilot utilities helping Tantalus develop its analytics platforms, contributing directly to what became **TRUGrid Transformer**. TRUGrid Transformer monitors transformer loading in near-real-time, giving utilities a clear picture of how individual transformers are performing rather than estimating how they might be performing. For Estes Park, that translated to replacing rule-of-thumb guesswork with actual data at every stage of transformer decision-making.

The Challenge

The challenge Sarah faced was threefold: lack of visibility into the distribution network, inaccurate usage estimates and guesswork, and a smaller team.

Before smart metering, the utility depended entirely on customer calls to know where power was out. With many customers absent during the winter season, an outage in a winter storm could go unreported for weeks or even months. That dependency created a real safety risk: energized lines could stay on the ground with no one nearby to notice.

Without better visibility, managing the grid meant relying on imprecise estimates. When upgrading a transformer, Estes Park followed rule-of-thumb calculations that were often overestimations. When outages did occur, crews rolled out with minimal information about where to start. The utility needed a way to see what was happening across its system without waiting for someone to report an outage.



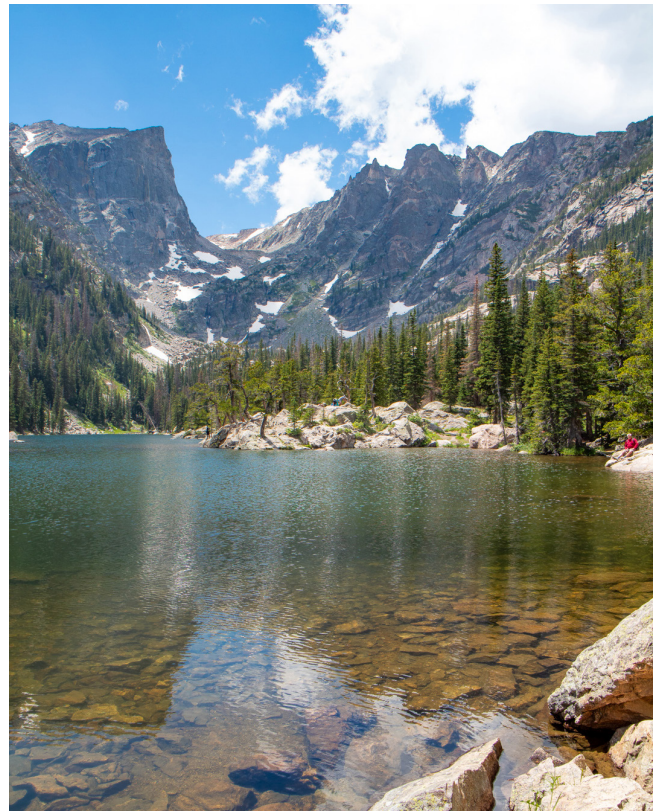
The Results

Following the deployment of TRUConnect AMI, outage response changed fundamentally. With TRUConnect AMI in place, the team can see exactly which meters are out, overlaid on the utility's GIS system, with enough precision to identify the most probable fault before anyone leaves the shop. Troubleshooting is front-loaded: crews are pointed to a specific point before they roll.

That same visibility lets Estes Park perform targeted infrastructure investment. The utility installed hundreds of miles of insulated tree cable and upgraded power poles in areas the data identified as high-stress. Sections of the grid that once demanded constant winter attention now rarely see a crew. When something does go wrong today, it more often is traced to a fallen tree or a squirrel, not to weather or aging infrastructure.

TRUGrid Transformer is leveraged daily across the team. Estes Park uses it for new service sets, replacements, and post-failure diagnosis. When a transformer fails in the field, the analytics data can show whether the failure was caused by overloading or something else, which changes how the team responds and what they stock to address subsequent failures. Clark relies on it for solar interconnection reviews, checking existing transformer load and expected reverse-flow generation before approving a new installation. When a developer brings in a new project, she checks comparable existing sites in the platform to right-size the equipment rather than defaulting to a larger transformer and passing that cost to customers.

Because the team trusts what TRUConnect AMI shows them, Estes Park does not run a separate OMS. The three nearest municipal utilities, all larger and all still working through their AMI deployments, each rely on separate OMS platforms to validate their outage data. Estes Park dispatches directly from Tantalus data, without the redundancy of a secondary application.



Looking Ahead

The earliest meters from Estes Park's original rollout are approaching end of life, and the utility is planning a second replacement cycle using the same in-house approach, budgeted gradually over the coming years rather than as a single capital event. Three additional TRUSense Fiber Gateways are staged for deployment pending site selection as the utility expands its fiber network. This will extend coverage and data density across the territory as the system continues to grow.



"Because we know we can trust the data, we don't need an OMS layered on top of our system. Thanks to Tantalus, we can see the outages coming through. We know that they're real, and we can dispatch a crew."

Sarah Clark, AMI Coordinator
Estes Park Light and Power

