

# La Plata Electric Association + Tantalus

## Advanced rate programs and grid intelligence in Colorado's mountain country

La Plata Electric Association serves just under 50,000 meters across steep mountain terrain in southwestern Colorado, where cellular service is unreliable and some distribution lines run two miles to reach a single home. The cooperative runs some of the most progressive rate programs of any rural cooperative in the region, with time-of-use, residential demand pricing, and net metering depending on reliable interval data from across a challenging territory. With TRUConnect™ AMI delivering that data and TRUGrid™ Transformer providing grid-level intelligence, La Plata can run rate programs most rural cooperatives cannot match and makes transformer decisions based on what is actually happening on the system.

### Background

La Plata Electric is a member-owned cooperative headquartered in Durango, serving two primary counties and portions of four others across southwestern Colorado. Its communications backbone is a Tantalus licensed 220 MHz RF network, with radio equipment on mountain ridges that carries data across terrain where cellular does not reach.

The membership is as diverse as the region is remote. Alongside farms and ranches, the cooperative serves a growing base of solar, battery storage, and distributed generation customers. La Plata also serves as a central hub for critical services (like hospitals) that serve people far outside of their operating area. That wide array of needs drives the cooperative's progressive approach to rates and grid management.



### The Challenge

Reaching nearly 50,000 meters across this territory is a persistent engineering problem. Long distribution taps end at single homes two miles from the nearest main line, in narrow mountain canyons where no other communication technology reaches. La Plata's obligations extend to hospitals and critical facilities with no backup option available. Every meter has to communicate, regardless of where it sits or how isolated it may be.

A growing distributed energy resource base has added new pressure. Solar installations have proliferated across the membership, with some connected without proper interconnection filings. Transformers built to carry power in one direction are increasingly seeing generation flow back the other way, stressing equipment designed around assumptions that are no longer valid. Energy is flowing across the entire grid, sometimes in directions that transformers were not designed to handle.

### The Solution

La Plata deployed the **TRUConnect AMI** network across a service territory that defeats most communication technologies. TRUConnect AMI is a purpose-built smart metering network that delivers interval data and captures both forward and reverse reads, giving the cooperative visibility into generation and consumption at every meter. The 220 MHz RF network reaches into canyons and across ridgelines where nothing else connects.

As the metering network matured, La Plata adopted **TRUGrid Transformer**, a data analytics tool that uses power quality data from TRUConnect AMI data to help identify failing assets deployed throughout the grid. With the integrated DERs and increased load, the lack of visibility into a transformer's health was an obvious gap. TRUGrid Transformer monitors transformer loading in near-real-time and lets engineers model added loads against actual performance data, tracking how long equipment has been running outside its design limits. In a territory where aging infrastructure meets rapid solar growth, that visibility drives better decisions and better outcomes.





## The Results

TRUConnect AMI's interval data has enabled La Plata to pursue rate programs most rural cooperatives cannot offer. La Plata even had the data in place to support net metering billing four years before its billing software, NISC, was ready to handle it, with La Plata's team hand-calculating bills using Tantalus data in the meantime. Residential peak demand pricing, typically reserved for large commercial accounts at most co-ops, is now available across La Plata's full residential membership.

La Plata found that high bill complaints are resolved faster and more precisely. When a member calls, the team pulls hourly intervals and on-demand five-minute reads, works through the data live, and helps the member identify problem circuits in real time. The same data layer lets members with solar and net metering view their own generation and consumption through the member portal and lets La Plata identify unreported EVs and behind-the-meter batteries without relying on members to self-report.

TRUGrid Transformer has caught problems that prior methods would have missed entirely. For example, a transformer recorded as a 10 kVA unit was pulling five times that load every irrigation season. A field visit confirmed the asset record was wrong, prompting a data integrity review across the system. The tool has also exposed a newer problem: transformers pushed well past rated capacity by solar generation flowing a direction the grid was not built to handle. Those findings have driven new conversations about equipment protection and interconnection policies that were not possible before the data existed.



## Looking Ahead

La Plata is expanding away from the 220 MHz RF network as fiber reaches more of the territory, adding Tantalus VersaComms Gateways™ at each new fiber-connected site. The cooperative is also watching closely for tools that will let it communicate with behind-the-meter batteries, inverters, and electric thermal storage directly, managing dispatch in a system that already carries far more distributed generation than its original design anticipated.

"More than anything, it enables us to be really innovative. We're so far advanced compared to a lot of our other co-ops in Colorado, and I think a lot of that has to do with having Tantalus as a partner."

**Rachel Schur,**  
Director of Metering Infrastructure  
La Plata Electric Association

