



PRO

Case Study

Twin Rivers Managed Charging

The Customer

Twin Rivers Unified School District (TRUSD) in Sacramento, California, has deployed 40 electric school buses, making it one of the largest electric school bus fleets in the nation. The school district is planning for 50 additional electric buses, and intends to replace its non-bus “white fleet” of 138 vehicles with EV as well. TRUSD has a mix of vehicles and chargers, including buses from Lion, Motiv, BlueBird, and Level 2 chargers from BTCPower, Nuvve, and OpConnect.

"We needed state-of-the-art charging management and a way to simplify data collection and monitoring. The Ford Pro Charging team has been that trusted partner to us."

Tim Shannon

Director of Transportation
Twin Rivers Unified School District

The Approach

Feasibility Assessment:

The initial step was an EV feasibility analysis for Twin Rivers. This compared the cost of operating electric school buses to their diesel baseline. Twin Rivers also wanted to do route planning with their existing mixed fleet of vehicles including diesel, CNG and battery electric options.

Electriphi (now part of Ford Pro) ran the analysis using the fleet’s operational data, incorporating key considerations like vehicle conditioning, ambient temperature, and charging strategies. This included using 6 months of operational data including GPS, routing, and scheduling data to identify which routes were best suited for electrification.

Analyzing Charging Strategies:

TRUSD, working alongside local utility Sacramento Municipal Utility District (SMUD), needed to understand the impact of various charging strategies and how to minimize energy costs. Particularly important was how this would change across the seasonal utility tariffs, and as the fleet fully scales its electric vehicles.

Electriphi evaluated TRUSD’s load profiles based on the fleet’s vehicle and duty cycle data. This was combined with SMUD’s summer and winter tariffs to determine the cost of charging. Twin Rivers could get an additional cost savings of \$140k per year using a managed charging strategy compared to having no charging management in place.

Energy Reports with Charging

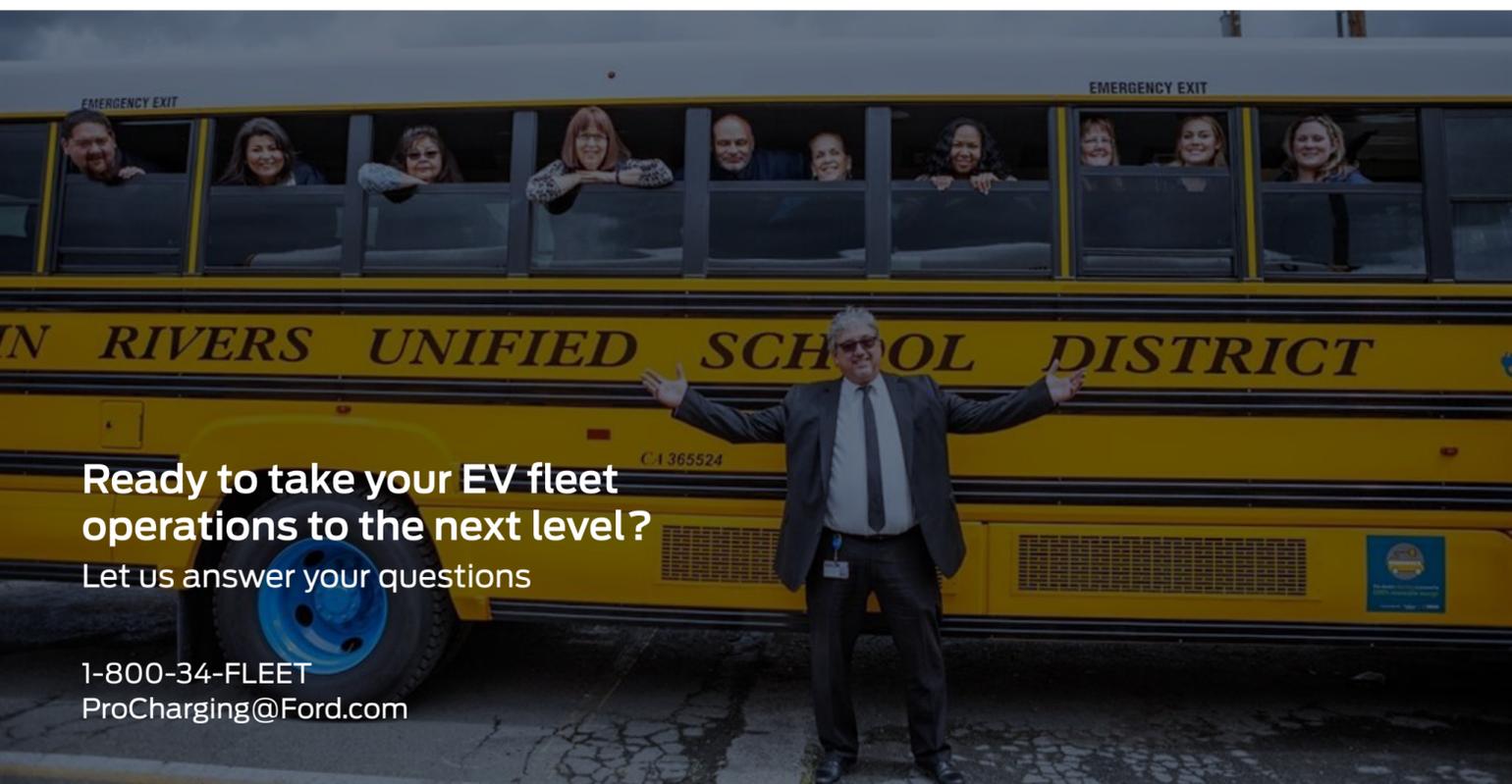
Management:

The school district needed visibility on how much energy was being dispensed for vehicle charging. A centralized reporting mechanism was especially useful to tie together data across various vehicles and charger providers.

Reporting was set up to send emailed weekly energy reports to TRUSD’s fleet and facilities manager. The reports provided data on kWh dispensed by vehicle and charger across the time period.

The Solution & Results

Managed charging strategy saves TRUSD **45%** on energy costs and **~\$400K** in infrastructure upgrade. Regular reporting on vehicle energy usage gives needed visibility to fleet charging operations.



Ready to take your EV fleet operations to the next level?

Let us answer your questions

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