

Photo by: Gilbert Rosas

# Electric School Bus Deployment at Modesto City Schools

*This profile reflects the electric school bus deployment experience and perspective of Modesto City Schools in California.*

## Overview

Led by Gilbert Rosas, Director II of Sustainability and Adaptation, Modesto City Schools has made significant progress in rolling out electric school buses (ESBs) in their district and is exploring funding opportunities for a full fleet conversion. Between August to October of 2023, Modesto City Schools – the 25<sup>th</sup> largest district in the state of California – added 30 Blue Bird Type D electric school buses to their fleet, accounting for approximately half of their existing bus fleet.

Modesto City Schools district has also published its own transportation webpage, which includes ESB-specific resources and details the strides the district has made toward ESB adoption. The district involves students in all sustainability projects, helping them develop the skills necessary to pursue green career path choices.

Contact	Gilbert Rosas, Director II Sustainability & Adaptation
District Size	34 schools
Student Population Transported	4,000 students
Bus Fleet	62 buses

## Charging Infrastructure

To support this new electric fleet, Modesto City Schools has installed 46 chargers, including:

- Nine DC 50kW ABB single port chargers
- Seven DC 120kW ABB dual port chargers
- 30 Level 2 14.5kW BTC chargers

Modesto City Schools owns all the buses, chargers and charge management software. The district's electric power is provided by **Modesto Irrigation District**.

## Clean Energy Infrastructure

Modesto City Schools has solar arrays in their transportation yard, Nutrition Services building, and seven high schools.

## Funding Sources

As of June 2025, Modesto City Schools has received about \$17.5M for electric school buses through a variety of grants, including \$6.3M from **CARB's Hybrid and Zero Emission Truck and Bus Voucher Incentive Project**, \$4.19M from San Joaquin Valley Air Pollution Control District (**SJVAPCD**) **Phase 1 Clean Vehicle Fueling Infrastructure Program**, \$3.16M from **EPA's Clean School Bus Rebate Program- Round 1**, and \$3.88M from the **SJVAPCD Phase 2 Clean Vehicle Fueling Infrastructure Program**.

## Motivation

Modesto's superintendent and Board of Trustees have long been advocates for sustainability and saw electric school buses as a key component in their broader efforts.

## Implementation Challenges

- **Charging system integration:** One major challenge was aligning the bus telemetry with the charge management software. Commissioning the charging system and determining which manufacturer was causing delays was a lengthy process and required extensive coordination and troubleshooting across vendors.
- **Bus reliability and uptime:** Keeping the ESBs road-ready involved addressing quality control issues between the factory and the dealer. Close collaboration and consistent communication helped to work through the issues and improve vehicle uptime.
- **Driver training and performance:** To maximize efficiency, drivers had to be trained to fully take advantage of regenerative braking. This training helped increase mileage and performance.

## Community Benefits

- **Reduced exposure to diesel exhaust** for students and communities
- **Significant cost savings** from using clean, solar-powered electricity instead of purchasing diesel
- **Significant federal and state grant investment** to convert half of their bus fleet with a single purchase
- **Recognition in national media** as one of the first school districts to widely adopt ESBs

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*“Other school district teams should take full advantage of available learning opportunities by attending as many webinars and conferences as possible to stay informed and grounded in the facts.... reach out to project partners and connect with other districts that have already successfully deployed ESBs to learn from their experiences.... Allow students to participate in the process. ESBs and sustainability initiatives give them a voice and empower them to make a difference in their communities.”*



– Gilbert Rosas, Director of Sustainability & Adaptation, Modesto City Schools