Highland Playbook

3 Districts That Transitioned from Diesel to Electric with ZERO Upfront Costs

Maryland | California | Florida

Highland

Montgomery County Public Schools, Maryland

• **286** Electric School Buses • **5** ESB-Ready Bus Depots

The Challenge

Montgomery County Public Schools (MCPS) is the **largest school district in Maryland** and the seventh largest in the United States, serving approximately **160,500 students**.

In 2021, its aging diesel bus fleet presented operational and environmental challenges at a time when the district had **committed to reducing greenhouse gas emissions by 80 percent by 2027** and reaching **net zero by 2035**. They set an ambitious goal to electrify more than half of their fleet of 300+ buses.

Transitioning to clean transportation at this scale required a solution that was **cost effective**, **logistically sound**, and **scalable** across five major depots without adding burden to school operations or taxpayers.

The Solution

MCPS partnered with Highland Electric Fleets to launch the most extensive electric school bus initiative in the country through a long term public-private partnership. The strategy focused on delivering reliable performance and long term cost savings while eliminating the need for upfront capital investment.

Key Elements Included:

Turnkey Electrification

Highland provided end-to-end services including planning, vehicle procurement, charger installation, fleet management, fueling, and ongoing maintenance.

Fleet Deployment

MCPS currently has over **200 electric school buses on the road**, with the rest arriving before the 2025–2026 school year—bringing the total to **286, 85% of their fleet**.

Infrastructure Buildout

Charging systems installed at **five major MCPS bus depots** to support daily operations. Highland manages partnerships with **Thomas Built Buses**, **Power Electronics**, **Synop**, **and more.**

Why It Matters

The MCPS deployment is more than a fleet upgrade. It is a strategic investment in health, education, and long term resilience:

Cleaner Rides for Students
Quiet, modern buses improve ride quality and eliminate exposure to diesel exhaust for over 160,000 students

Operational Resilience
Five fully equipped depots ensure consistent service, grid readiness, and efficient fleet coordination across a large geographic area

Public Private Innovation
The service based model enables districts to electrify at scale without the financial or technical complexity of going it alone

"From the initial concept to rollout, Highland has been there every step of the way, answering questions... **They've made a complicated process smooth and simple.**"

– Bethesda Depot Manager, MCPS, MD
Jim Beasely

The Results

286 electric buses on contract, with phased delivery already transforming day to day operations.

Five charging equipped bus depots now powering clean transportation for one of the largest student populations in the country.

Featured in numerous national media outlets and a Harvard Business School case study, the project has become a model for peer districts navigating the transition to electric fleets.

MCPS has become a go-to resource for districts exploring zero emission fleets. Staff regularly field reference calls, host site visits, and organize educational events. Through this work, MCPS is not just leading in its own community but **helping set the national standard.**

Since switching to electric school buses, our partner has **reduced maintenance requirements**, **lowered operational expenses**, and **gained protection** from diesel price spikes and fuel market volatility.

Compton Unified School District

• **25** Thomas Built Electric Buses • **25** Tellus DC Fast Chargers

The Challenge

Our partners at Compton Unified School District (CUSD), located in southern Los Angeles County, are deeply committed to providing equitable, forward-looking opportunities for its students. However, its school transportation system, like many across the country, was powered by aging diesel buses. These vehicles contributed to air pollution in a community where **1 in 11 children suffer from asthma**, and lacked modern amenities that support a safe and comfortable student experience.

CUSD sought to **improve transportation for its 20,000 students** to help navigate the financial, logistical, and infrastructure-related hurdles of electrification.

The Solution

Through funding from the U.S. Environmental Protection Agency's (EPA) Clean School Bus Program, Compton Unified acquired 25 new electric school buses, marking its first step toward full fleet electrification. The district partnered with Highland Electric Fleets, Durham School Services, Thomas Built Buses, and Southern California Edison to ensure a seamless transition from diesel to electric.

Key elements included:

Operational Support

Full support from Highland under its Electrification-as-a-Service (EaaS) model, ensuring reliable charging and maintenance services without upfront capital costs.

Fleet Electrification

Deployment of **25 Thomas Built electric school buses** (17 Type A, 8 Type C) to serve students across the district.

Infrastructure Buildout

Highland completed the Charge Ready Transport buildout **6 months faster than anticipated** (12 vs. 18 months), and installed **25 fast charging stations** to support the transportation of 20,000+ students.

Technical Training

Hands-on training for drivers and technicians, led by Durham School Services, Thomas Built Buses, Highland, and Optimal EV.

This project was made possible by a collaborative public-private effort and represents just the beginning, as CUSD plans to deploy an additional **25 electric buses in the near future**.

Why It Matters

CUSD's electric bus deployment addresses both environmental justice and educational equity:

Community Health
Zero-emission buses reduce exposure to harmful pollutants in a community disproportionately impacted by air pollution and pediatric asthma.

Student Safety & Comfort
Modern vehicles offer quieter rides, improved safety features, and air conditioning for year-round comfort.

Environmental Leadership
Our partner is demonstrating bold climate action in one of California's most densely populated urban areas.

"These new electric buses are an investment in our students' future, providing safe, clean transportation as they pursue their dreams."

– Dr. Darin Brawley, Superintendent, Compton Unified School District

The Results

Historic First Deployment: CUSD's first 25 electric school buses began service in spring 2025.

Charging Infrastructure Built: 25 fast chargers installed to power the new fleet.

Workforce Readiness: Local technicians trained to maintain and operate the new electric buses.

Future Expansion: After seeing the value of the initial rollout, the district is moving forward with Highland to double the fleet and footprint, bringing 25 more electric school buses to the community.

Since switching to electric school buses, our partner has **reduced maintenance requirements**, **lowered operational expenses**, and **gained protection** from diesel price spikes and fuel market volatility.

Glades County School District, Florida

• 13 Blue Bird Electric Buses • 13 Tellus DC Fast Chargers

The Challenge

Glades County School District, serving a rural community in Florida, operated a fleet of aging diesel buses, with **some vehicles exceeding 25 years in service**. The majority of these buses lacked air conditioning, subjecting students to extreme heat during their commutes.

The district aimed to modernize its fleet to provide safer, cleaner, and more comfortable transportation but **faced financial and infrastructural hurdles** in transitioning to electric vehicles.

The Solution

Through a nearly $5 million grant from the EPA's Clean School Bus Program, GCSD acquired 13 Blue Bird electric school buses. To facilitate this transition, the district partnered with Highland Electric Fleets, which provided comprehensive Electrification-as-a-Service (EaaS) support, including:

Key elements included:

Infrastructure Development
Installation of 13 Tellus DC fast charging stations and related infrastructure.

Training Programs
Fleet electrification training for district employees, including drivers, mechanics, and managers.

Operational Support
Guaranteed daily charging sufficient for designated routes.

Financial Structuring
A 15-year agreement with predictable annual payments covering energy costs, maintenance, and infrastructure support.

Maintenance Coverage:
Reimbursement for electric school bus maintenance costs.

This partnership allowed GCSD to modernize its fleet without incurring significant upfront capital expenses.

Why It Matters

The introduction of electric buses addresses both community health and operational challenges.

Benefits include:

Community Health
Zero-emission buses contribute to improved air quality in the community, which is known to help to reduce pediatric asthma.

Student Comfort
All new buses are equipped with air conditioning, enhancing the comfort of student commutes

Operational Savings
Anticipated reduction in fuel and maintenance costs, with energy costs reported at ~19 cents per mile compared to ~79 cents for diesel buses.

The Results

Fleet Modernization: Replacement of over half of the district's outdated diesel buses.

Enhanced Student Experience: Majority of students now have access to air-conditioned transportation.

Financial Efficiency: Predictable and manageable operational costs

Community Leadership: GCSD positions itself as a leader in clean student transportation within the region.

"These state-of-the-art buses represent a significant advancement for our district, offering students a much more comfortable transportation experience in the extreme Florida heat. This milestone is a chance to bring our community together and recognize the teamwork and dedication that brought this project to life."

– Dr. Beth Barfield, Superintendent
Glades County School District

Let's Talk About Your District!

Ready to explore electrification but not sure where to start?

Highland can help you:

- Navigate funding opportunities
- Model your total cost of ownership
- Design and implement a turnkey EV program

Contact us to learn more:

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