



**Highland<sup>®</sup>**

Canutillo ISd

December 2025

# Your partner in fleet electrification

Highland takes on the risk, complexity, and upfront expense, so you don't have to.

## Our Guarantees

Highland guarantees that its system of electric vehicles, chargers and infrastructure will deliver:

- ✓ 97% charger uptime
- ✓ Route-ready vehicles at the start of each day
- ✓ 30 minute response time for system issues
- ✓ Price stability, even when electricity costs fluctuate
- ✓ Performance-based contract



 Funding & Financing	 Project planning	 Vehicle & charger procurement
 Permitting & installation	 Charger operation & maintenance	 Maintenance reimbursement
 FleetX Remote Management	 Fueling (electricity)	 Staff & driver training

# Proposed Site Plan



Proprietary and confidential. Not for construction. Subject to change based on permitting authority or utility requirements, and design improvements.



# Highland Contract Pricing

Pricing is inclusive of:

- All up-front capital costs, no costs to Canutillo ISD until the buses and depot are operational.
  - Vehicles
  - Utility interconnection (already complete)
  - Charger procurement and delivery
  - Construction
- Ongoing Highland Depot services:
  - Grant and reporting support
  - Site surveying
  - Permitting
  - Civil & environmental engineering
  - **Charging and fleet management software FleetX**
  - Route & fleet feasibility analysis and reports
  - **Charger maintenance**
  - Extended charger warranty
  - **Operational & uptime guarantee**
  - Vehicle-to-grid integration where possible
  - **Dedicated support and troubleshooting staff**
  - Press events
  - Customer Success Manager
  - **Extensive training for drivers, admin, community**
  - Highland monetizes 45W/30C tax credits to lower price

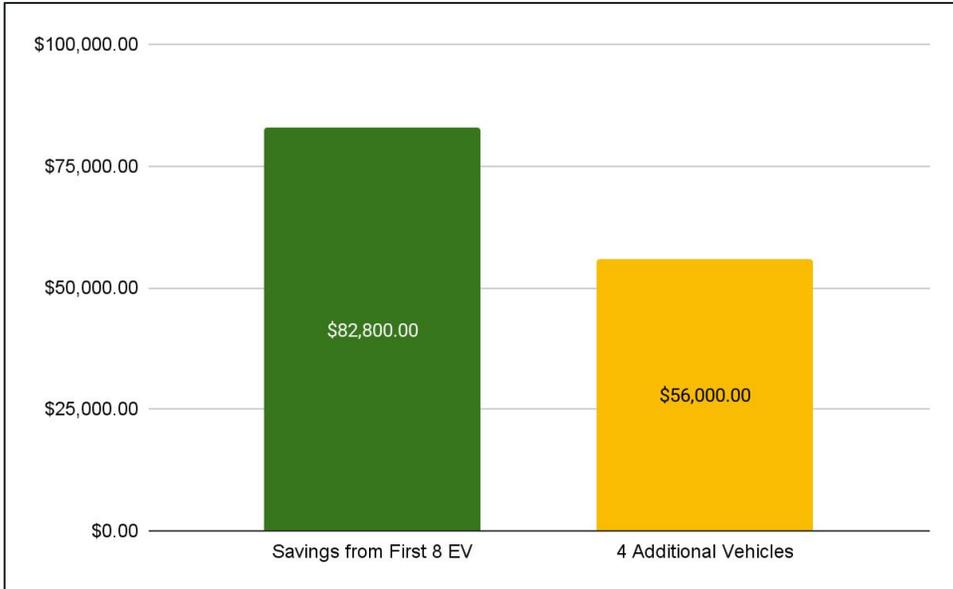
Fleet Electrification-as-a-Service Offering				
Base Service Fee*	Bus Quantity	Charger Qty. / Type	Funded in part by:	
\$12,200 - \$14,000 / bus / year	4	4 / 30kW	EPA Clean School Bus Program	
Base Service Term	Vehicle	Annual Escalator	Average Annual School Days	Annual Mileage
10 years	Type C	3%, subject to CPI adjustments	180 days	9,000 miles

*\*\*Pricing conditional on securing federal funding and tax credits. Low risk, but still conditional*

*\*No scrap vehicles are required from the district*



# Phase 1 Deployment Savings



Diesel Savings from First 8 Vehicles	
Average Annual Mileage	9,000
Efficiency (mpg)	6 mpg
Diesel Fuel Price (\$/gal)*	\$3.30
Diesel Savings per bus	\$4,950
Number of Diesel Buses Replaced	8
<b>Diesel Fuel Savings from Phase 1</b>	<b>\$39,600/year</b>
Maintenance + Bus Cost Savings	
Diesel Bus Cost	\$165,000
M&R Year 1 (per bus)**	\$5,400
Number of Diesel Buses Replaced	8
<b>Maintenance Savings from Phase 1</b>	<b>\$43,200</b>
<b>Combined Fuel and Maintenance Savings</b>	<b>\$82,800</b>

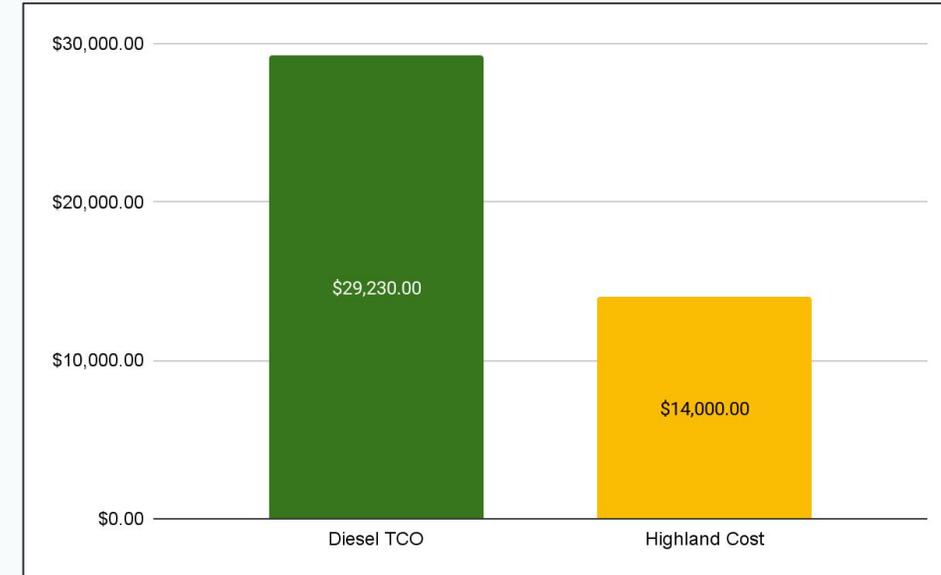
The economic savings from the first 8 vehicles comfortably offset the cost to add 4 additional EV vehicles, chargers, energy, and maintenance with Highland.



# What will it cost to operate a diesel bus?

Diesel operation costs will continue to increase and fluctuate with market volatility

10-year Diesel TCO* Medium Volatility Case	Year 1 Cost Assumptions	Yearly Average	Lifetime Costs
Vehicle Operating Timeframe	2026	2026-2038	2026-2038
Vehicle Purchase Price	\$165,000	-	\$168,000
Fuel (\$/bus)	\$4,950	\$5,943	\$59,430
Maintenance and Repair (\$/bus and Labor)	\$5,400	\$6,483	\$64,830
LIFETIME TCO <sup>1</sup>			\$292,263
YEARLY AVERAGE TCO			\$29,230



The Highland Fleet Contract, utilizing the awarded grant funding, is a more stable and affordable option for Canutillo ISD over the following 10 years.



\*Modeling assumptions, including cost escalator rates, are available upon request.  
<sup>1</sup> Lifetime costs include a 10% chance of a large engine overhaul repair cost

# Our Projects

6.0M+

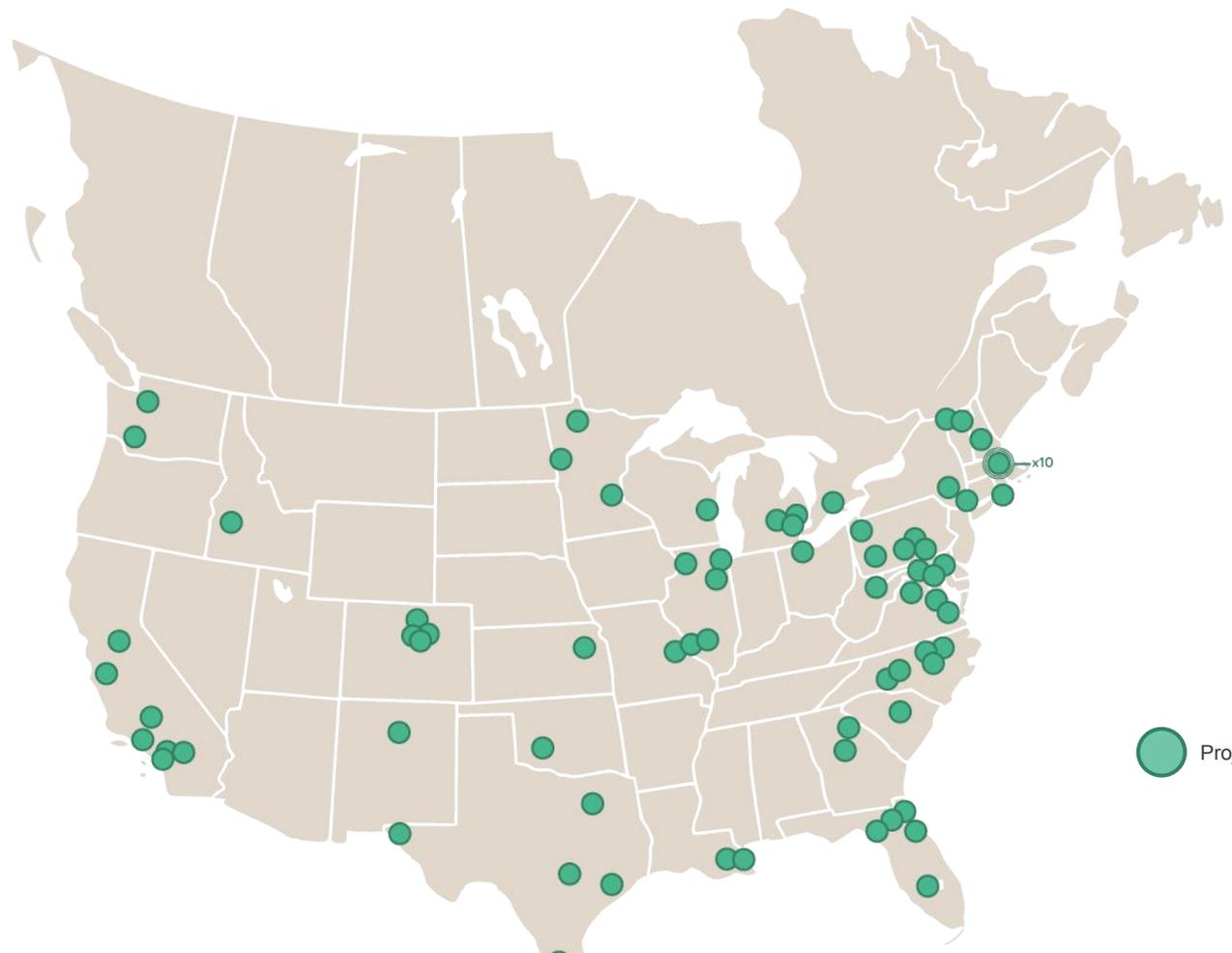
electric miles driven

1,000+

electric school buses  
under contract

130

School district partners under  
development and contracted



 Projects

**California**

- Salinas City ESD
- Compton Unified SD/NEC
- Fruitvale SD, Bakersfield
- Roseville City Elementary SD
- Moreno Valley Unified
- Oxnard SD

**Colorado**

- Peak to Peak Charter School
- Jeffco PS
- Cherry Creek USD
- Jefferson County USD

**Florida**

- Glades County SD
- Dixie District Schools
- Duval County PS
- KIPP Jacksonville
- Union County SD

**Georgia**

- Wilkes County PS
- Bibb County Schools

**Idaho**

- Boise School District

**Illinois**

- Palatine Community CSD
- West Aurora SD 129
- East St. Louis SD 189
- Hardin County CUSD No.1

**Kansas**

- Topeka/NAC PS

**Louisiana**

- New Orleans Charter Science & Mathematics HS/ NEC
- New Orleans/NEC

**Massachusetts**

- Amherst PS
- Beacon Mobility
- Beverly PS

**City of Beverly**

- Essex North Shore
- Hamilton-Wenham/Clean Ride
- WeDriveU
- Lincoln PS/Clean Ride
- Holyoke PS/NEC
- Worcester PS

**Maryland**

- Baltimore City PS
- Baltimore County PS
- Montgomery County PS

**Michigan**

- Dearborn PS
- Jackson PS
- Redford Union SD/NEC

**Minnesota**

- Red Lake PSD 38
- Edina PS
- Moorhead PS

**Missouri**

- Normandy Schools Collaborative

**North Carolina**

- KIPP Durham
- KIPP Halifax
- KIPP Gaston
- Charlotte-Mecklenburg Schools
- RISE SE Raleigh Charter

**New Hampshire**

- Rumney SD (SAU 48)/NEC

**New York**

- Hyde Park CSD
- Scarsdale PS

**New Mexico**

- GreenPower Motor Co.

**Ohio**

- Toledo City PS

**Oklahoma**

- Cache PS

**Pennsylvania**

- Baldwin-Whitehall SD
- Bethlehem Area SD
- Erie City SD
- Greater Johnstown/McIllwain
- Unionville-Chadds Ford SD

**Rhode Island**

- Cumberland/NEC PS

**Texas**

- Canutillo ISD
- Dallas ISD
- San Marcos CISD
- Cypress-Fairbanks ISD
- Valley View ISD

**Vermont**

- South Burlington SD
- Champlain Valley SD

**Virginia**

- Manassas City PS
- Westmoreland Colonial Beach
- Westmoreland Montross

**Washington**

- Tukwila SD
- Woodland PS

**West Virginia**

- Grant County Schools
- Wisconsin
- Milwaukee PS/NAC

**Canada**

- Attridge Transportation, ON



# Highland Sourcewell Contract 051123-HEF

Highland was one of 9 companies awarded through Sourcewell's competitive solicitation for Fleet Electrification Services, among a field of 43 applicants.

Contract 051123-HEF is for Turnkey Fleet Electrification Services provided as an annual fee per bus, based on mileage, term, charger capacity (kW), and Net Vehicle Acquisition Costs (Net VAC). Highland's Contracted fee per bus includes cost of design, equipment acquisition & installation, project implementation, and ongoing services.



Canutillo ISD

Sourcewell 

Awarded Contract

Contract #051123-HEF

## Does EPA CSB Program allow use of Sourcewell Contracts?

Yes! "Cooperative Purchasing Contracts (like Sourcewell) can be used instead of issuing RFPs" for EPA Awarded projects, as Sourcewell contracts meet the competitive requirements and include the required Federal terms and conditions of 2 CFR Part 200.  
(Quote Ref: EPA CSB RFP - Q&A 5.30)

## Highland 051123-HEF

EPA Criteria	Sourcewell Award	EPA Compliance
Project Planning and Design	✓	✓
Site Prep & Installation	✓	✓
Bus & Charger Acquisition	✓	✓
Air Quality Monitoring	✓	✓
V2G Equipment & Software	✓	✓
Fleet Management Software	✓	✓

# Thank you



# Appendix

# Why now?



## Available Funding

- Grant & incentive programs
- State & local policies
- Utility programs



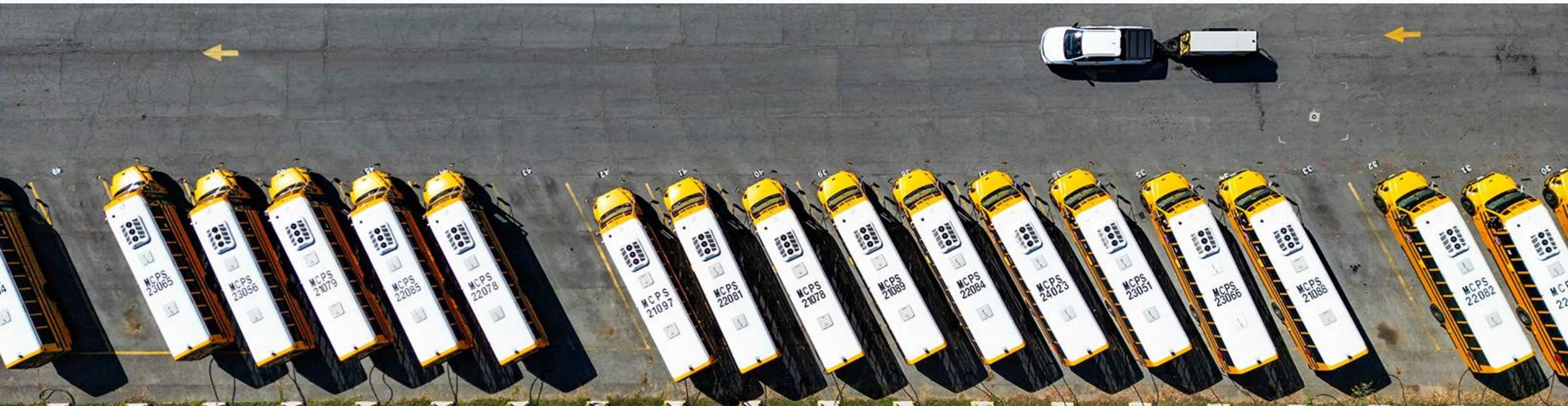
## Major Manufacturers, Track Record

- OEMs committed to electrification
- 1,700+ electric buses on the road for 5+ years



## Business Model Innovation

- Zero upfront cost
- Lower cost of operation
- Summertime V2G



# FleetX: purpose-built EV fleet software

## Manage your fleet from your fingertips

Monitor Route Readiness

Vehicle Name	AM Route Readiness	Plug Status
10	● Ready+	● In Motion
11	● Ready+	● Charging
3	● Ready+	● In Motion
5	● Ready+	● In Motion

Schedule tracking during project development and execution

**Project Status**

**Project Summary:**  
This is the project summary. It can be a couple of sentences, but is intended to be brief.  
Contracted Operational Date: 01/31/2025  
Targeted Operational Date: 01/31/2025

**Project Stages**  
Track project progress across key milestones  
1 Task Pending

- Kickoff
- Planning
- Building
- Adoption  
Support initial bus operations and route management. (0-12 months)
- Activation

3 of 5 stages complete 60%

Estimated Completion Date: 12/21/2024  
Last updated on 10/23/2024

Current Stage: Adoption

Access step-by-step training resources and troubleshooting guides

**About My Fleet**  
This section will give basic introduction to the key elements of operating

- What's Inside an Electric School Bus

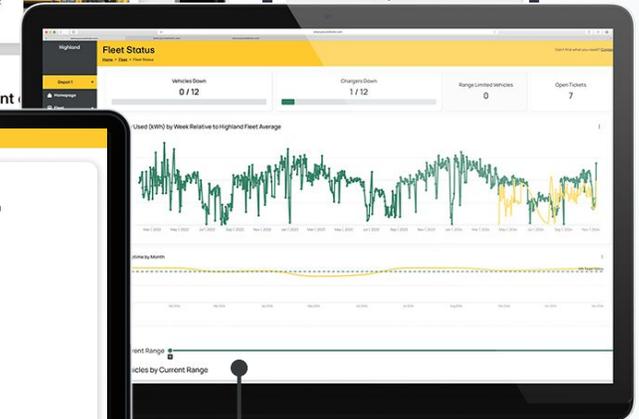
What is Vehicle-to-Grid (V2G)

Submit & track support tickets from anywhere

All Tickets Create New Ticket

TICKET ID	TITLE	STATUS
0123	Charger Down	● Open
0124	Regenerative Braking not working	● In Progress
0125	Charger Down	● Delayed
0126	Vehicle did not charge fully overnight	● Open
0127	12v vehicle battery is dead	● Open
0124	Regenerative Braking not	● In Progress

Track historical performance



# Additional Benefits Working with Highland

## EPA Clean School Bus Grant Award: Highland Commitments

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### Workforce Development

[GRID Alternatives](#): Contract with GRID Alternatives to develop and perform EVSB and charger trainings including classroom, video and field trainings.

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### Air Quality Quantifications

[QuantAQ](#): Purchase and deploy QuantAQ Air Quality Sensors at depots prior to electrification

- Publish pre-electrification air quality reports to establish baseline air quality metrics
- Regularly collect and report on air quality metrics after EVSB deployment to demonstrate how electrification impacts air quality

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### Community Engagement

- Education: Develop and lead interactive community events to educate the local communities on electrification, how it works, and how it improves local health and environments
  - Press Releases: Provide press releases to relevant media to highlight electrification progress
  - Ribbon Cutting: Organize event for district staff, students, local politicians, and EPA staff
- 



# Fire Safety and First Responder Training

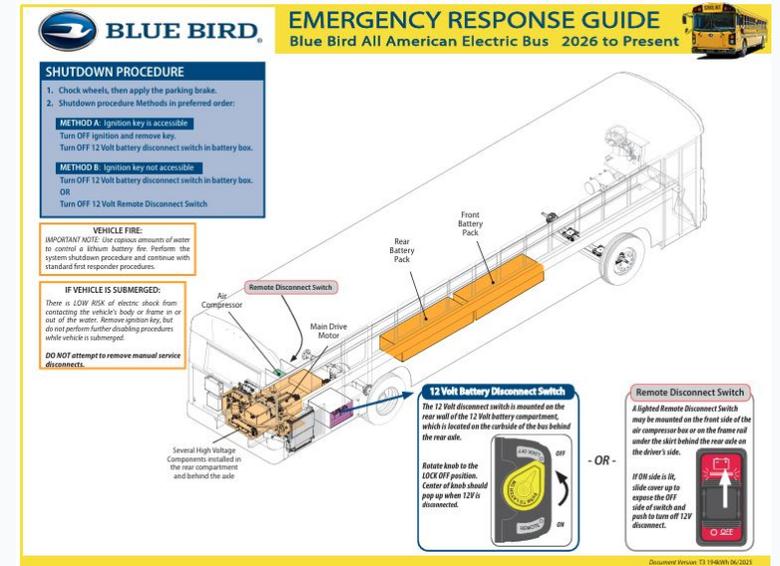
OEMs provide comprehensive Emergency Response guides and quick references for all electric models.

Both diesel and electric buses have low-voltage electrical systems and are responsible for 70% of all bus fires.

- These fires can occur when wires are incorrectly routed or secured, leading to contact with nearby metal parts.
- Although electric buses include high-voltage components that might appear to add complexity, they are thoughtfully designed with safety features to address and minimize potential risks.
  - For example, low-voltage circuits control the high-voltage systems. If a short circuit occurs, the vehicle alerts the driver there is a high-voltage fault, and the driver is then to take the appropriate steps to properly pull over out of harm's way. This early detection allows the high-voltage system to prevent further damage.
  - Additionally, manufacturers take extra care in designing battery placement and enclosures. These enclosures are engineered to protect the batteries during collisions and to manage heat buildup safely, reducing the risk of fires.

While issues with the high-voltage systems can arise, the buses are equipped with battery thermal management systems that help maintain the batteries at an optimal temperature, whether cooling or heating is needed. Each battery pack is monitored by sensors that track temperature and provide dashboard alerts if conditions become unusual. Drivers also receive training to effectively respond to battery alerts and warnings.

Proper training is essential for handling thermal incidents safely. **Highland provides training for drivers, first responders, and fleet managers to ensure everyone is prepared for electric vehicle emergencies.**



# Health impacts of student transportation

Clean buses improve student & community health



Students riding clean school buses have

**8%**

**LESS ABSENTEEISM**

**THAN STUDENTS RIDING DIESEL BUSES<sup>1</sup>**



Children riding clean buses have

**16%**

**LESS EXPOSURE**

**TO INHALED NO<sub>x</sub> & AIR POLLUTION<sup>1</sup>**



Reduced air pollution exposure leads to

**7%**

**LOWER RISK**

**OF PEDIATRIC ASTHMA HOSPITALIZATION<sup>2</sup>**

Exposure to air pollution is linked to **impaired cognitive development & lower academic performance<sup>3</sup>**

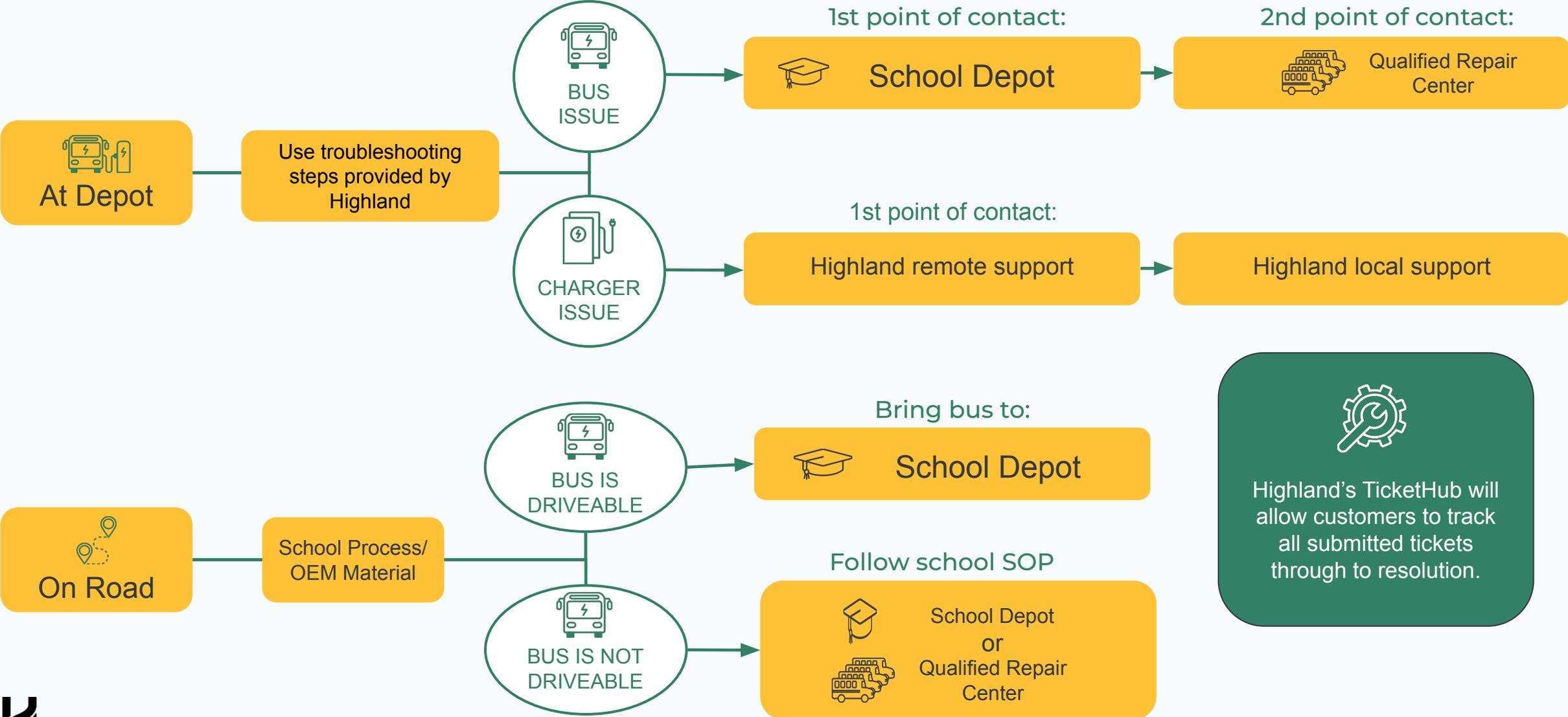


# Citations

1	American Journal of Respiratory and Critical Care Medicine	<a href="https://www.atsjournals.org/doi/full/10.1164/rccm.201410-1924OC#.VTVtZK1Vikp">https://www.atsjournals.org/doi/full/10.1164/rccm.201410-1924OC#.VTVtZK1Vikp</a>
2	American Journal of Respiratory and Critical Care Medicine	<a href="https://www.atsjournals.org/doi/10.1164/rccm.201706-1267OC">https://www.atsjournals.org/doi/10.1164/rccm.201706-1267OC</a>
3	Environmental Epidemiology	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8663889/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8663889/</a>
4	Community Health	<a href="https://projects.iq.harvard.edu/covid-pm">https://projects.iq.harvard.edu/covid-pm,</a>
5	Environmental Justice	<a href="https://uspirg.org/reports/usp/electric-buses-clean-transportation-healthier-neighborhoods-and-cleaner-air">https://uspirg.org/reports/usp/electric-buses-clean-transportation-healthier-neighborhoods-and-cleaner-air</a>
6	School Budgets	<a href="https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&amp;s=EMD_EPD2D_XL0_PTE_NUS_DPG&amp;f=W">https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&amp;s=EMD_EPD2D_XL0_PTE_NUS_DPG&amp;f=W</a>
7	Academic Success	<a href="https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3351840">https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3351840</a>



# Typical EV Maintenance Issue Resolution



# Comprehensive Maintenance & Warranty Coverage

Highland ensures entire system performance for the duration of the partnership

Component	Mechanism
<b>Entire system issue identification &amp; resolution</b>	Dedicated customer success & field service team, 30-min response time during business hours
<b>Vehicle inspections and Annual Vehicle Work maintenance and parts</b>	District performs inspections and maintenance Reimbursed on annual schedule
<b>Other Vehicle repairs and parts, tires</b>	Reimbursement of: Labor - agreed hourly rate (\$55/hr) Parts - at cost Highland assists pursuing warranty claims
<b>Major Repairs</b>	Main EV battery, drivetrain, etc. covered under 8yr warranty Highland assists coordinating with third-party or OEM
<b>Vehicle towing</b>	Reimbursed at capped amount (\$650 per tow)



# Comprehensive Maintenance & Warranty Coverage

What's covered?	What's not covered?
<p>“Annual Vehicle Work” (OEMs recommended preventative maintenance):</p> <p>(a) Up to 15 hours of labor, which is the Standard Repair Time (SRT)</p> <p>(b) Inspection and change or replacement, as needed or otherwise indicated below, of each of the following:</p> <ul style="list-style-type: none"><li>(i) Air compressor oil separator and main seal</li><li>(ii) Coolant system maintenance, fluid change</li><li>(iii) Electric Transmission Fluid Change</li><li>(iv) Power steering fluid all C2</li><li>(v) Power steering filter all C2</li><li>(vi) Battery Pack Desiccant (replacement)</li><li>(vii) Rear end fluid (change)</li><li>(viii) Air Drier</li><li>(ix) AC Filters</li><li>(x) Air compressor filter LG (replacement)</li><li>(xi) Air compressor filter SM (replacement)</li><li>(xii) Power steering Motor Lube</li><li>(xiii) Vehicle consumables (such as wiper blades, light bulbs, and similar), other than Vehicle tires</li></ul> <p>(c) Such other annual, semi-annual, quarterly, monthly, or other, periodic Vehicle work required under Prudent Vehicle Practices (defined in the Terms and Conditions).</p>	<ul style="list-style-type: none"><li>● Customer caused damage</li><li>● Repairs reimbursed / paid for by the OEM or warranty</li><li>● Labor hours in excess of the applicable Standard Repair Time</li><li>● Labor rate beyond agreed rate</li><li>● OEM diagnostic software (Highland assists with diagnosing)</li></ul>
<p>Other vehicle repairs and parts at agreed labor rate, cost of parts, tires, warranty covered items, battery, drivetrain, towing</p>	



# Mechanic and Driver Training

Highland has developed a robust training program for District staff and community stakeholders. As part of Highland's electrification-as-a-service solution, we train drivers and mechanics to use and maintain Electric School Buses (ESBs) and first responders on safety best practices. This training is often done in tandem with the OEM or the dealer and covers the following:

- High level overview of ESBs
- Trip routine procedures
- Component overview
- Troubleshooting, Tips, & Tricks
- High Voltage disconnect procedures
- High Voltage repairs
- Maintenance plans and schedules
- Overview of charger process and troubleshooting
- Basic training on how to utilize FleetX



Trainings are scheduled to start before the site has been commissioned, continue once buses have arrived, and are held on an ongoing basis throughout the life of the contract. Highland can also facilitate curriculum for District students so the buses can be used as laboratories for learning.

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