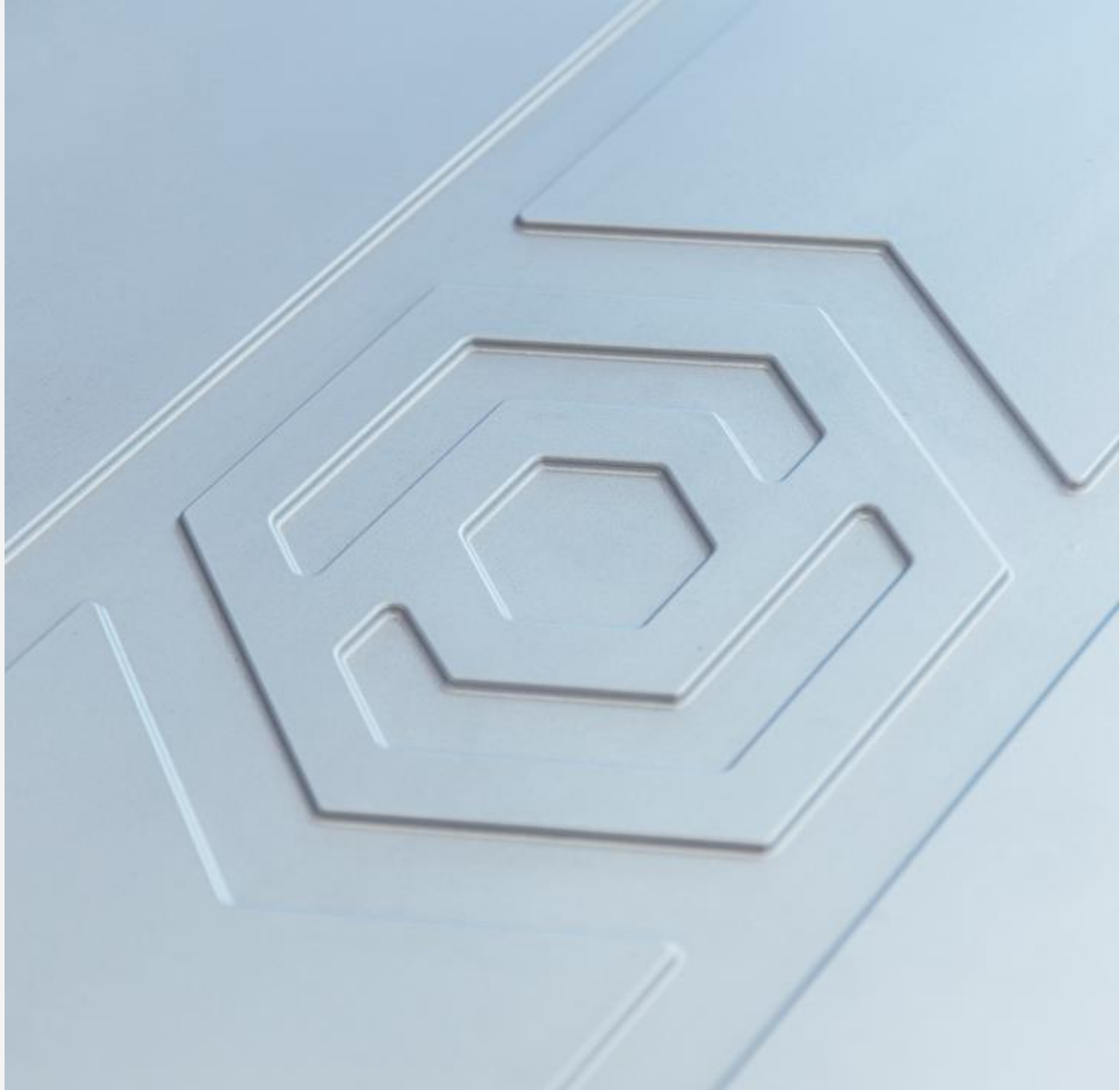
PROTERRA

Electrification for the Future

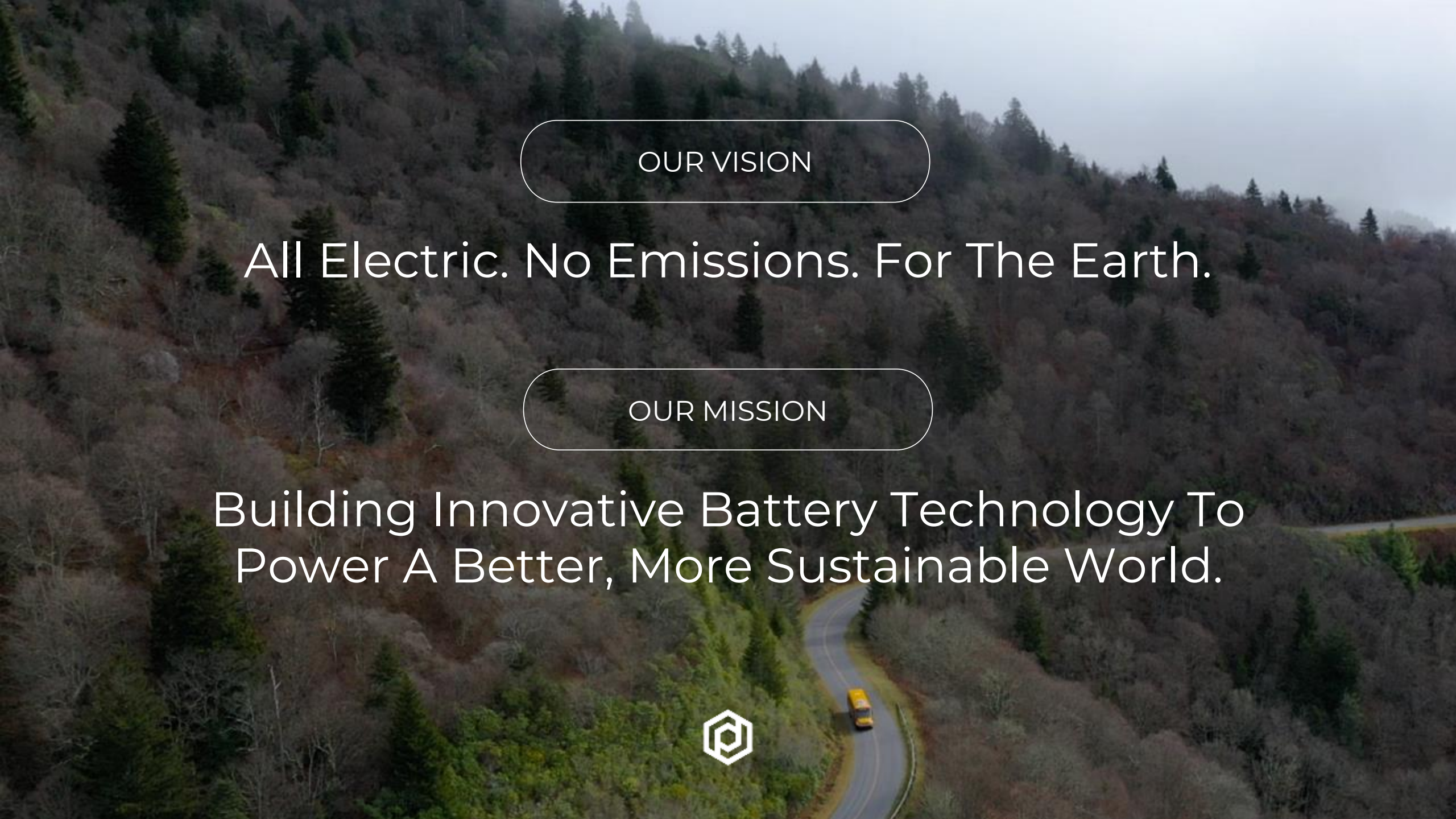
Regina Lopez
VP of Supply Chain



About the Speaker

Regina Lopez
VP of Supply Chain

20+ Years
Industrial Automation
Vehicle Manufacturing
(Ports, Terminals, Transit Buses & Trucking)
Battery Electric Manufacturing


OUR VISION
All Electric. No Emissions. For The Earth.
OUR MISSION
Building Innovative Battery Technology To Power A Better, More Sustainable World.

RECHARGE | Strategic Pillars

PROTERRA

Operate with Discipline

Develop our People

Serve our Customers

Drive Growth & Innovation

Location: Burlingame, CA

Features:

- Cutting-edge testing and equipment:
  - Four Thermal Chambers
  - Two Shock + Vibration Tables
  - HALT Chambers
  - Immersion + Steam + Spray Testing
  - Crush + Impact Testing (600+ kN)
  - Cell Testing
- In-house design and testing engineers dedicated to ensuring the highest standards of quality and functionality.

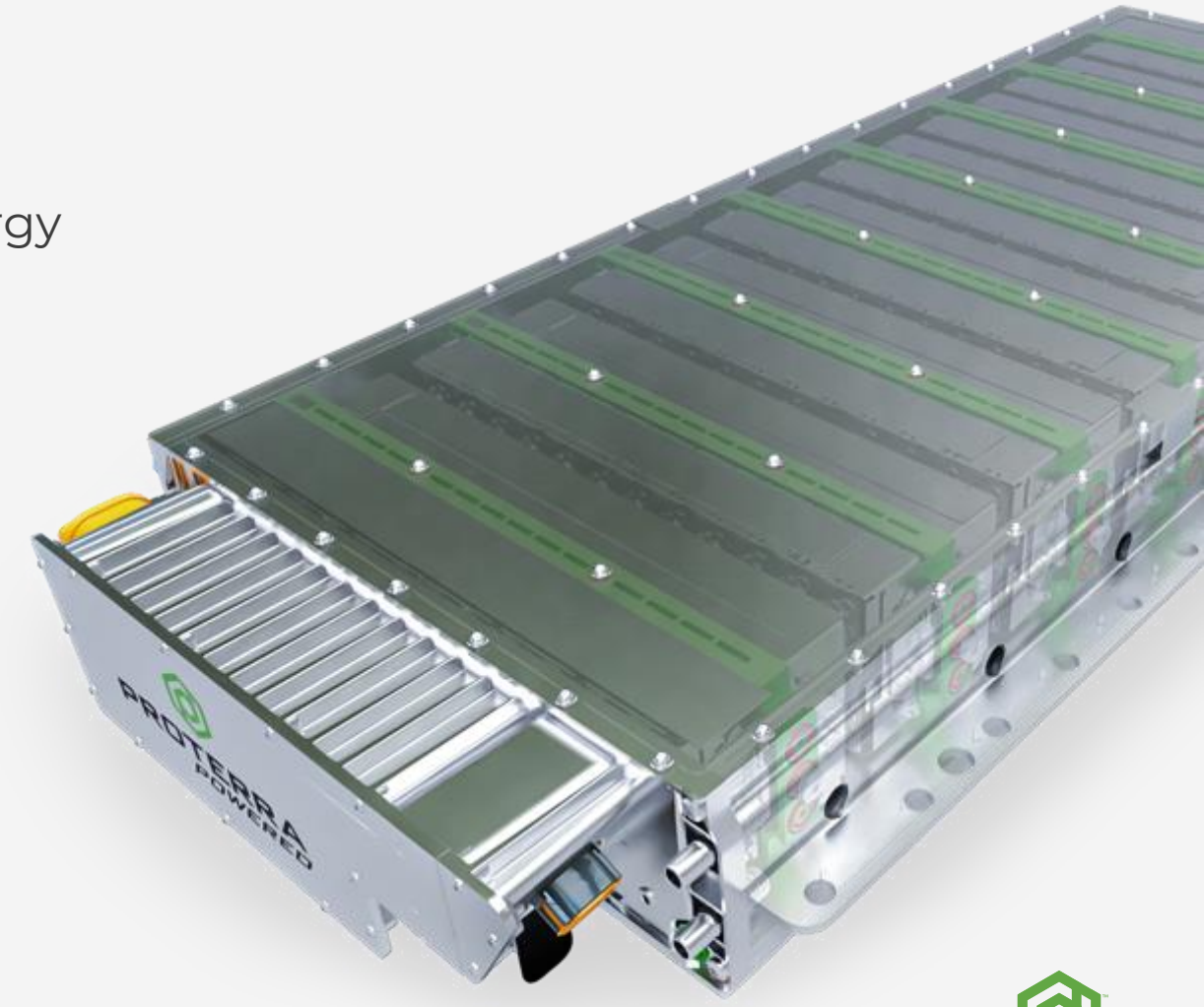
Location: Greer, South Carolina

Features:

- State-of-the-Art Battery Module and Pack Manufacturing:
  - 236K sq ft with multi-GWH production capacity
  - Ancillary system production
  - Dedicated remanufacturing / rework area
- Extensive Warehouse:
- 60K sq ft with automated material deliveries with AGVs and RFID technology
- Office:
  - 31k sq ft of open office, experience center and technology showcase

Purpose-Built for Commercial Vehicles

- Proven battery technology powering over 2,000 commercial vehicles on the road
- Industrial-scale gravimetric and volumetric energy density
  - Enables long range for high weight ratings
- Designed with safety in mind: single-cell fault tolerance (PPR) , active liquid cooling , patented thermal event mitigation
- Functional Safety Certified: ISO 26262 and ECE-R100
- Rugged, ballistic-grade enclosure

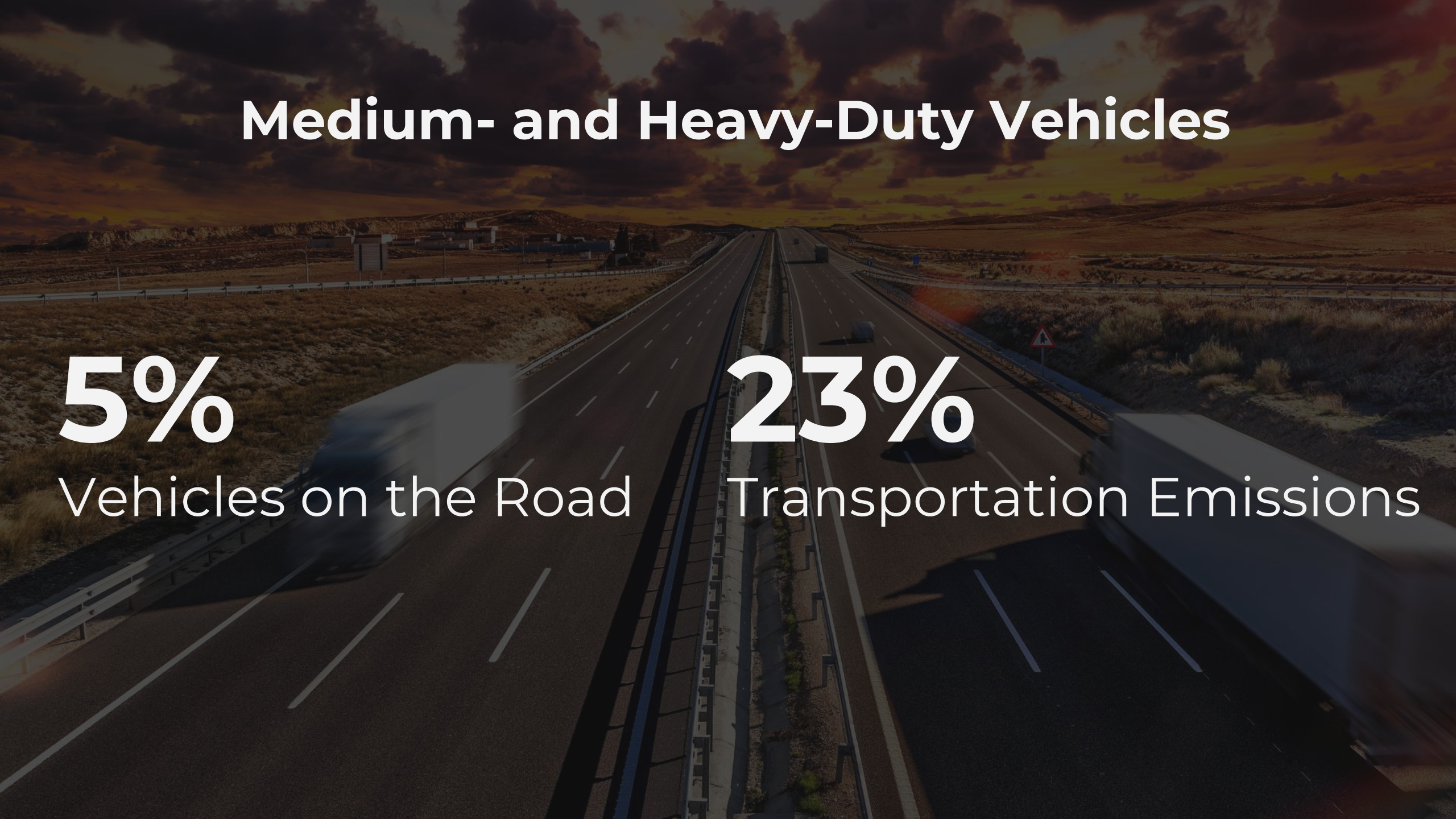


PURPOSE-BUILT

FOR MEDIUM- AND HEAVY-DUTY COMMERCIAL VEHICLES AND EQUIPMENT

Why Electrification?

Medium- and Heavy-Duty Vehicles



5%
Vehicles on the Road

23%
Transportation Emissions

Key Emission Statistics

- Greenhouse Gas Emissions:
  - Medium and heavy-duty vehicles emitted approximately 400 million metric tons of CO2 in the United States in 2020.
- Fuel Consumption:
  - These vehicles are major consumers of fossil fuels, with the sector consuming over 47 billion gallons of diesel annually in the U.S. alone.
- Noise Pollution Reduction:
  - EVs operate much quieter than traditional diesel engines, reducing noise pollution and contributing to a more peaceful environments.

Environmental Benefits

- Reduction in Emissions:
  - EVs produce zero tailpipe emissions, significantly lowering NOx, PM, and CO2 pollutants that are known to be harmful to human health.
- Improved Air Quality:
  - Reduced emissions contribute to better air quality, particularly in urban areas where vehicles are higher concentrated.
- Resource Efficiency:
  - Electrification decreases dependence on finite fossil fuels and improves energy sustainability.

Making an Impact

"When you look at the youth average asthma rate we [Cherokee nation] are about 40% higher here on the Qualla Boundary. One way we are looking to improve air quality is with electrifying our school bus fleet."

- Katie Tiger, Air Quality Supervisor

"It all leads to one thing, and that is to protect this place"

– Yona Wade, Director of Community Affairs, Cherokee Schools

Cherokee Nation Schools, North Carolina

Circularity is Key to a Sustained Zero Emission Economy

- Second Life Applications
- 100% Recyclability
- Preservation of Rare Earth Minerals for Remanufacturing

Thank you!