

PROTERRA®

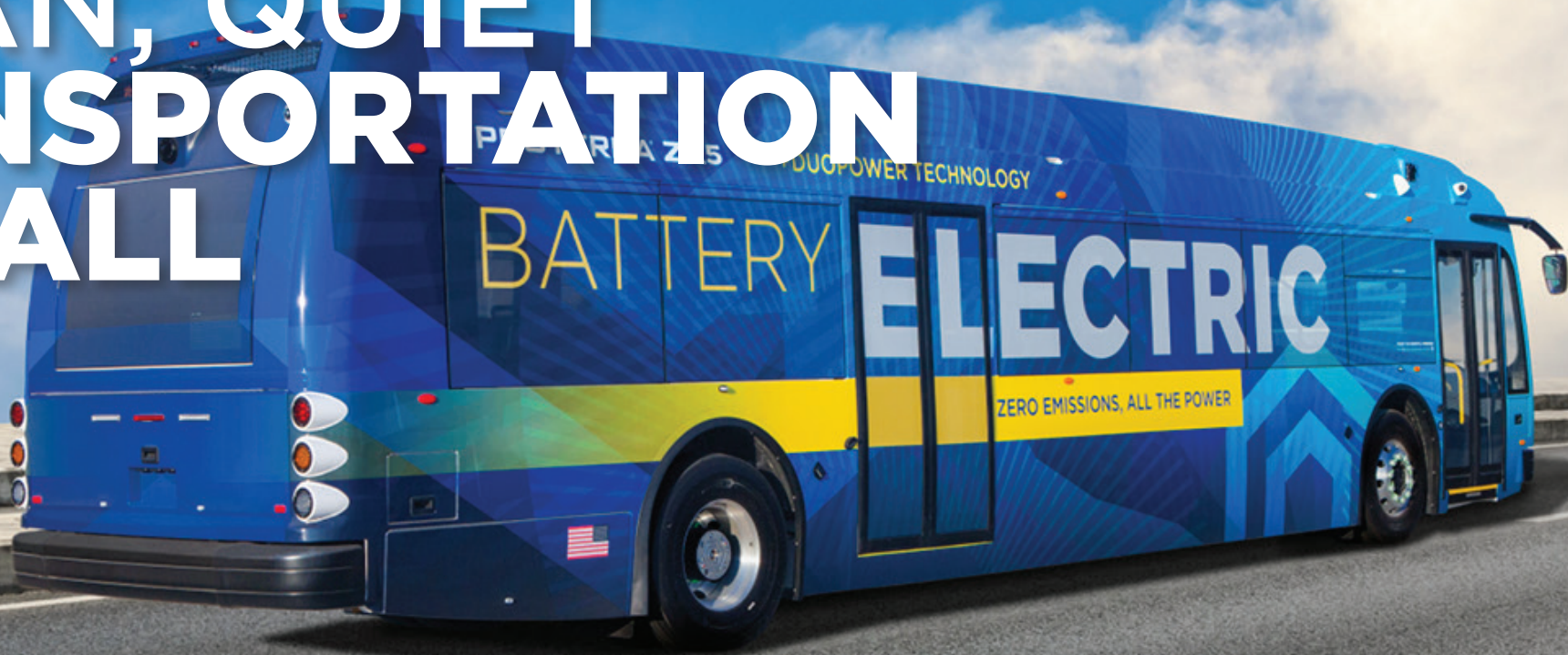
ZX5

BATTERY-ELECTRIC TRANSIT BUS



PROTERRA

CLEAN, QUIET TRANSPORTATION FOR ALL



Communities are growing and evolving, and with that, our transportation needs are changing. Now more than ever, we need safer, more reliable and cleaner options. Proterra works to meet those needs with the world's best electric vehicle technology solutions, designed and built in the United States by top talent from the automotive, manufacturing and transit industries. Our revolutionary battery-electric Proterra® ZX5 vehicle helps fleet operators reduce operating costs and reach sustainability goals while providing a clean, quiet, comfortable ride. With more than 125 customers across North America and over 14 million service miles driven, **Proterra is leading the industry's shift to a 100% electric future.**

PROTERRA[®] ZX5 TRANSIT VEHICLE

UNMATCHED PERFORMANCE

Best acceleration, greatest horsepower, highest MPGe

LONGEST RANGE

Up to 329 miles* on a single charge

GREATEST SAVINGS

Lowest operating costs, zero emissions



ZX5 220 kWh energy on board
91-125 miles operating range*
2.8 hrs charge time**

ZX5+ 440 kWh energy on board
154-240 miles operating range*
2.8 hrs charge time**

**ZX5
MAX** 660 kWh energy on board
205-329 miles operating range*
2.9 hrs charge time**

*Operating range and efficiencies approximated from simulations based on Altoona testing results at SLW, and will vary with route conditions, weather, vehicle configuration and driver behavior.
**Charge time will vary depending on charger type.

BUILT TO BE ELECTRIC FROM THE INSIDE OUT

Designed from the start as an exclusively electric vehicle, everything about a Proterra® ZX5 bus is built with safety, efficiency, and a smooth ride in mind. The ZX5 vehicle delivers exceptional route flexibility and proven operational performance, with the greatest range of any zero-emission, battery-electric bus in its class.

ADVANCED DESIGN

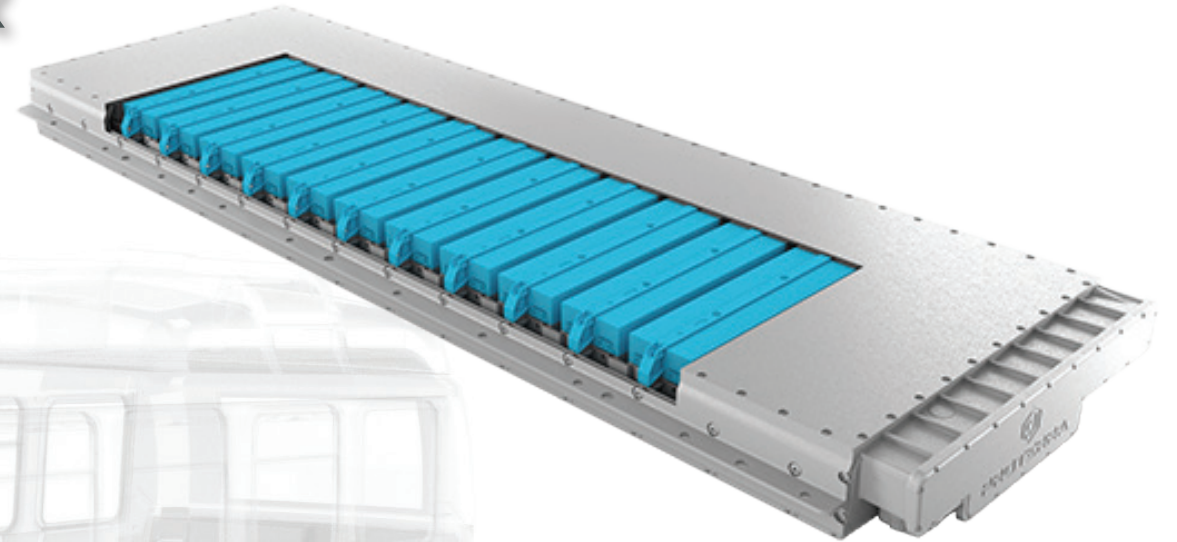
Made with an advanced composite body, the ZX5 vehicle is designed to safely and quietly endure nearly two decades of on-road service, with minimal maintenance required.

- Bus body made of carbon-fiber-reinforced composite materials
- Lighter than steel counterparts, enabling the highest battery capacity
- Extremely durable composite is corrosion-resistant, easy to repair, and non-conductive
- Maximizes vehicle life while minimizing repairs and maintenance
- Rigorously tested and 3rd-party validated



UNBEATABLE DESIGN FOR **BATTERY SAFETY**

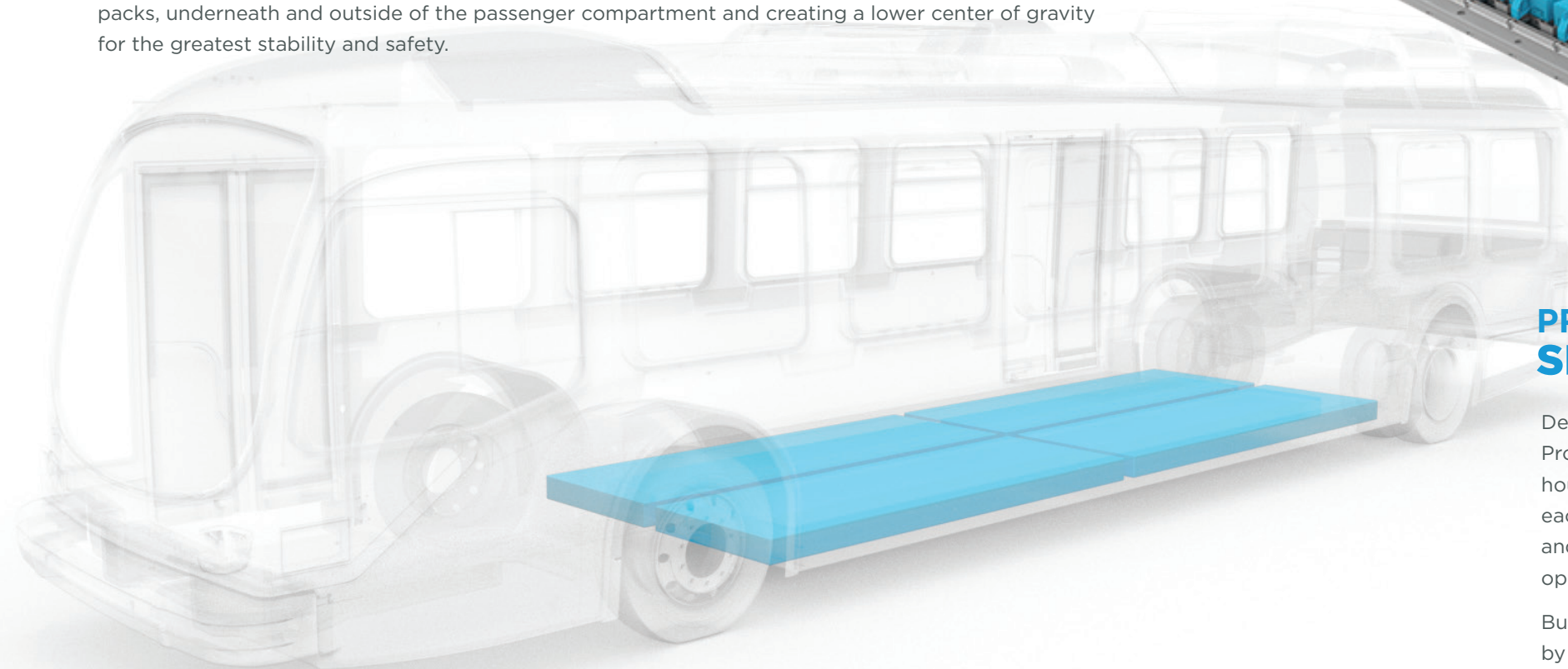
The innovative design of the Proterra® ZX5 vehicle enables us to have the most battery capacity on board for maximum range. The purpose-built design also allows for the best placement of battery packs, underneath and outside of the passenger compartment and creating a lower center of gravity for the greatest stability and safety.



PROTERRA® BATTERIES: SMART, TOUGH, RELIABLE

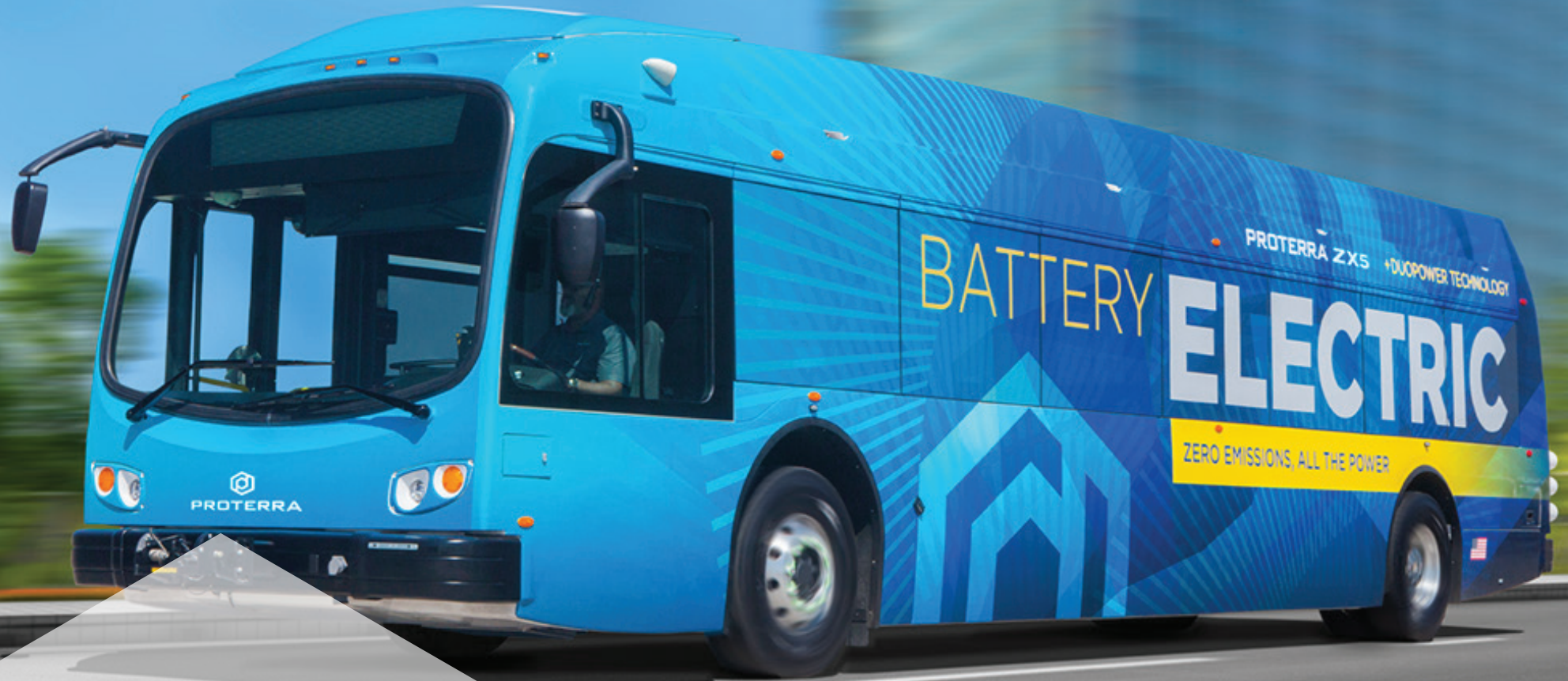
Designed from the cell level up for heavy-duty transit usage, Proterra batteries have a ruggedized, commercial-grade housing to withstand harsh environments. Sensors throughout each pack enable continuous monitoring for faster diagnostics and service, while active thermal management software ensures optimal operation in any climate.

Built in Proterra's Silicon Valley battery manufacturing facility by the best minds in battery engineering, Proterra battery systems are designed to be compact, safe and powerful.



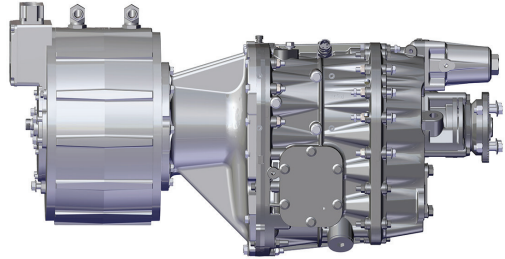
ZERO EMISSIONS ALL THE POWER

With Proterra, you don't have to compromise on performance when you go electric. In fact, our Proterra® ZX5 vehicle out-performs combustion-engine buses and is the most efficient bus in its class.



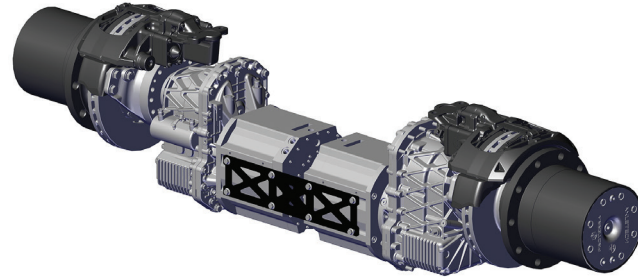
PROTERRA DRIVETRAINS: BEST ACCELERATION, EFFICIENCY AND HORSEPOWER

THE PRODRIVE DRIVETRAIN

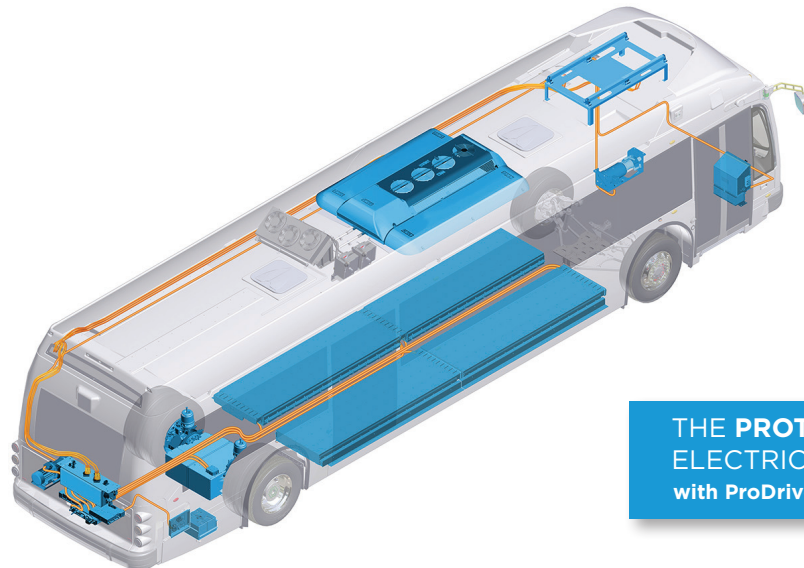


The ProDrive drivetrain, the standard option for the Proterra® ZX5 vehicle, offers superb performance and efficiency, enabling up to 22 miles per gallon equivalency (MPGe). That's five times more fuel-efficient than a standard diesel bus.

THE DUOPOWER™ DRIVETRAIN



Communities with more demanding conditions and tougher terrain may opt for the DuoPower™ drivetrain, which provides unparalleled performance and up to 25 MPGe. Featuring two electric motors, this drivetrain can accelerate the ZX5 1.5 times faster than a standard diesel bus, with nearly twice the horsepower, enabling industry-leading hill climb capabilities.



THE PROTERRA ZX5 ELECTRICAL SYSTEM with ProDrive configuration

FASTEST ACCELERATION

1.5 times faster than a standard diesel bus

5X MORE EFFICIENT THAN A DIESEL BUS

Up to 25 MPGe

GREATEST HORSEPOWER

Nearly twice as powerful as a standard diesel bus, able to tackle steep hills with grades up to 27%, with a full seated load weight

NORTH AMERICA'S MOST POPULAR ELECTRIC BUS



PROTERRA®

ZX5

40 FT BUS



ALL ZX5 MODELS can be charged on-route with overhead fast chargers or at the depot overnight, with plug-in or overhead chargers. All models take advantage of industry-standard J1772 CCS plug-in or J3105 overhead chargers.

Our most popular vehicle, the 40-foot ZX5 electric bus, can hold up to 660 kWh of energy and drive more than 300 miles on a single charge. With the longest range and best performance, the ZX5 MAX with the DuoPower™ drivetrain is the iconic model that broke the world record for the longest distance traveled by any electric vehicle on a single charge.

	with DUOPOWER™			with PRODRIVE		
	ZX5	ZX5+	ZX5 MAX	ZX5	ZX5+	ZX5 MAX
ENERGY ON BOARD	220	440	660	220	440	660
MAX RANGE* (miles)	120	232	329	117	216	297
MPGe*	23.5	22.2	20.9	22.2	20.9	19.8
PEAK HORSEPOWER	338	550	550	335	335	335
ACCELERATION 0-20 MPH	5.7	5.7	5.8	6.0	6.2	6.4
SEATING CAPACITY		40			40	

PROTERRA®

ZX5

35 FT BUS

Available in both the ZX5 and ZX5+ series, this model can carry up to 440 kWh of battery storage capacity, reach a maximum range of 240 miles and an operating efficiency of 25 MPGe.



REQUEST A ROUTE ANALYSIS

Experts on the Proterra team perform detailed route simulations and total cost of ownership analyses to help you match the on-board energy storage, drivetrain and charging configurations to your route requirements, total daily mileage and layover options. Get in touch with us to request your route analysis and find out which ZX5 vehicle is best for your transit needs.

proterra.com/contact

	with DUOPOWER™		with PRODRIVE	
	ZX5	ZX5+	ZX5	ZX5+
ENERGY ON BOARD	220	440	220	440
MAX RANGE* (miles)	125	240	124	227
MPGe*	25.1	23.5	23.5	22.2
PEAK HORSEPOWER	338	550	335	335
ACCELERATION 0-20 MPH	5.6	5.7	5.9	6.1
SEATING CAPACITY	29		29	

* Operating range and efficiencies approximated from simulations based on Altoona testing results at SLW, and will vary with route conditions, weather, vehicle configuration and driver behavior

BANK ON THE SAVINGS

Proterra® ZX5 vehicles aren't just clean and quiet. They're also far more economical than conventional transit vehicles. Imagine not having to maintain an engine, with its fuel system, cooling system or exhaust system. With Proterra, all that effort and expense is a thing of the past.

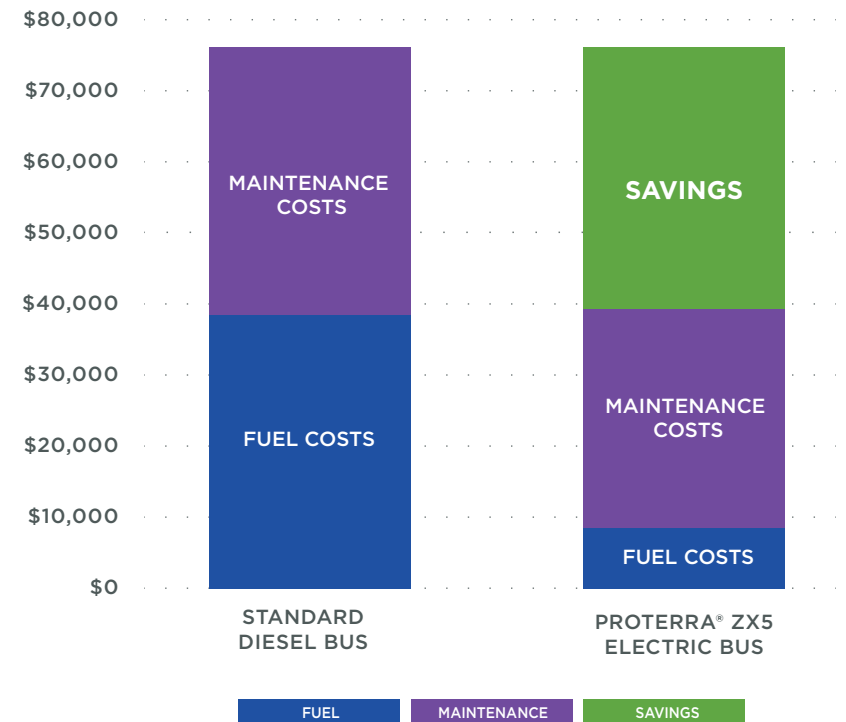
Thanks to lower maintenance costs, the stable cost of electricity, and exceptional fuel economy, Proterra customers can save more than \$400,000 in operating costs over the lifetime of each vehicle.

ZERO

oil changes • liquid fuels • expensive exhaust after-treatments

LOWER OPERATING COSTS

Save up to \$400K per bus over a 12-year lifetime vs. diesel vehicle



SIMPLIFY THE SHIFT WITH FINANCING

Proterra can help you make the shift from fossil fuels to zero-emission electric buses with a variety of financing and funding options. We'll work with you to identify the grant, loan or financing program that best meets your budget needs.

OPERATING COST SAVINGS ENABLE LEASE FINANCING:

SAVINGS

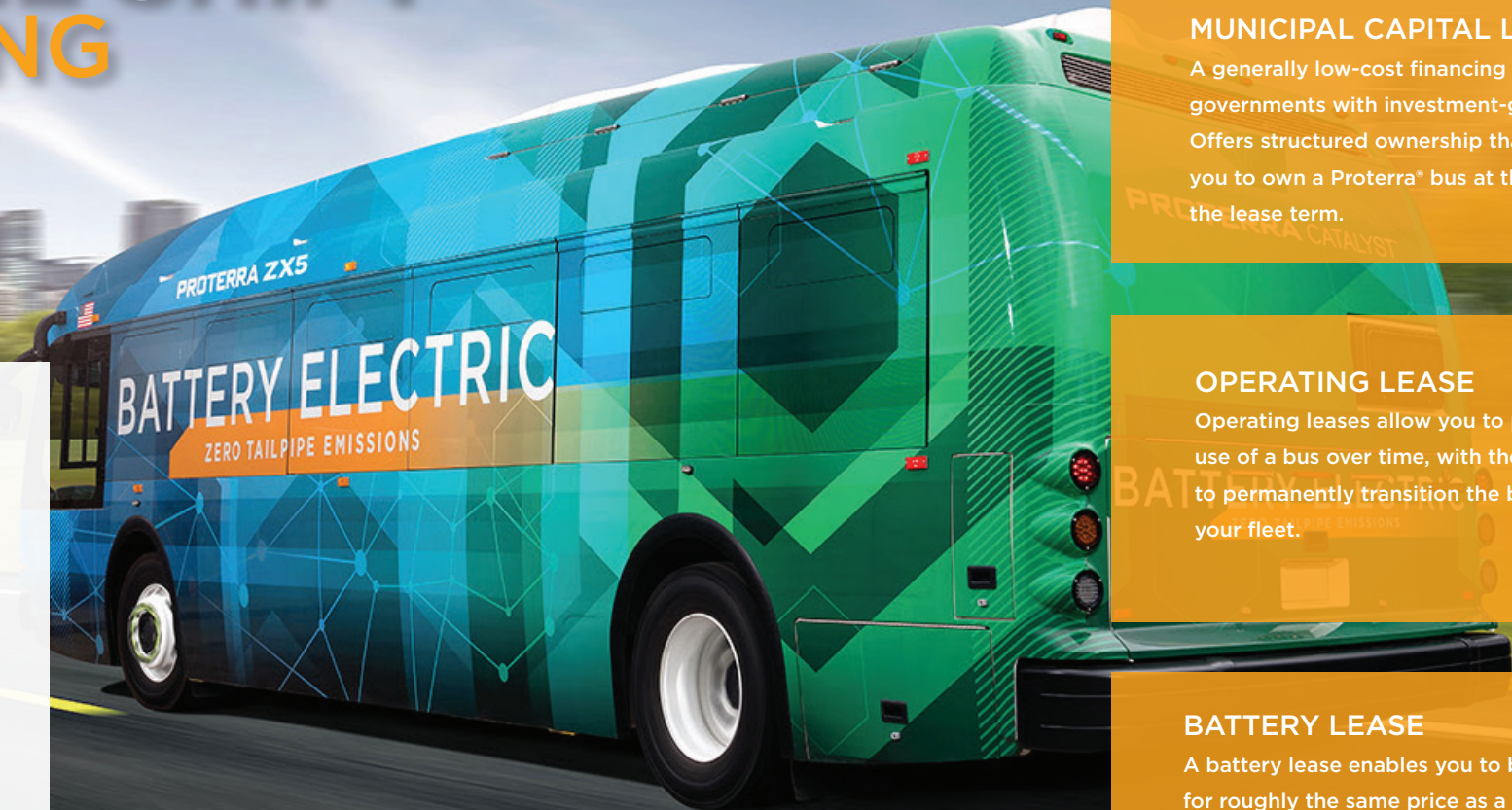
BATTERY
LEASE
PAYMENT

MAINTENANCE
COSTS

FUEL COSTS

PROTERRA

Example battery lease financing model.
For illustrative purposes only.



MUNICIPAL CAPITAL LEASE

A generally low-cost financing tool for local governments with investment-grade credits. Offers structured ownership that enables you to own a Proterra® bus at the end of the lease term.

OPERATING LEASE

Operating leases allow you to pay for the use of a bus over time, with the option to permanently transition the bus into your fleet.

BATTERY LEASE

A battery lease enables you to buy a ZX5 bus for roughly the same price as a diesel bus, putting the operating savings toward the battery lease. Proterra is responsible for the performance of the batteries through the life of the lease, removing operator risk.

TURN-KEY ENERGY DELIVERY FOR YOUR BATTERY-ELECTRIC VEHICLE FLEET

PROTERRA®
**POWER
CONTROL
SYSTEM**

YOUR PARTNER FOR A ZERO-EMISSION FLEET

At Proterra, we don't just design and build the world's most efficient heavy-duty electric vehicles. We're your partners in successfully transitioning to a zero-emission fleet. Proterra Energy™ fleet solutions offer a turn-key approach to delivering the complete energy ecosystem for heavy-duty electric fleets, including design, build, financing, operations, maintenance and energy optimization.

COMPREHENSIVE PLANNING

TURN-KEY INFRASTRUCTURE INSTALLATION

SOPHISTICATED CHARGING

SMART ENERGY MANAGEMENT

ADVANCED ENERGY STORAGE

PAY-AS-YOU-GO

OPTIMIZE OPERATIONS, REDUCE COSTS

With the Proterra APEX™ Connected Vehicle Intelligence System, you can access cloud-based data that gives you historical and real-time performance information about your battery-electric vehicle fleet, to optimize your bus and charging operations and reduce costs.

Vehicle monitoring | Remote diagnostics | Preventative maintenance | Charger management

PROTERRA® APEX™

Connected Vehicle Intelligence System

CONNECTED VEHICLES FOR SMARTER CITIES

Proterra is advancing connected vehicle technology to enable safer and more efficient movement through dynamic urban environments. From the Proterra APEX™ connected vehicle intelligence system to our advanced diagnostics tool and autonomous vehicle technology testing, Proterra is bringing robust, connected vehicle technology to electric bus fleets.



Offices:

Headquarters

1815 Rollins Road, Burlingame, CA 94010

East Coast Manufacturing

1 Whitlee Court, Greenville, SC 29607

West Coast Manufacturing

383 Cheryl Lane, City of Industry, CA 91789

proterra.com/contact

864-438-0000



PROTERRA



Proterra® vehicles and chargers are designed and manufactured in the USA by America's top transit designers and engineers, compliant with Federal DOT Buy America requirements.

REVOLUTIONIZING
TRANSIT™