

PROTERRA: REVOLUTIONIZING TRANSIT



National Association of
State Energy Officials



PRESENTED BY
Eric J. McCarthy
SVP, Government Relations, Public Policy and Legal Affairs



Proterra's Mission

Advancing electric vehicle technology to deliver the world's best-performing heavy-duty vehicles

- Offices and manufacturing in CA and SC
- 500+ employees, with strong transportation expertise
- >100 customers; >900 vehicles sold
- >10,000,000 service miles
- >50,000,000 pounds of CO2 emissions avoided



Strong Transportation Expertise



World-Class Financial Partners



OUR CUSTOMERS



>900 buses sold to >100 customers across 43 states/provinces

AL
ALABAMA A&M UNIVERSITY
NORMAL

AK
CAPITAL TRANSIT JUNEAU

CA
CITY OF ARVIN
CITY OF QUARTE
FAX FRESNO
FORTA FRESNO
FAST FAIRFIELD
FOOTHILL TRANSIT WEST COVINA
HUMBOLDT TRANSIT AUTHORITY EUREKA
LADOT TRANSIT LOS ANGELES
MAX MODESTO
RABA REDDING
RTD STOCKTON
SACRAMENTO INTERNATIONAL AIRPORT
SAMTRANS SAN CARLOS
SAN FRANCISCO INTERNATIONAL AIRPORT
SAN JOSE INTERNATIONAL AIRPORT
SCHTD SANTA CRUZ
TRI DELTA TRANSIT ANTIOCH
VTA SAN JOSE
VISALIA TRANSIT VISALIA
YOSEMITE NATIONAL PARK

CO
TOWN OF BRECKENRIDGE
SUMMIT COUNTY PRISCO
ECO TRANSIT GYPSUM

CT
GBT BRIDGEPORT

DC
DC CIRCULATOR WASHINGTON
DART FIRST STATE DOVER

DE
DART FIRST STATE DOVER

FL
STAR METRO TALLAHASSEE
HART HILLSBOROUGH
LYNX ORLANDO
MIAMI-DADE COUNTY MIAMI

GA
UNIV. OF GEORGIA ATHENS

HI
JTB HAWAII HONOLULU

IA
DART DES MOINES

ID
VALLEY REGIONAL TRANSIT MERIDIAN

IL
QUAD CITIES METROLINK MOINE
JLJ CHICAGO
CHICAGO TRANSIT AUTHORITY
CITYLINK PEORIA

KS
WICHITA TRANSIT WICHITA

KY
TARC LOUISVILLE
LEXTRAN LEXINGTON

LA
SPORTSMAN SHREVEPORT

MA
WRTA WORCESTER
PVTA SPRINGFIELD

MD
BGE BALTIMORE
MCDOT ROCKVILLE
THE BUS PRINCE GEORGES COUNTY TRANSIT

ME
SH-ZOOM TRANSIT BIDDEFORD
GREATER PORTLAND METRO PORTLAND

MI
BLUE WATER AREA TRANSIT
PORT HURON
DDOT DETROIT
SMART DETROIT

MN
BTA DULUTH

MT
DASH UNIV. OF MONTANA MISSOULA
MOUNTAIN LINE MISSOULA

NC
RALEIGH-DURHAM INTERNATIONAL AIRPORT
ART ASHEVILLE
OTA GREENSBORO
DUKE UNIVERSITY DURHAM
GO TRIANGLE DURHAM
CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT

NM
ATOMIC CITY LOS ALAMOS

NV
RTC WENDO

NY
TANCE TRANSPORTATION DISTRICT
STATELINE

OH
MTA NEW YORK CITY
TOMPKINS CONSOLIDATED
AREA TRANSIT ITHACA
PORT AUTHORITY OF NY & NJ

OK
THE CHEROKEE NATION

OR
SMART PORTLAND

PA
SEPTA PHILADELPHIA

RI
RIPTA PROVIDENCE

SC
CATBUS CLEMSON
CITY OF SENECA
GREENLINK GREENVILLE
CITY OF ROCK HILL
CARTA CHARLESTON

TN
MTA NASHVILLE

TX
VIA SAN ANTONIO
DART DALLAS
CTIBUS LUBBOCK
PAT PORT ARTHUR
CAPMETRO AUSTIN

VA
HAMPTON ROADS TRANSIT NORFOLK

VT
GREEN MOUNTAIN TRANSIT BURLINGTON

WA
KING COUNTY METRO SEATTLE
EVERETT TRANSIT EVERETT
KITSAP TRANSIT BREMERTON
PIERCE TRANSIT LAKEWOOD

WI
METRO TRANSIT MADISON
LA CROSSE MTU LA CROSSE

WY
START JACKSON

CANADA
EDMONTON TRANSIT SERVICE

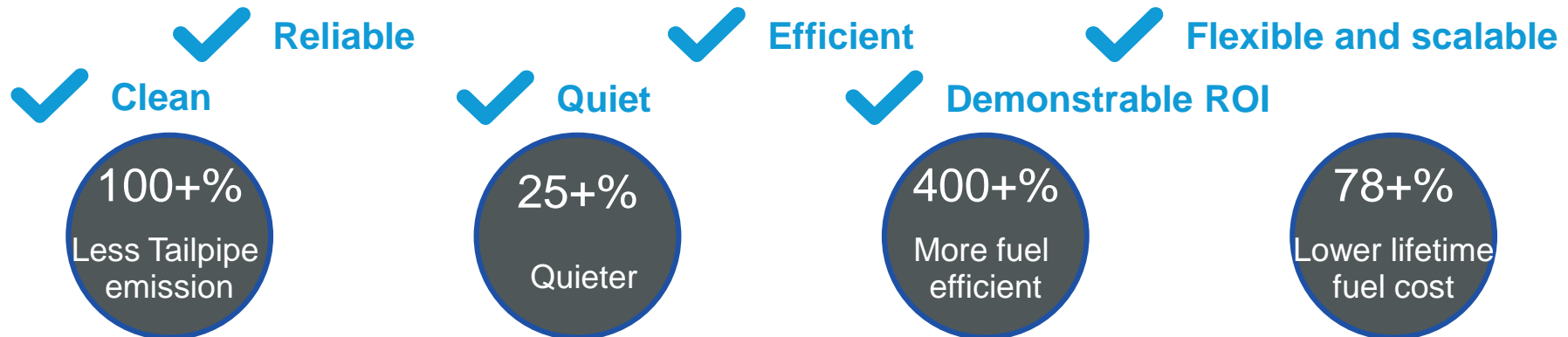
ON
TORONTO TRANSIT COMMISSION

Only announced customer names shown. Updated May 2019

THE SOLUTION: REVOLUTIONARY APPROACH TO TRANSPORT



THE ONLY TRANSIT PLATFORM DESIGNED SPECIFICALLY FOR EV PERFORMANCE



HIGHLY DIFFERENTIATED AND FULLY INTEGRATED HEAVY DUTY TECHNOLOGY PLATFORM

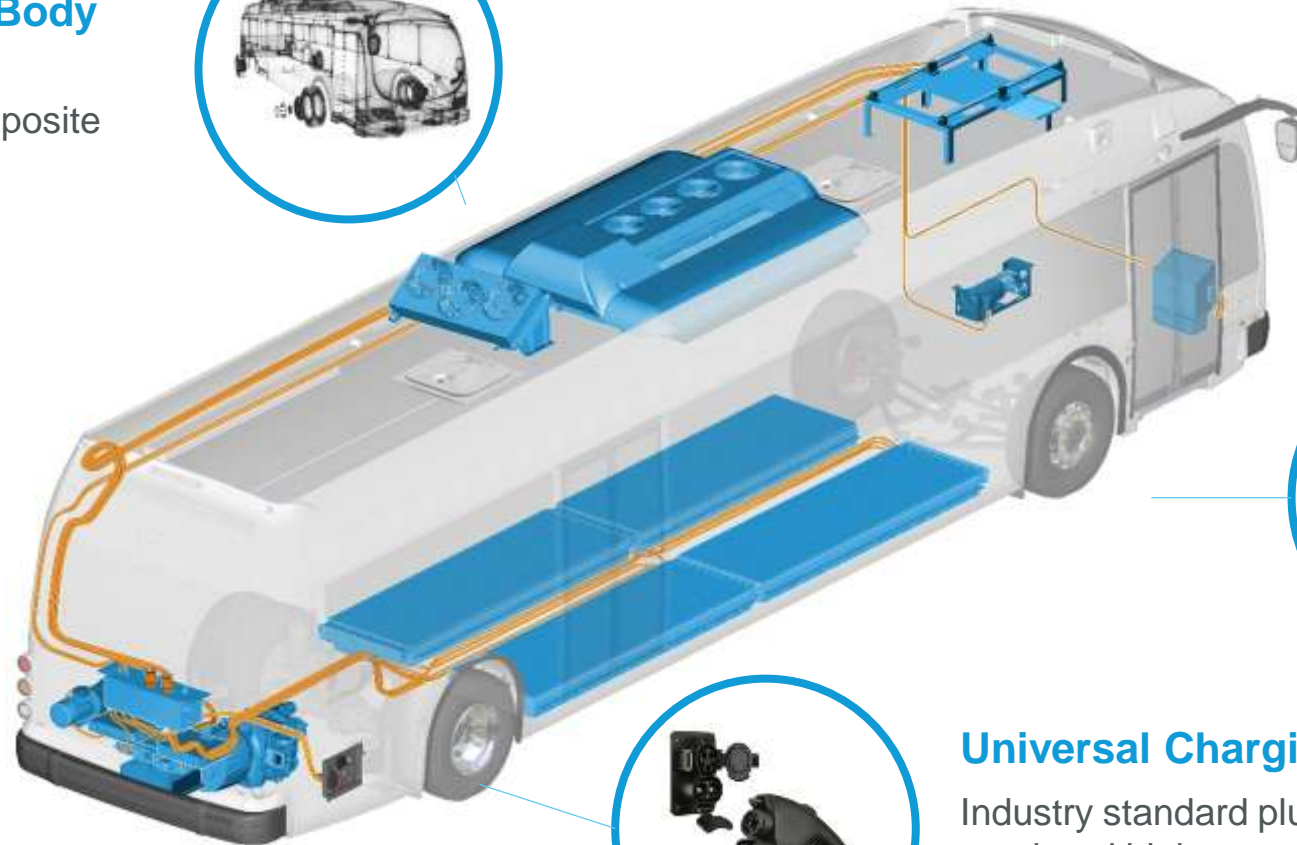
Advanced Composite Body

Lightweight and durable
carbon-fiber-reinforced composite



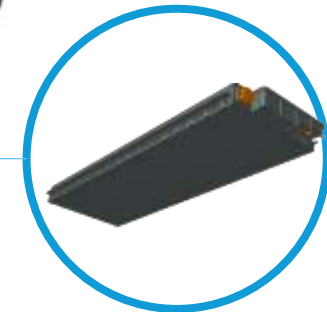
High Efficiency Drivetrain

5x efficiency of diesel
Greatest horsepower
Fastest acceleration



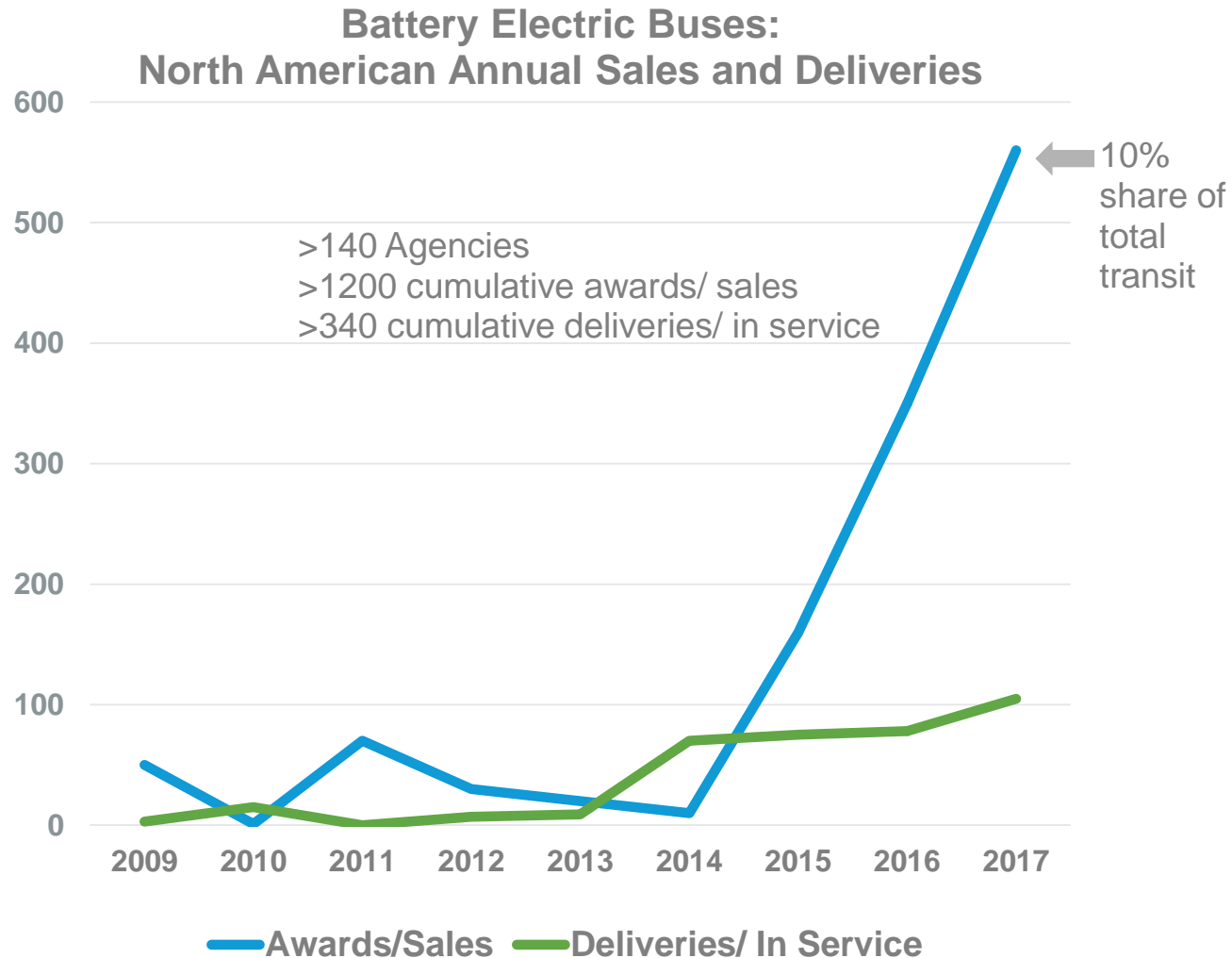
Heavy Duty Battery Pack

High energy density,
ruggedized battery packs
purpose built for commercial
vehicles



Universal Charging

Industry standard plug-in and
overhead high power Level 3
charging

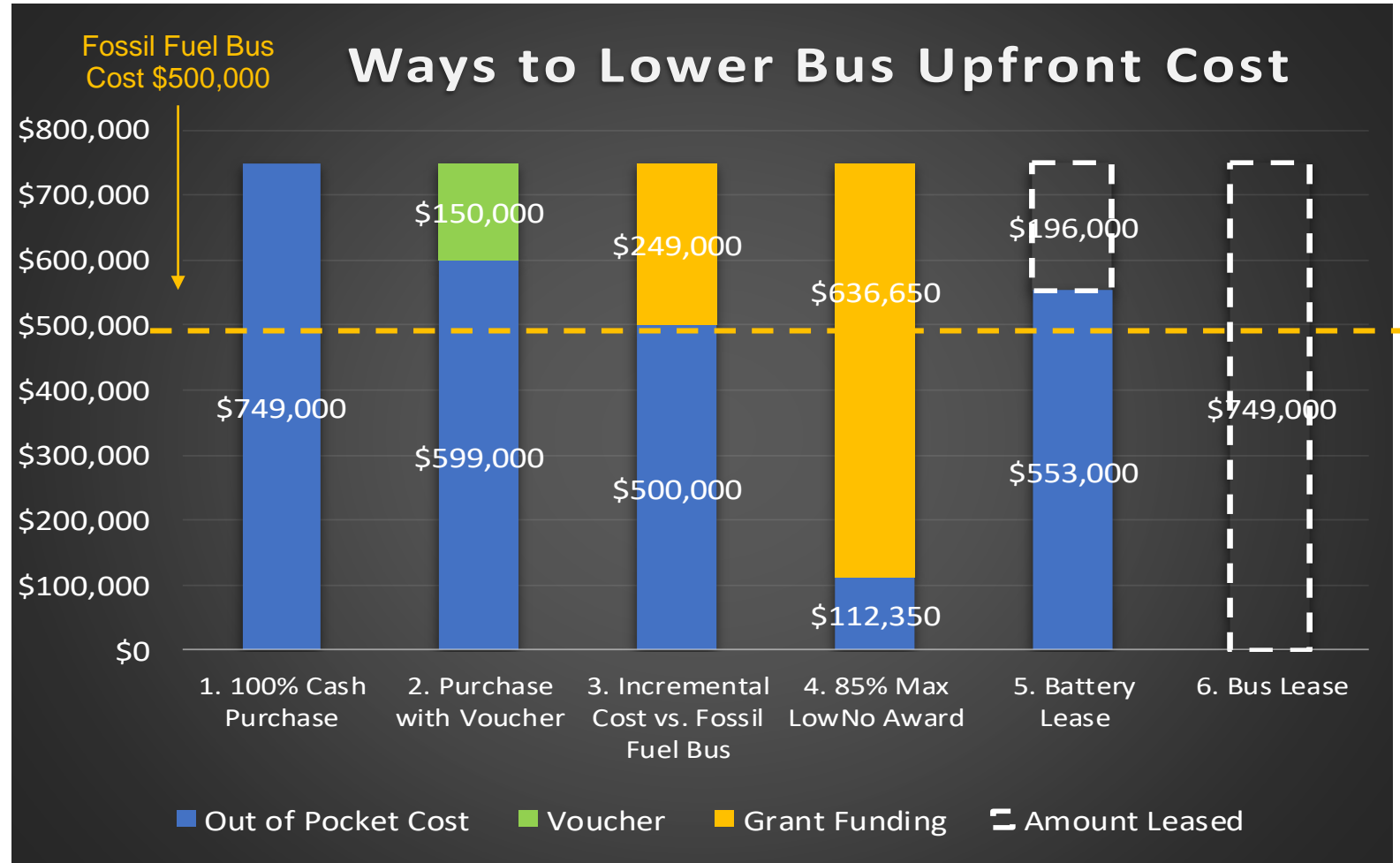


Source: CTE Center for Transportation and the Environment

- Moving toward **widespread industry adoption**
- **Purchase barriers eliminated** due to:
 - Improved range
 - Charging standardization
 - Sharp decline in battery costs
 - Service-proven performance
 - Increased total cost of ownership
 - Environmental stewardship
 - Rising health costs associated with fossil fuels
 - Government programs (e.g., grants)
 - Urbanization

WAYS TO LOWER UPFRONT COSTS

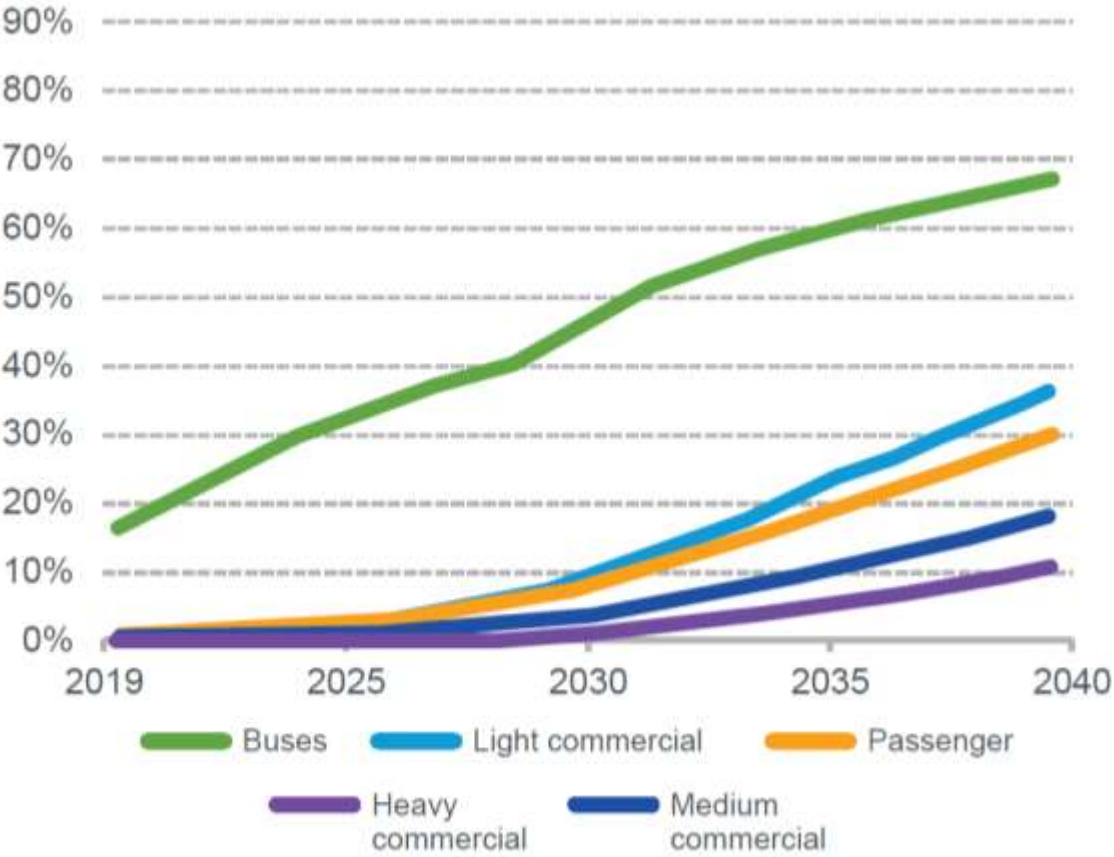
1. \$749,000 Electric Bus vs. \$500,000 Fossil Fuel Bus
2. Local vouchers reduces electric bus price
3. Incremental cost required over Fossil Fuel Bus
4. Max Low-No Award Reduces Bus Cost
5. Battery Lease - Electric Bus Cost Fossil Fuel Bus
6. \$0 Out of Pocket Cost for Bus/Charger Capital Lease



VEHICLE ELECTRIFICATION IS TRANSFORMING THE BUS MARKET FASTER THAN ANY OTHER SEGMENT



Global EV penetration by vehicle segment



North American transit agency mandates >25k buses to be 100% zero emission by 2040

MTA	State/ City	Size of Bus Fleet	Zero Emission Commitment
	California	14,000+	100% by 2040
	New York	5,800	100% by 2040
	Toronto	1,900	100% by 2040
	Chicago	1,850	100% by 2040
	Seattle	1,600	100% by 2034
	Minneapolis	900	100% by 2040
	Miami	800	50% by 2035

12 major cities now committed to buy only electric buses starting in 2025

Los Angeles	London	Paris	Milan
Seattle	Copenhagen	Barcelona	Cape Town
Vancouver	Auckland	Mexico City	Quito



ZERO EMISSIONS

- 100% battery-electric with no tailpipe emissions

FAST CHARGING

- DC charging enables a full charge in ~ 3 hours using Proterra's 60 kW PCS

HIGH PERFORMANCE

- Efficient, smart, safe drivetrain technology for optimal performance in any climate

PROVEN TECHNOLOGY

- Proterra batteries and drivetrains proven in more than 7,000,000 service miles on transit buses

PROTERRA ENERGY™

FLEET SOLUTIONS

