

V O L V O



# Business Perspectives on Medium & Heavy-Duty Policy

Electrification Coalition PA EV Bootcamp & Showcase

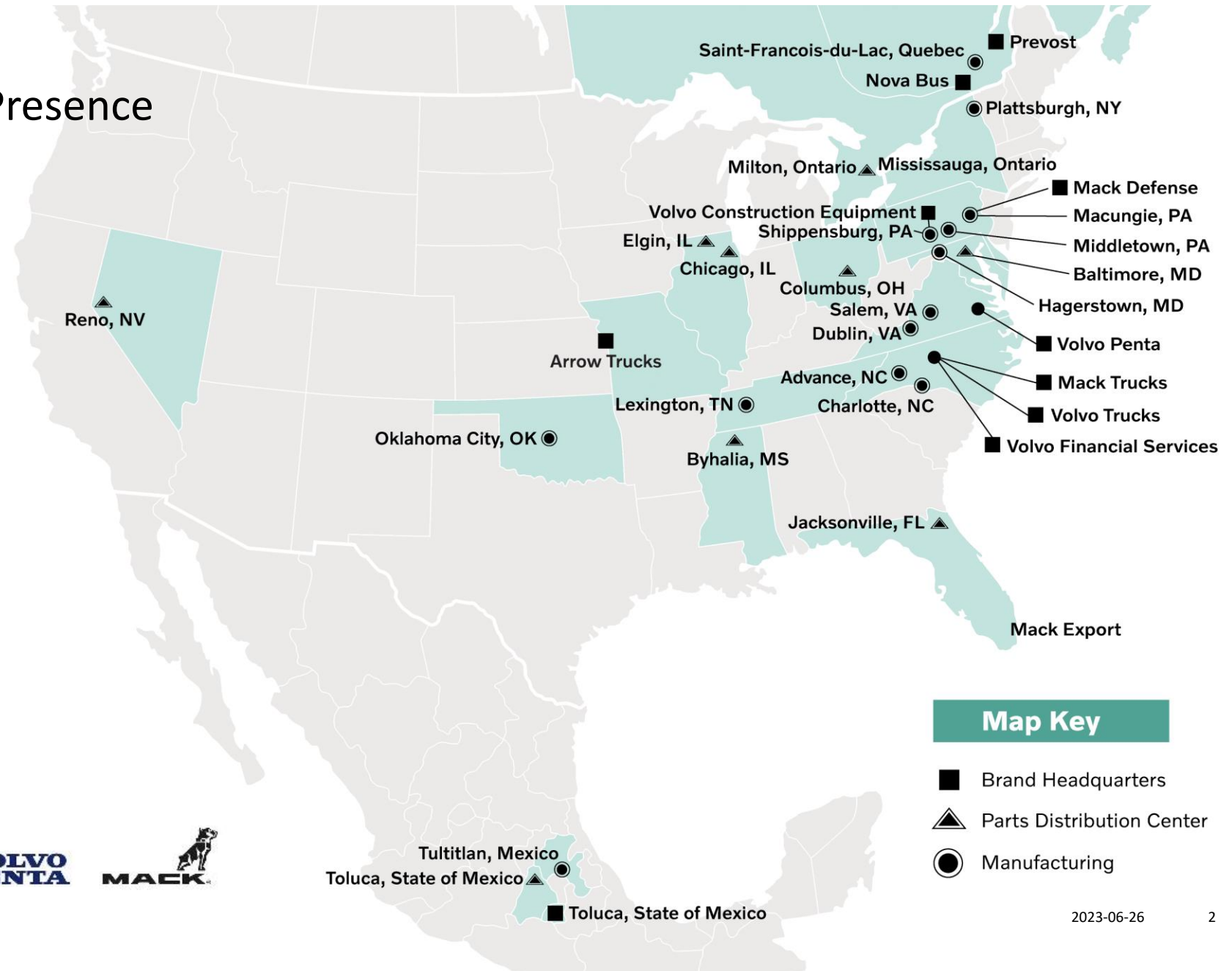
Dawn Fenton

Vice President, Government Relations & Public Affairs

Volvo Group North America

## A Major North American Presence

- **27%** of Group's net sales (2021)
- More than **16,300** employees
- **16** major manufacturing sites
- Only heavy-duty truck group with **100%** U.S. production
- Global HQ for Mack Trucks, Volvo Financial Services
- Global Technical Center for R&D

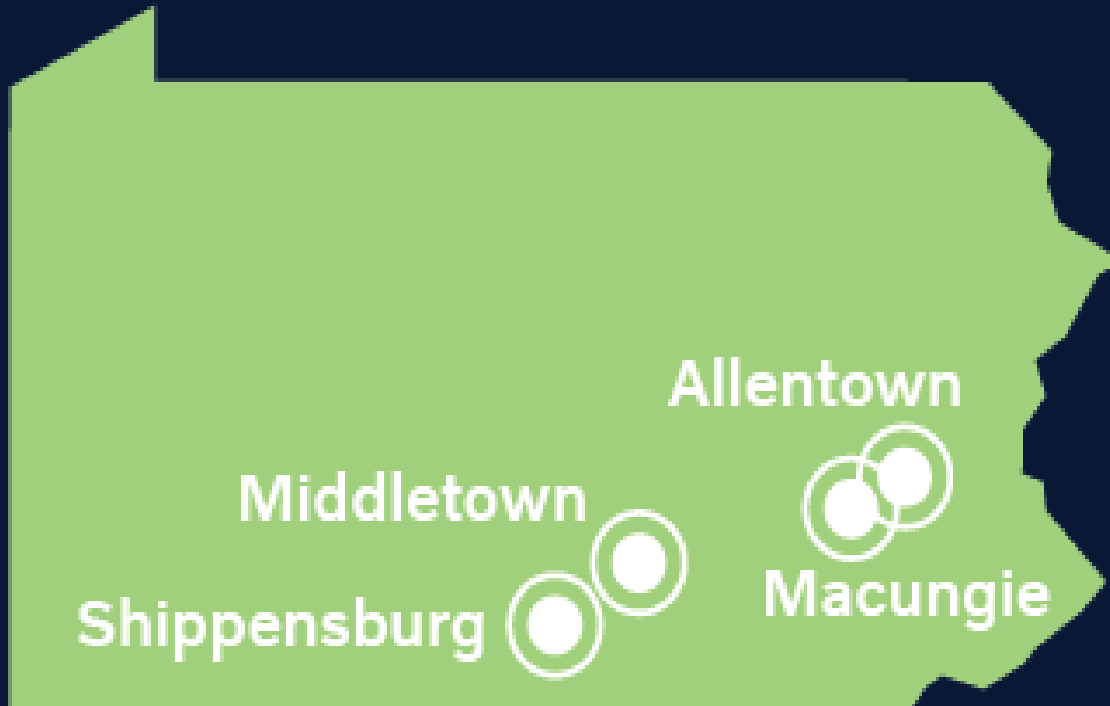


### Map Key

- Brand Headquarters
- ▲ Parts Distribution Center
- Manufacturing



# 115+ YEARS OF MANUFACTURING ROOTS IN PENNSYLVANIA



Mack Defense is building Heavy Dump Trucks for a \$296.4 million Army contract at the Mack Experience Center (MEC) in **Allentown**.

The **Middletown** Remanufacturing Center restores worn components to their original specifications for Mack Trucks, Volvo Trucks and Volvo CE.

Mack Trucks moved to the Lehigh Valley in 1905. Mack's heavy-duty product line, including the LR Electric refuse truck, is built at the Lehigh Valley Operations (LVO) facility in **Macungie**.

In **Shippensburg**, Volvo Construction Equipment (Volvo CE) produces wheel loaders and compactors. It is also home to Volvo CE's North American headquarters, an engineering hub for the Americas, and a customer demonstration and training center that draws nearly 10,000 visitors to the region each year.

# Constantly defining our actions and deliverables considering climate and environmental impact



Volvo Trucks Hagerstown - MD

Carbon-neutral manufacturing plant and landfill-free operations



Volvo Trucks Greensboro - NC

100% renewable electricity sites throughout the US



Distribution Centers

Education to make sustainability a natural part of all employees' actions



Volvo Trucks New River Valley - VA

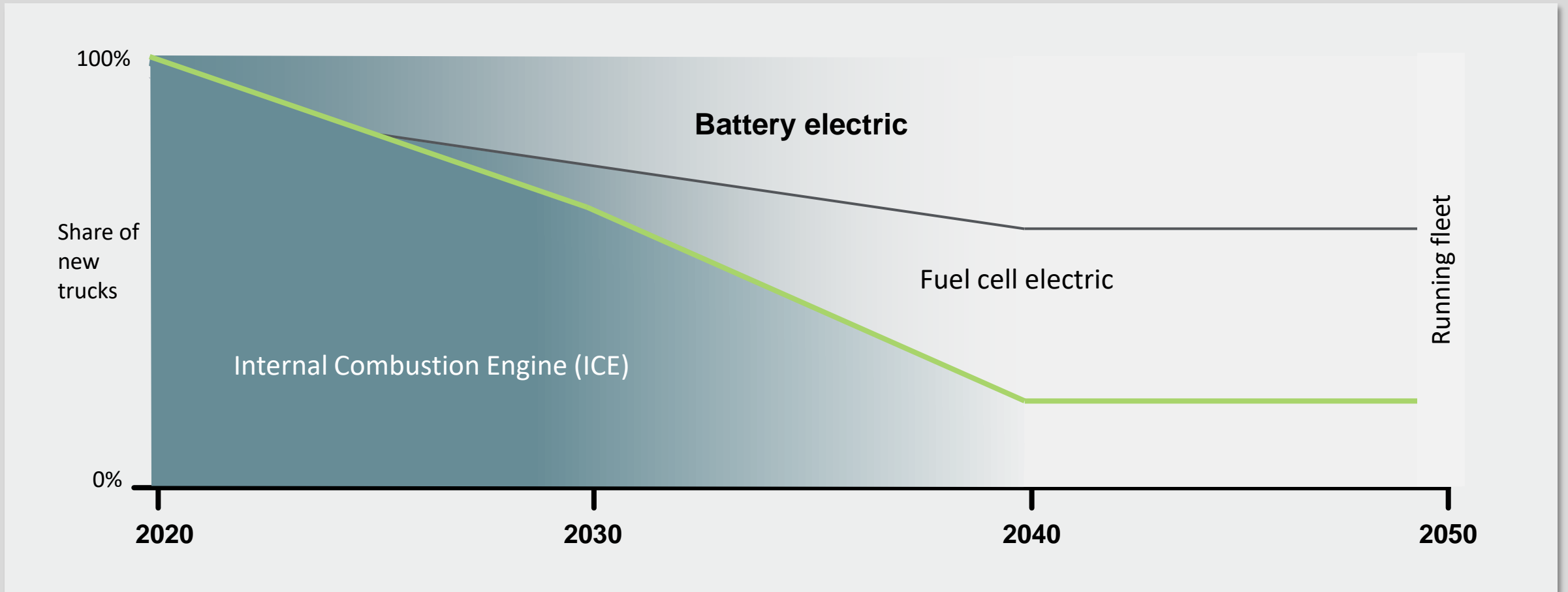


Volvo Trucks Customer Center - VA



Dealer Network

# 100% fossil-free Volvo Trucks vehicles by 2040



VOLVO

## Volvo Group Has a Broad Offering of Heavy-Duty Battery Electric Products





# VOLVO LIGHTS

## BRINGING BATTERY-ELECTRIC FREIGHT TRUCKS TO MARKET FROM DEMONSTRATION TO COMMERCIALIZATION

Lessons Learned Guidebook



Authored by Volvo Group North America



Volvo LIGHTS (Low Impact Green Heavy Transport Solutions) is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment — particularly in disadvantaged communities. The total project cost was \$90 million, with a funding award of \$44.8 million.

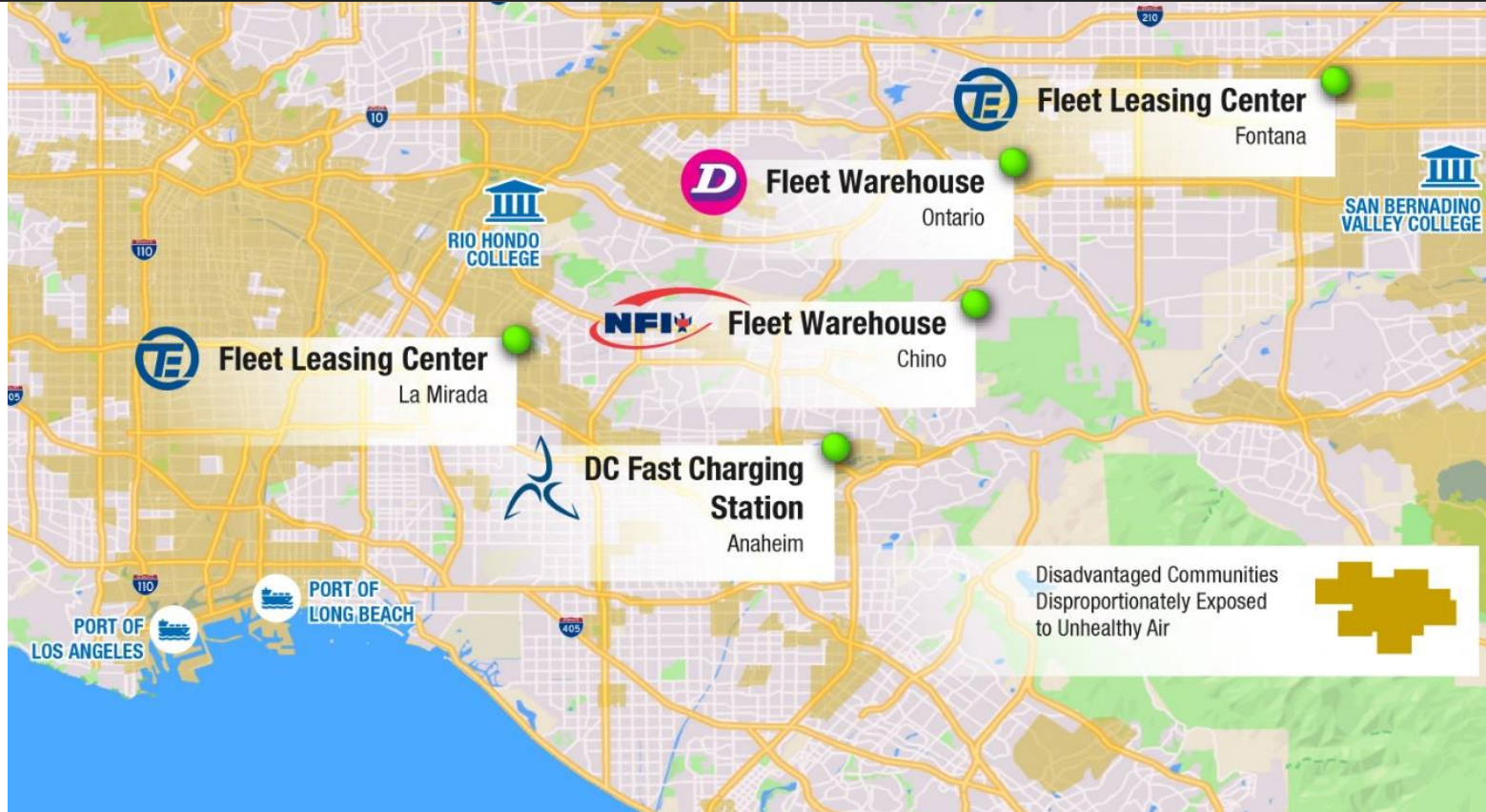


# Demonstrating innovations critical to the commercial success of battery electric trucks and equipment for goods movement

[LIGHTSproject.com](http://LIGHTSproject.com)



## PROJECT PARTNERS



**23** Battery Electric Heavy-Duty Trucks



**29** Battery Electric Equipment



**58** Public & Private Chargers



**2** Colleges Designing Electric Truck Maintenance Programs



**1.8** Million KWH Solar Energy Generation



**2** Ports Providing Infrastructure Planning



# One of Largest Nonprofit Recyclers, Eco-Cycle, Orders Mack® LR Electric as its First BEV

02-10-2022

BOULDER, CO (Feb. 10, 2022) – Mack Trucks announced today that Eco-Cycle, one of the largest nonprofit recyclers and Zero Waste organizations in the U.S., recently ordered a Mack® LR Electric battery electric vehicle (BEV) - the first BEV that Eco-Cycle will add to its fleet.



## Electromobility in Refuse

### City of Santa Cruz, California, Purchases Mack LR® Electric Vehicle to Help Meet Sustainability Goals

05-11-2022

LONG BEACH, California (May 10, 2022) – The City of Santa Cruz, California, recently purchased a Mack LR® Electric refuse vehicle, the first fully electric vehicle in the municipality's sanitation fleet, and plans to purchase another. Mack made the announcement during the Advanced Clean Transportation (ACT) Expo, May 9-12, at the Long Beach Convention Center.



# CEC BESTFIT Awards \$2M Grant for MHD Charging Corridor



EMISSIONS & EFFICIENCY

## Volvo Trucks to build charging corridor in California for electric vehicles

July 18, 2022



# 2023

## 36

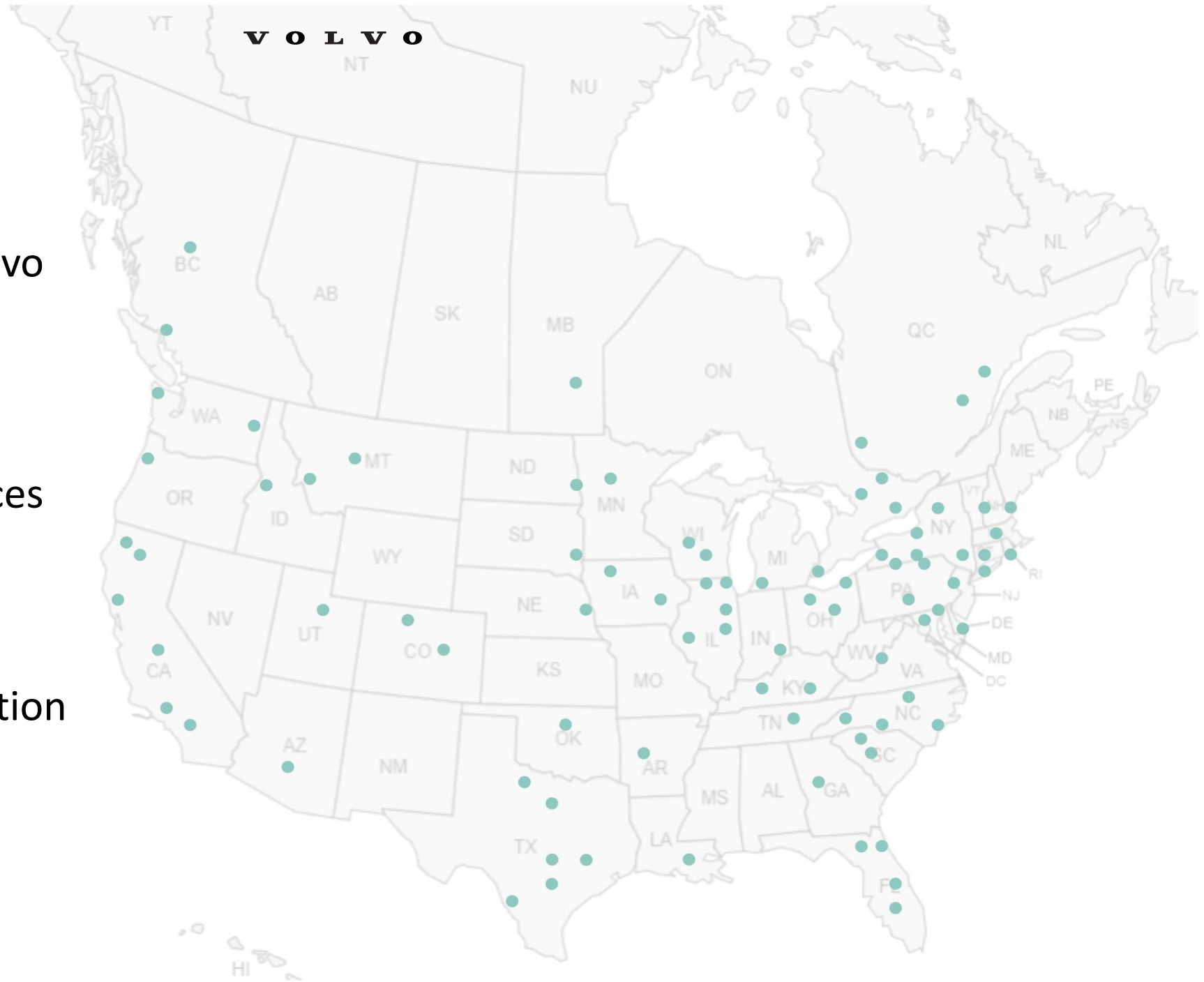
EV Certified Volvo Trucks Dealers

## 21

States / Provinces

## 56

Dealer certification in process



# BEV Repair and Maintenance



- Paradigm shift in trucking requires investments across the entire ecosystem of support
- New training programs created through Volvo LIGHTS for repair & maintenance
- Certified EV dealers can help assess impact on fleet operations and ensure safe electric truck servicing.
- First responder training distributed through National Fire Protection Agency and where dealers are going through the certification process.

# Early ZEV Deployments: Lessons Learned

- Single largest challenge for the heavy-duty ZEV market is charging infrastructure
- Engage utilities and local officials early in the infrastructure design process
- TCO is currently dependent on public funding for vehicle purchase & infrastructure
- Fleet ownership of property eases facility planning and investments
- Divergent priorities of multiple stakeholders must be managed
- Consider identifying a dedicated point of contact within your organization

