



ZERO EMISSION VEHICLES (ZEV) WORKSHOP

Tuesday, April 21, 2026
8:00 A.M. - 4:00 P.M.



Presentations | Networking | Funding Information | Ride & Drives

Make sure you check in at the registration booth!

Presentations will start at 8:45am. In the meantime, help yourself to breakfast, network with our attendees/exhibitors, or go outside to checkout the Vehicle Display and Ride and Drive

Thank You to Our Sponsors!

Zero Emission Vehicle Workshop Breakfast Sponsors



Dallas-Fort Worth Clean Cities Sponsors



Real Innovation Delivered with Excellence™



With **Westport™** Technology



Over 300 EPA Certified Bi-Fuel & Dedicated
2626 Willowbrook Rd, Dallas, TX 75220
www.wingfuelsystems.com
(214) 231 - 1450

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Session 1: Workshop Kick Off and State of the Industry



Presentations | Networking | Funding Information | Ride & Drives



About Us

Regional Planning Agency



Metropolitan Planning Organization (MPO) Transportation Policy



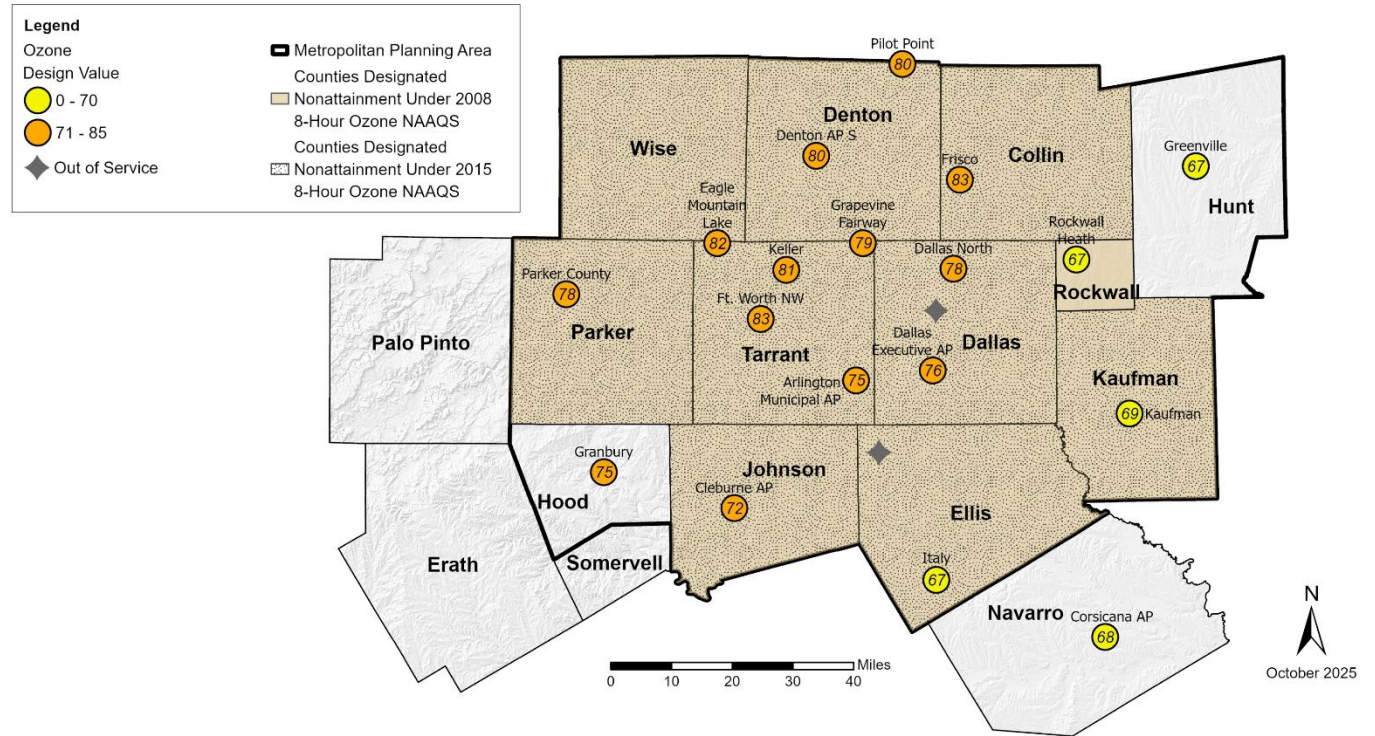
Department of Energy-Designated Clean Cities Coalition



Sister Coalitions in Texas:

- Alamo Area Clean Cities (San Antonio)
- Central Texas Clean Cities (Austin)
- Houston-Galveston Clean Cities
- Apprentice Coalition: South Texas Clean Cities (Rio Grande Region)

North Central Texas Council of Governments (NCTCOG) Region and Ozone Nonattainment Areas



Source: NCTCOG



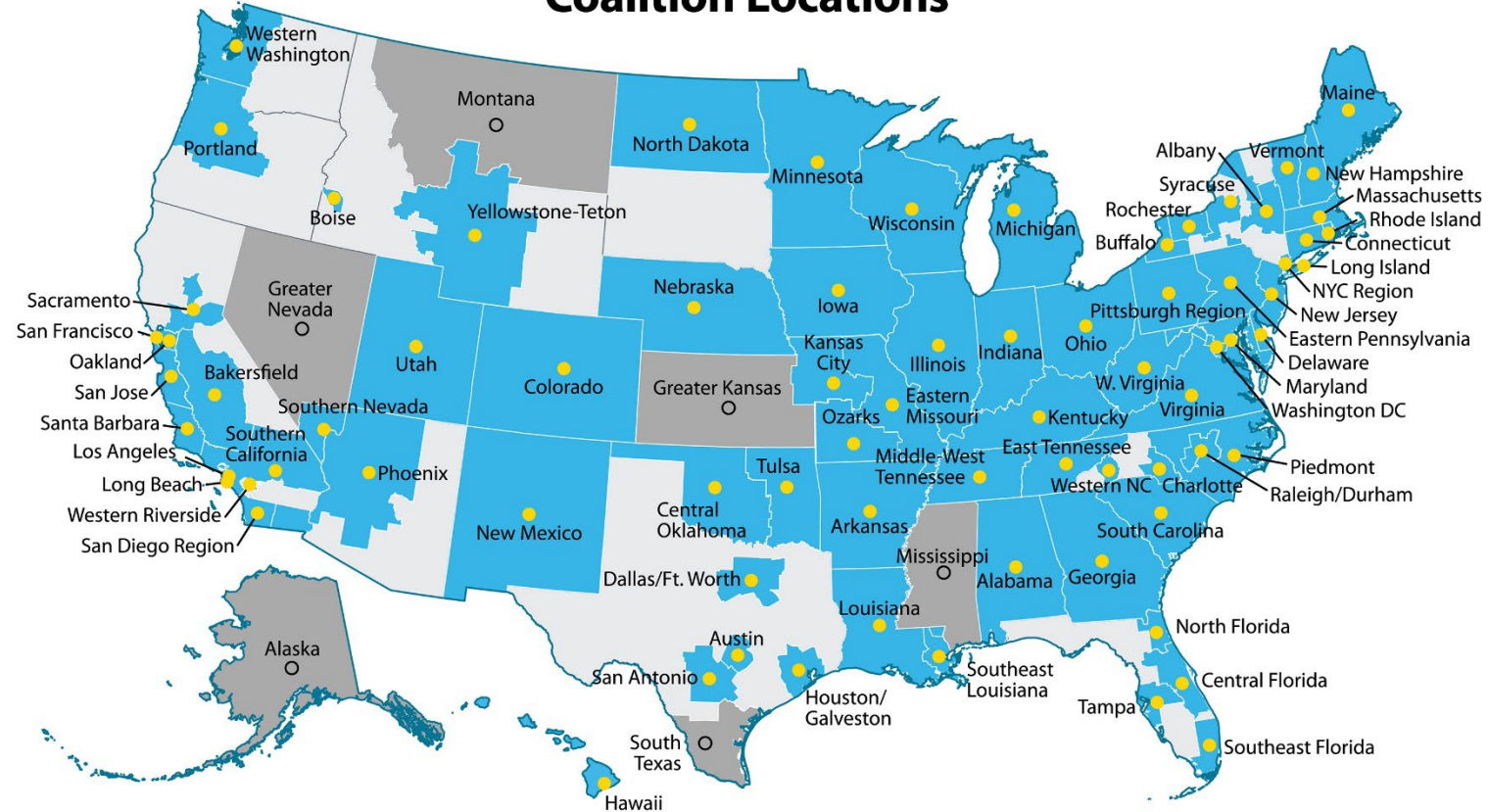
Dallas-Fort Worth Clean Cities Coalition



Mission: Improve air quality by promoting clean, reliable, accessible, and sustainable transportation

Designated by the Department of Energy as part of the national Clean Cities and Communities Partnership

Coalition Locations



■ DOE-Designated Coalitions ■ DOE-Recognized Apprentice Coalitions

Map Date: 2/25/26



Agenda



Session 1: Workshop Kick Off



Session 2: Keynote: State of Tesla's Heavy-Duty Zero Emission Vehicles



Session 3: Current ZEV Availability

Break/Exhibitor Visiting



Session 4: What to do About Infrastructure

Lunch!



Session 5: Planning 101



Session 6: Lessons Learned from HD ZEV Adoption in Texas



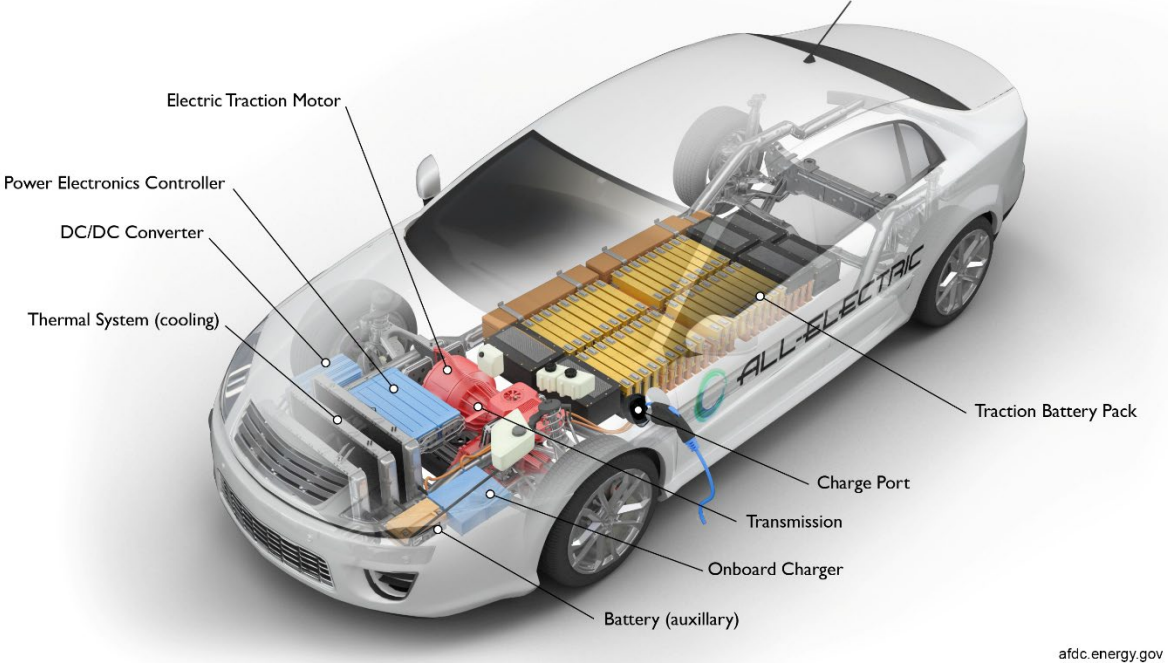
Session 7: Networking and Ride and Drive

**Check the ZEV
Workshop Packet for:
Venue Map
Session Speakers
Resources!**

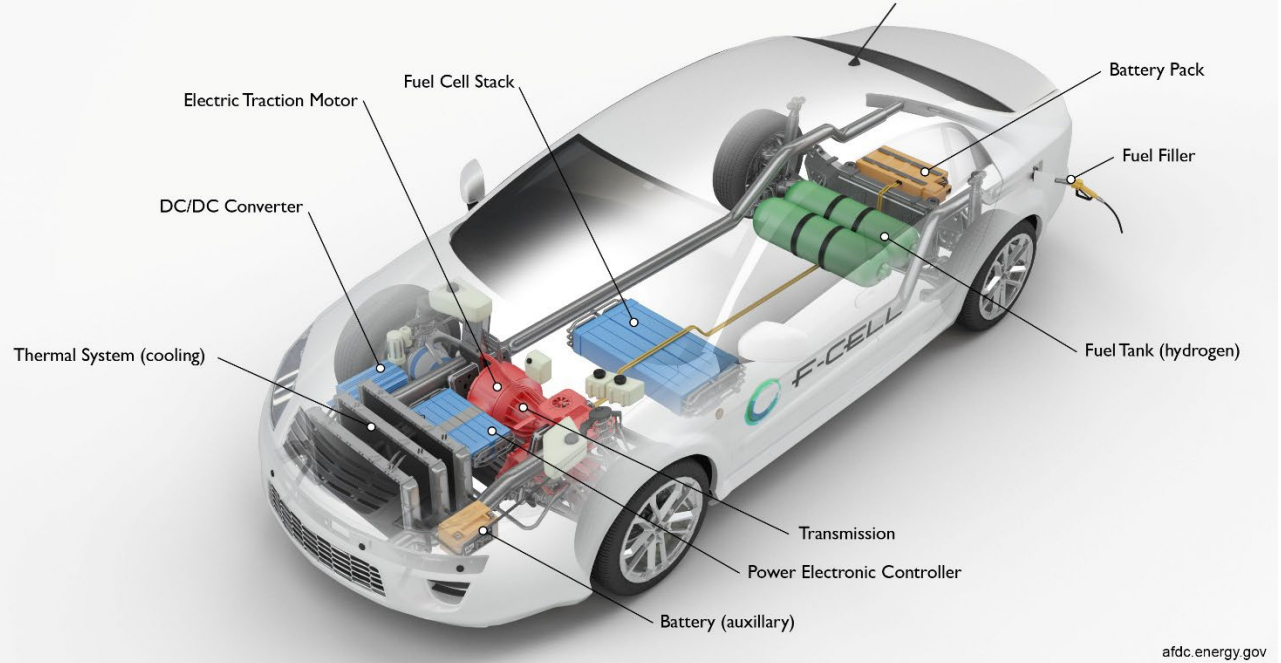


Setting the Stage – What Are Zero-Emissions Vehicles?

Battery Electric Vehicle



Hydrogen Fuel Cell Electric Vehicle



Source: Alternative Fuels Data Center

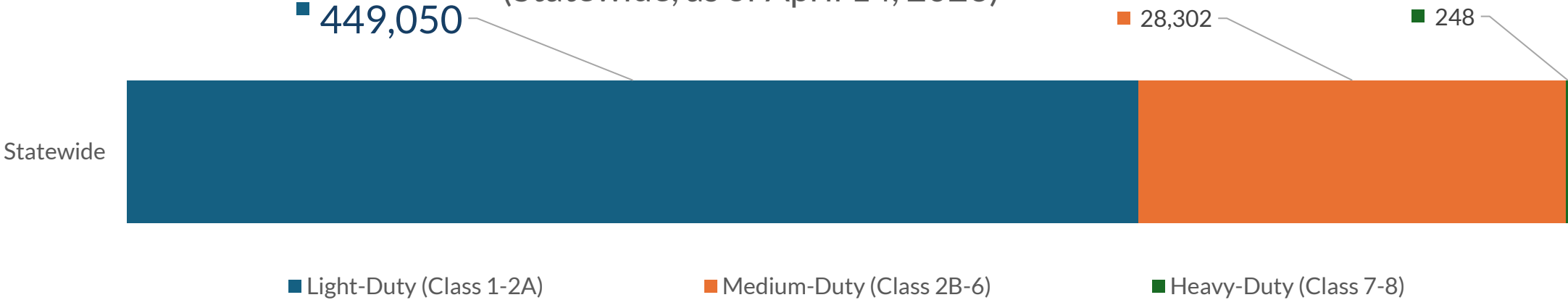
- Electric drivetrain, zero tailpipe emissions
- Battery charged by electricity from external power source

- Electric drivetrain, zero tailpipe emissions
- Battery charged by electricity from fuel cell stack
- Fuel Cell fueled from external hydrogen source



Setting the Stage – Zero-Emission Vehicle Adoption*

Total Electric Vehicle Registration in Texas: 477,600
(Statewide, as of April 14, 2026)



% Registered in DFW
~37%

Not Counting Anymore

% Registered in DFW
~34%

18 Makes/Models

% Registered in DFW
~36%

11 Makes/Models

Source: DFW Clean Cities EV Registration Data: www.dfwcleancities.org

***Note, the graphic shown on this slide was updated after the 4/21/2026 workshop. No data was changed.**

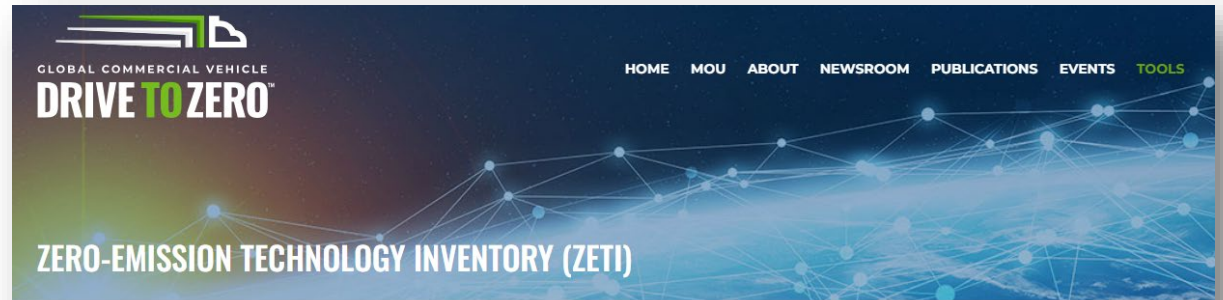


Setting the Stage – Zero-Emission Vehicle Availability (Medium- and Heavy-Duty Only)

Vehicle Class	Fuel Type	OEMs	Models
2B	Electric	7	10
3	Electric	4	5
4	Electric	13	24
5	Electric	6	6
6	Electric	13	22
6	Fuel Cell	2	6

Vehicle Class	Fuel Type	OEMs	Models
7	Electric	5	6
8	Electric	18	32
8	Fuel Cell	3	3

Source: CALSTART's Drive to Zero™ program:
www.globaldrivetozero.org/tools/zeti



The Zero-Emission Technology Inventory (ZETI) tool is an interactive online resource to establish a current and shared knowledge base for worldwide commercially available offerings of zero-emission medium- and heavy-duty vehicles (MHDVs). The tool provides fleets and governments with comprehensive information covering key vehicle specifications and insights including regions where zero-emission brands are available for purchase, and the timeline over which additional models are expected to become available. Commercial availability is defined as availability for immediate production based on placed orders.

An evaluation of model trends based on ZETI data can be found in the [ZETI Data Explorer](#).





Session 2: Keynote: State of Tesla's Heavy- Duty Zero Emission Vehicles



Presentations | Networking | Funding Information | Ride & Drives





State of HD Electrification

Duty Cycle Fit

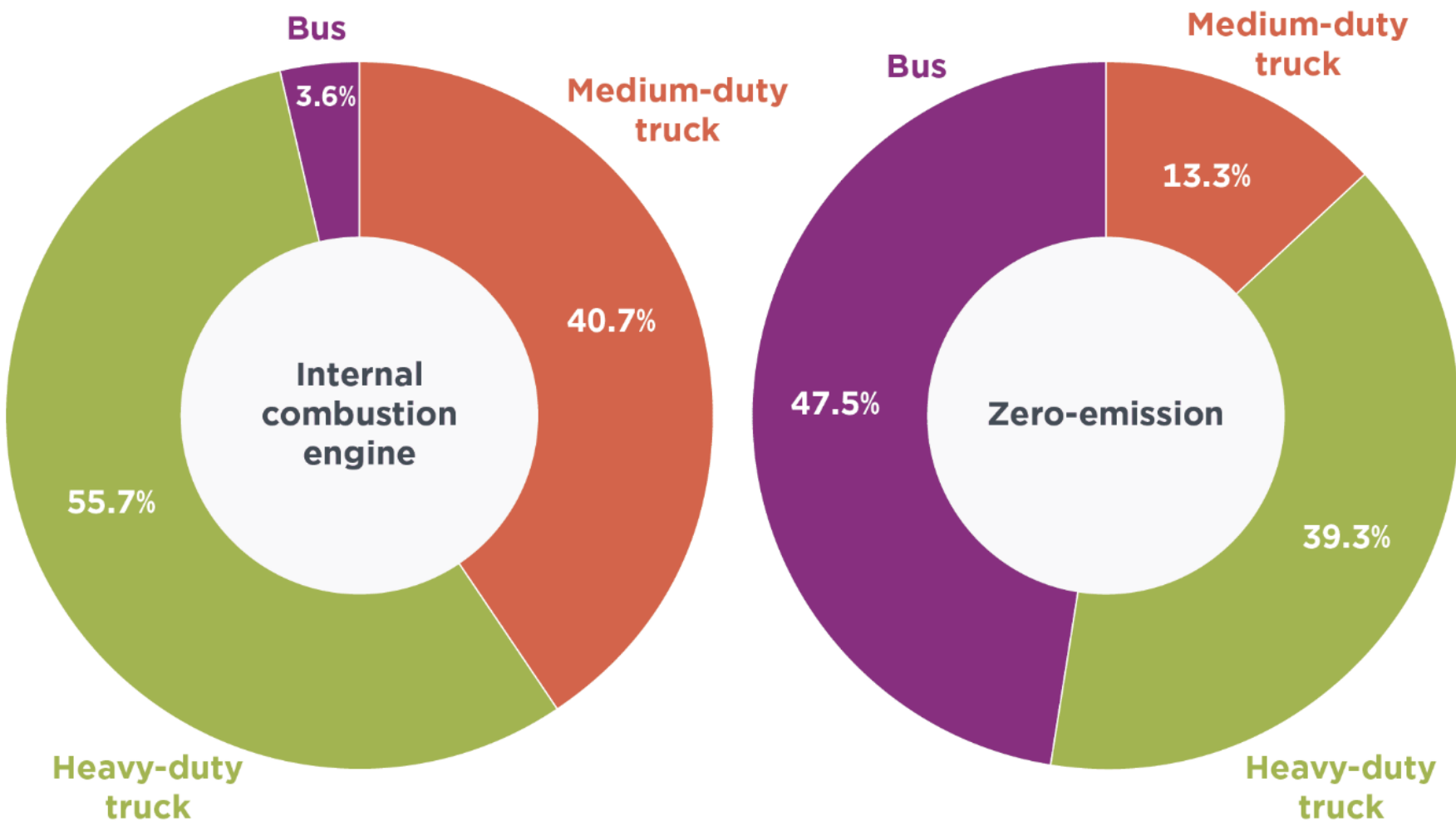
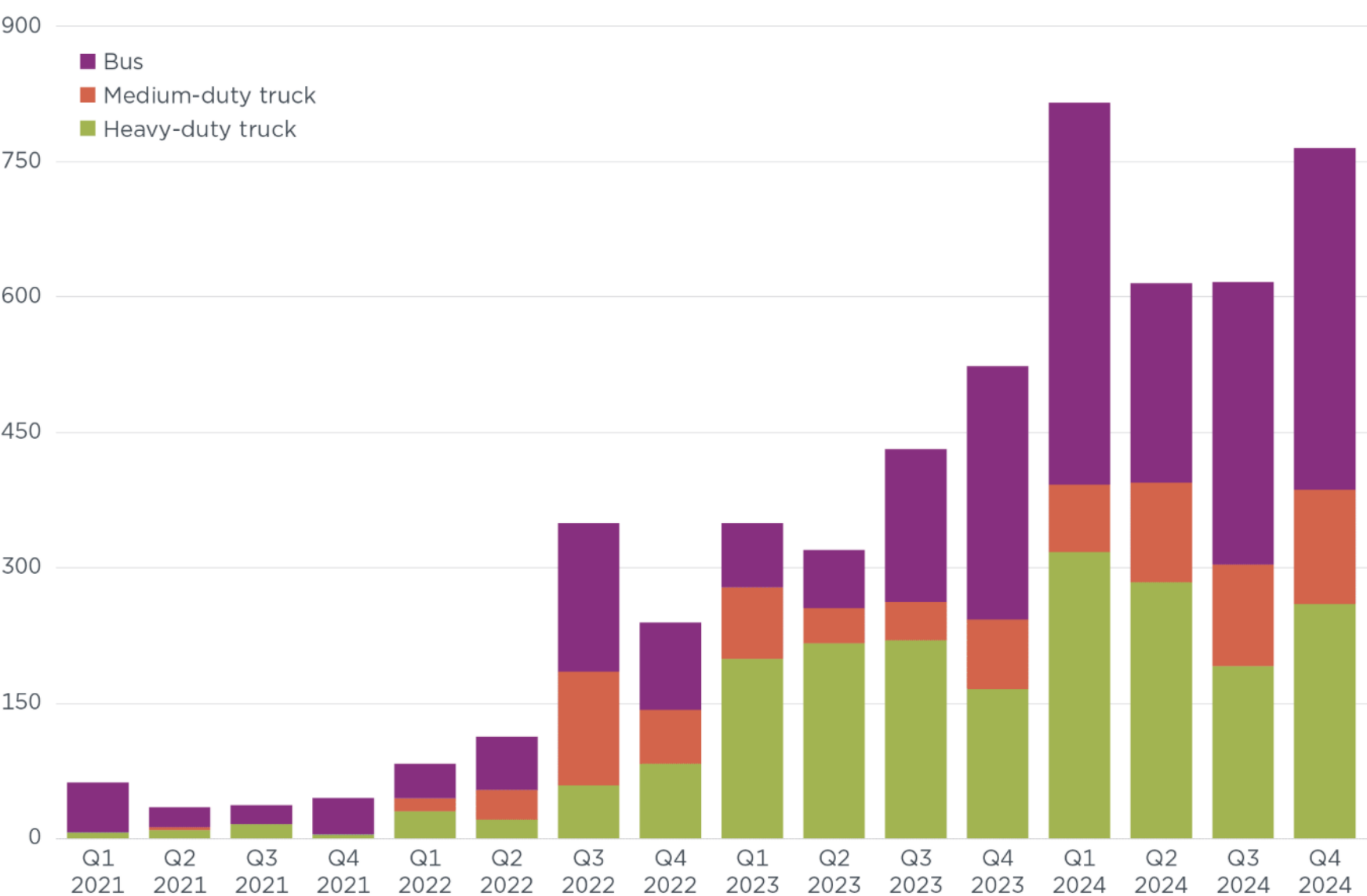
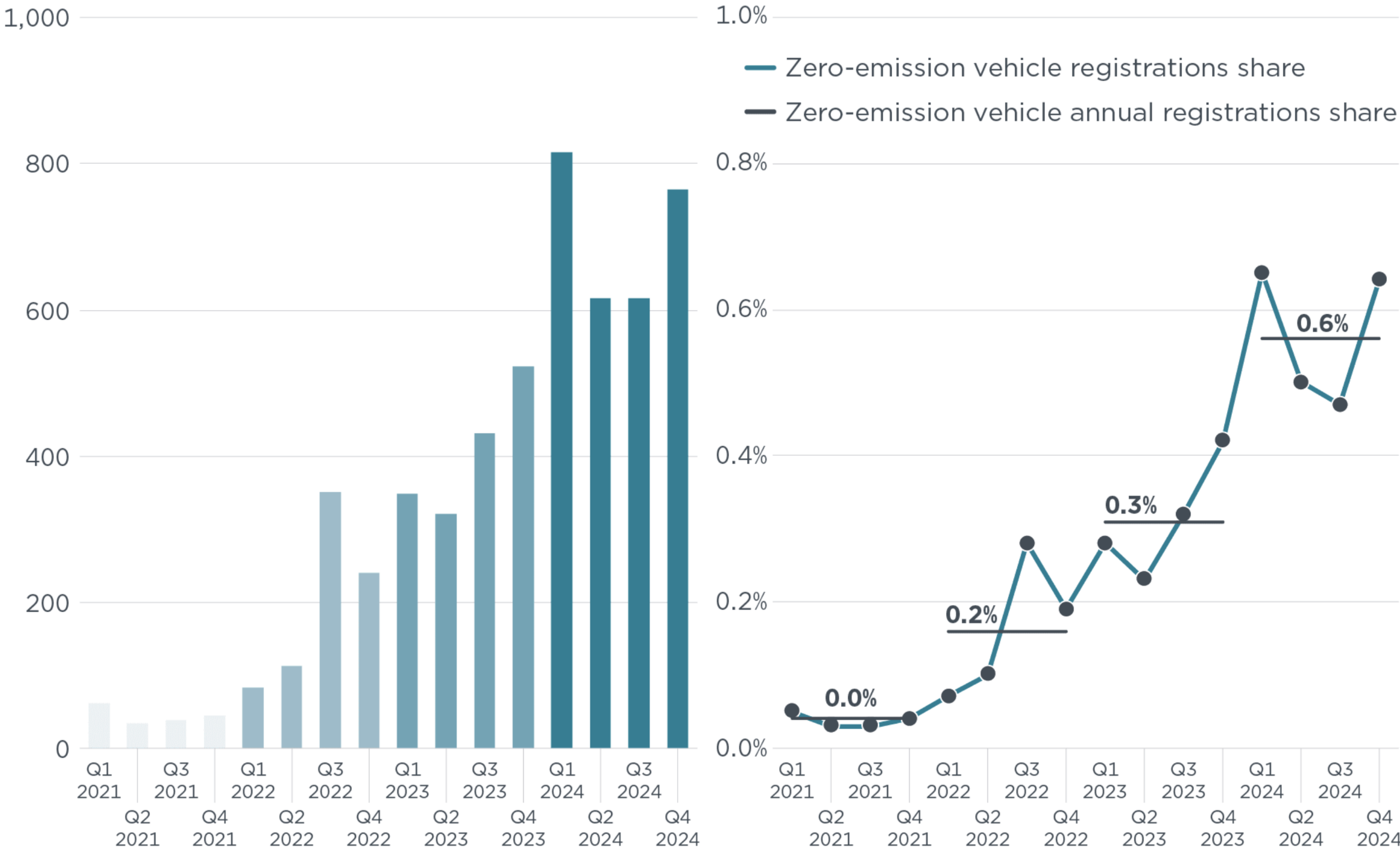
- Range
- Weight / Payload Impact
- Performance
- Charge Time

Total Cost of Ownership

- Capital
- Historical Investments

Market Readiness

- Access to Trucks
- Access to Charging
- Reliability
- Service Availability
- Adoption



Source: International Council on Clean Transportation (<https://theicct.org/publication/r2z-zero-emission-bus-and-truck-market-us-2024-jun25/>)



Semi

Standard Range

Long Range

Est. Range

325^{mi}

500^{mi}

Vehicle Weight

<20,000^{lbs}

23,700^{lbs}



Efficiency
15 Million Miles Driven

1.7 Avg. kWh/mi

Reliability
95% Uptime
73% Service Visits <24 hrs

Commitment to Scaling Semi





Drop Glass

Charge Port

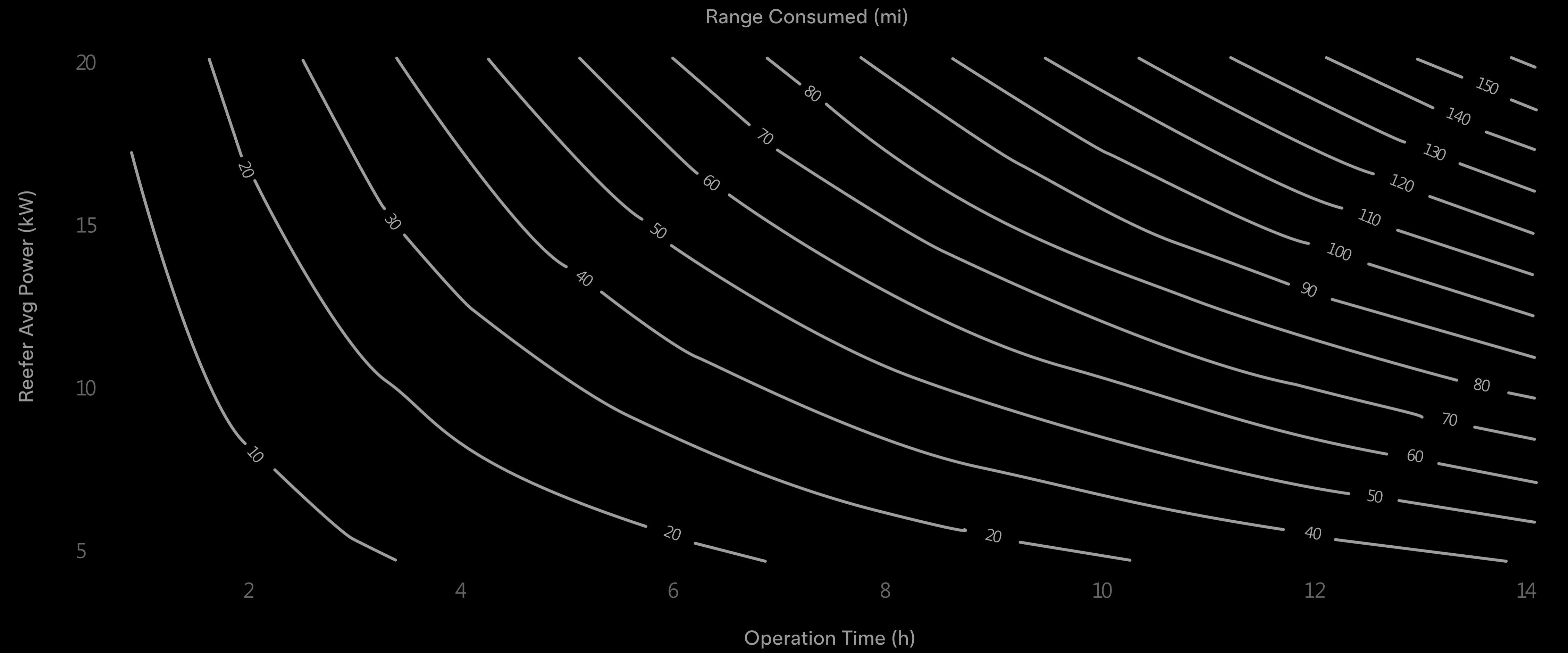
HV Battery

7.3%

increase in efficiency

25kW

output



Up to AC (480V) or DC (680V) capability on a single connector
Galvanic isolation between Tractor and Trailer High Voltage systems

1.2 MW Charging





Public Charging Network

Public Charging Network



T E S L A



Session 3: Current ZEV Availability



Presentations | Networking | Funding Information | Ride & Drives



BILL
KAHN

Senior Principal Engineer



2026 PETERBILT **PRODUCT** LINEUP

ELECTRIC VEHICLES



MEDIUM DUTY



CLASS 8 TRADITIONAL



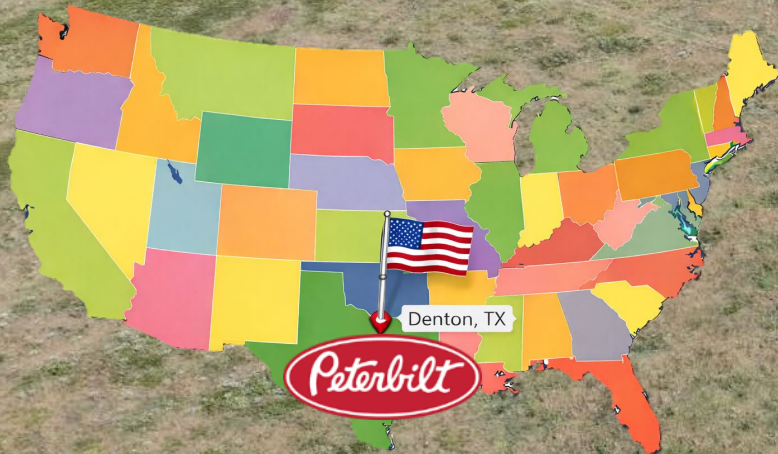
CLASS 8 VOCATIONAL



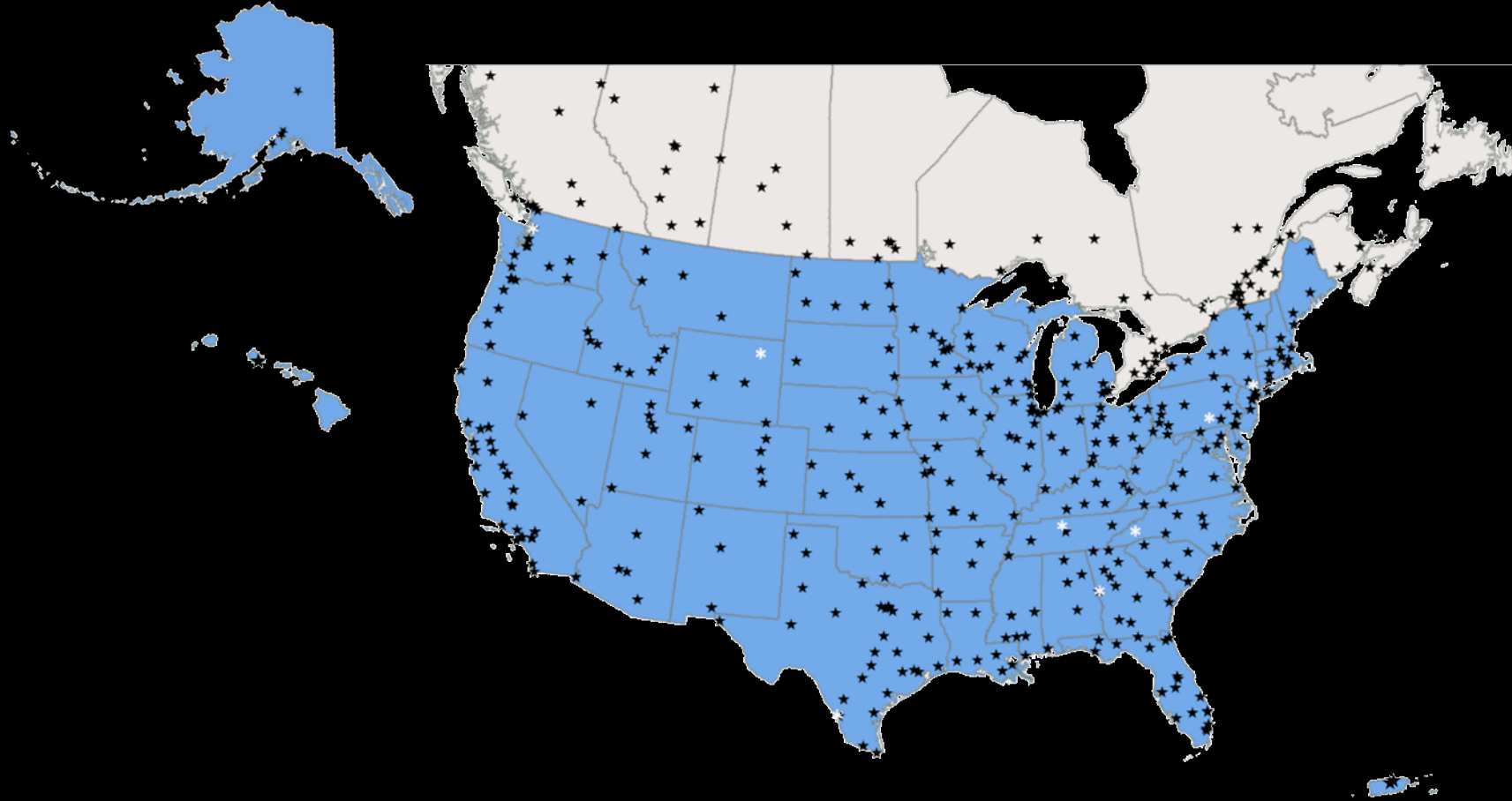
CLASS 8 AERO



PETERBILT MOTORS



PETERBILT DEALERS



432

Locations

5,040

Service Bays

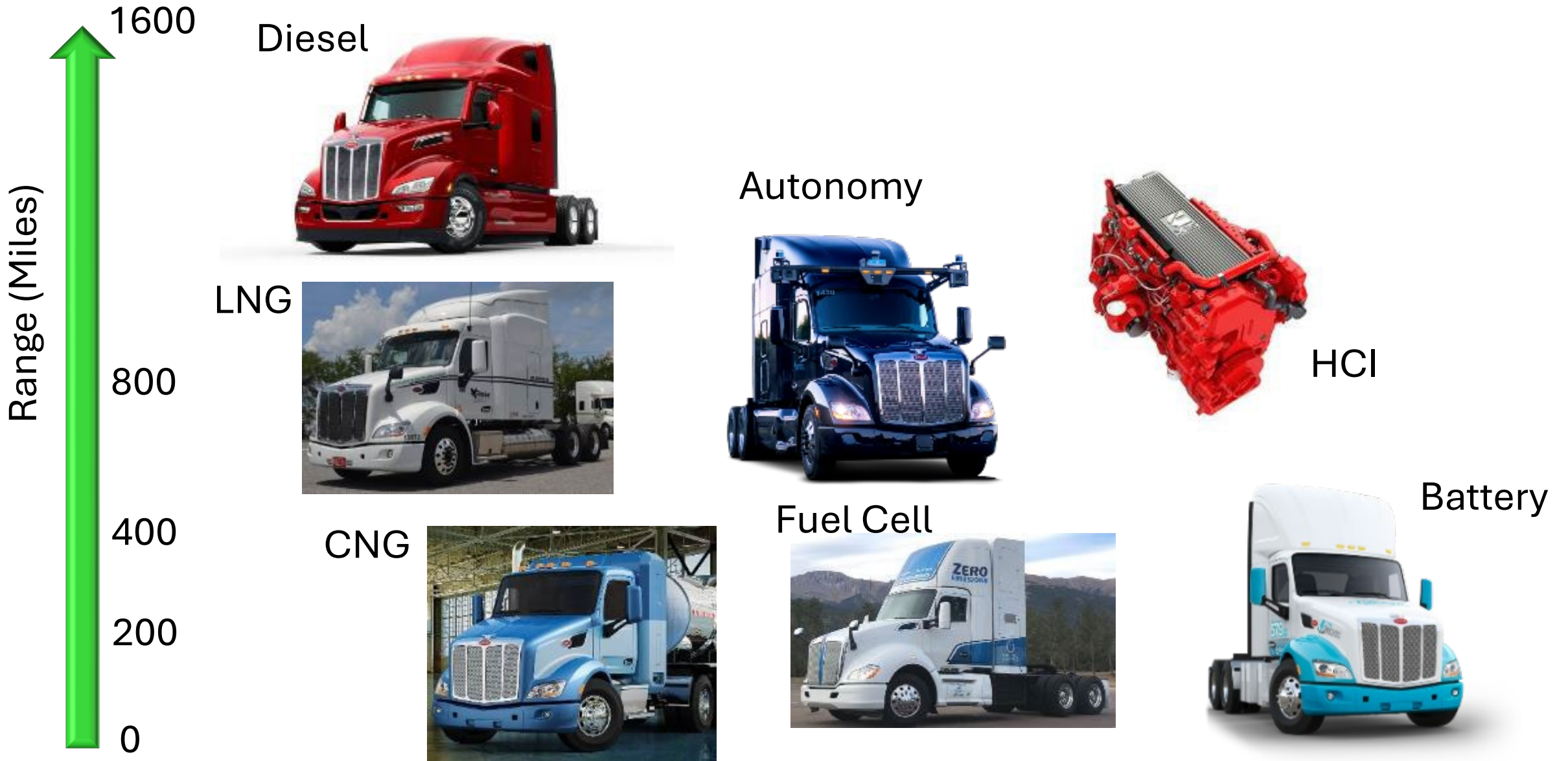
5,000

Technicians

1,100

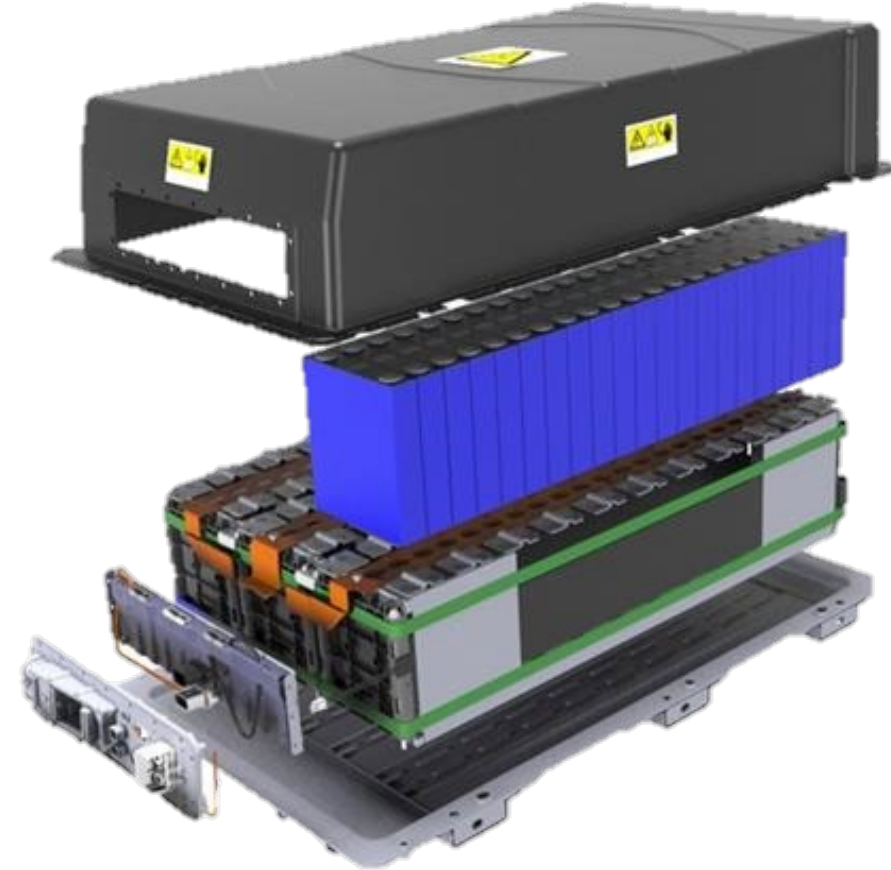
Mobile Service

DRIVING EFFICIENCY



BATTERY CHEMISTRY FOR HD TRUCKS

Description	Chemical Makeup	Energy / Power	Battery Life	Temp Sensitivity
LFP	Lithium Iron Phosphate	M Energy H Power	Better (4,000+)	270 C
NMC	Nickel Manganese Cobalt	H Energy H Power	Good (1 – 2k)	210 C



Electric Vehicle Line - Up



579_{EV}



520_{EV}



LEADING^{THE}
CHARGE

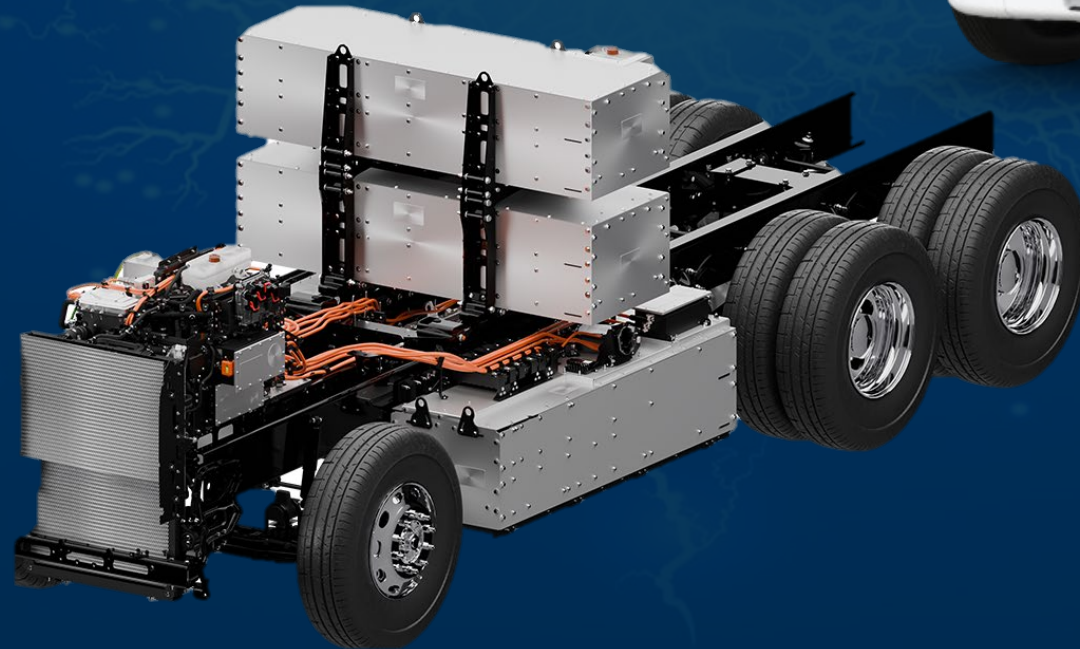
LEADER IN ELECTRIC VEHICLES



579EV Overview



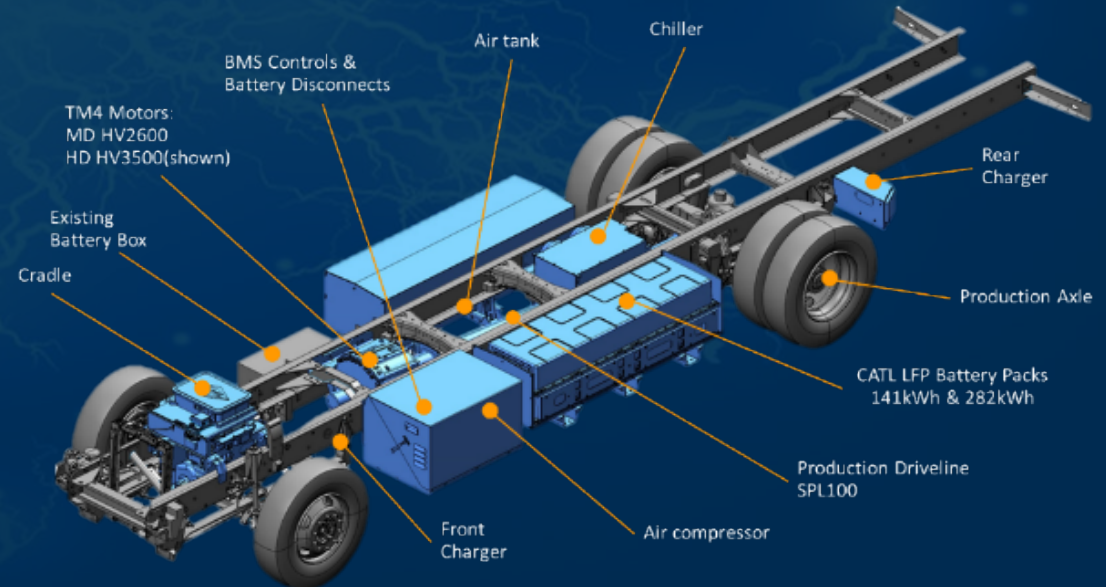
- ZF Center-Drive Electric System
- 6x4 Configuration, 82,000 lb. GVWR
- 400kW (436hp) continuous; 500kW (670hp) peak
- 150 Mile Range, 396 KW-hr Battery Pack
- Up to 7,400 lb. Weight Increase
- 80% SOC Charge Time – 90 Minutes
- 25 & 150 kW ePTO



548EV Overview



- Dana/TM4 Midship Motor Electric Powertrain
- 26,000 Lbs (Class 6) & 33,000 Lbs (Class 7)
- Drive Configuration: 4X2
- Class 6: 154kW (207hp) continuous; 265kW (355hp) peak
- Class 7: 259kW (347hp) continuous; 350kW (469hp) peak
- Range
 - 100 Miles: 141 kWhr Battery Pack
 - 150 Miles: 209 kWhr Battery Pack
 - 200 Miles: 282 kWhr Battery Pack
- 1,500 lb to 4,000 lb Weight Increase
- Charge Time
 - AC Charging: 7.5 - 15 Hours
 - Fast DC Charging: 1 - 2 Hours



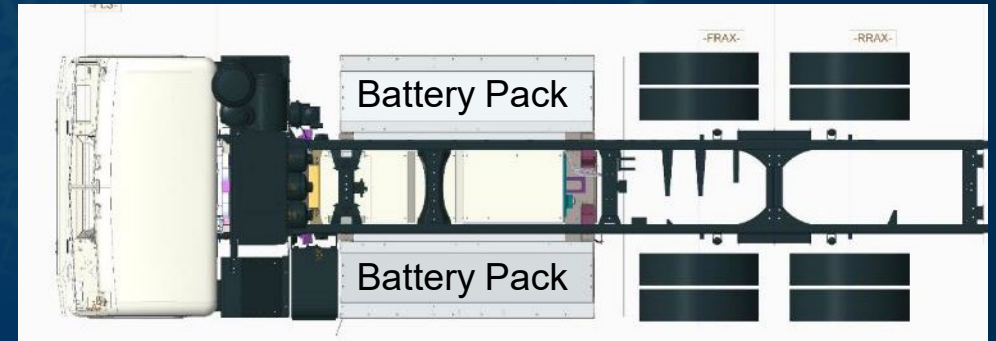
520EV Overview



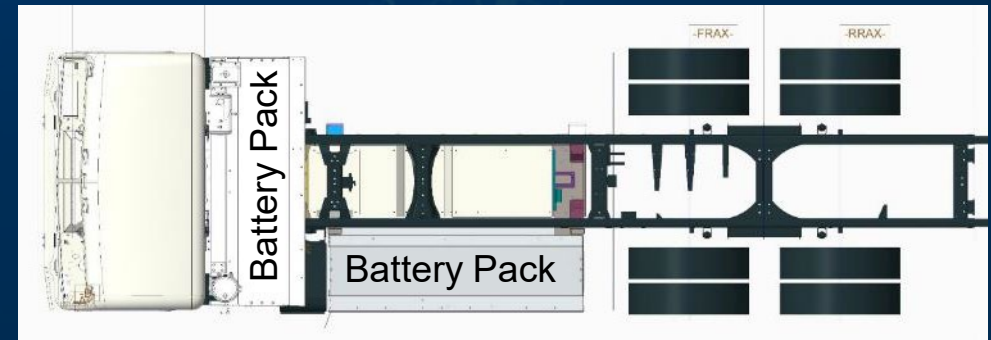
- Powertrain - eAxle
 - 6x4 - 80,000 lbs. GVW
- Wheelbases: 200" & 215"
 - ePTO Options Available
 - Front/Rear/Side Loader Configurations
- Power:
 - 400kW (536hp) continuous
 - 500kW (670hp) peak
- Range:
 - 80 – 120 Miles Range / 1,100 Bins
 - Total Battery Size = 396 kW-hr
- 6,000 - 7,000 lb. Weight Increase
- Charge Time
 - Fast DC Charging: 3.1 Hours @ 150kW



200" LH/RH Battery with ePTO



200" Automated Side Loader with ePTO



CONTACTS



Kyle Crawford

National Sales Manager

(662) 352-6043

Kyle.Crawford@PACCAR.com



Charlie Cook

Refuse Sales Manager

(940) 594-2940

Charles.Cook@PACCAR.com



Highland[®]

NCTCOG ZEV Workshop
April 21, 2026

Common Hurdles in Fleet Transition



Funding

Identifying and applying for complex grant programs



Infrastructure

Planning, permitting, and installing charging equipment



Choosing the Right Vehicles

Matching the right EVs to specific operational needs



Staff Training & Operations

Training staff and managing new technologies



Risk Mitigation

Ensuring a smooth transition without disrupting services



Interoperability

Managing multiple vendors and utilities

Highland

A turnkey partner in fleet electrification



Grants & financing



Project planning



Vehicle & charger procurement



Permitting & installation



Staff & driver training



Fueling (electricity)
























FleetX: Smart charging



Maintenance reimbursement



Solving electrification complexity

	Legacy Fleet	Going Electric Alone	With Highland
Vehicle Ops			
Fueling			
Maintenance			
Utility Electricity Cost			
Training	—		
Installation	—		
Planning & Permitting	—		
Charger Management			
Financing & Grants			



FLEET MANAGER



The Most Experienced Electrification Provider in North America

10M+

electric miles driven

1,200+

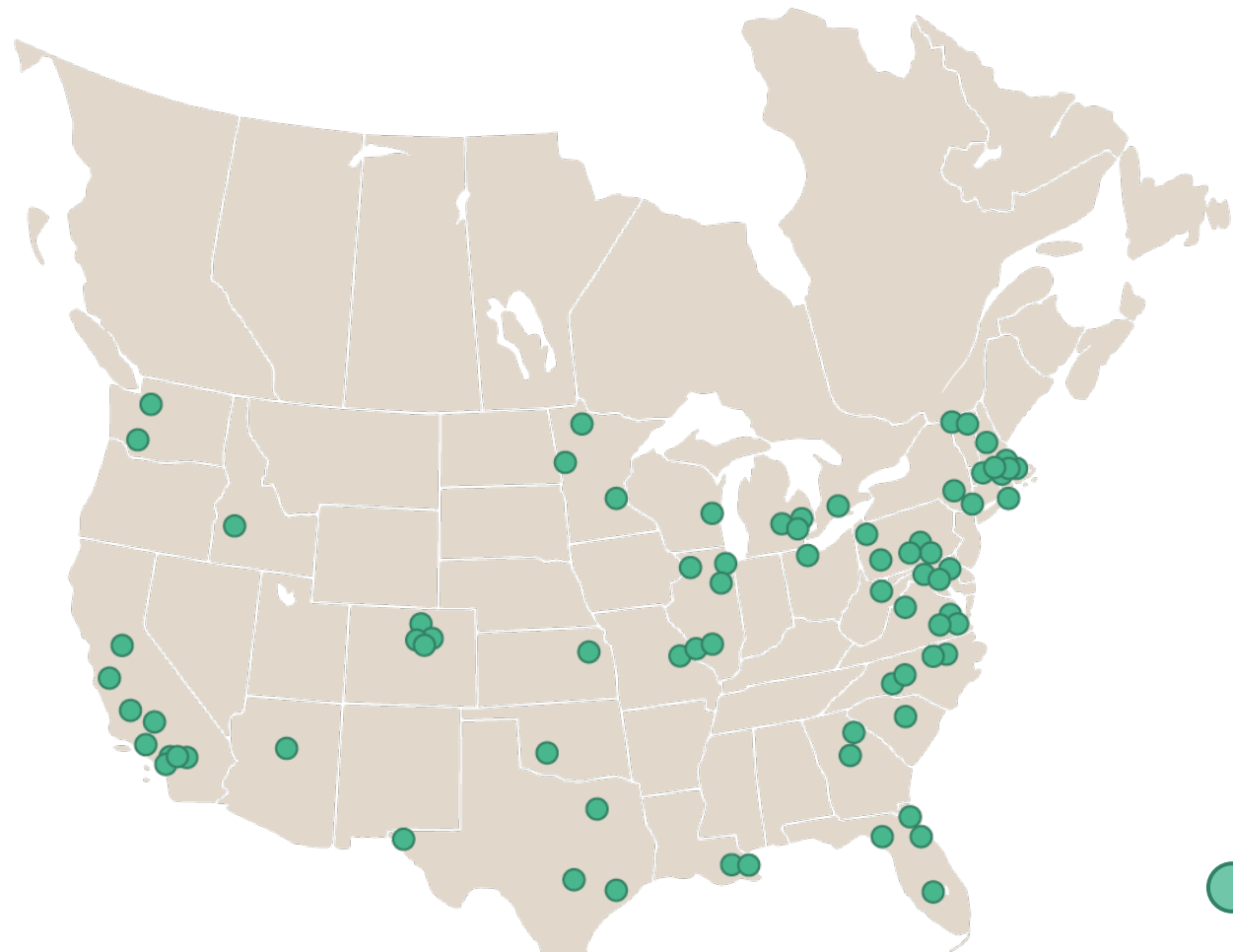
electric vehicles under contract


130+

Public entity partners under development and contracted

-9° to 115°

Climate range amongst Highland customers' depots



 Projects

California

- Salinas City ESD
- Compton Unified SD/NEC
- Fruitvale SD, Bakersfield
- LA County Sanitation Districts
- Rio Bravo-Greeley USD
- 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/CleanRide
- 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/McIlwain
- 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
- Westmoreland Colonial Beach

Washington

- Tukwila SD
- Woodland PS

West Virginia

- Grant County Schools

Wisconsin

- Milwaukee PS/NAC

Canada

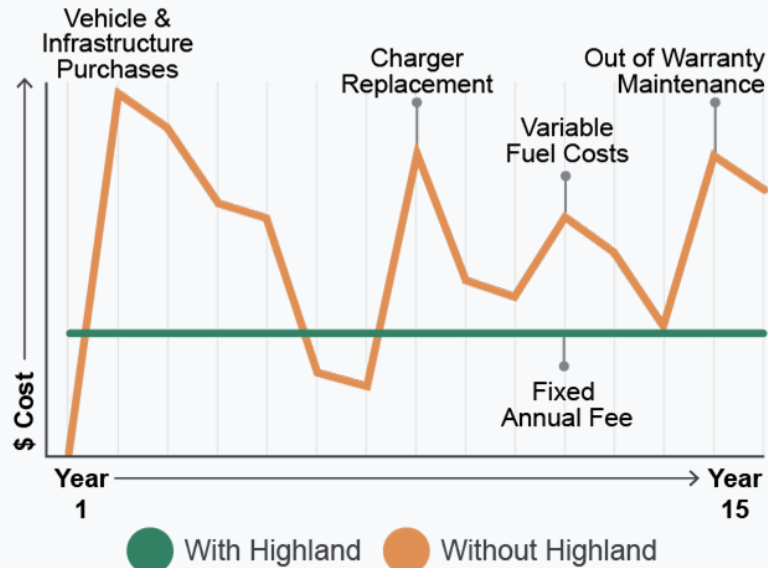
- Attridge Transportation, ON



Reduce Unknown Costs

Our **fixed annual fee** allows you to budget accurately and rule out surprise expenses.

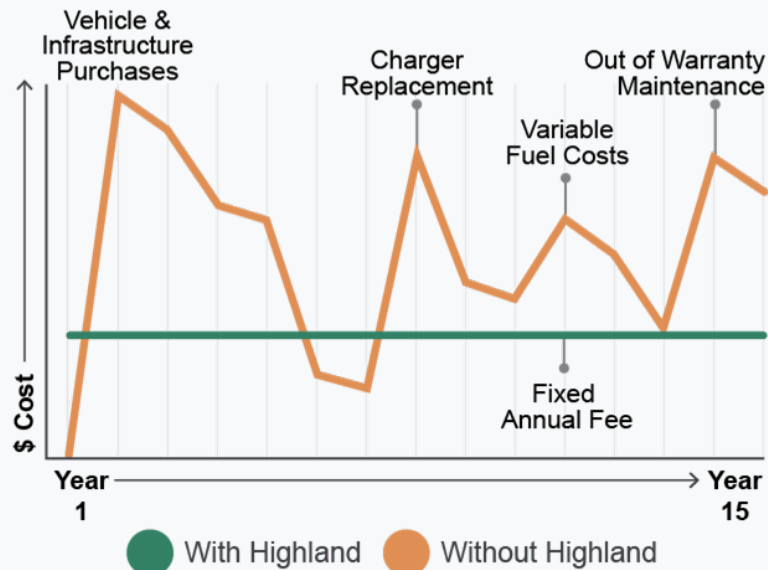
Electrification Costs



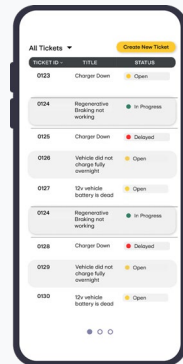
Run a Smarter Depot

Our **fixed annual fee** allows you to budget accurately and rule out surprise expenses.

Electrification Costs



We use cutting edge technology to **optimize fleet operations**, reducing costs from charging to maintenance.



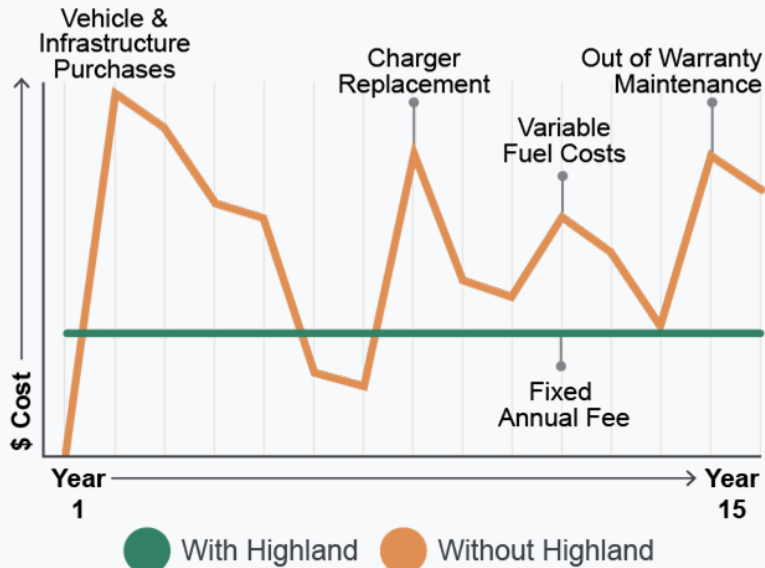
24/7 Status Updates +

- Training resources
- Managed charging (huge cost savings)
- Diagnostics & troubleshooting

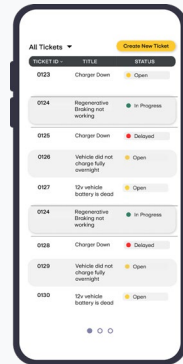
Get it Done Quicker

Our **fixed annual fee** allows you to budget accurately and rule out surprise expenses.

Electrification Costs



We use cutting edge technology to **optimize fleet operations**, reducing costs from charging to maintenance.



24/7 Status Updates +

- Training resources
- Managed charging (huge cost savings)
- Diagnostics & troubleshooting

Our experience & connections allow us to **expedite depot set up**, and procure vehicles at a **lower rate**.

Electrification Timeline



Your partner in fleet electrification



Performance-based contract

Performance-based 3-8 year contract with no upfront cost or time investment.



Predictable budgets











One contract for design, implementation, and operation. Everything is included in one simple, annual price.



Dedicated, one-stop support

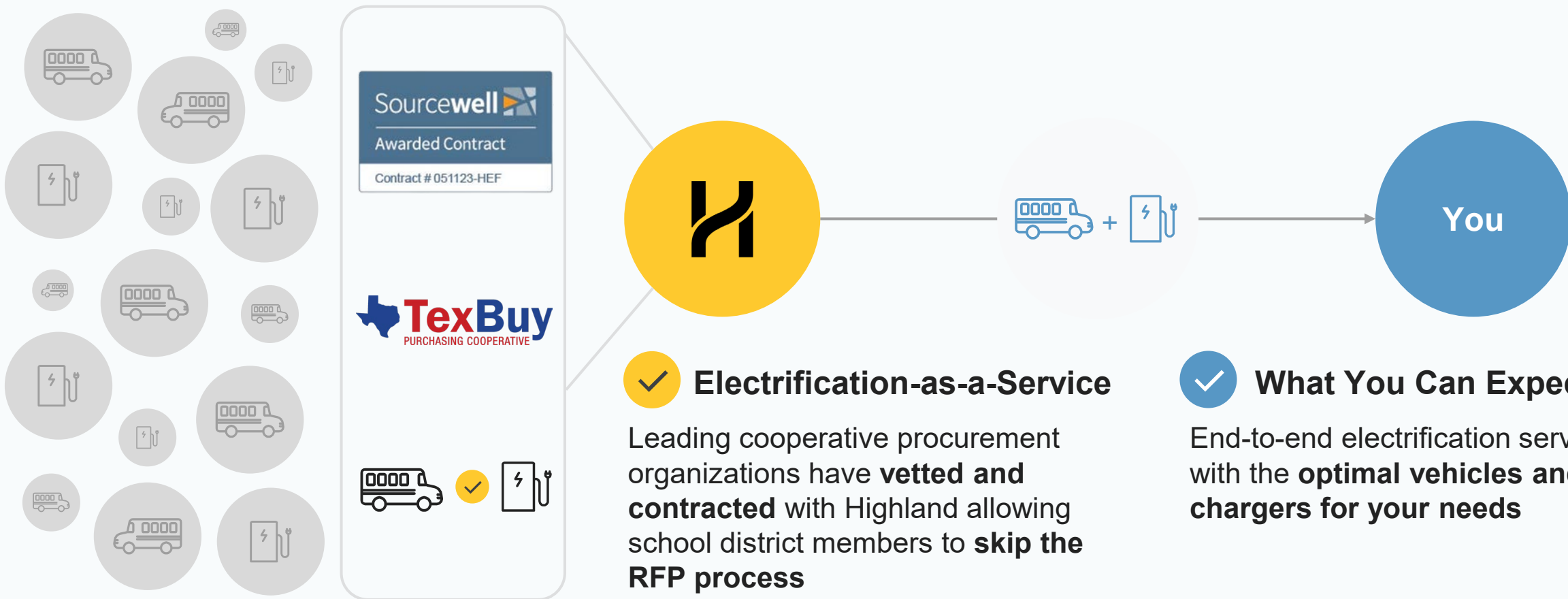
Dedicated team to support charging operations, vehicle troubleshooting, and vehicle maintenance.

Highland's Heavy Duty Service Offerings

		Fleet	Depot	FleetX
		Turnkey Partner	Charging-as-a-Service	Software + Energy Services
	Electric Vehicles	✓	X	X
	Grant & Incentive support	✓	✓	X
	FleetX: EV Fleet Charge Management Software	✓	✓	✓
	Vehicle Telemetry	✓	✓	✓
	Energy Optimization	✓	✓	✓
	EV Charger Installation	✓	✓	X
	Extended Charger Warranty	✓	✓	X
	Dedicated Technician Support: Vehicles & Chargers	✓	✓	X
	Uptime Guarantee*	✓	✓	X
	Fixed Energy (Fuel) Costs	✓	(Optional)	X
	<small>*Guarantees vary by product tier</small>			
	Vehicle Maintenance Reimbursement	✓	(Optional)	X



Save Time & Money Through Cooperative Procurement



✓ **Electrification-as-a-Service**

Leading cooperative procurement organizations have **vett**ed and **contracted** with Highland allowing school district members to **skip the RFP process**

✓ **What You Can Expect**

End-to-end electrification service with the **optimal vehicles and chargers for your needs**





OFFICIAL ELECTRIC
SCHOOL BUS PROVIDER



Powering Movement for the LA28 Games

Highland will deploy the largest electric school bus fleet ever at the LA28 Games.

Big Picture:

500 Repurposed electric school buses from districts

40+ Competition venues across Southern California



Infrastructure

- Site energization
- Scope, project management of infrastructure upgrades
- Permitting & site prep
- Groundwork
- Installation



Full Service Offering

- Full fleet operations
- Daily route & driver logistics
- Technical support & maintenance
- Charge management
- Bus driver & technical training
- FleetX vehicle tracking software



Highland

POWERING MOVEMENT

Case Studies



- **6** New Refuse Vehicles
- **6** DC Fast Chargers
- **~\$290K** in annual cost savings

Key Elements

Highland conducted initial route feasibility to determine which vehicles can be replaced with electric vehicles

With adding EVs to their fleet, Denver will have one accountable partner for electrification



Dallas ISD

- **18** Level 2 & DC Fast Chargers
- **67%** Faster Install than Industry Avg.
- **2nd** Largest District in Texas

Key Elements

Established a depot charging infrastructure project, creating a long-term foundation for electrification expansion

Transportation staff received training on charging systems, operations, and maintenance



Valley View ISD

- **8** Electric School Buses
- **8** Level 2 DC Fast Chargers
- **~\$48K** in annual cost savings

Key Elements

The school saved over \$6,000 per bus, per year, in total cost of ownership

Achieved a speedy 16-month implementation timeline (vs typical 36mo cycle)

Thank you



Dan Rosenfield
214.991.4582 | Dan.Rosenfield@highlandfleets.com



Networking Break

Speaker session will resume at
10:30



Presentations | Networking | Funding Information | Ride & Drives





Session 4: What to do About Infrastructure



Presentations | Networking | Funding Information | Ride & Drives



The logo features the word "ONCOR" in a dark red, sans-serif font, with a red swoosh above and below it. To the right, "EVolution" is written in a black, sans-serif font, with "EV" in green and "olution" in black. A small "SM" trademark symbol is positioned to the right of "EVolution".

ONCOR[®]
EVolutionSM

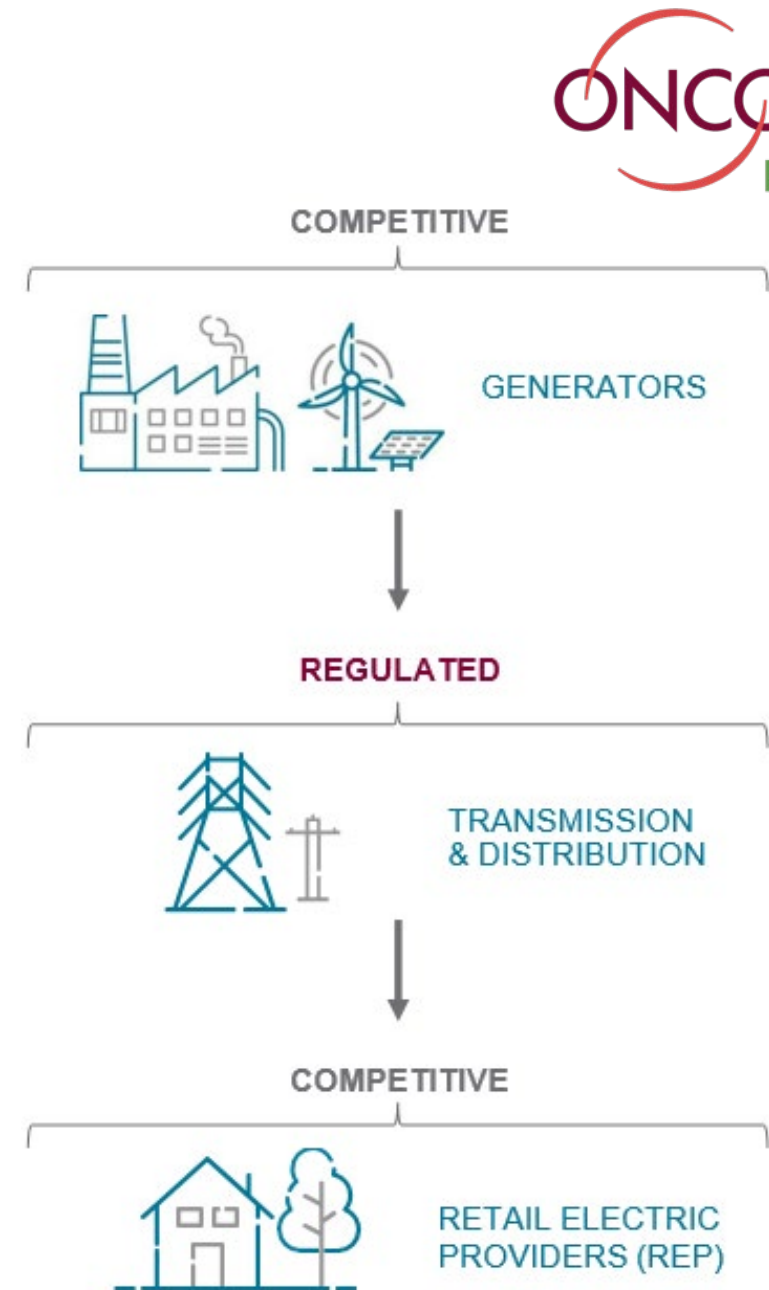
April 21, 2026



About Oncor



- Oncor is a regulated transmission & distribution utility (TDU) that operates the largest electric delivery system in Texas.
- Provides transmission and distribution services under regulations established by the Public Utility Commission of Texas (PUCT) and the Electric Reliability Council of Texas (ERCOT).
- We're your "poles and wires" company. Oncor does not own, generate, produce or sell electricity.



Where We Serve



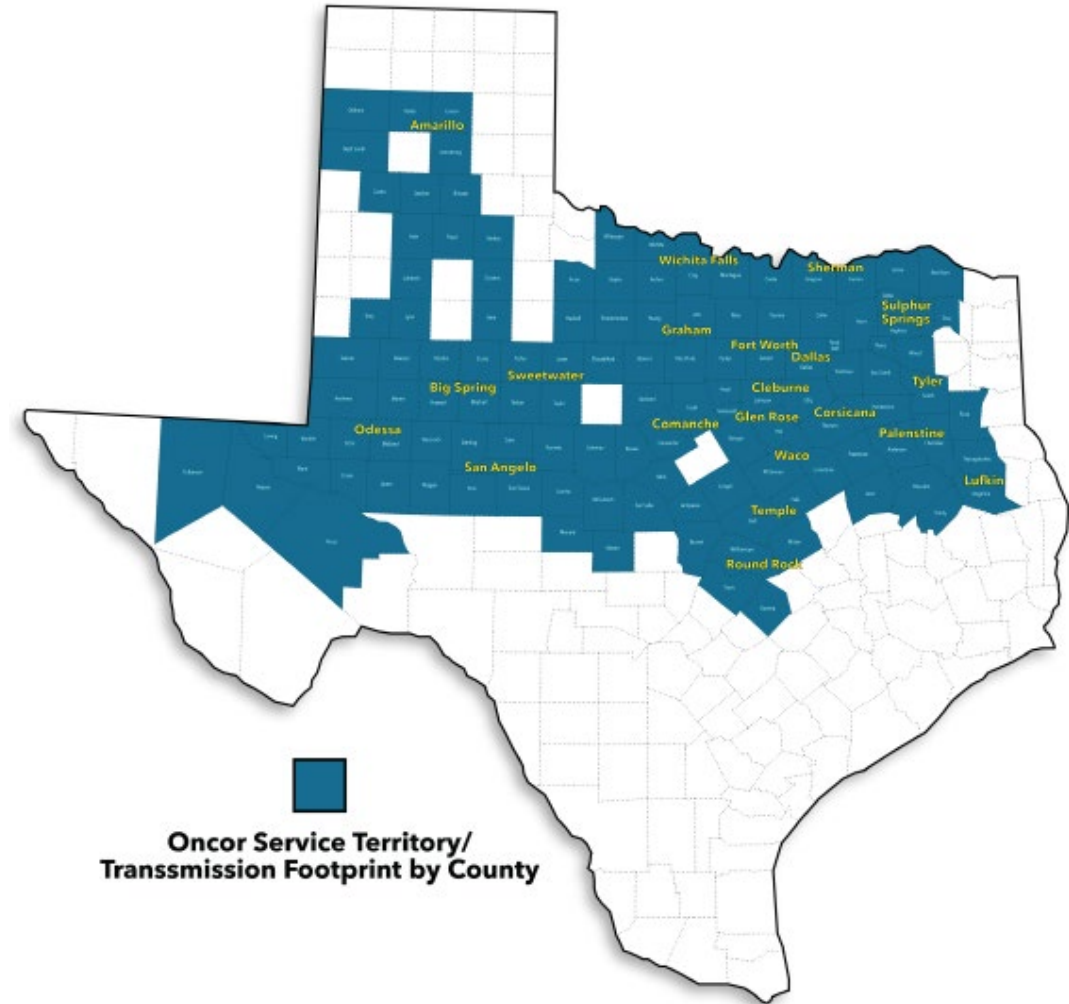
SERVING ~13 MILLION
TEXANS

98 COUNTIES
AND 400+ COMMUNITIES

141,000 MILES
OF TRANSMISSION AND DISTRIBUTION LINES

3.9 MILLION
ADVANCED METERS

4,500+ EMPLOYEES
ACROSS THE STATE



Supporting Growth in the Lone Star State



Oncor has invested billions of dollars across its service area to build, upgrade and operate a safer, smarter, more reliable electric grid.

From 2019 - 2023, Oncor added:

- **Over 10,500 miles** of new & re-built transmission & distribution lines,
- **~ 340,000 new customer connections**, and
- **More than 200 new substations** across its service area.

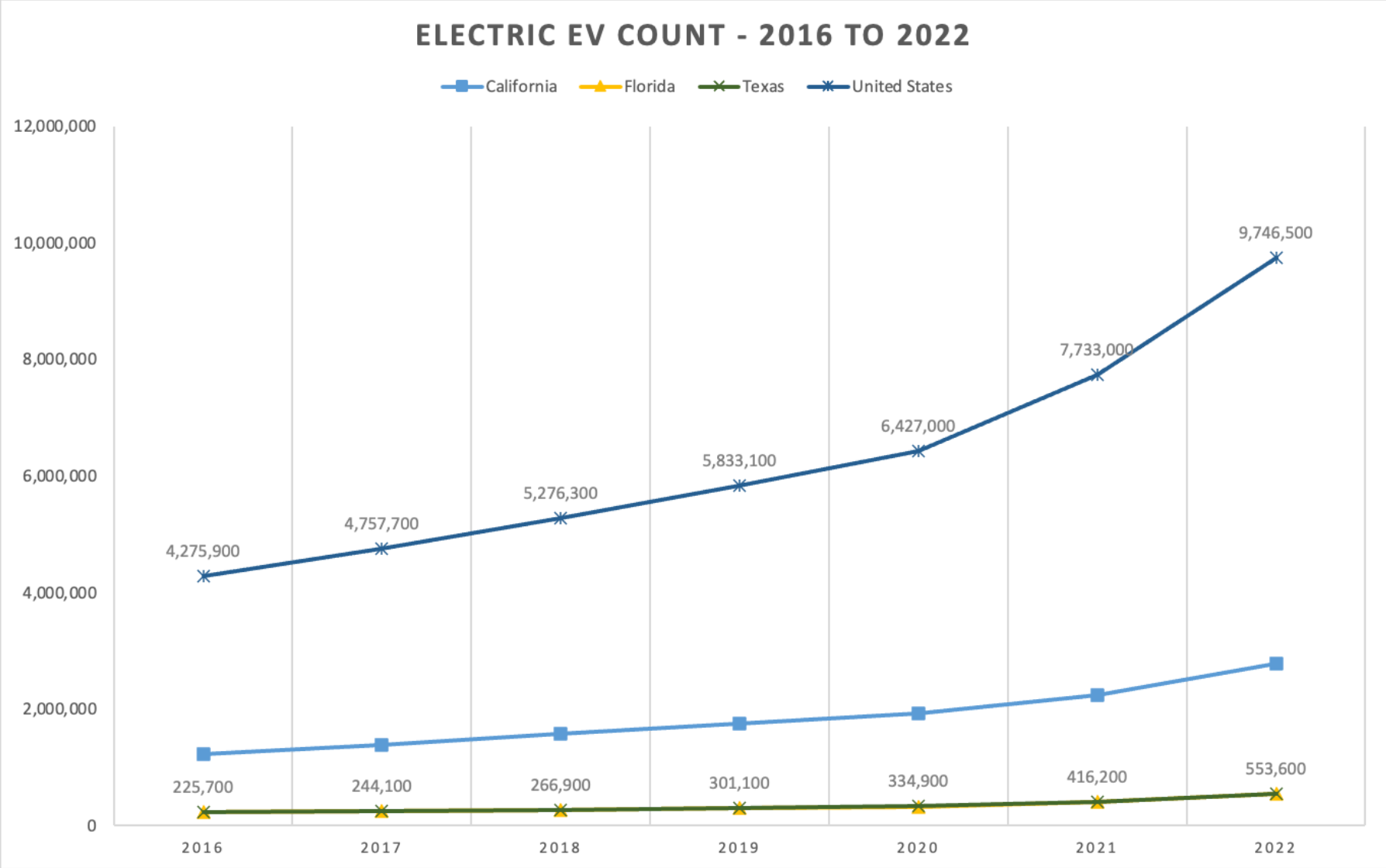
Oncor's capex plan includes \$19 billion in investments over the next five years. These capital expenditures are expected to be used for investment in transmission and distribution infrastructure, including investments to support system growth, reliability and resiliency.

Oncor also focuses on making appropriate and necessary investments in an efficient and cost-effective manner. **Oncor rates are among the lowest electric delivery rates of any investor-owned utility in Texas.**



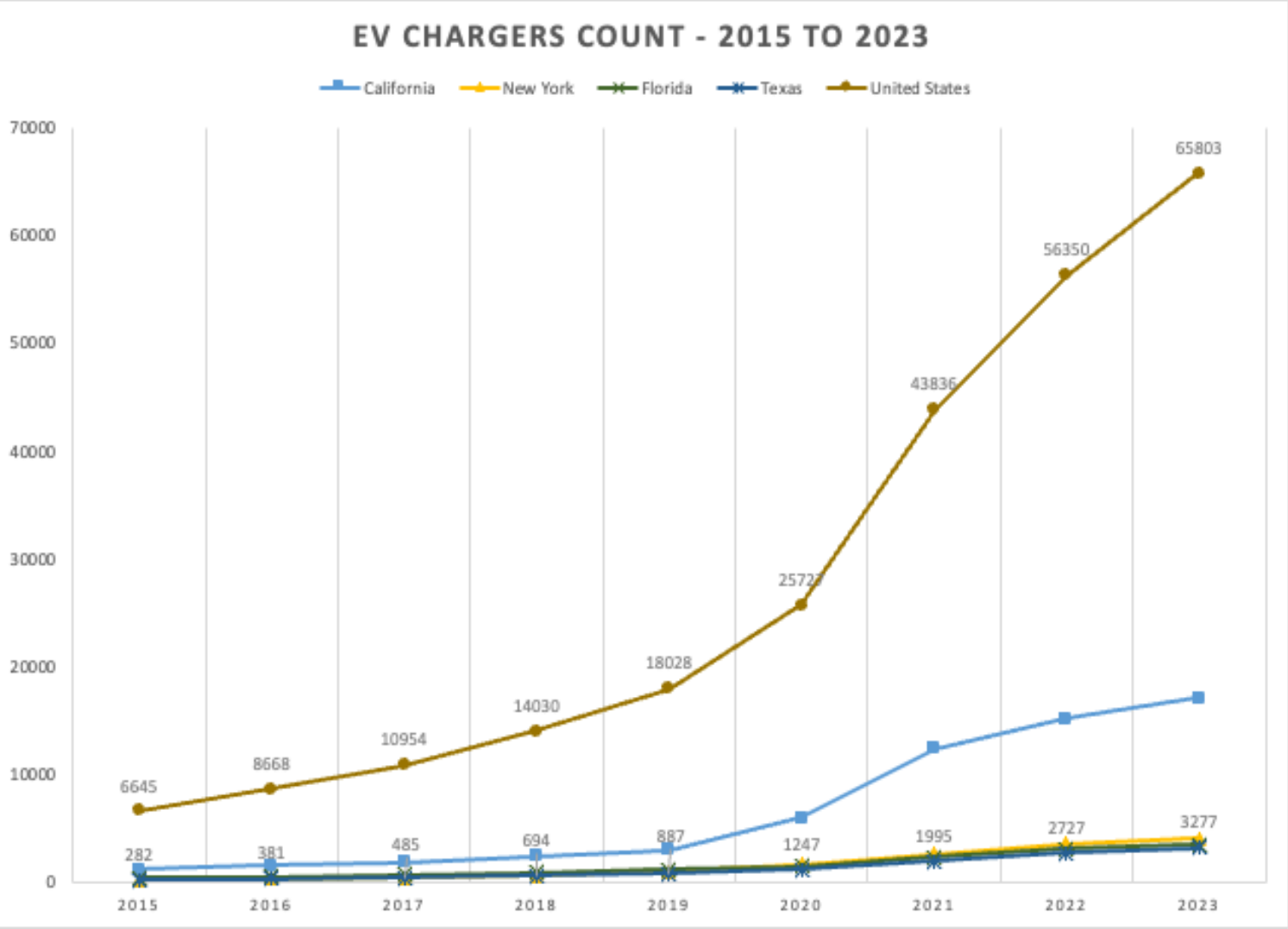
EV Trends

EV Count of All EV Types from 2016 to 2022 - USA and Top 3 States



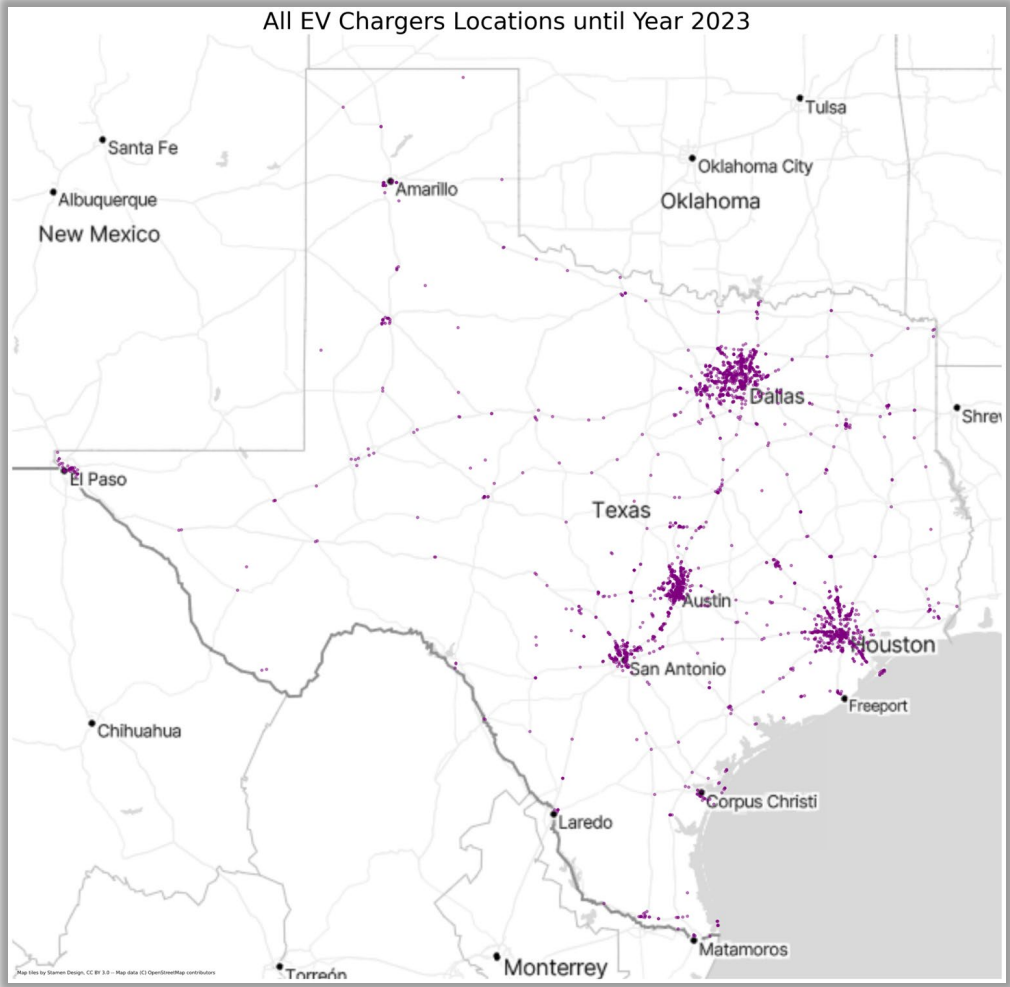
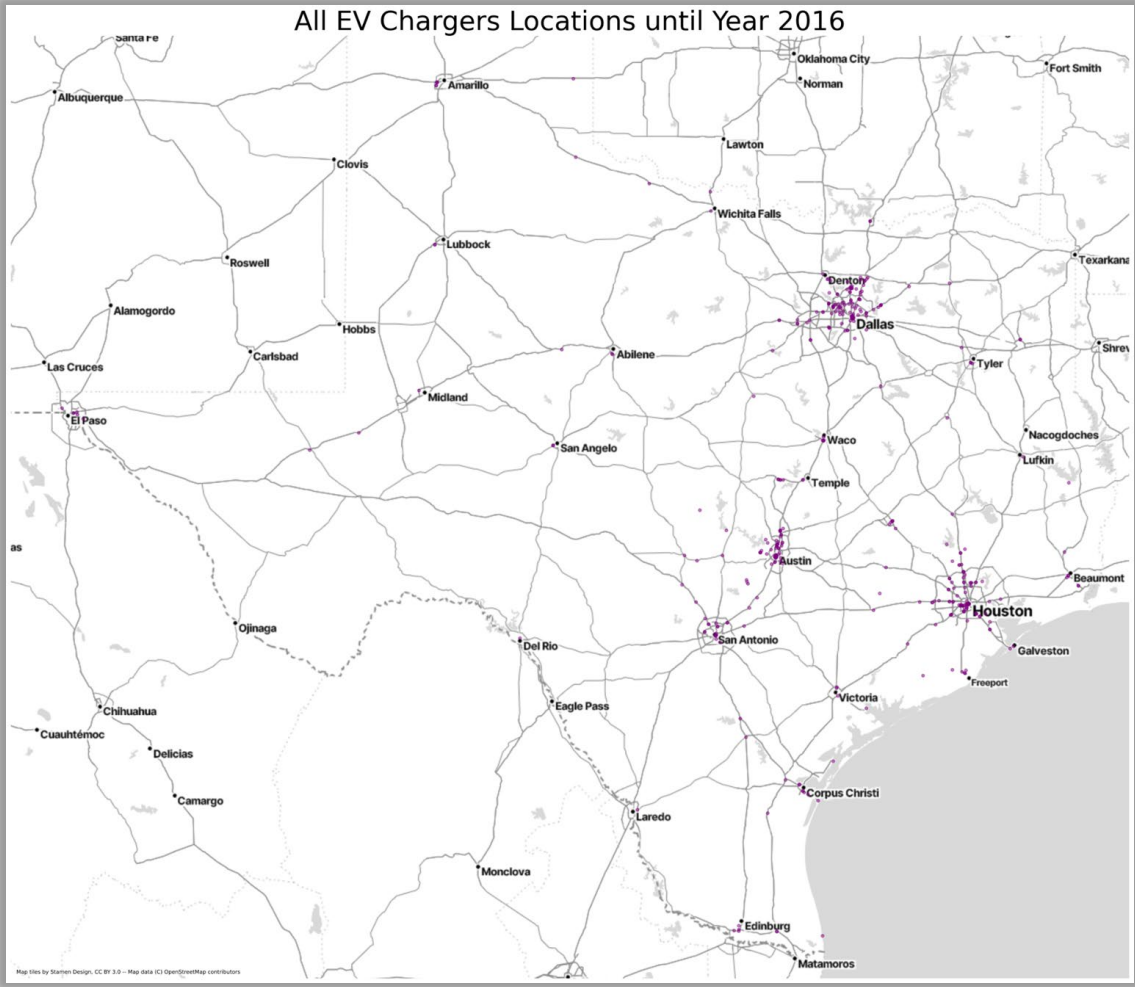
Source: US Department of Energy, Alternative Fuels Data Center (<https://afdc.energy.gov/vehicle-registration>)

Count of EV Chargers from 2015 to 2023 - USA and Top 4 States



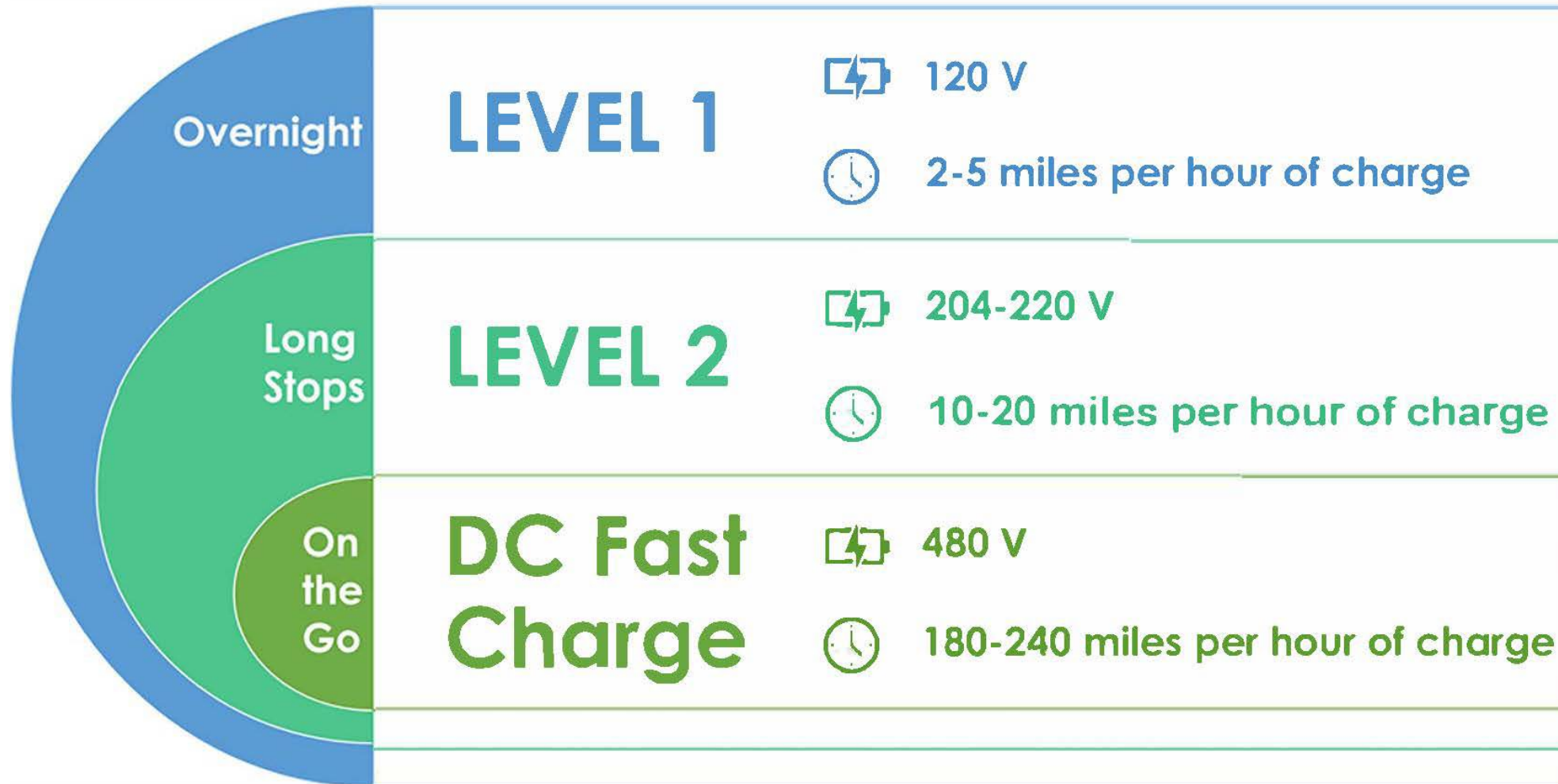
Source: US Department of Energy, Alternative Fuels Data Center
https://afdc.energy.gov/fuels/electricity_locations.html#/analyze

EV Network - Texas and Oncor Area - 2016

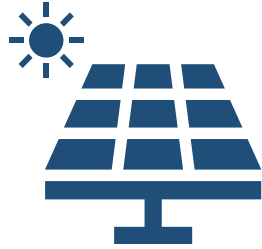


Source: US Department of Energy, Alternative Fuels Data Center (https://afdc.energy.gov/fuels/electricity_locations.html#/analyze)

Types Of EV Charging And Infrastructure



Other Charging Technologies



Solar – Enables off-grid charging for greater resiliency, may integrate with other charger brands and have on board storage. No additional infrastructure required.



Mobile – Allows for portable and emergency charging of EVs without any additional infrastructure.



Storage – Utilizes on board batteries that store electricity to allow faster charging and charging off-grid.

Distributed Generation at Oncor



- Distributed Generation comprises of a variety of technologies; solar, batteries or generators, used to generate electricity at or near the point where it will be used.
- **If you want the DG at your site to put electricity back onto the grid (ex. solar panels, Vehicle to Grid (V2G), Battery Storage), you will need an interconnection agreement to meet safety and equipment standards.**
- Delay of interconnection agreement submission will cause a delay in a project.



Customer New Service Portal



When ready to move forward with your project, please click on the link to submit to Oncor!

Project Submission – Link [HERE](#)

All Oncor construction standards documentation are on the webpage

- Electric Service Guidelines (ESG) – Link [HERE](#)
- DDS4OH Overhead Construction – Link [HERE](#)
- DDS4UG Underground Construction – Link [HERE](#)



Group Members

Project Managers – NCMs

Charles Douglas III

Jordan Reed

Mylea Farmer

Gladys Sosa

Cristian De La Campa

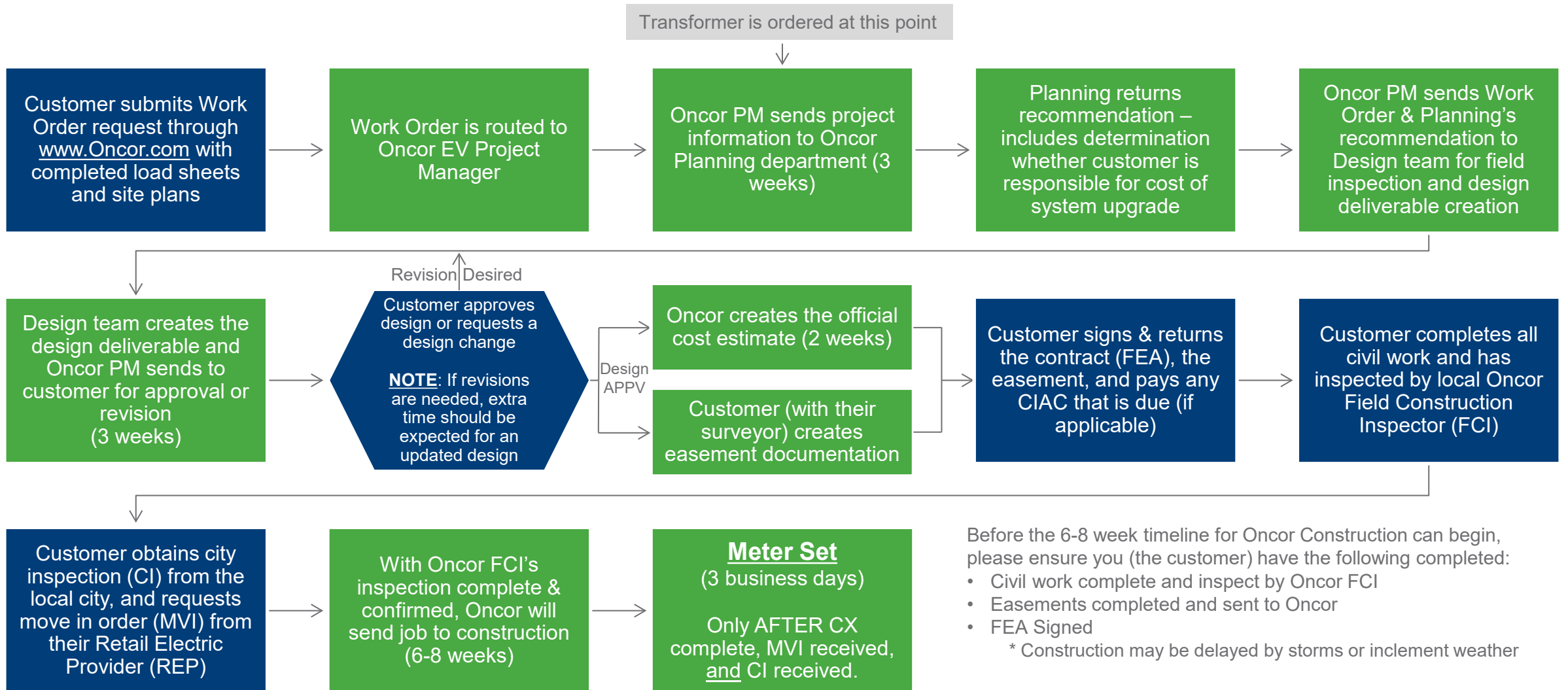
Manager

Chris Harrelson

Supervisor

Garon Yamashita

New Commercial Construction Process



Additional Considerations



All 277/480V chargers require service from a Padmount XFMR



Padmount XFMR lead times sit @ 18 weeks (as of 01/16/26)



Easement exhibit creation is the responsibility of customer through a preferred surveyor

Overview



What Oncor team(s) can provide support?

- Area Manager, LCI, DSA
- PMDS (Design), Distributed Generation, Energy Efficiency

Owned/leased property (Cust Example 1)

- If leased
 - Will owner provide easements?
 - Who is responsible for construction costs?
 - How will it be metered?

Short term/long term plans (Cust Example 2)

- Load ramp
 - Will more chargers be installed at a later date?
 - Can new equipment support full deployment plans?
- How will they be used?
 - Employee Charging / For Pay charging
 - Will determine how it can be served?



Planning for Infrastructure at Your Fleet's Facility

Public & Private Fleets

Life Is On

Schneider
Electric

Topics

Section 1

1

Strategic Context for ZEV
Infrastructure Planning

Section 2

2

Fleet Operations as the
Starting Point

Section 3

3

Charging Strategy and
Technology Choices

Section 4

4

Electrical Infrastructure and
Utility Coordination

Section 5

5

Managing Power, Cost, and
Physical Constraints

Section 6

6

Scalability, Resiliency, and
Long-Term Value

Strategic Context for ZEV Infrastructure Planning

Facility Infrastructure

Why Facility Infrastructure Is Foundational to ZEV Success

Critical Infrastructure Transformation

Transitioning to ZEVs requires foundational changes in facilities, utilities, and operations beyond vehicle procurement.

Impact on Fleet Operations

Inadequate charging infrastructure reduces fleet uptime and disrupts routes, shifts, and service commitments.

Financial and Strategic Risks

Poor planning leads to higher capital costs, oversized electrical upgrades, and long-term operational constraints.

Cross-Functional Coordination

Early collaboration among fleet, facilities, utilities, sustainability, and finance teams ensures successful infrastructure planning.

Fleet Operations as the Starting Point

Defining Requirements

Fleet Usage Patterns

Charging needs depend on vehicle class, daily mileage, energy use, dwell times, and shift schedules to optimize infrastructure design.

Duty Cycle Analysis

Understanding vehicle return times and energy needs enables accurate charging power requirements without overbuilding infrastructure.

Future Growth Planning

Infrastructure must support anticipated fleet expansion over 5 to 10 years to avoid costly redesigns and disruptions.

Redundancy and Resiliency

Critical service fleets require higher charger redundancy and resilience to maintain continuous operations under varied conditions.



Charging Strategy & Technology Choices

Charging Strategy

Why Facility Infrastructure Is Foundational to ZEV Success

Depot-Based Charging

Uses low-power AC chargers overnight, benefiting from predictable schedules and lower infrastructure costs.

Opportunity Charging

Understanding vehicle return times and energy needs enables accurate charging power requirements without overbuilding infrastructure.

Hybrid Charging Approach

Combines overnight depot charging with limited fast charging to balance cost and operational flexibility.

Strategic Alignment

The right charging strategy aligns power availability with operational needs to minimize costs and maximize reliability.

Schneider Large Commercial Fleet Charging

Reliable, scalable charging infrastructure designed to keep fleet operations running on schedule

Designed for centralized fleet operations

Supports depot-based charging for light- and medium-duty fleets

Combines AC Level 2 & DC fast charging to meet operational demands

Scalable, high-performance

Modular architecture designed for expansion

High-power DCFC (up to 400kW) for reduced downtime

Tailored electrical distribution aligned to facility requirements

Intelligent energy and load management

Dynamically distributes power across chargers

Optimizes charging during off-peak hours to reduce energy costs

Centralized monitoring & control through EV Connect platform



Expanding Infrastructure Value

Extends infrastructure to support employee and visitor charging at fleet facilities, leveraging existing resources.

Designed for long-duration use cases, with AC Level 2 charging and integrated access, payment, and energy management.

Adds flexibility and scalability to fleet infrastructure without affecting core operations.



Electrical Infrastructure & Utility Coordination

Assess and Engage

Electrical Capacity Assessment

Assess transformers, switchgear, feeders, and panelboards to evaluate available electrical service capacity for EV charging.

Utility Engagement Importance

Engage utilities early to understand upgrade scope, costs, timelines, and available EV-specific programs.

Managing Upgrade Timelines

Service upgrades can take 12 to 36 months; early utility involvement helps align fleet deployment with power availability.

Ongoing Capacity Partnership

Capacity planning is continuous; integrating utility planning reduces risk and uncovers cost-sharing and incentives.



Managing Power, Cost, & Physical Constraints

Load Management, Facility Design, & Cost Control

Intelligent Load Management

Smart charging systems balance vehicle charging loads, limit peak demand, and reduce energy costs effectively.

Facility Layout and Design

Proper charger placement and civil design optimize traffic flow, safety, cable management, and accessibility.

Permitting and Regulatory Compliance

Early coordination with authorities helps navigate permits, approvals, and zoning to avoid project delays.



Scalability, Resiliency, & Long-Term Value

Designing for Growth, Reliability, & Financial Sustainability

Phased Infrastructure Design

Design ZEV sites for full build-out initially and add chargers incrementally to minimize disruption and future costs.

Resiliency and Redundancy

Incorporate charger redundancy, spare electrical capacity, and backup energy to ensure continuous fleet operations.

Financial Sustainability

Understand full costs and leverage incentives to improve economics for long-term ZEV infrastructure viability.



Life Is n



Discover more ways we're leading the digital transformation of energy management and industrial automation



Schneider Electric
201 Washington St., Ste 2700
Boston, MA, 02108-4403
United States Tel: (978) 975-9600
se.com/us





Zero Emission Vehicle Workshop

April 21, 2026



**North Central Texas
Council of Governments**



Forum Mobility develops, owns, and operates multi-fleet charging depots for MHD electric trucks and offers vehicle financing to help fleets electrify



Founded by Forum Energy Partners in 2021.
Vast infrastructure experience
with \$6B+ projects globally.



Raised over \$400M in capital to support
infrastructure construction and EV truck
deployment at scale. Investors include CBRE,
Amazon Climate Pledge Fund, Obvious
Ventures and Edison International



Real World Fleet Charging Experience with
18+ unique fleets of all sizes. 3+ years
supporting EV drayage carriers servicing the
Ports of Los Angeles and Long Beach.



Electrify and scale your fleet with **Forum Mobility's** charging and truck leasing solutions



Truck + Charging



High speed charging at Forum's depots



EV truck leasing

OR

Charging Only

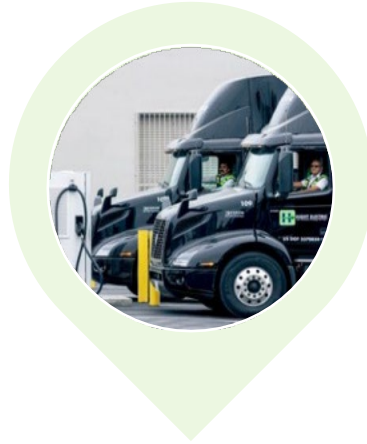


High speed charging at Forum's depots

Forum's EV Charging Solutions: Offsite & Behind-the-Fence

1 Forum owned & operated EV charging hubs

- + Pull-through & Bobtail charging
- + 24/7 Access
- + Gated with full time staff and security
- + Driver parking and amenities



2 Behind the fence charging infrastructure at customer site or warehouse

- + Requires long-term site control, power availability, and onsite space



FM Harbor: Port of Long Beach

Largest port-based EV charging depot in the world

Key Specs:

- + Up to 360-kW Per Port (CCS)
- + 9 MW of Grid Power
- + 99+% Uptime
- + Opened Dec 2024
- + 44 Charging Spaces

Amenities:



Fully Staffed & Nighttime Security



Secure Gated Entry/Exit



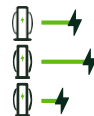
Clean Restrooms



Vending & Picnic Area



Personal Vehicle Parking



Charging Management Software



Customers Include:



CCS vs. MCS – What it means for HD EV Trucking

Unlocking longer routes, higher utilization, and superior fleet economics

- + MCS (Megawatt Charging System) is a next-generation standard delivering 3x+ faster charging than CCS
- + Enables superior fleet economics:
 - > 30–45 minute charge times minimize downtime and keep trucks moving.
 - > Charging aligns with standard driver rest breaks, avoiding incremental labor costs.
 - > Higher daily asset utilization drives down fuel price and costs per mile.
 - > Longer routes become with access to offsite charging

Feature	CCS	MCS
Max Power Output	Up to 350 kW	1 – 3.8 MW
Connector Type	CCS1	MCS (ISO 15118-20)
Charging Time (Class 8)	1-3 hours	30-45 minutes
Use Case	Overnight and dwell-time charging	Offsite and en-route charging
Truck Model Compatibility	Most current BEV models (Volvo, DTNA, BYD, Paccar)	MCS-capable models 2026+ (Tesla, Windrose)

Move to MCS impacts offsite charging depot design



Typical Forum Mobility Offsite Depot Layout

Bobtail & Box Truck Chargers (CCS / MCS)

Pull-through Chargers (MCS)

Lighting for 24/7 Operations

Wide Turning Radii

Secure Gated Lots

Auto Parking

Command Center & Driver Lounge



Powering EV Depots



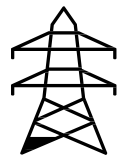
Typical Forum Depot = 5-10MW

Avg. NFL Stadium = 5-10 MW

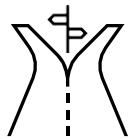
- + Essential to understand power availability and interconnection timelines
 - > Engage utilities upfront to define cost, timing, and requirements to bring power to the site.
- + Use modeling to inform site design and minimize fleet energy costs
 - > Model utilization and load profiles to optimize infrastructure sizing and layout



Developer's Perspective to Siting Offsite Charging Depots



Availability of Power



Proximity to Key Freight Infrastructure (highways, ports, rail, and airports)

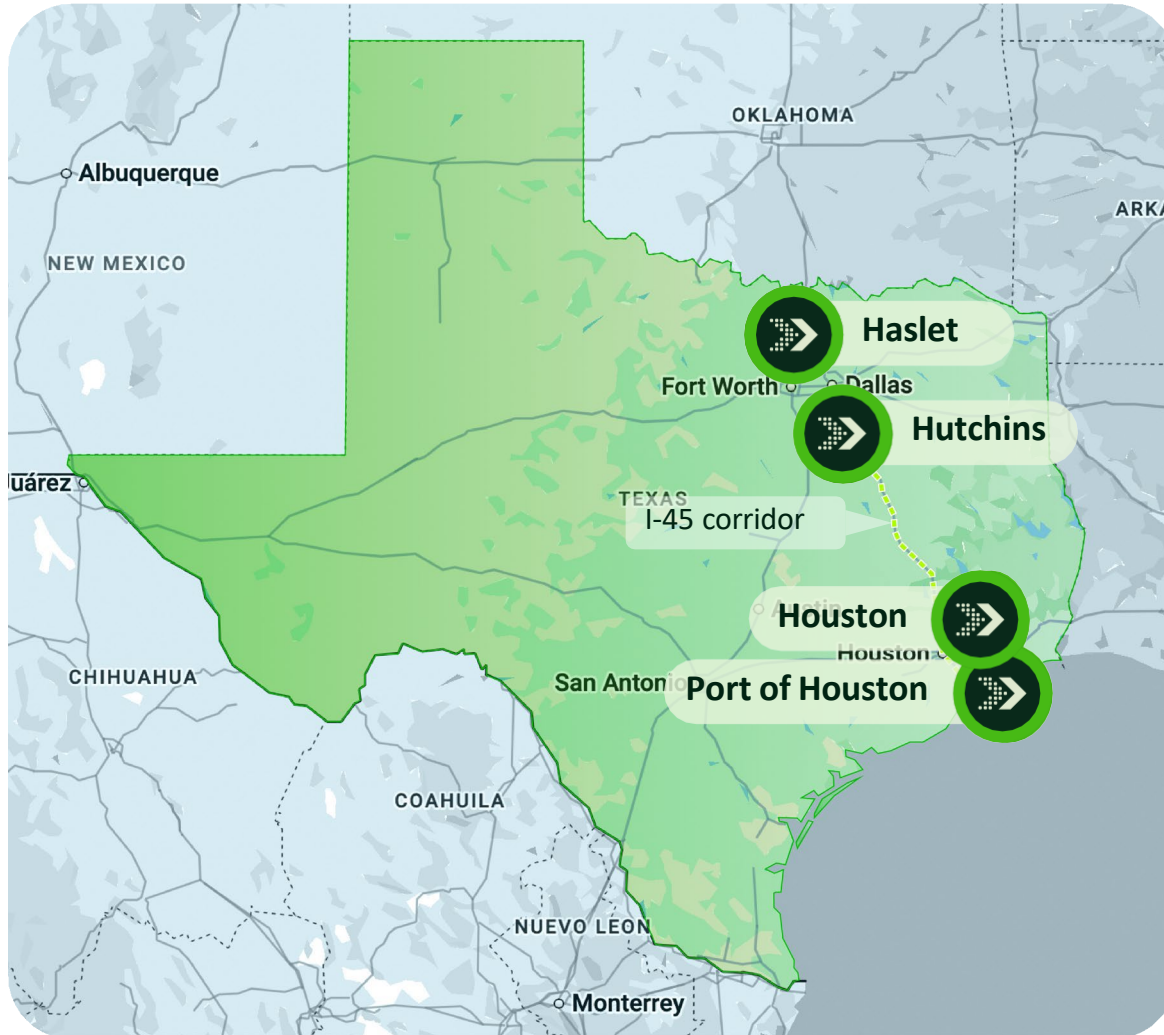


Existing Industrial Users



Straightforward Permitting Pathway

Texas Development Pipeline



Forum Mobility is accelerating the decarbonization of heavy-duty trucking through the development of several depots across DFW and greater Houston

+ Proximity to key freight activity



Port of Houston container terminals



BNSF & Union Pacific rail

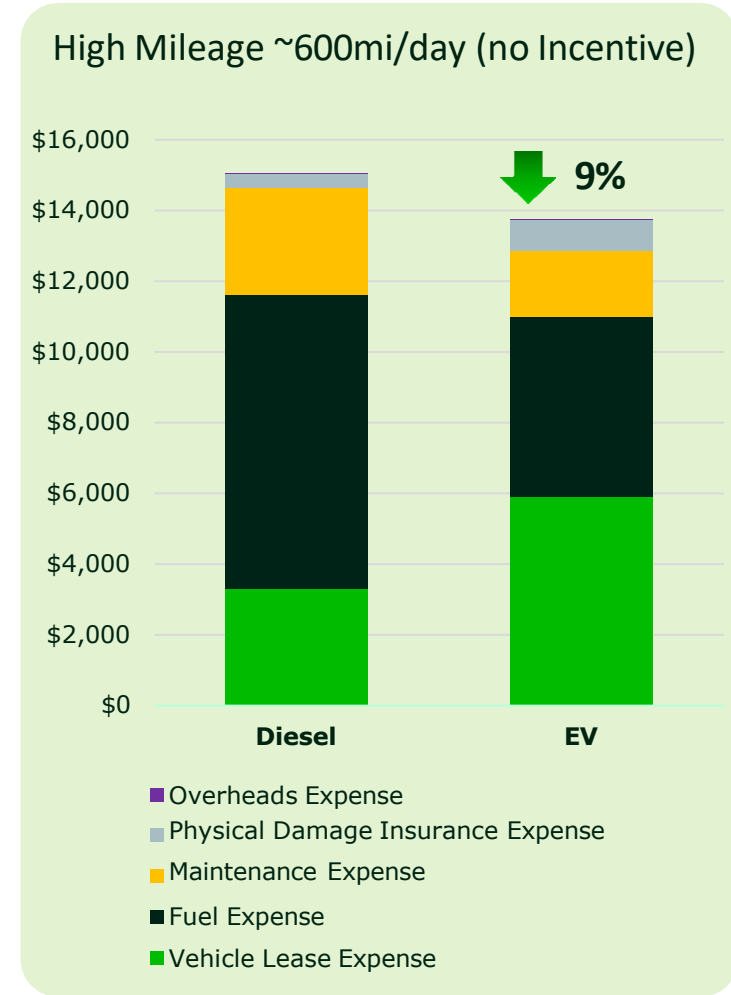
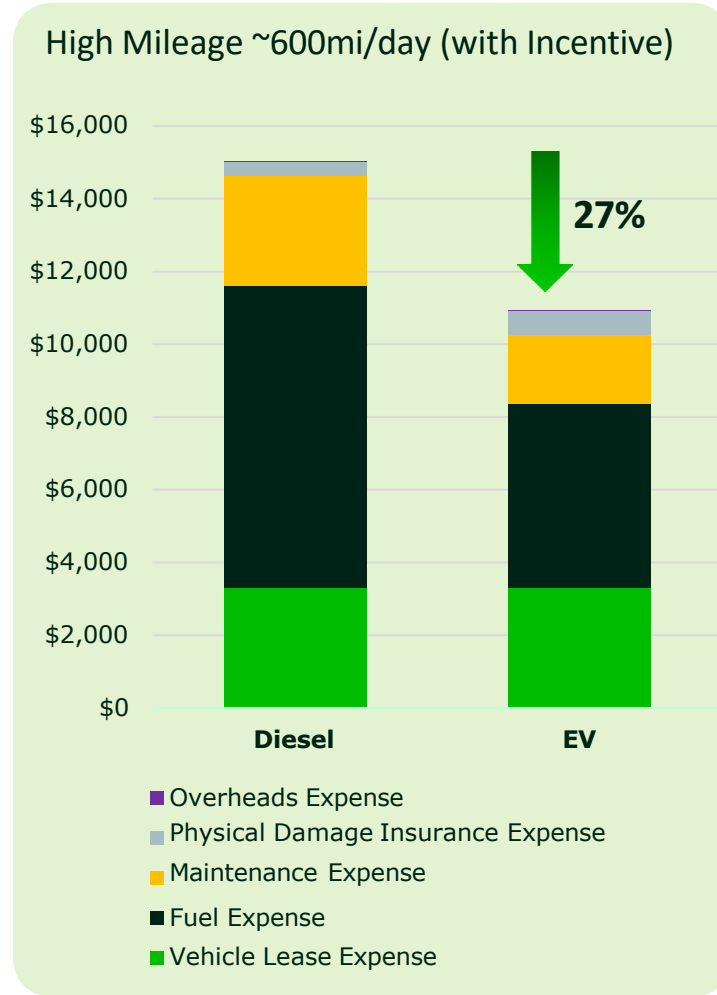
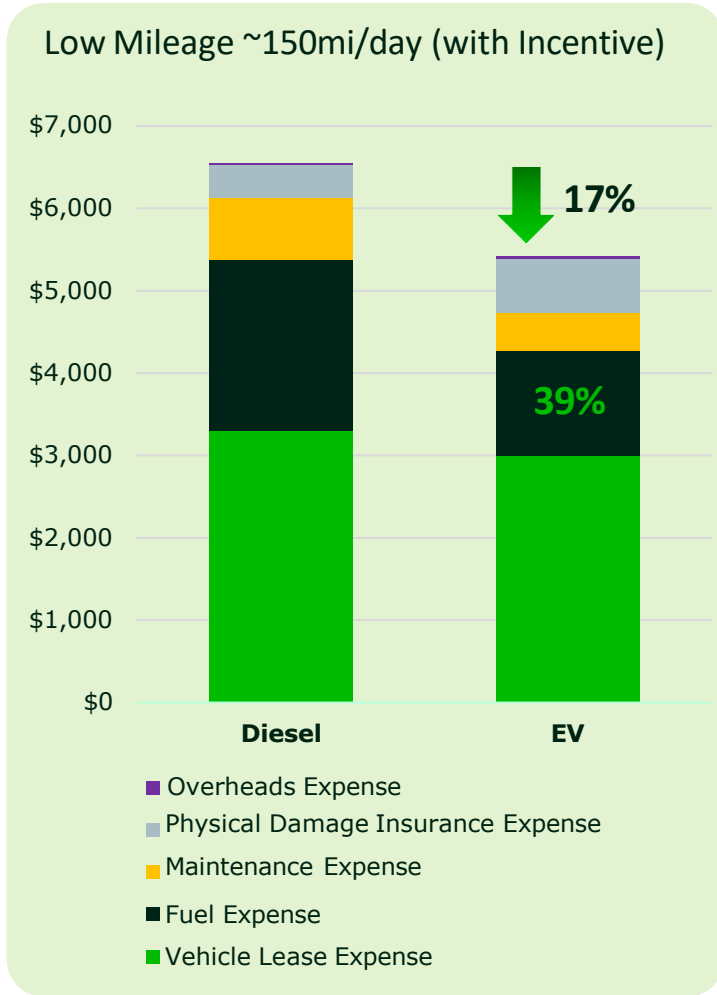


AFW & IAH airports

+ Enables electrification of the I-45 corridor from Houston to Dallas

+ MCS pull-through charging (up to 1,200kW per lane) with depot amenities including security, parking and trailer storage, restrooms, vending, and driver lounge area

Monthly TCO Savings (Class 8)



Diesel Fuel & Efficiency: Assumes 7.5 MPG and \$4.80/gallon



Ben Goossen

Sr. Director of Business Development

Ben.Goossen@forummobility.com

+1 303.886.5857



[forummobility.com](https://www.forummobility.com)



Hydrogen Stations in Texas

Lori Clark, Senior Program Manager and DFWCC Director

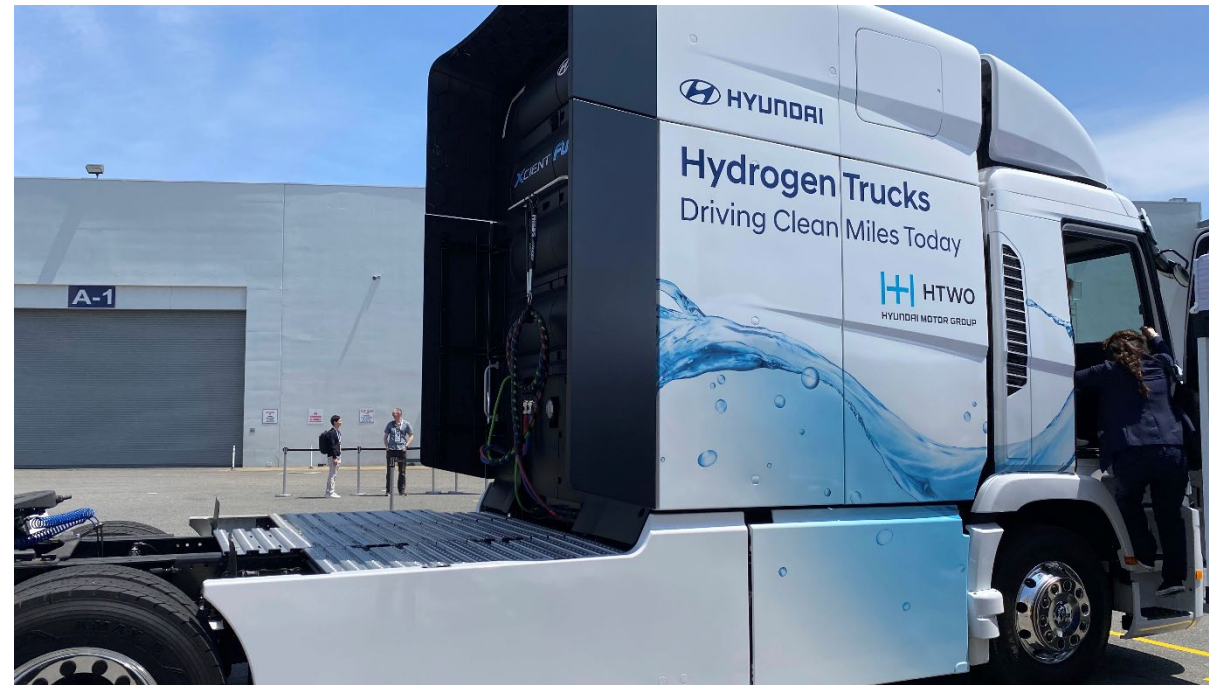
Zero Emission Vehicle Workshop

April 21, 2026

North Central Texas Council of Governments



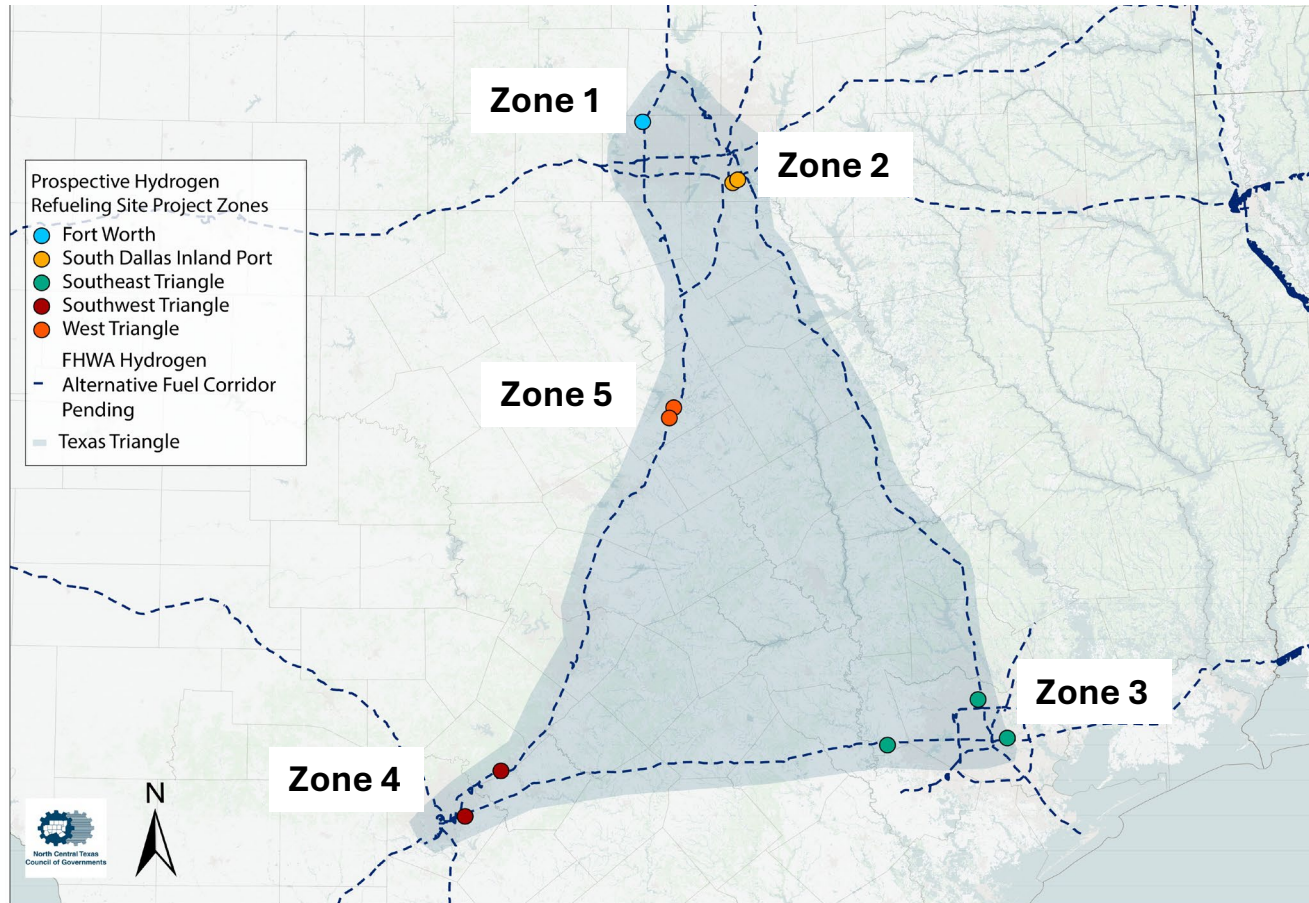
North Texas Zero Emissions Vehicles Call for Projects Workshop



Hydrogen Fueling Station Network

\$70 million award to NCTCOG to construct up to 5 medium/heavy-duty hydrogen refueling stations

Award in partnership with Pilot Travel Centers LLC who is evaluating a short-list of locations



Rendering Source: Pilot Travel Centers



Lunch/Ride and Drive Visits/Exhibitor Visiting

Afternoon speaker session will
begin at 12:45 pm



Presentations | Networking | Funding Information | Ride & Drives





Session 5: Planning 101



Presentations | Networking | Funding Information | Ride & Drives



EVs2Scale 2030™



GridFAST Overview

ZEV Planning 101 Session

April 21st, 2026

Erin Costigliolo

EVs2Scale 2030 Initiative...The Challenge:



1

~3,200 U.S. utilities,
each with different
processes, tools,
regulators

2

Planning and
integrating new
electrical loads on the
grid is typically a
multi-year process

3

Uncertainty in
where/when loads are
expected prevents
utilities (and utility
regulators) from being
able to plan

4

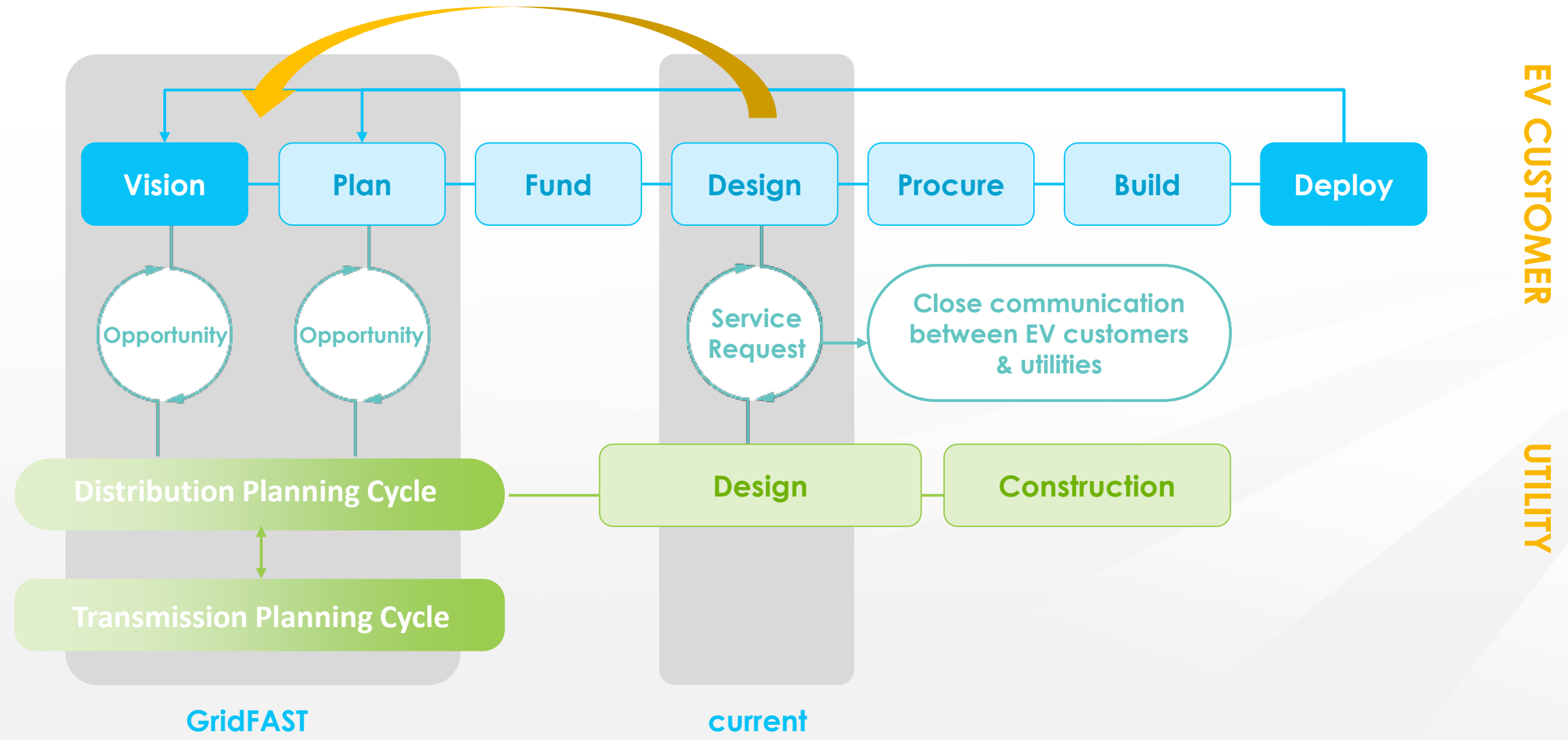
Utilities (and
regulators) must have
confidence in when
and where loads are
coming to accelerate
connection times

Early engagement with EV charging customers is critical




Early EV Customer Data Directly Influences Utility Planning

GridFAST helps EV customers and utilities get *actionable* information, *earlier* in this process

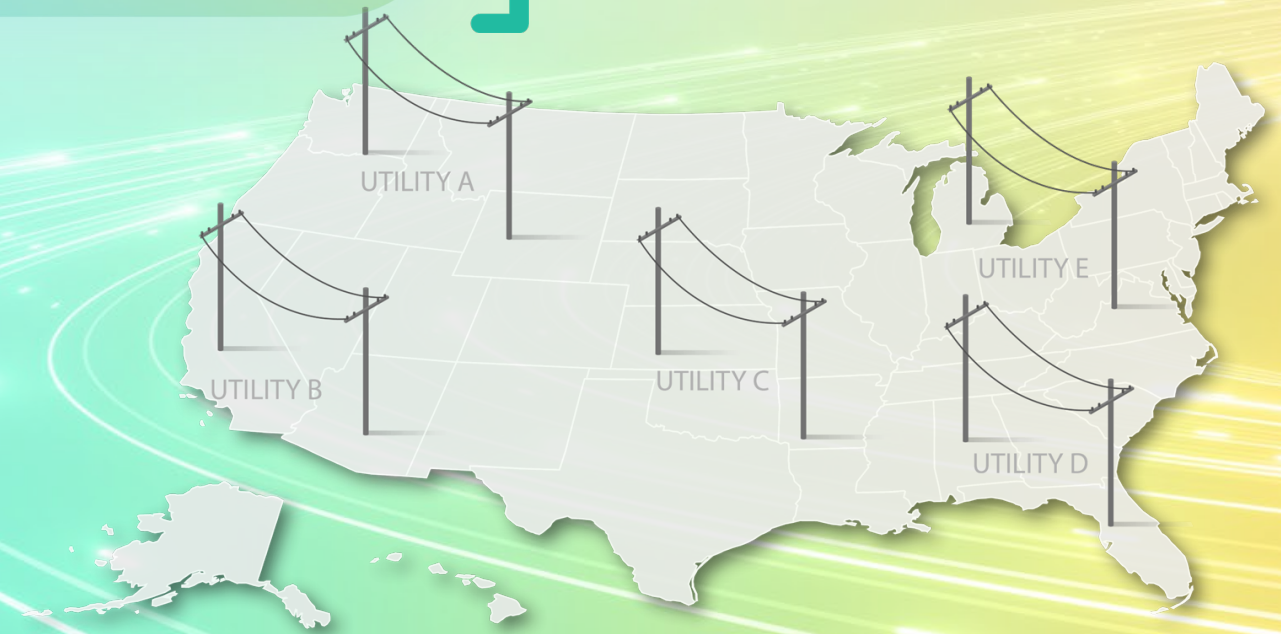
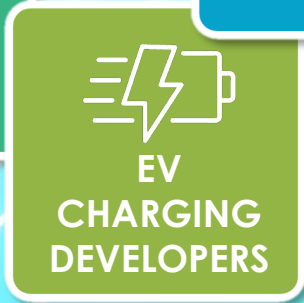


Connecting Businesses and Utilities Early to Help Accelerate EV Charging Projects

EV customers get the right utility connections, capacity info (where available), and standardized information


Secure Online Data Exchange Platform

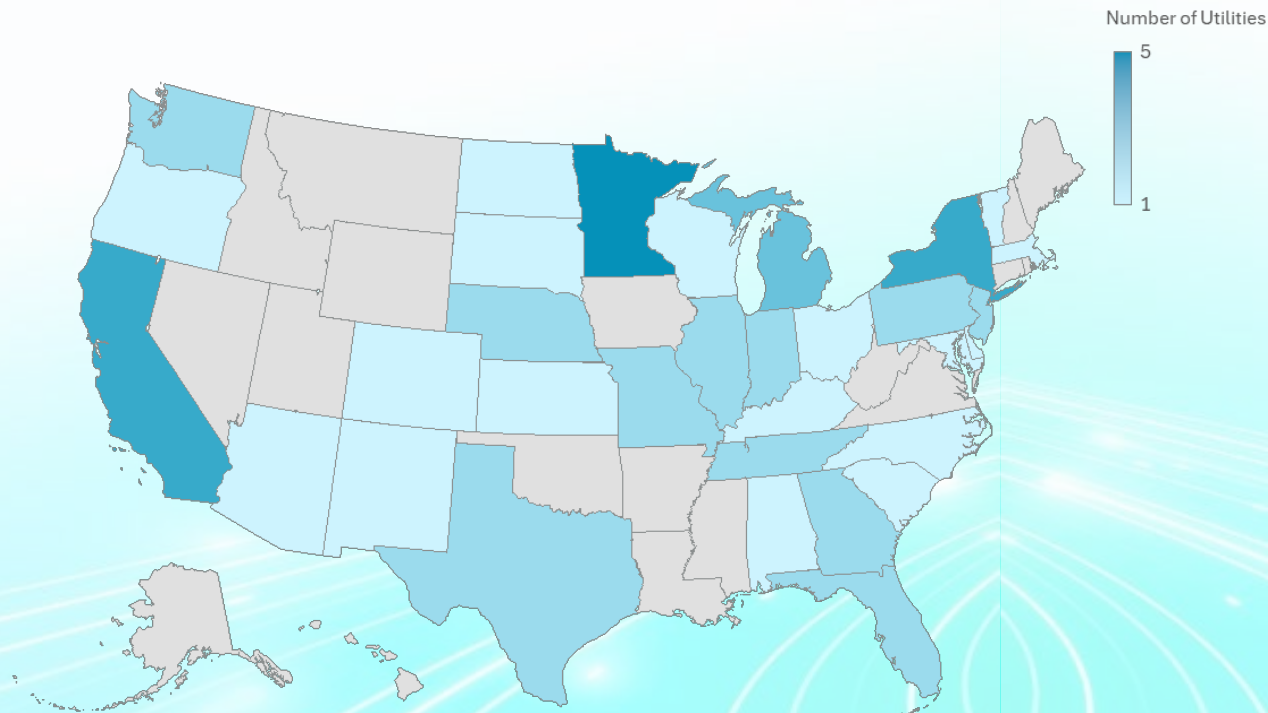
Utilities get early insight into new EV loads coming, project readiness, and right-sized load estimates



Create your **FREE** account at <https://www.GridFAST.com/about>



Utilities Continue to Join



Nearly 40% of all MHD vehicles operate in areas served by the utilities in GridFAST.
(April 2026)



Caltrans Success

EV customers can share their project info effortlessly: send EPRI a project list exactly as you already have it.

Email GridFAST@epri.com for more information

Over 500 sites across California - 400
of them have EV plans

Projects were shared in the format
Caltrans had ready

Matched with 27 utilities across CA
LADWP (25); PG&E (179); SMUD (10); SCE (111)

Webinar held with matched utilities to
review project information and help
establish use cases

1/4 of sites were not previously known
to a large IOU, most sites not
previously known to small utilities



When Customers Plan Early, Everyone Connects Faster (Fleets, Charging Providers, etc)

17 Utilities Surveyed (IOUs, Munis, Coops)

Key Takeaway: Fleets can directly influence utility engagement through the early input of deployment plans in GridFAST

> 75%

of Utilities likely to use fleet info in GF to:

- Inform Transmission & Distribution planning
- Inform Grid Forecasting
- Reach out to Customers to Provide Guidance
- Incorporate Fleet Plans into Planning Scenarios

> 50%

of Utilities likely to use fleet info in GF to also:

- Prioritize Capacity-constrained Areas
- Inform Purchasing of Long Lead Time items, e.g. transformers
- Verify and share Grid Capacity information
- Support Regulatory Filings including proactive investment
- Improve Executive Visibility into fleet electrification plans

Streamline Interconnection with GridFAST

Save time and money for customers and utilities with GridFAST

- Consider GridFAST as the first step in connecting with your utility for electrifying your state fleet
- Use GridFAST for NEVI sites or state incentive programs with projects 1+ years out
- Encourage utilities and EV customers to adopt GridFAST for a smoother process

<https://www.GridFAST.com/about>

Create an account or [book a deeper dive](#) today!

NEW Website! EVfleethub.org



HOME | ELECTRIFY | VEHICLE TYPES | CHARGING | SAVINGS | RESOURCES

Is This Website For You?

BENEFITS OF ELECTRIFICATION:

For fleet owners and operators considering electrification for the first time, it may be difficult to anticipate what to expect from the process. However, fleet electrification can

benefit both

HOME | ELECTRIFY | VEHICLE TYPES | CHARGING | SAVINGS | RESOURCES

UNDERSTANDING THE FLEET ELECTRIFICATION JOURNEY

Whether you're electrifying a few vehicles or transitioning a larger fleet, preparation makes all the difference. With the right information and a clear plan, the transition can be smooth, cost-effective, and aligned with your operational needs. Understanding the process in advance helps you avoid delays and make informed decisions from the start.

PLANNING | DESIGN | IMPLEMENTATION

PLANNING PHASE

- Review Your Vehicles**
Start by reviewing your current vehicles and identifying which could transition to electric. Consider vehicle range needs, duty cycles, and operational patterns.
- Explore Charging Equipment**
Next, explore the types of charging equipment that match your fleet's needs, noting that public or contract charging facilities may be an option in your area.
- Research Financial Programs**
This is also the ideal time to research available financial incentives, rebates, or grant programs – these opportunities often require early applications.
- Utilities Advisory Programs**
Many utilities offer fleet advisory programs that can guide you through vehicle selection, charging needs, and cost considerations.



Federal Fleet ZEV Ready Center: Another helpful resource is the [Department of Energy's Federal Fleet ZEV Ready Center](#). While it is designed for larger federal fleets, many of the considerations and steps also apply to small and mid-size fleets.



National Laboratory
of the Rockies

Vehicle Technical Assistance Programs

Ryan Frasier

NCTCOG ZEV Workshop

Apr. 21, 2026

Who We Are



Team of transportation experts with more than 30 years of experience tackling transportation challenges through customized problem-solving and lasting partnerships



Knowledge that encompasses all alternative fuels, advanced transportation technologies, and associated infrastructure



Support that ranges from light touch (e.g., email or phone calls) to heavy touch (e.g., site visits, ongoing analysis, fleet planning)



Experience as technical assistance lead for partners, including U.S. Department of Energy's Transportation Technologies Office, Clean Cities and Communities Coalitions, Joint Office of Energy and Transportation, U.S. Environmental Protection Agency, and Federal Transit Administration



THE GO-TO RESOURCE
for advanced transportation fuels and
technologies

The Alternative Fuels Data Center

<https://afdc.energy.gov/>

Find information, data, and tools about alternative fuels, advanced vehicles, and fuel-saving strategies that can help achieve your goals

Technical Response Service

technicalresponse@icf.com

800-254-6735



- Reach out to receive a quick e-mail response from technical experts
- Anyone can submit a question
- Ask about alternative fuels, fuel economy improvements, advanced vehicles, and more

EPA Clean School Bus (CSB) and Clean Heavy-Duty Vehicle (CHDV) Programs

cleanschoolbusta@nlr.gov

cleanhdvehiclesta@nlr.gov

transportTA@nlr.gov

WE PROVIDE

Technical Assistance

Contact Us



About Our Technical Assistance

NLR provides unbiased, free, and customizable technical assistance to help fleets plan for and deploy vehicles and infrastructure. We are here to help with any aspects of your project and at any stage.

Email
Q&A

Virtual
meetings

In-depth
assistance

How NLR Can Help Your Fleet

Coordinating
with electric
utilities

Assisting with
procurement

Analyzing
charging
infrastructure
needs

Conducting
route analysis
and planning

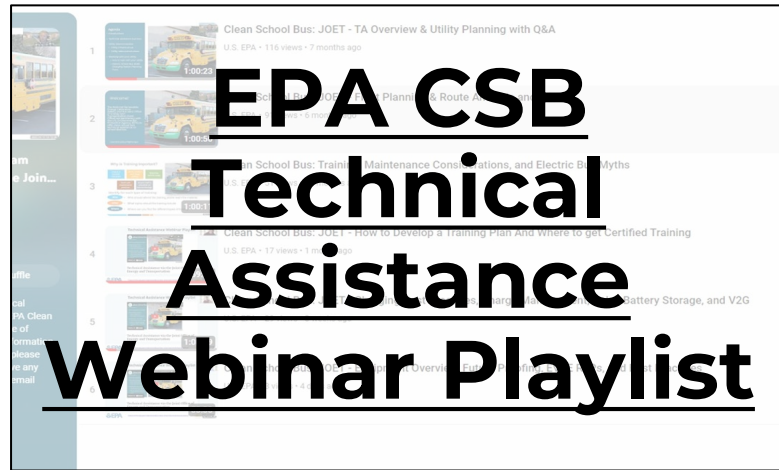
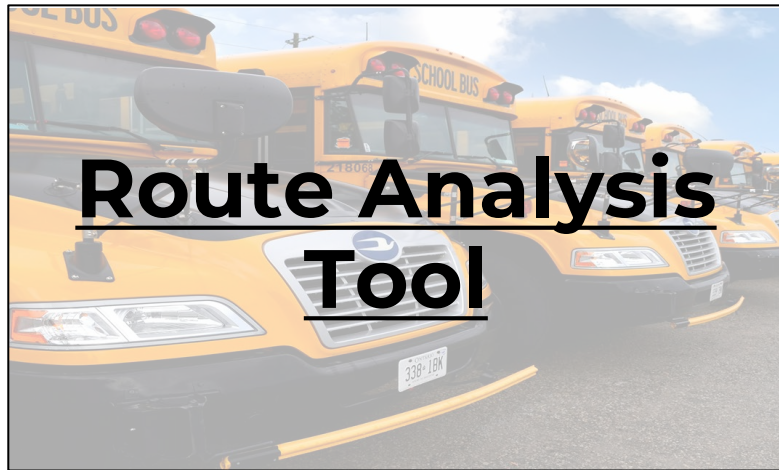
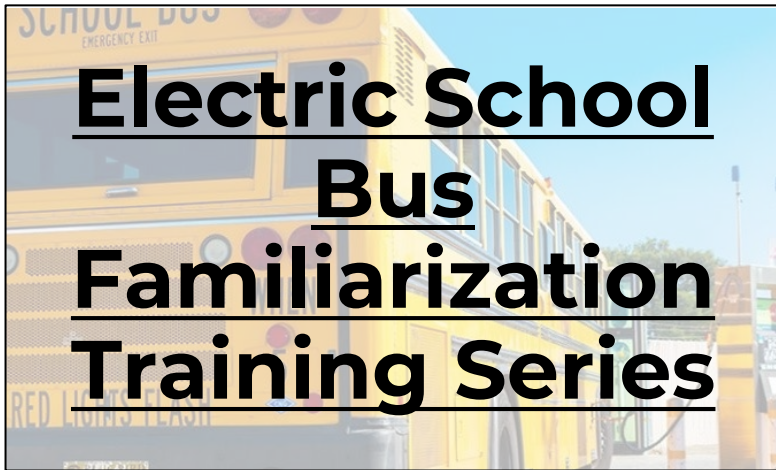
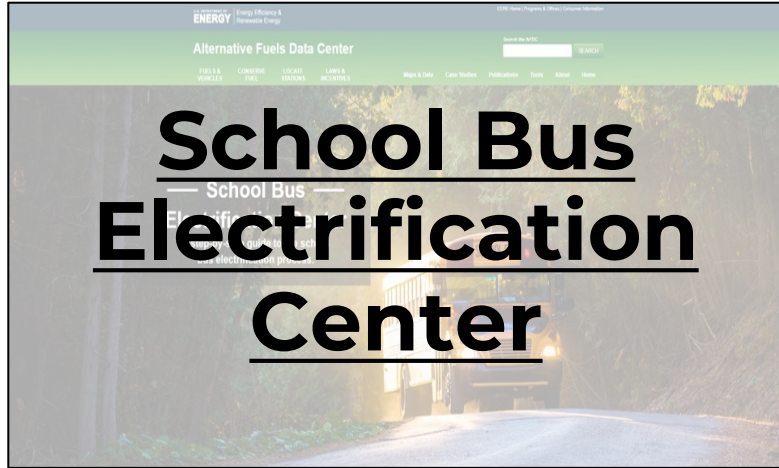
Advising on
training and
workforce
development

Opportunities
for resiliency
(V2X)

Analyzing
energy needs
and grid
impact

Identifying
future-proofing
opportunities

Resources



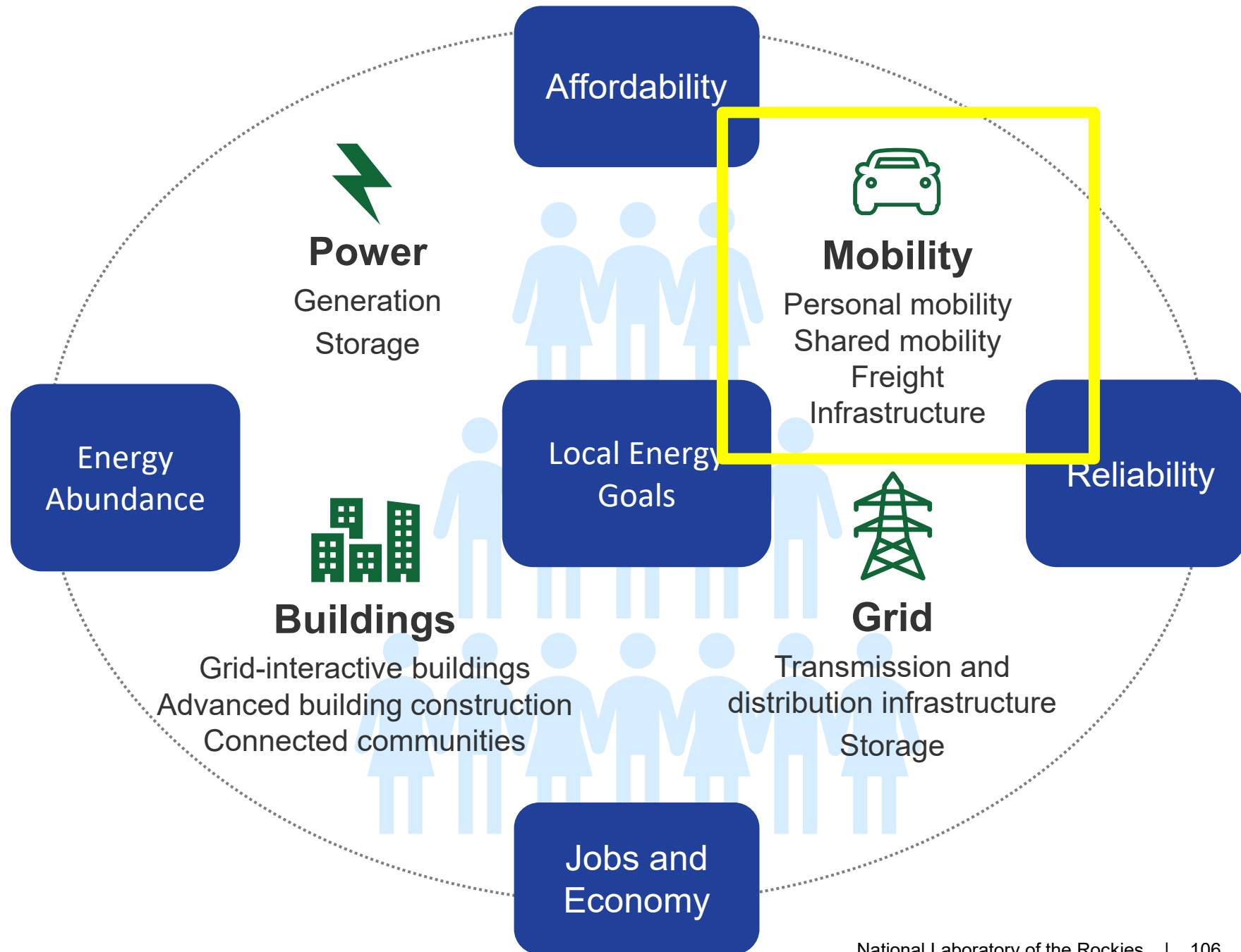
Energy to Communities (E2C)

- Provides innovative cross-cutting technical analysis to support local efforts to secure abundant, reliable, and affordable energy systems.

Expert Match

- Receive direct near-term TA from a lab expert
- **Apply before May 1, 2026!**

<https://www.nlr.gov/state-local-tribal/e2c-expert-match>



This work was authored by the National Laboratory of the Rockies for the U.S. Department of Energy (DOE), operated under Contract No. DE-AC36-08GO28308. The views expressed in the article do not necessarily represent the views of the DOE or the U.S. Government. The U.S. Government retains and the publisher, by accepting the article for publication, acknowledges that the U.S. Government retains a nonexclusive, paid-up, irrevocable, worldwide license to publish or reproduce the published form of this work, or allow others to do so, for U.S. Government purposes.

Thank You

ryan.frasier@nlr.gov



**National Laboratory
of the Rockies**



Funding for Zero Emission Vehicles in Texas

Juliana VandenBorn, Senior Air Quality Planner
Zero Emission Vehicle Workshop
April 21, 2026
North Central Texas Council of Governments



Prepping for a Grant Opportunity

Typical Information Needed

Old Vehicle:

- Identifying Number and Title
- Gross Vehicle Weight Rating
- Fuel Type and Year
- Typical Operations
- Scrappage Options

New Vehicle:

- Fuel Type of New Vehicle
- Market Availability and Cost Estimate
- Refueling Needs

Helpful Analysis

Total Cost of Ownership:

- Evaluates differences total cost over lifetime of owning vehicle
- Helps determines amount of funding needed to “break-even”

Potential Changes in Operations:

- Route length or frequency
- Refueling changes
- Changes in cargo/weight differences

Emissions Savings:

- Can support company goals and improve regional air quality



North Texas Zero Emissions Vehicles Call for Projects

Rebates to Replace Class 6 or Class 7 “vocational vehicles” with zero-emissions trucks

Both battery electric and hydrogen fuel cell electric trucks eligible

Funding ranges from 33% to 80%

Can fund supporting charging/fueling infrastructure if needed

Both public and private sector fleets eligible

Example “vocational vehicles” include:

Straight/Box Truck



Step Van



Septic/Bucket Truck



Street Sweeper



Transit Bus



Refuse Hauler



Other Vocational Vehicles*



Photo Credit: NCTCOG/Trinity Metro



Funding for Zero Emission Vehicles in Texas

*School bus eligible only if NOT operated as a typical school bus as defined in Guidelines Appendix A

North Texas Zero Emissions Vehicles Call for Projects

Next application deadline: Friday, May 15 at 5 pm

Subsequent application deadlines: 3rd Friday of every month at 5 pm, until funds are exhausted

No-Cost Applicant Resources

- Weekly Virtual Office Hours on Mondays at 10:00am
- Technical assistance from the National Lab of the Rockies
- Resources to help identify vendors/vehicles
- Call for Projects Workshop Recordings
- ZEV Workshop Presentation and Recordings!

Details at www.nctcog.org/NTxZEV



State Funding for Heavy-Duty ZEV and Infrastructure

Texas Emissions Reduction Plan (TERP):

Operates on a two-year cycle aligned with state budget; consists of 12 different programs

Texas Volkswagen Environmental Mitigation Program (TxVEMP):

One-time funding program

Looking for?	Public or Private	Programs
ZEV Specific Programs for On-Road and Off-Road Vehicles	Both	Texas Hydrogen Infrastructure, Vehicles, and Equipment - Expected to open August 2026 ★ TxVEMP- All-Electric Grant Round- Open through August 31, 2026, on a first-come, first-served basis)
Vehicle/ Equipment/Drayage Replacement/Repower Programs that Can Include ZEV	Both	Rebate Grants - Expected April 2026 Texas Clean Fleet Program - Expected to Open January 2027 Seaport and Rail Yard Areas Emissions Reduction Program - Expected to August 2026 Emissions Reduction Incentive Grants (ERIG) - Expected April 2026
	Public Only	Governmental Alternative Fuel Fleet Grant Program - Expected to open Spring 2027
Infrastructure Only	Both	Alternative Fueling Facilities Program - Expected to Open in Winter 2027



Other Funding for Heavy-Duty ZEV

Looking for?	Public or Private	Programs
Replacement/Repower of Heavy-Duty Vehicles/Equipment	Both	NCTCOG North Texas Diesel Emissions Reduction CFP - Deadline to Apply is June 12, 2026
Infrastructure Only	Both	IRS Alternative Fuel Vehicle Refueling Property Credit – Sites must be Operational by June 30, 2026

Ready to Learn More?

- Visit Funding and Technical Assistance Room (Board Room) from 2:15pm to 4:00pm!
 - See all funding at www.nctcog.org/aqfunding
 - Subscribe to Air Quality funding updates at www.nctcog.org/stay-informed
 - Contact staff for assistance at cleancities@nctcog.org



Contact Us



Kris Yowtak
Air Quality Planner
NCTCOG

kyowtak@nctcog.org
(817) 695-9238



Juliana VandenBorn
Senior Air Quality Planner
NCTCOG

jvandenborn@nctcog.org
817-704-2545



Savana Nance
Principal Air Quality Planner
NCTCOG

snance@nctcog.org
682-433-0488



Lori Clark
Senior Program Manager
NCTCOG

lclark@nctcog.org
817-695-9232





Session 6: Lessons Learned from Early Adopters



Presentations | Networking | Funding Information | Ride & Drives





Basics for Electrification for Fleet. Light, Heavy and Equipment

- Vincent Olsen CPFPP
- 4/20/2026



Key Take Aways

- Never forget the core of your missions
- Know the scope of the undertaking
- Keep an open mind
- Add it Up!! Is the juice worth the squeeze

Never forget the core of your missions

- If you can't deliver on your core function, you will not be successful, and this puts your initiatives at risk
- Evaluate your mission statement
- Do the math and be sensitive to the origin of the problem you are trying to solve
- Can your program withstand the whims of politics?
- Measure your progress

“Provide cutting edge customer service, as a matter of fact”



- Meet the mission
- Carry the team
- Leave no trace

Fiscal Year 2026 CECAP Eligible Units



- Total General Fund of 170 Light Duty units meet criteria for replacement
- 30 EV Units pending approval for Grant
- Additional 75-100 units purchased through normal replacement funding



Current Electric Vehicle Types

120



On the horizon



- 1 Garbage Truck
- 3 Dump Trucks



Know the scope of the undertaking

1. Vehicles and Equipment
2. Infrastructure
3. Training
 1. Operator
 2. Service
4. Vendor Support
 1. Parts
 2. Service

Dallas Fleet Electrification Goals

- The CECAP comprises 97 actions across eight sectors/goals
 - 45 actions are aimed primarily at reducing GHG emissions
 - 19 actions in transportation sector



WHY TRANSPORTATION MATTERS

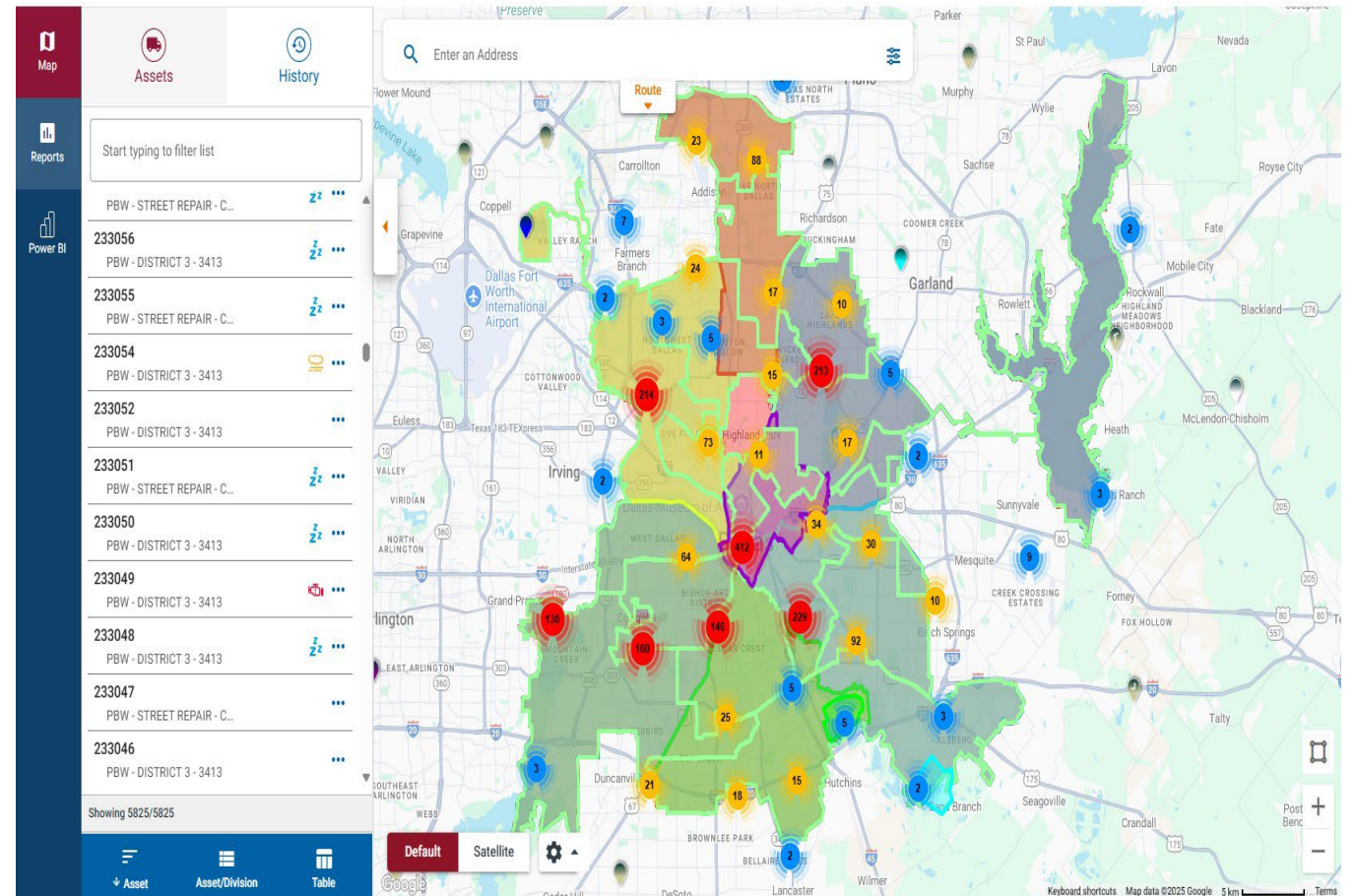
- The transportation sector contributes 34% of GHG emissions for the City of Dallas, of which 98% is attributed to on-road transportation.
- Dallas County fails to meet federal air quality standards for ground level ozone, which is a direct result of internal combustion engines, especially gasoline and diesel burning engines.
- **Solutions are aimed at shifting away from single-occupancy commuting, encouraging public transportation, improving vehicle efficiency, and increasing the overall share of electric vehicles.**

CECAP Goals

- Remove older assets from service, regardless
 - No “V” better than EV!
- Create disincentives through fleet chargeback rates for older assets- Non-target Repairs etc.
- Limit replacement options for departments
- Incentivize participation with replacement

KNOWING THE SCOPE OF YOUR UNDERTAKING FOR ELECTRIFICATION

- What are you trying to accomplish?
- Is it practical
 - Understanding the equipment operator's role
 - Understating the need for infrastructure
- Who are you allies
- Can you convert allies
- Who are your obstacles?
- How do you combat opposition?
- Keep tabs on technology!
- Be aware of your city's mandates
- Keep politics out of your decision making.
- Balance infrastructure. How many charging stations per EV are needed?



Charging Infrastructure, Status

- **7 Charging Depots operational more than 100 available locations**
 1. **Central Service Center, Level III**
 2. **Central Service Center Solar, Level II**
 3. **City Hall Motor Pool / Assigned, Level II**
 4. **Grand Prairie Solar (Henley Field), Level II**
 5. **Southeast Service Center, Level III**
 6. **Dallas Animal Service Solar, Level II (NEW)**
 7. **Northwest Service Center, Level II (NEW)**



Keep an open mind

This is an era of Technology

Energy Technology is evolving very rapidly.

Evaluate your infrastructure at the same time. Grid awareness is essential

Ask new vendors for vehicle reference and support solutions

Metrics will change compared to conventional fleet

Body shop and technicians training will also change

Parts and inventory will change

Software integration is problematic



Q&A

"The secret of
CHANGE
is to focus all of
your energy not on
fighting the old, but
on building the new."

-SOCRATES



Next Generation Freight

April 2026

Zero Emission Vehicle Workshop



CONFIDENTIAL

About us

Nevoya is a fully-electric truckload carrier, focused on making zero-emissions freight capacity seamless and cost-competitive for shippers and 3PLs



Driven by EV & AI-native TMS technology



Focused on operational excellence



Obsessed with customer experience

Featured In



Commercial Leadership Team



John Verdon
CCO

ex-Waymo & Motive
GTM & commercialization of
transformational freight tech



Ryan Craft
VP, Commercial

ex-PepsiCo
Revenue Expansion & Logistics Network
Transformation

Exec & Board Track Record Includes



XPOLogistics



project44

motive



Strong partnerships enable scale



15+ Fortune 500 shippers



40% *monthly* growth across all accounts



Partnerships with 7 of the top 10 3PLs



Widest range of charging capacity in the US

Infrastructure

 **Greenlane**

 **evrealty**

 **FORUM**
MOBILITY

OEMs

 **FREIGHTLINER**

 **TESLA**

 **VOLVO**

Brokers

 **ECHO**



C.H. ROBINSON

 **NTG**

 **its**
logistics

 **RXO**



Building the EV Freight Backbone:

Key Growth Lanes in Texas & California



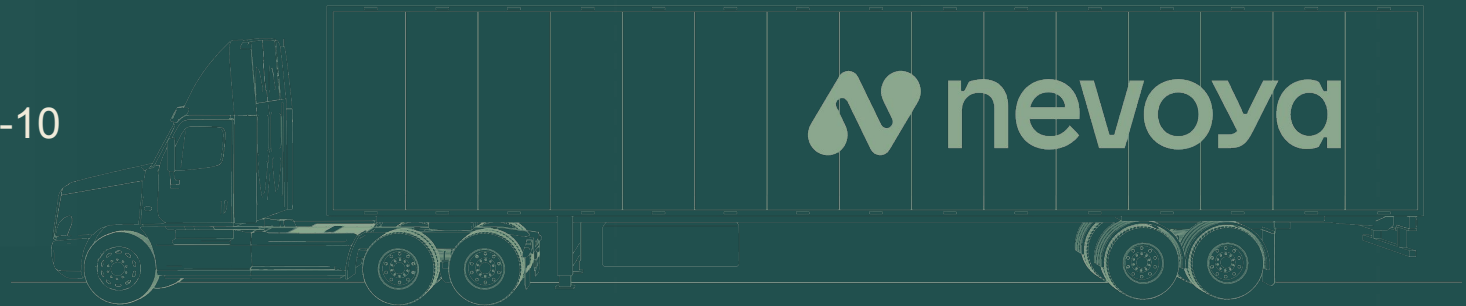
Dallas, TX to Houston, TX:
Closed Loop OTR Solutions for I-45



California Drayage:
Electrifying the Long Beach Port



California Power Lane Expansion: I-5 & I-10



| How we're doing it

Bespoke AI-enabled
tech platform



Flexible capital structure Network of charging providers

Loads + Create Load

TABLE CALENDAR DOCUMENTS

Filters Reset Filters

Search Loads

Load Status

Pending Dispatched
In Progress Cancelled
Completed

Load Type

Truckload
Import Container
Export Container
Container Shuttle

Customer

Select Customer

Dispatch Owner

Select Dispatch

Pickup Appointment Time

Pick a date range

Delivery Appointment Time

Pick a date range

Vessel Arrival Date

Pick a date range

Load ID	Load Status	External Order Nu...	Rate	Dispatch Owner	Driver	Vehicle	Pickup App
2418	Dispatched	DO202506171078	\$441.00	Eric Huizar	Dondidelfin Razor	Velocity - 346504	Jun 17, 2024 12:00 AM PST
2417	In Progress	63146690	\$75.00	Eric Huizar	Omar Rivera	Velocity - 356024	Jun 16, 2024 12:00 PM PST
2416	Dispatched	DO202506171011	\$256.00	Eric Huizar	Derek Contreras	Velocity - 346499	Jun 17, 2024 12:00 AM PST
2415	Pending	A-542677	\$2,160.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST
2414	Pending	A-542679	\$2,160.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST
2413	Pending	A-542680	\$2,160.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST
2412	Pending	A-542681	\$2,160.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST
2411	Pending	A-542642	\$575.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST
2410	Pending	A-542645	\$575.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST
2409	Pending	A-542646	\$575.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST
2408	Pending	A-542647	\$575.00	Eric Huizar	Unassigned	Unassigned	Jun 15, 2024 12:00 AM PST

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| Case study

Fortune 500 beauty care brand



Background

- Customer had ambitious climate goals to reduce emissions by 50% by 2030
- Nevoya partnered with the customer in SoCal to decarbonize their short-haul lanes, growing from 1 lane to 5 in the first month
- Within 3 months, Nevoya had decarbonized all short-haul lanes in SoCal



Expansion

- Following the success of the SoCal deployment, customer asked for additional capacity in TX
- Nevoya quickly spun up resources and identified required charging locations
- Within 30 days Nevoya was moving freight for the customer in TX, at >99% reliability



NCTCOG Update

Aaron Lapsley, CTO
4/21/2026

What is Hyroad offering to fleets?

Hyroad is developing and managing a turn-key, end-to-end zero-emissions trucking solution



Trucks

Customers can choose trucks from multiple hydrogen FCEV OEMs ⁽¹⁾ depending on their needs.

Hyroad handles truck purchasing, financing and maintenance.



Refueling Stations

Modular refueling infrastructure with industry-leading performance and unit economics.

Hyroad provides reliable locations for drivers fill up the trucks.



Hydrogen Supply

Supply deals from producers using a range of technologies to optimize price and carbon intensity.

Hyroad bundles dependable, low-cost fuel sources with its trucks.



Funding

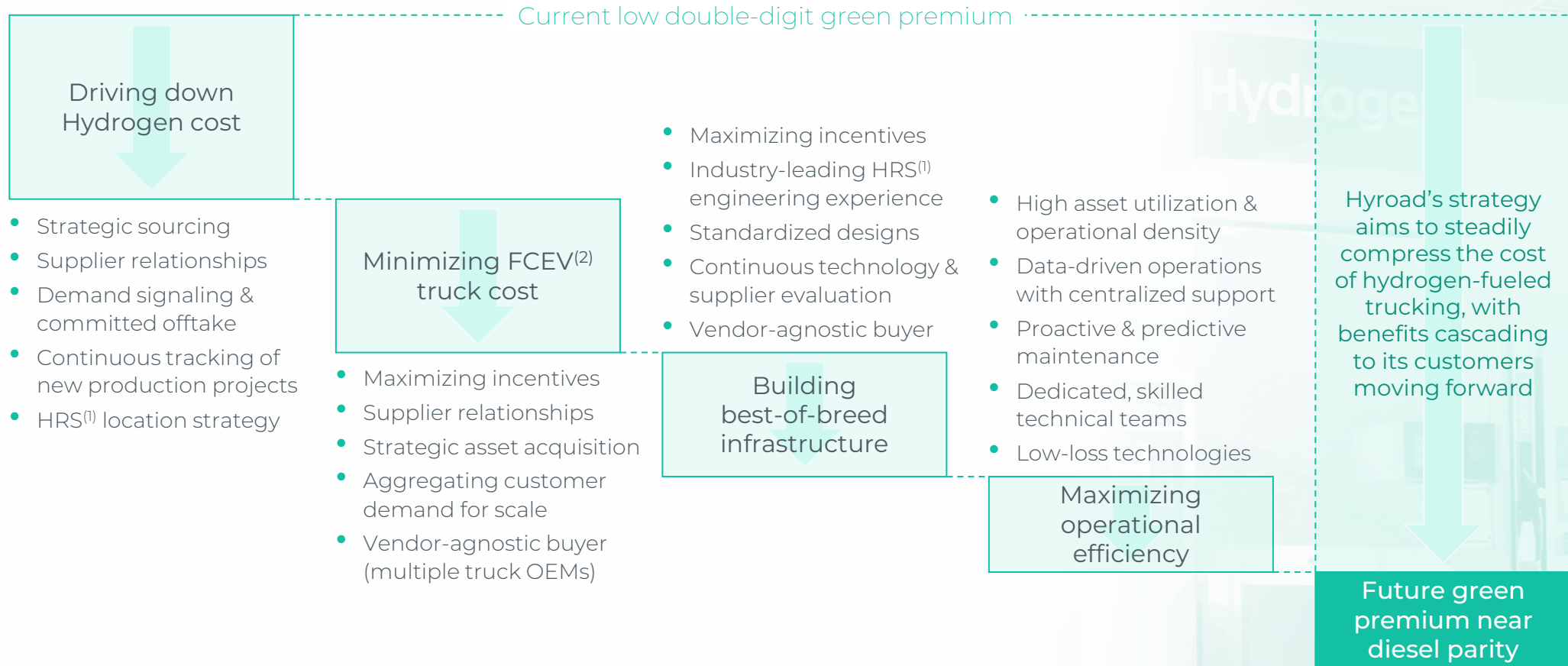
Access to public funding programs for both trucks and fueling infrastructure on behalf of customers.

Hyroad makes benefiting from incentives simple and streamlined.

(1) Fuel cell electric vehicle original equipment manufacturers

Partners for the long haul

Hyroad is committed to reducing the green premium for hydrogen-powered trucks

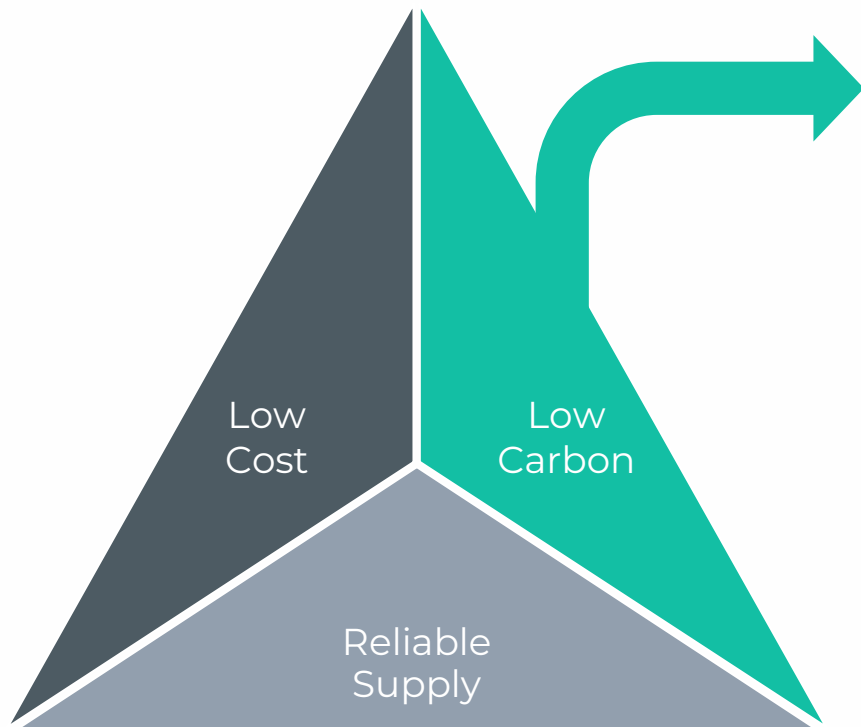


(1) Hydrogen refueling station

(2) Fuel cell electric vehicles, which use hydrogen to produce electricity instead of combustion

Supporting sustainability goals and initiatives

Hyroad provides transparent carbon accounting and options for carbon intensity of hydrogen fuel, while balancing cost and reliability of supply



Managing carbon intensity ("C.I.") of hydrogen fuel

- Continuously track C.I. of all fuel supplies and Hyroad refueling operations using industry standard metrics (e.g. LCFS ratings)
- Provide customers access to C.I. data tied each refueling event
- Build a diverse and differentiated portfolio of hydrogen supply
- Design, operate and improve systems and equipment for refueling stations to minimize hydrogen losses (especially from liquid H₂)
- Offer product options for TaaS customers to reduce the C.I. of their dispensed fuel, either physically (e.g. swapping RNG feedstocks) or synthetically (e.g. bundling carbon credits or RECs / EACs)
- Ultimately targeting the ability to directly include C.I. of dispensed fuel in pricing tiers for retail fueling (like the octane rating of gasoline) and generate EACs for TaaS truck movements

“Hyroad Energy Acquires Nikola’s Fuel-Cell Trucks to Fast-Track Zero-Emission Fleet Expansion”

What Hyroad Acquired:

- 113 FCEV Trucks (103 are new)
- Software & IP
- Spare Parts



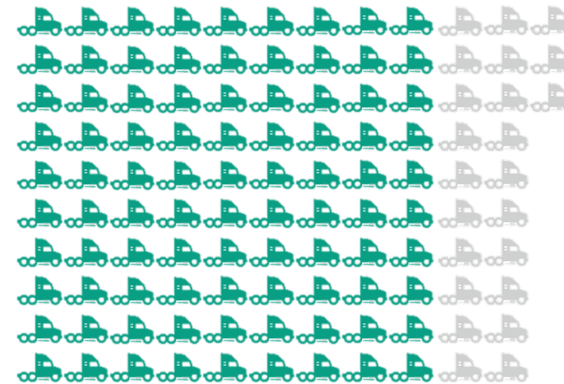
Hyroad is rapidly working to enable its TaaS fleet and restore services for other Nikola owners

Current State

- 40 trucks are being staged for first customer in SoCal, rolling out throughout 2026
- Customer deals progressing for the remaining 50, but they are still available – planning 10-15 in TX in 2026
- Huge inventory of Nikola parts (BEVs & FCEVs) are in Hyroad's first maintenance shop and warehouse in CA
- Second maintenance facility planned for Houston (2H'26)
- All software products are migrated to Hyroad and functional
- 80 Nikola trucks are reconnected to the Fleet platform
- We are actively performing physical maintenance, repairs, diagnostics and software OTA updates for customers
- Leveraging purchasing power to secure attractive hydrogen prices and refueling capacity for our customers
- We have hired 10 full time employees from Nikola and engaged another 15 as contractors, all very capable senior professionals on software, services and trucks systems

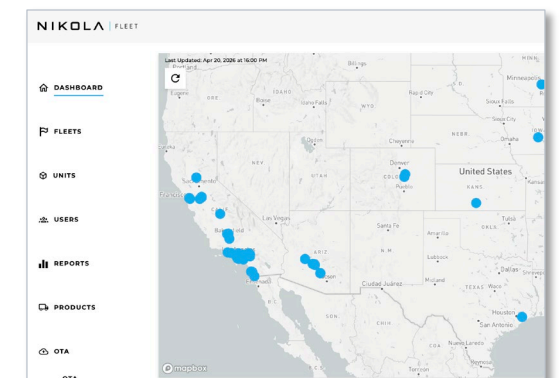
Future State

Hyroad is setting aside 20% of its trucks for spares and loaners from the start ...



... leaving 90 trucks as the useable fleet for Hyroad's TaaS customers ...

... and we have developed software, support and service packages for other Nikola truck owners, focusing on L.A. and Houston for physical repair and maintenance.



Katy, TX refueling station

Hyroad will be fueling trucks with the lowest C.I. green H₂ in the market



Total Hydrogen Solutions (THS) is developing on-site green H₂ production & refueling project in the west Houston metro

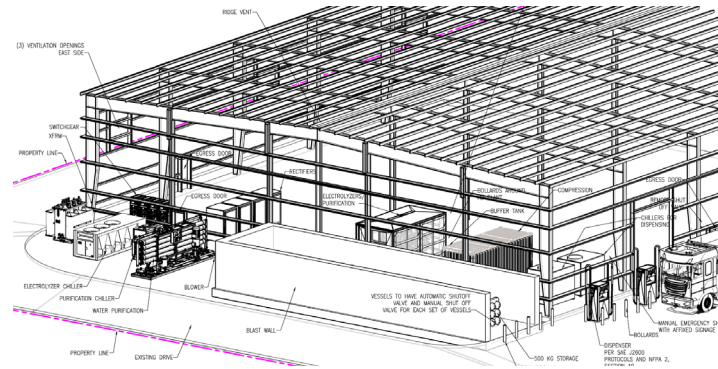
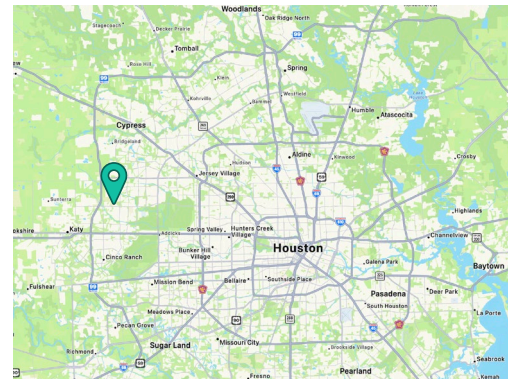


Facility will provide fueling for up to 15 of Hyroad's trucks, with some overnight parking



THS is a hydrogen subsidiary of established company Pneumatic & Hydraulic Co.

Start of refueling operations expected July 2026



- Hyroad has contracted for the full initial production of 500 kg/d green H₂
- Project has potential to expand to >1,000 kg/d
- Benefitting from federal 45V tax credit at highest tier (<0.45 kgCO₂e/kgH₂)
- Hydrogen will have low carbon intensity from renewable energy credits (RECs) purchased from the TX grid



My top learnings on ZEV transition

1. Control what you can, and work with people who will work with you
2. Maintenance costs can be more volatile with ZEVs
3. A little operational flexibility goes a long way
4. Demand has more leverage than supply
5. Don't ignore the benefits to drivers / users of technology
6. Tough times wash out weak players and open doors



Get Involved with Dallas-Fort Worth Clean Cities



cleancities@nctcog.org



www.dfwcleancities.org/
www.nctcog.org



www.linkedin.com/showcase/dfwcleancities
@North Central Texas Council of Governments
@NCTCOGtrans

Get Involved:

www.dfwcleancities.org/get-involved



Give feedback on the ZEV Workshop:

<https://forms.office.com/r/2TjAjnGcvS>





Networking, Vehicle Display, and Ride & Drive

- **Funding/Technical Assistance Workshop:**
 - **Location:** Board Room across the lobby from the Ballroom
- **Vehicle Display and Ride-and Drive:**
 - **Location:** Outside of Venue, right past the main entrance/pavilion.
- **Visit with Exhibitors:**
 - **Location:** Within Ballroom



Presentations | Networking | Funding Information | Ride & Drives

