

Dallas-Fort Worth  
CLEAN CITIES

# Dallas-Fort Worth Clean Cities Coalition: Networking for Solutions

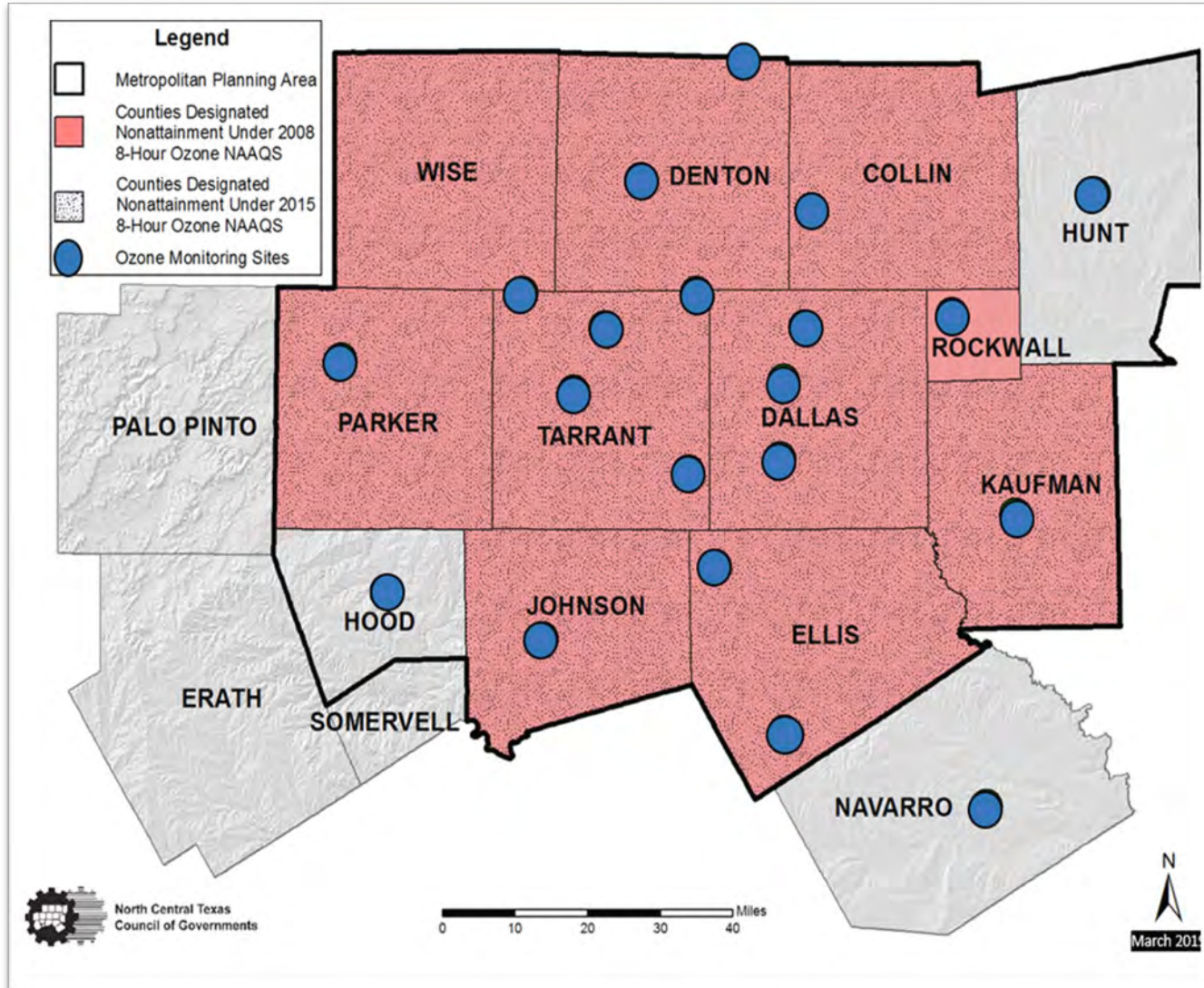
**Lori Clark**

**Program Manager & DFW Clean Cities Director**

**RCE North Texas Annual Summit  
SDG 9 Panel: Industry, Innovation, and  
Infrastructure**

**November 9, 2022**

# Who We Are



Regional Planning Agency



Metropolitan Planning Organization (MPO)

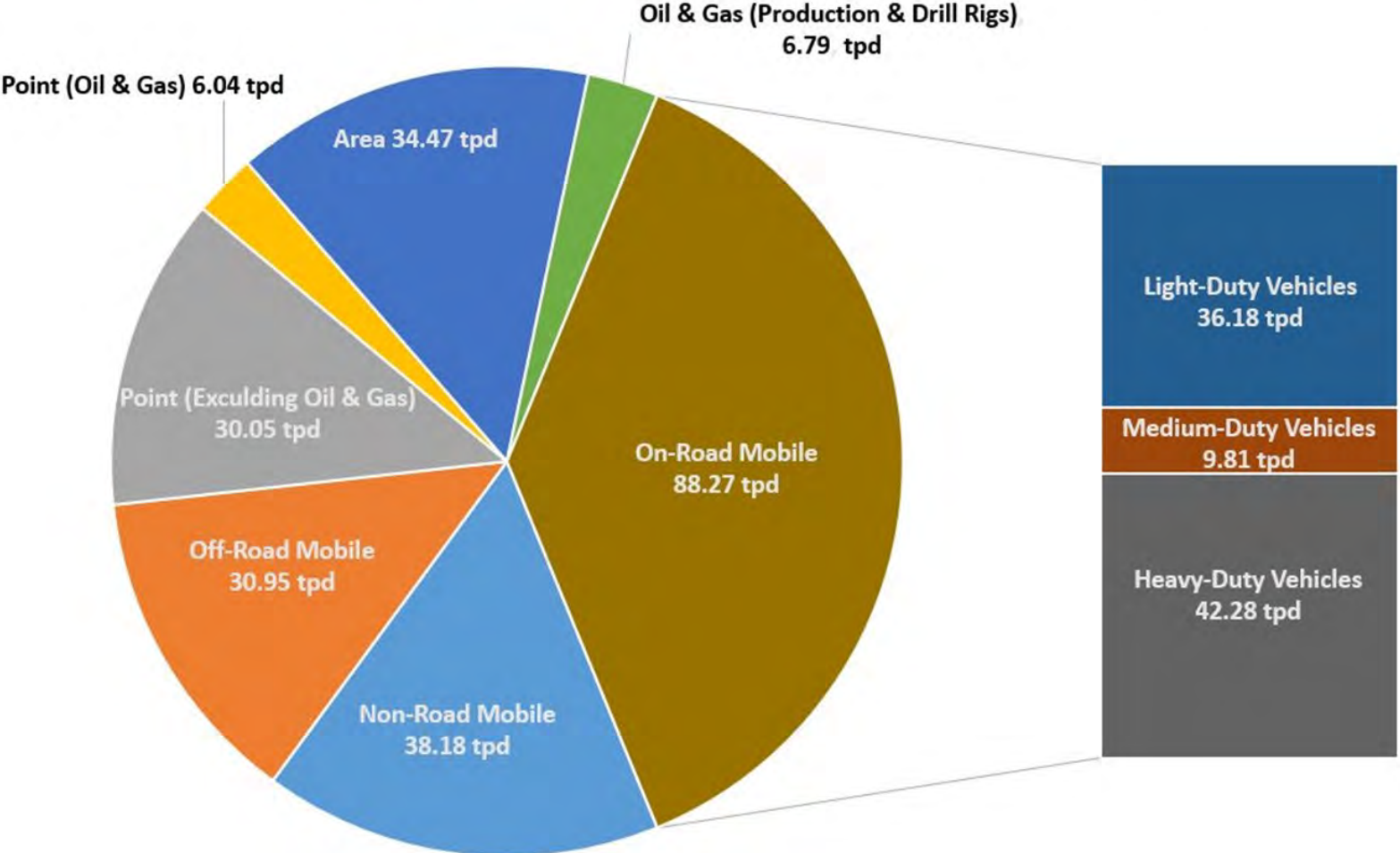


Local Clean Cities Coalition



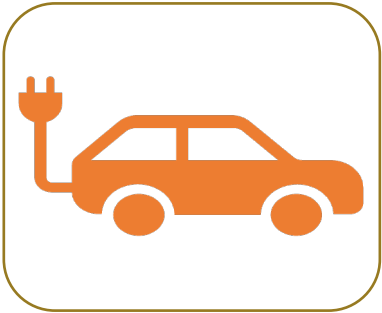
# Nitrogen Oxides Emissions Sources

Total Nitrogen Oxides (NO<sub>x</sub>) = 234.75 tons per day (tpd)

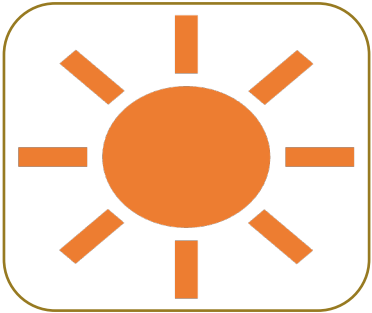


Source: Dallas-Fort Worth Serious Classification Attainment Demonstration State Implementation Plan Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard, September 2019

# Clean Cities Portfolio



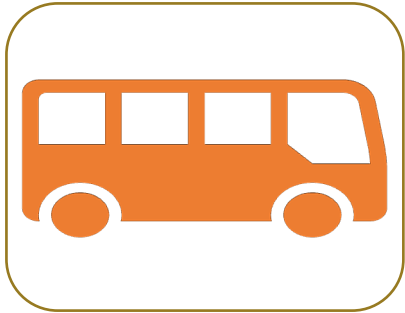
Light-, Medium-, and Heavy-Duty Vehicles



Alternative and Renewable Fuels and Infrastructure



Idle Reduction Measures and Fuel Economy Improvements



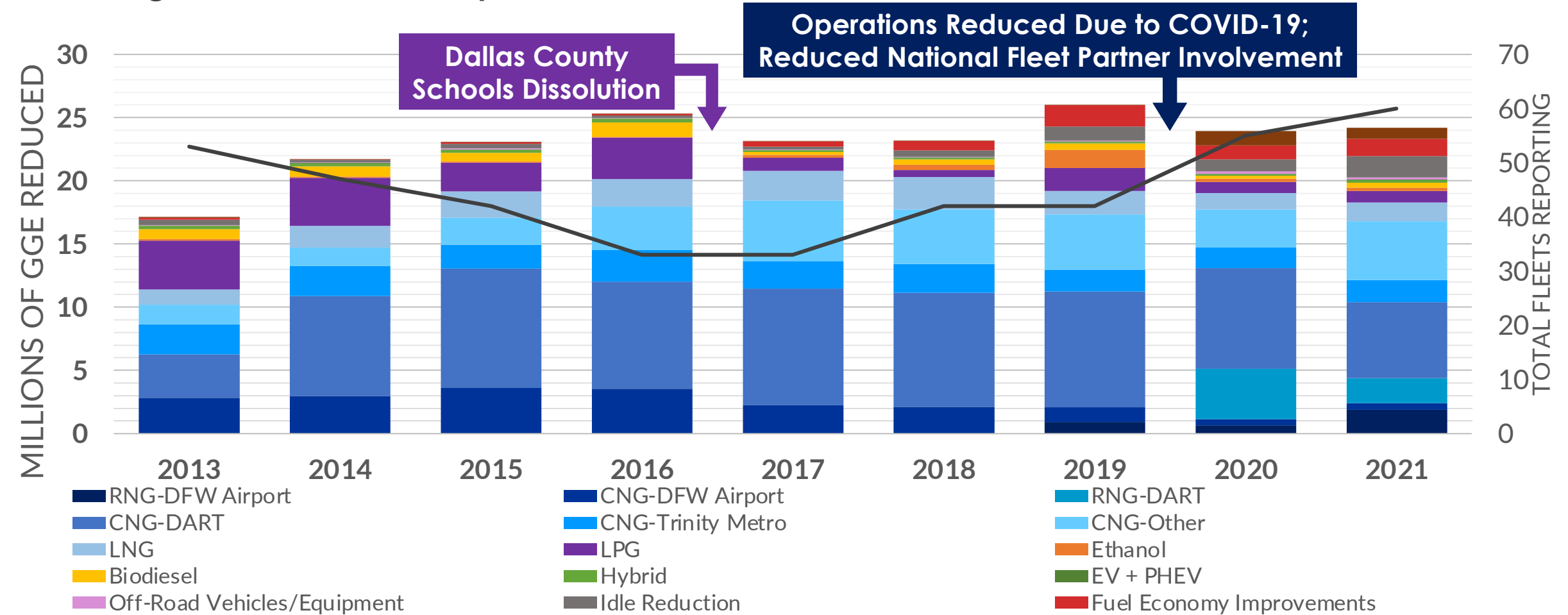
New Mobility Choices and Emerging Transportation Technologies

 Electricity	 Hydrogen	 Fuel Economy
 Natural Gas	 Propane	 Idle Reduction
 Ethanol	 Biodiesel	



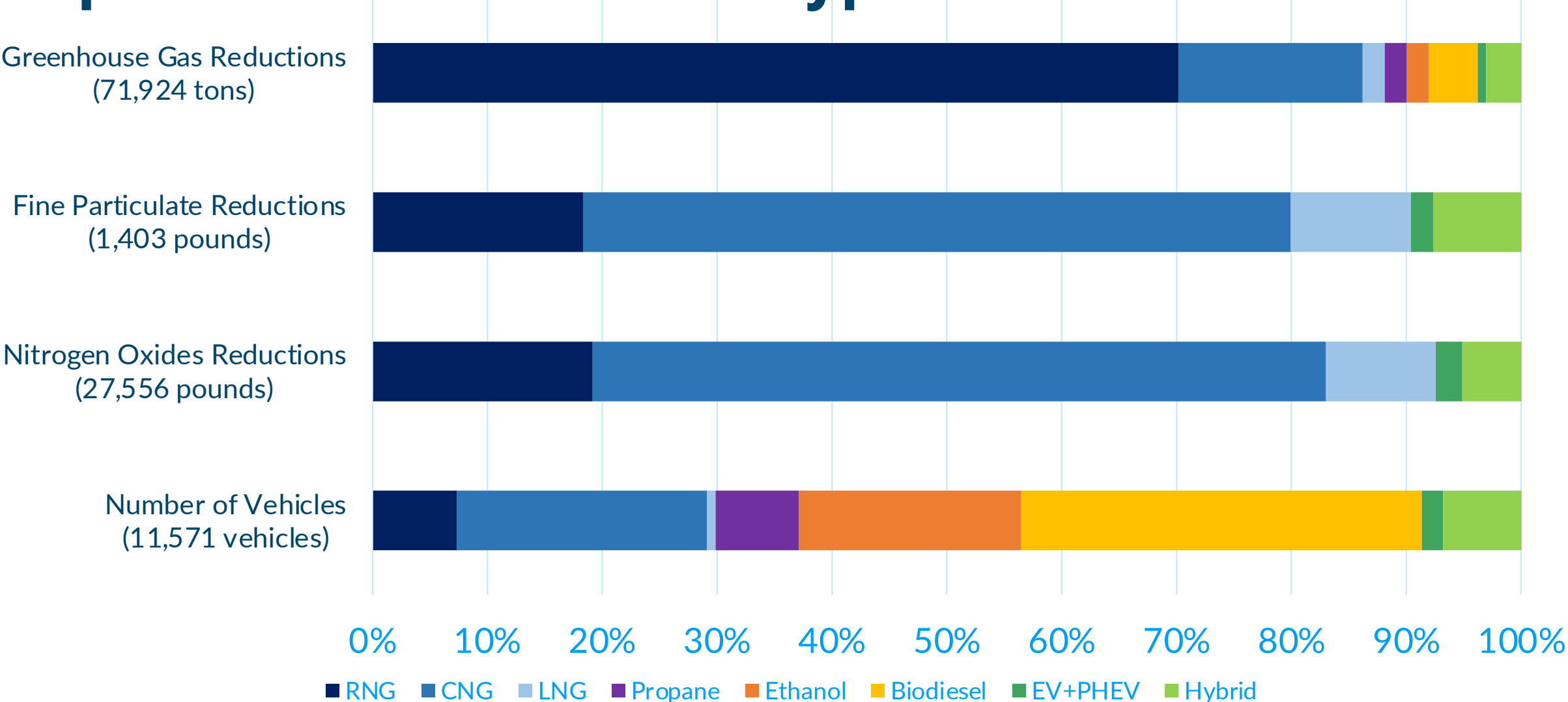
# Trends in Annual Energy Impact

Department of Energy Goal: Increase GGE Reductions 16% Year Over Year  
 2021 Target: 27.79M, 2021 Reported: 24.19M



RNG-Renewable Natural Gas; CNG- Compressed Natural Gas; LNG- Liquefied Natural Gas; LPG- Liquefied Petroleum Gas; EV- Electric Vehicle; PHEV-Plug-In Hybrid Electric Vehicle

# Impact of Various Fuel Types



RNG-Renewable Natural Gas; CNG- Compressed Natural Gas; LNG- Liquefied Natural Gas; LPG- Liquefied Petroleum Gas; EV- Electric Vehicle; PHEV-Plug-In Hybrid Electric Vehicle



# What We Do



## Funding Support

Assist with Navigating Programs and Developing Grant Applications

Administer Funding



## Technical Assistance

Maintain and Analyze Data

Hold Webinars, Workshops, Peer Exchange

Develop Best Practices and Template Resources



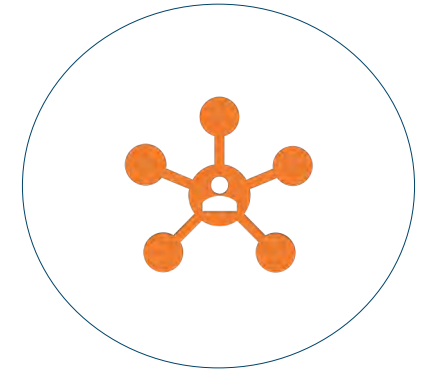
## Planning the Future

Alternative Fuel Corridors

Texas EV Charging Plan

ZEV Infrastructure

Organic Waste to RNG Feasibility Study



## Raising Awareness

Facilitating Relationships

National Drive Electric Week

Fleet Recognition

Success Stories and Community Events



# Electric Vehicle Market Trends

Over half of new vehicle sales forecasted to be electric by 2030

*-[Bloomberg New Energy Finance](#), September 2022*

42% of medium- or heavy-duty truck sales forecasted to be zero emissions by 2030, assuming **economics** drive adoption

*-National Renewable Energy Laboratory, [Decarbonizing Medium- and Heavy-duty On-ad Vehicles: Zero-Emission Vehicles Cost Analysis](#); March 2022*

To serve projected 22 million electric vehicles by 2030, need 10-fold increase in charging stations

*-[Governing.com](#), December 2021*





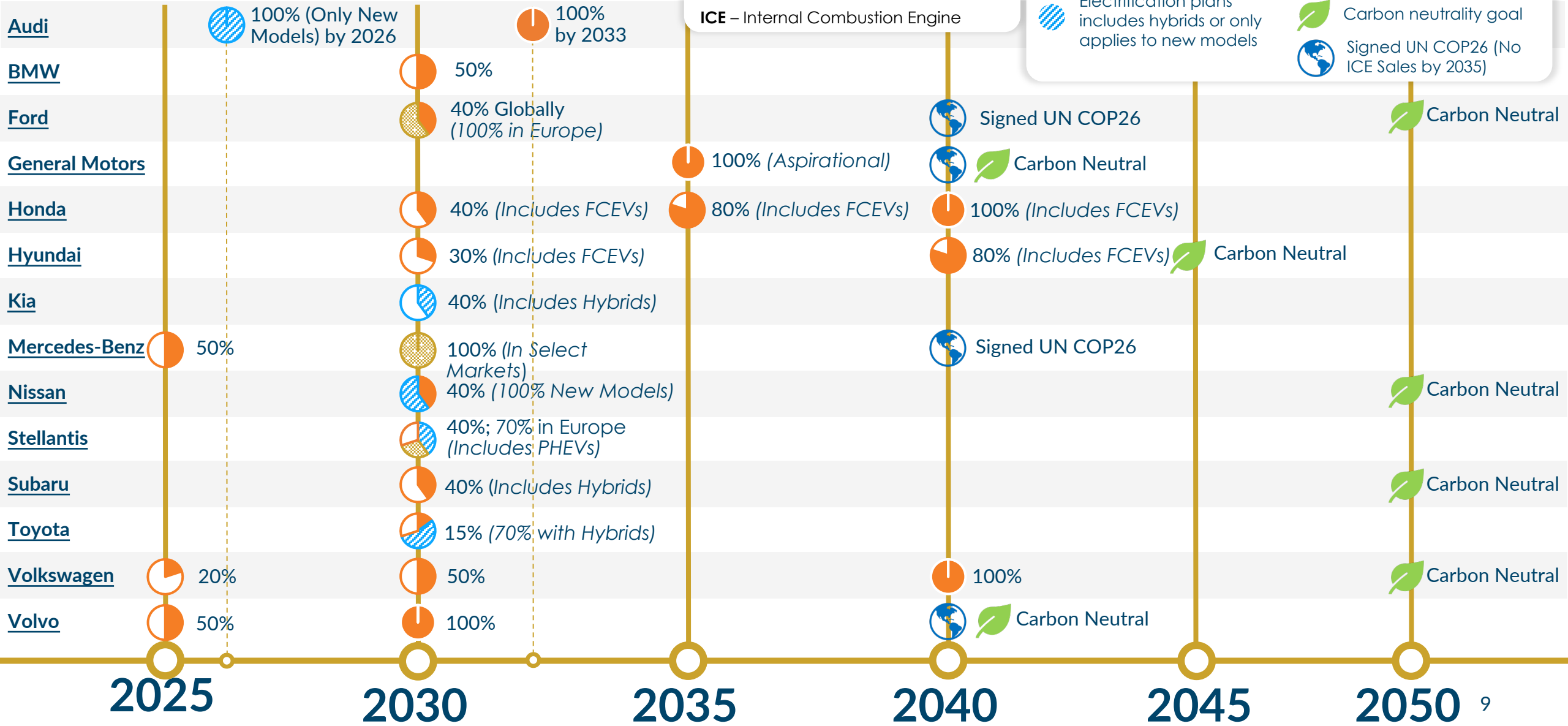
# Electrification Transition Goals Of Manufacturers

(% of Sales) | Data as of 11/10/2021

\*This list is not comprehensive, and manufacturers are not endorsed by NCTCOG

**FCEV** – Fuel Cell Electric Vehicle  
**PHEV** – Plug-In Hybrid Electric Vehicle  
**ICE** – Internal Combustion Engine

- % of sales that do not use ICEs
- Electrification plans includes hybrids or only applies to new models
- OEM has phased out ICEs in a region other than the United States
- Carbon neutrality goal
- Signed UN COP26 (No ICE Sales by 2035)



# EV Data And Trends

## EV Registration Data

[www.dfwcleancities.org/evnt](http://www.dfwcleancities.org/evnt) -> EVs and Texas

**As of October 31, 2022:**

~155K EVs in Texas

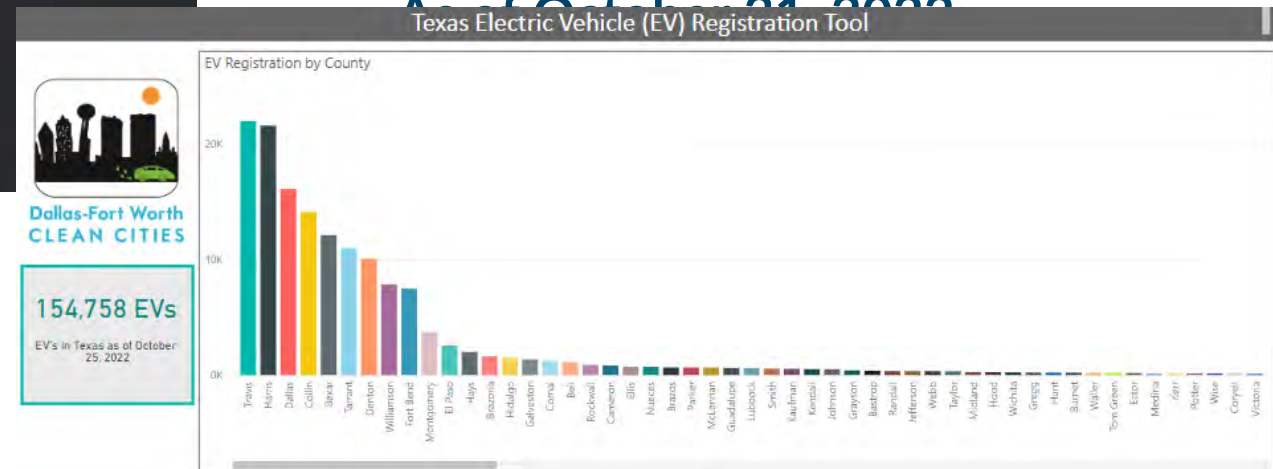
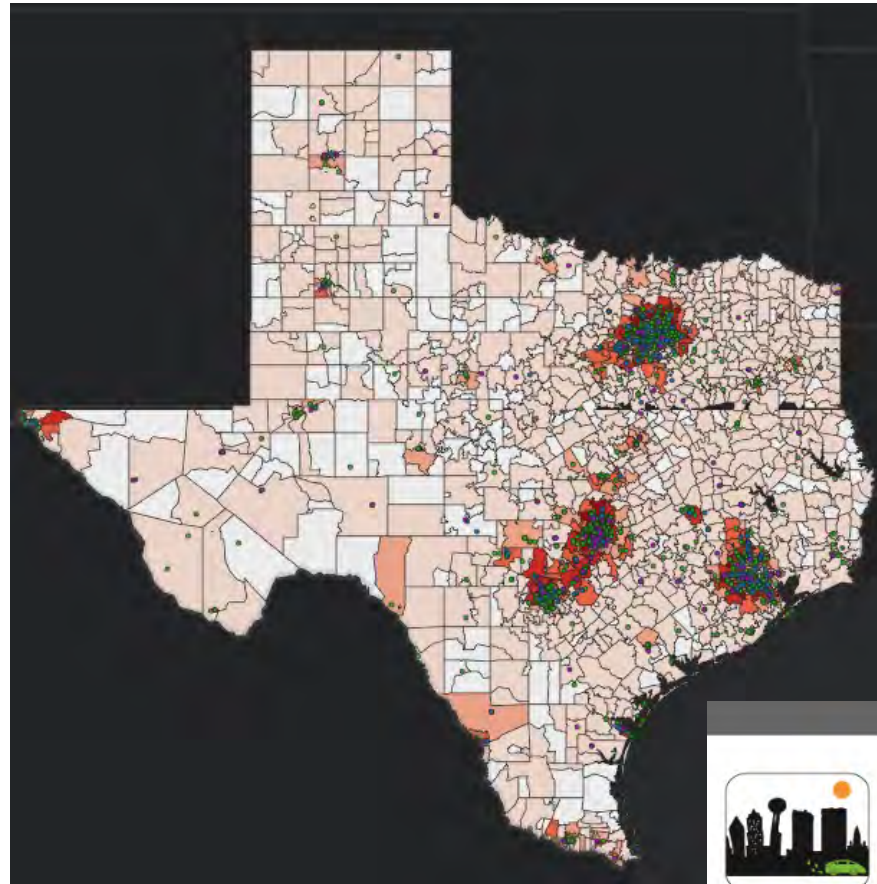
**September 2021:**

~93K EVs in Texas

## Charging Station Dashboard

[https://txdot.mysocialpinpoint.com/tx\\_ev\\_pla](https://txdot.mysocialpinpoint.com/tx_ev_pla)

As of October 31, 2022

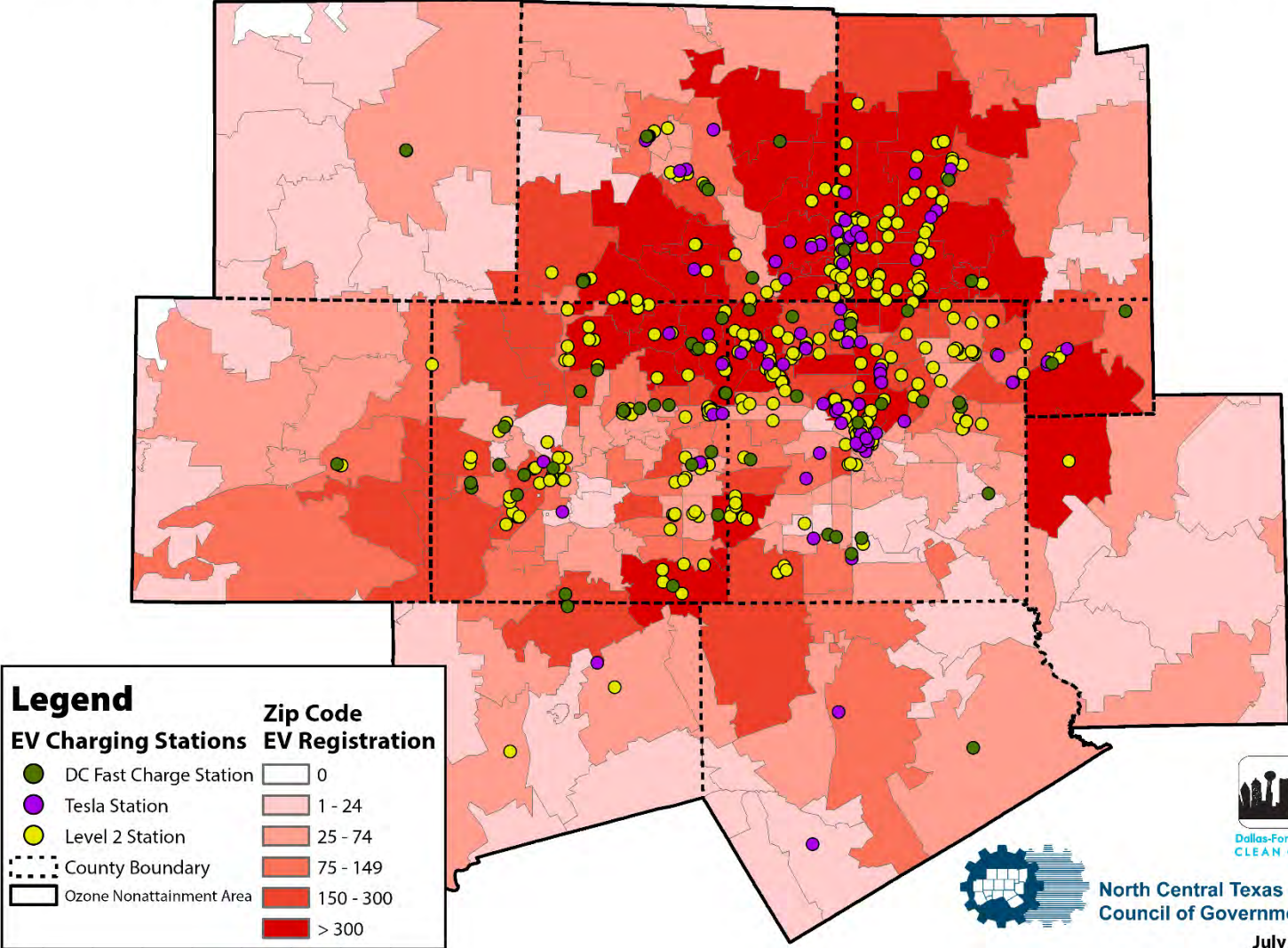


# EV Adoption and Infrastructure Availability

County	Level 2 Plugs*	DC Fast Charge Plugs*
Collin	217	2
Dallas	529	18
Denton	78	15
Ellis	0	4
Johnson	5	1
Kaufman	2	0
Parker	2	1
Rockwall	9	5
Tarrant	313	28
Wise	2	0

\*As of July 2022;  
Excludes Tesla Stations

## EV Registration and EVSE in Ozone Nonattainment Area

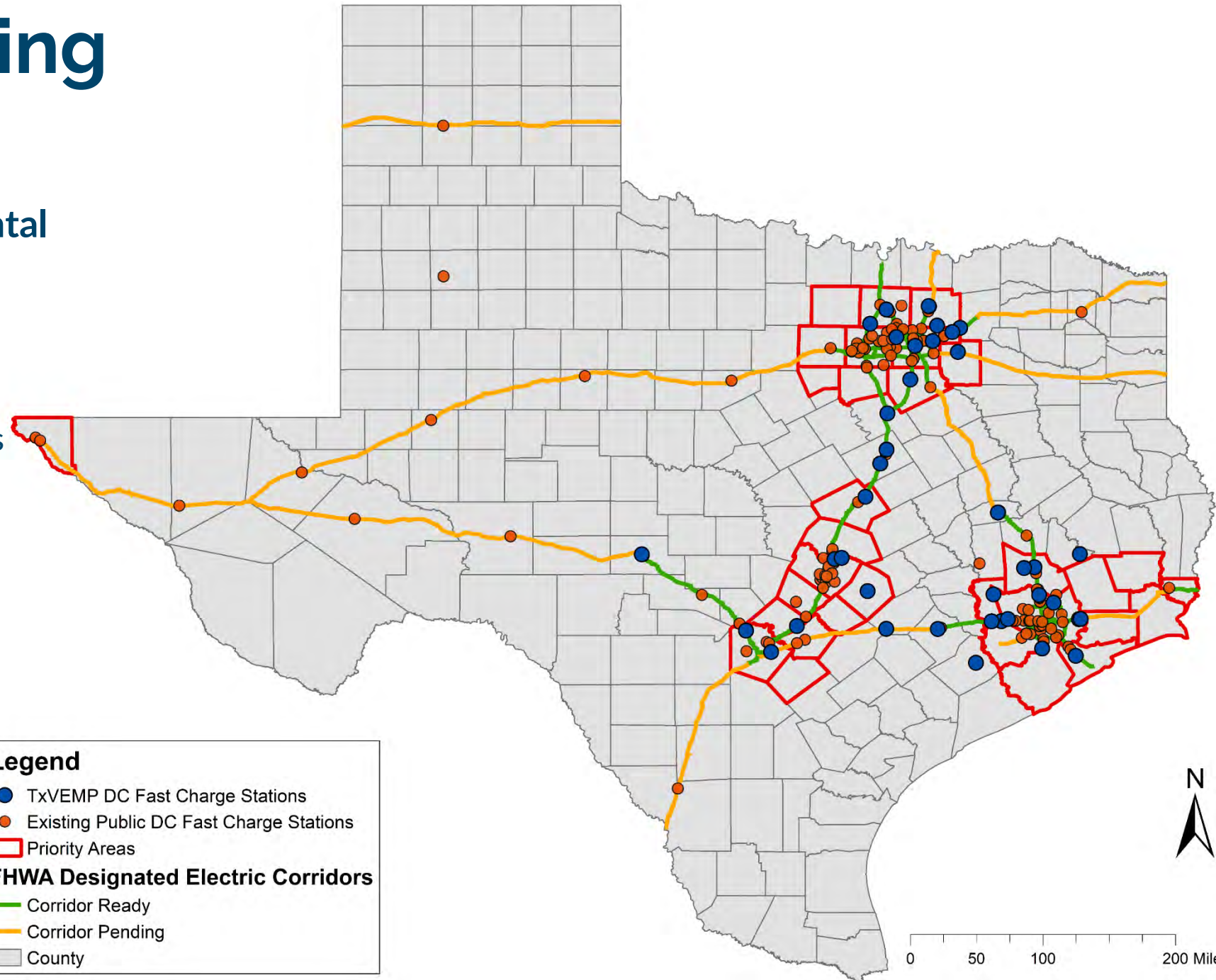




# DC Fast Charging Across Texas

## Texas Volkswagen Environmental Mitigation Program:

~\$20.9 Million DC Fast Charging  
170 Plugs at 41 Sites  
96% of Funds to Fuel Retailer Sites



**Legend**

- TxVEMP DC Fast Charge Stations
- Existing Public DC Fast Charge Stations
- Priority Areas

**FHWA Designated Electric Corridors**

- Corridor Ready
- Corridor Pending
- County

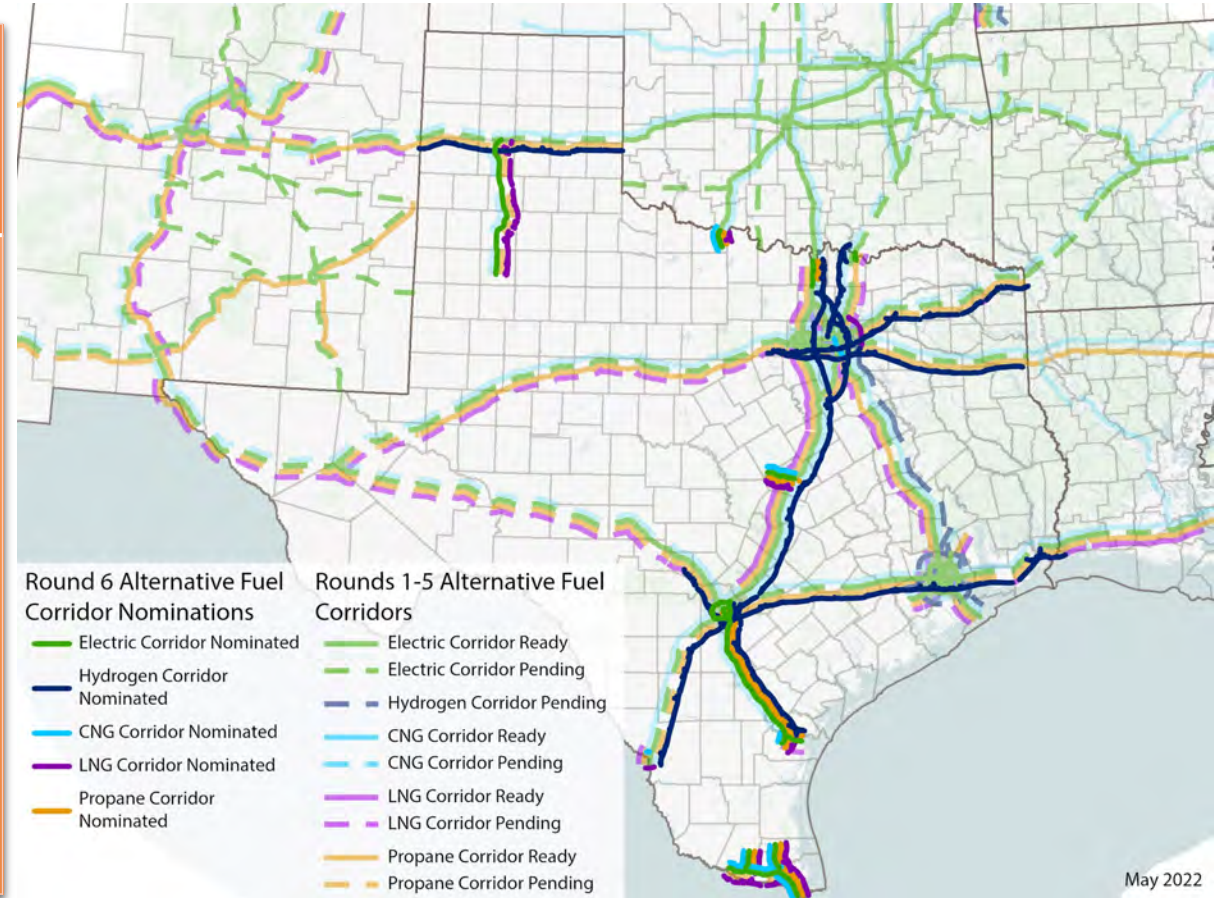
# Highlights Of Texas EV Charging Plan

Plan Posted at [Texas electric vehicle planning \(txdot.gov\)](https://www.txdot.gov/electric-vehicle-planning) - \$408M Total

**Year 1** Install DC Fast Chargers Along Alternative Fuel Corridors  
(~55 Stations Statewide; \$48.5M Federal)

Work with Counties and Small Urban Areas to Install DC Fast Charge Sites In/Near County Seats  
(Estimated 190 Locations, \$159.7M Federal)

**Years 2-5** Work *with MPOs* to Identify Locations and Appropriate Combination of Charging Sites  
(Number Locations TBD, Estimated \$198.92M Federal)  
**NCTCOG Area: ~\$64.5M**



**For Reference: 290 DC Fast Charging Sites Statewide as of October 31, 2022**



# Medium- and Heavy-Duty Truck Impact on Regional Air Quality

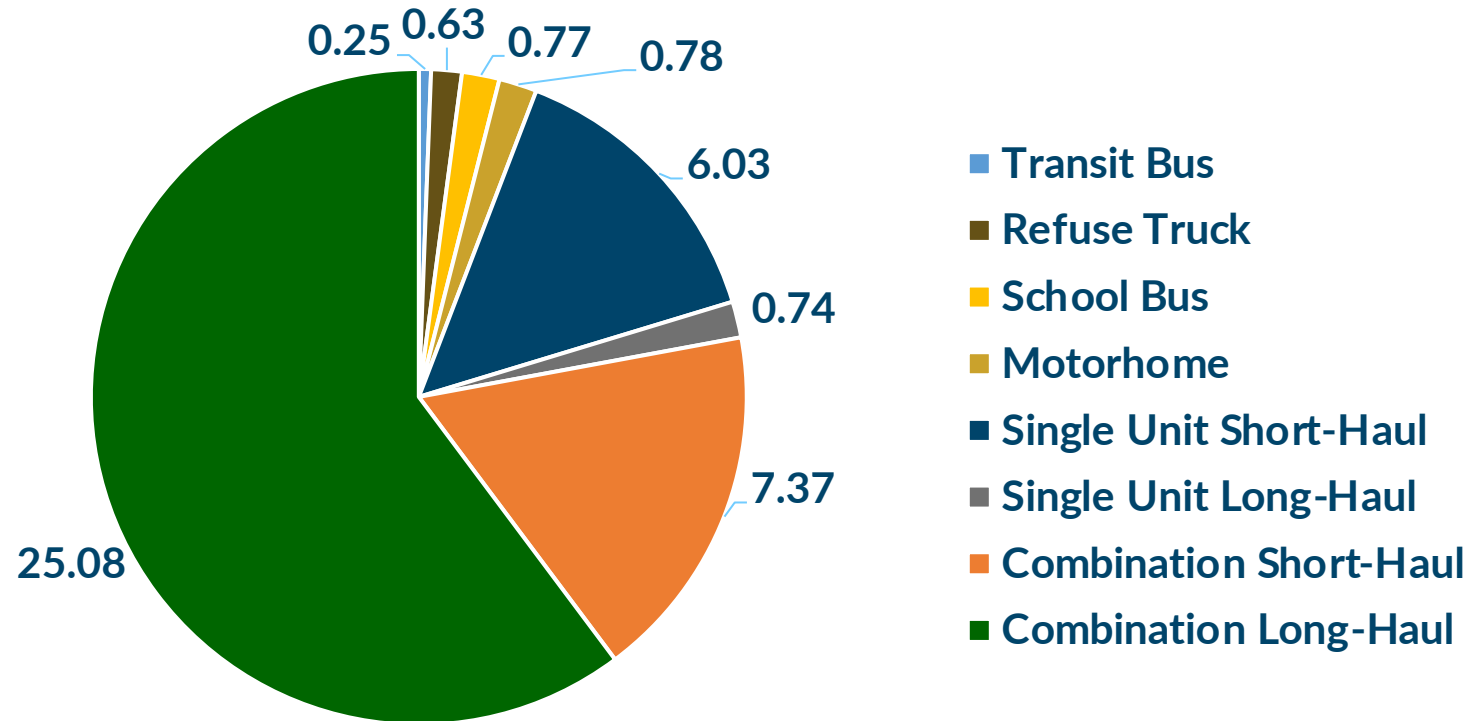
## Medium/Heavy Duty Vehicle Impacts:

- ~5 % of Miles Traveled
- ~40% of Nitrogen Oxides (NO<sub>x</sub>)

## Key Factors in Choosing Zero Emission Vehicle (ZEV) Platform:

- Weight
- Refueling Time
- Range (Route Length)

NO<sub>x</sub> Emissions in Tons per Day by Medium/Heavy-Duty Vehicle Type



# IH 45 Corridor Zero Emission Vehicle Infrastructure Plan

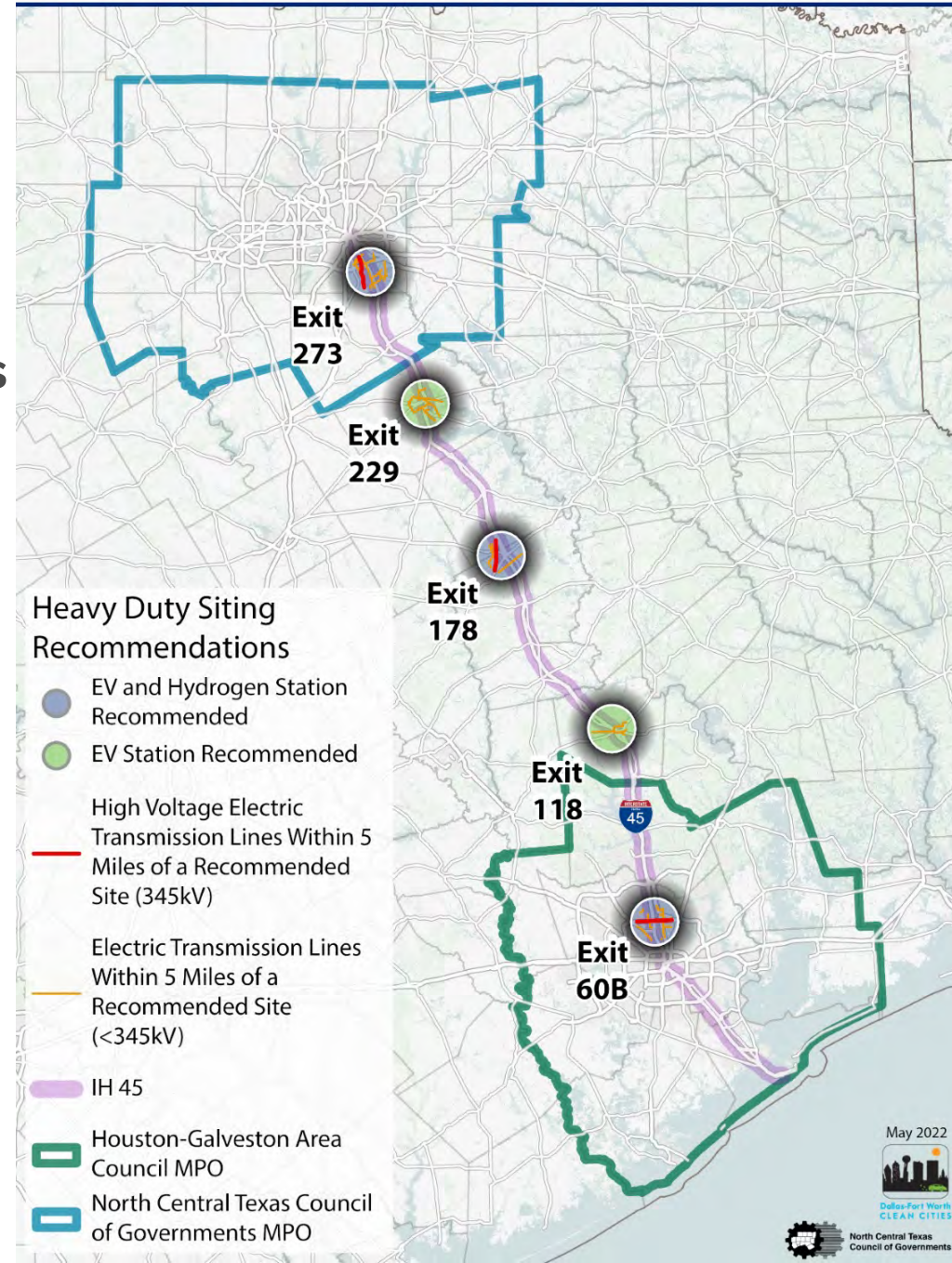
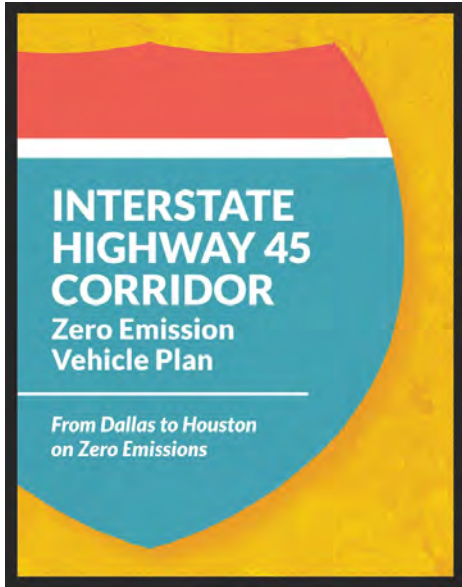
Provide Actionable Recommendations to Facilitate ZEV Deployments:

- Battery Electric
- Hydrogen Fuel Cell Electric

Support Future Strategic Initiatives (e.g., Autonomous Vehicles)

Engage Wide Range of Stakeholders

[www.nctcog.org/IH45-ZEV](http://www.nctcog.org/IH45-ZEV)





# Contact Us



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