

# Interstate Highway 45 ZEV Corridor: Policy/Incentives

## Agenda:

1. Welcome/Housekeeping
2. Review of Subgroup Role/Objectives
3. TCEQ Hydrogen Funding Opportunities
4. Discussion and Closing Remarks

October 28, 2020

11:00 am – 12:00 pm

**Next Meeting:** November 12, 2020 at 11:00 AM

Call-In Information: 1-346-248-7999

Meeting ID: 881 1632 4143

Please mute yourself when you are not speaking

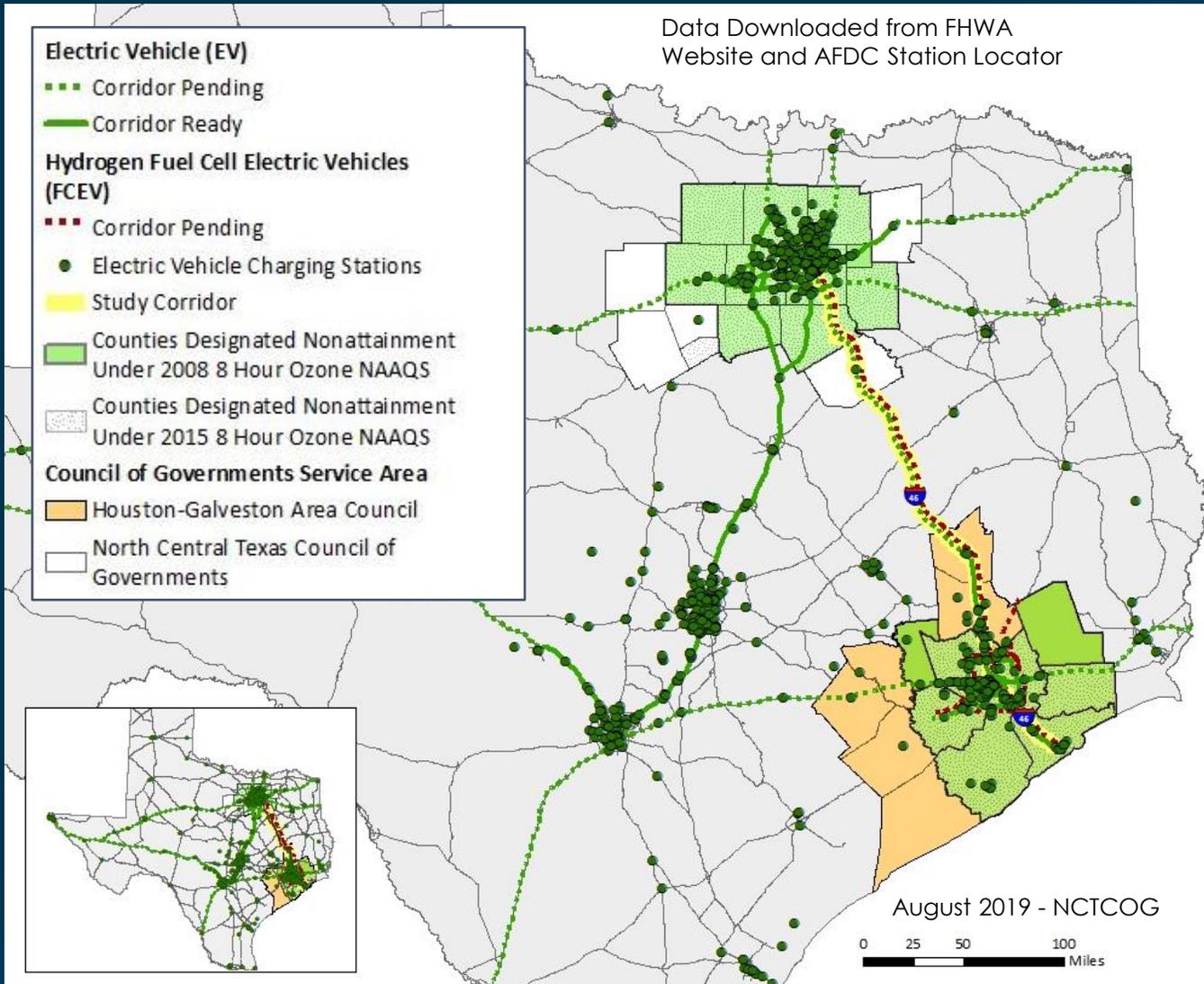


Dallas-Fort Worth  
CLEAN CITIES



North Central Texas  
Council of Governments

# IH-45 ZEV Corridor Plan Goals



**Create an Actionable Infrastructure Plan that Facilitates BEV and FCEV Pilot Projects Along the Corridor**

- Focused on Medium and Heavy-Duty Applications

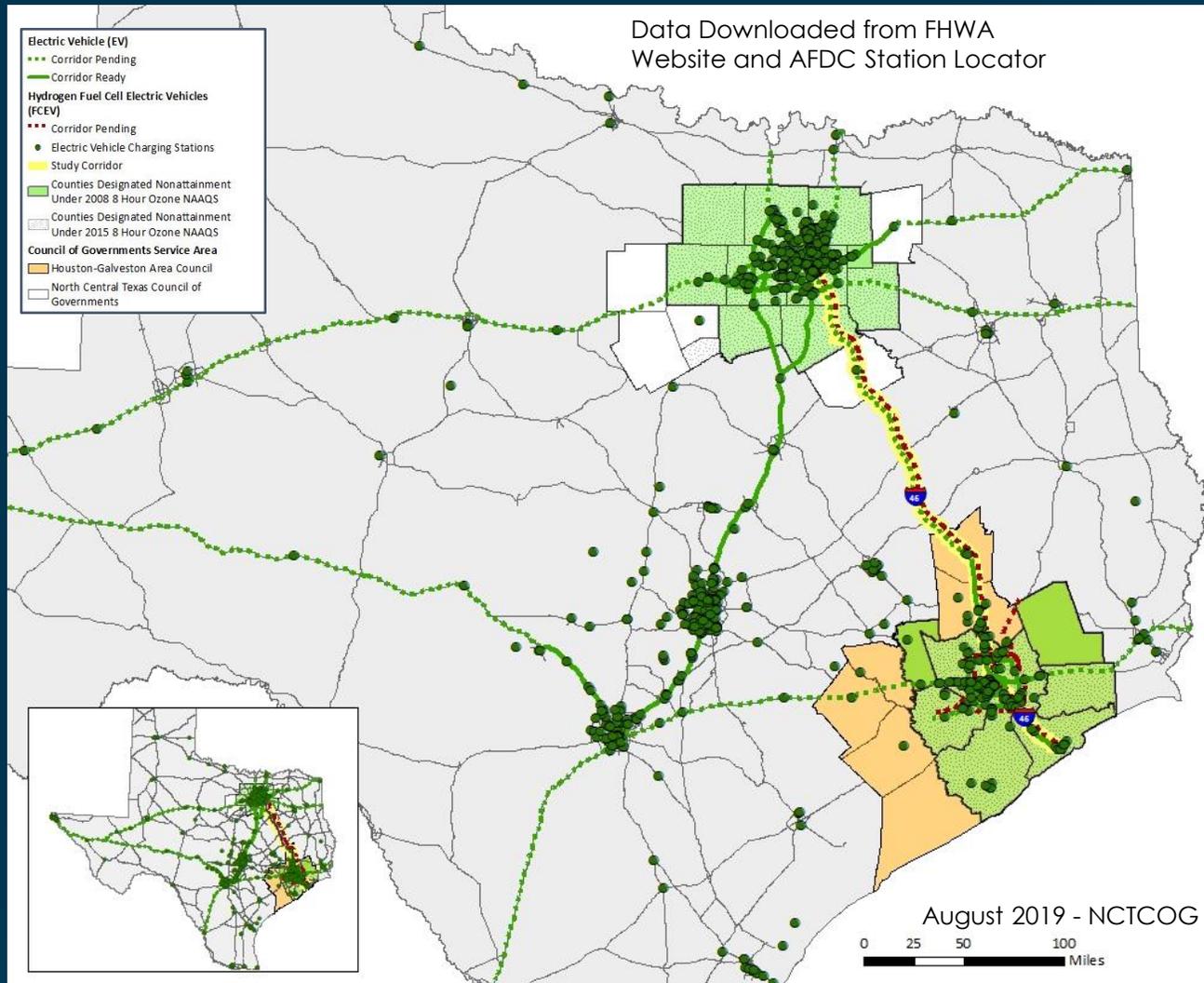
**Support Future Strategic Initiatives in the Corridor**

- AV Technology
- Truck Platooning

**Expect Plan will Need Revisiting in 3-5 years**

**Stakeholder Role: Guide Plan Development, Lend Expertise, Ensure Appropriate Details Addressed**

# IH-45 ZEV Corridor Plan Goals



## Infrastructure Development:

- Solicit Infrastructure Needs and Criteria
- Identify and Contact Property Owners

## Customer Identification:

- Identify and Engage End-User Fleets
- Match User Needs to Vehicle Availability

## Vehicle Availability:

- Identify Best Technologies Suitable for Vocational Needs
- Evaluate Commercialization Status of Suitable Vehicles

## Policy/Incentives:

- Identify and Prioritize Non-Monetary Policies/Incentives
- Assess Existing and Needed Monetary Incentives

# Assumptions

**Federal Highway Administration designation intervals are appropriate.**

Hydrogen: 100 miles between stations, Within 5 Miles

Electric: 50 miles between stations, Within 5 Miles

**Plan should focus on build-out of facilities to support medium/heavy-duty vehicles.**

Critical Minimum on Light-Duty BEV in Place

FCEV Adoption Expected First in MD/HD Sectors

# What we Have Now/Work in Progress

## Existing DC Fast Charge BEV Infrastructure (Electrify America)

### Truck Stops along I-45

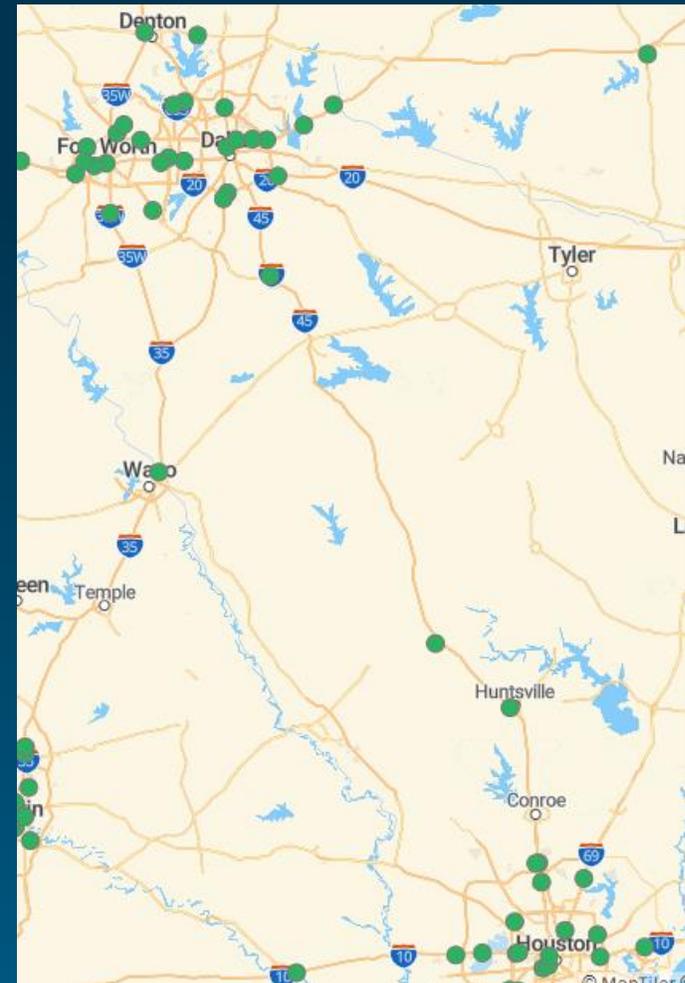
### Developing Surveys

Fueling Providers  
Fleets

### Origin/Destination Data

#### [Heavy-Duty Diesel Inspection & Maintenance Pilot Program](#)

Data from 496 Trucks at New Waverly Weigh Station  
~46% Destined for DFW as Final Destination  
~23% Passing Through DFW, not Final Destination  
Remaining ~31% Not Passing Through DFW



# What we Have Now/Work in Progress

**Total Truck Volumes Along Corridor  
(current and future forecasted volume)**

**Potential Fuel Volumes Needed (calculated from truck  
volume and origin/destination fraction)**

Total Truck Volume -> Trucks Suitable for BEV or FCEV  
Transition based on Weight Class/Type and  
Origin/Destination

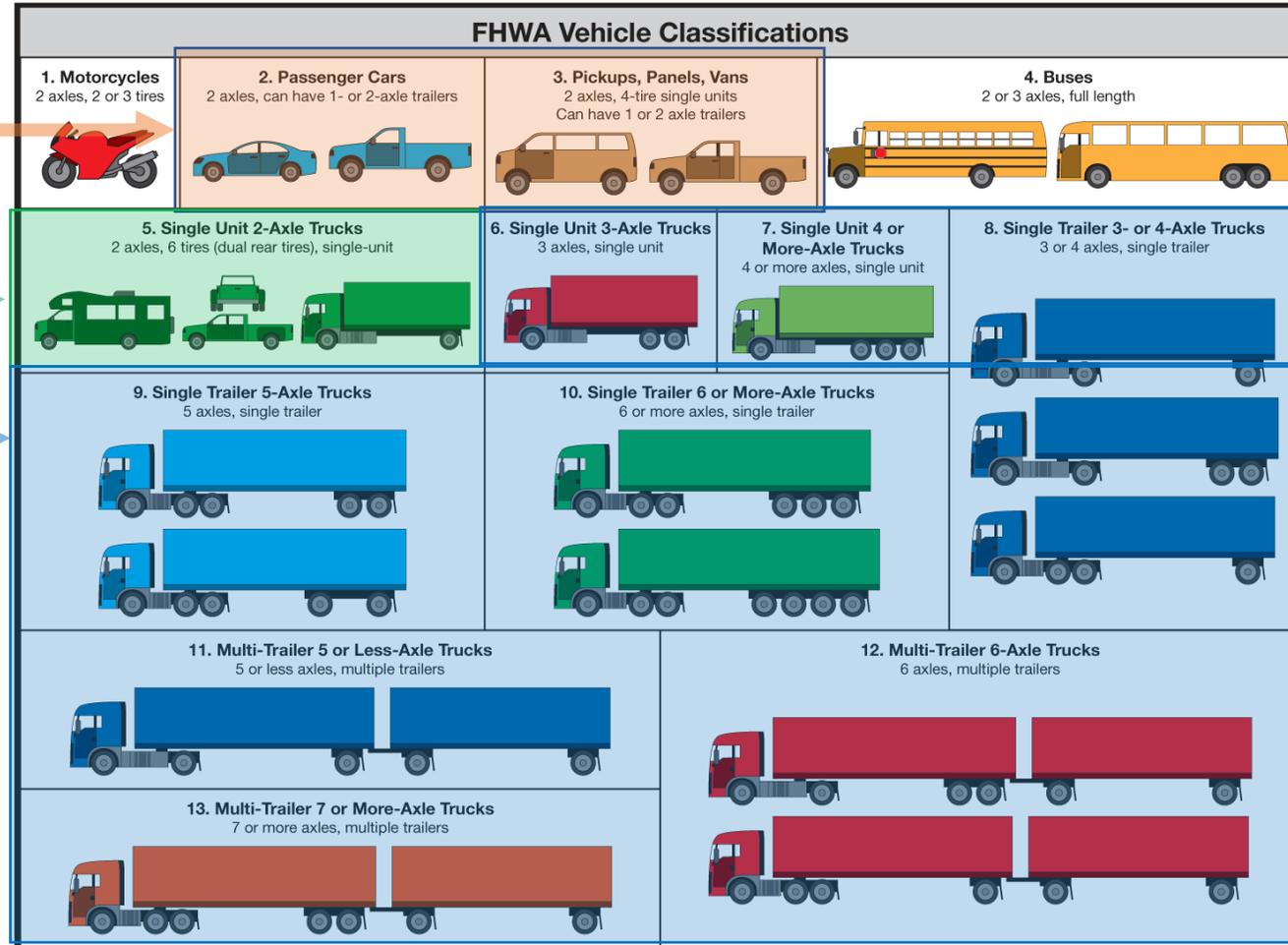
Suitable Trucks -> Fuel Consumption

# Three Commercial Vehicle Classes

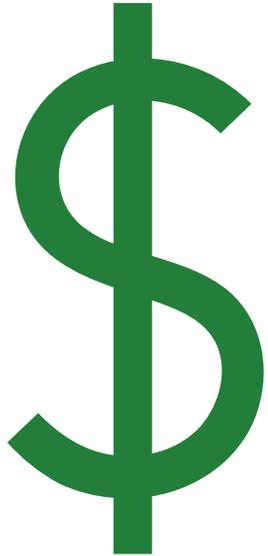
Light CV

Medium CV

Heavy CV



# ZEV Incentives



## Texas Volkswagen Environmental Mitigation Program (TxVEMP)

### Level 2 Charging Infrastructure

**Funds:** Up to \$2,500, Not to exceed 70% Funding per Activity

**Deadline:** First-Come, First-Served Until August 11, 2021

## Texas Light-Duty Motor Vehicle Purchase or Lease Incentive Program

**Funds:** Up to \$2,500 for Electric or Hydrogen

**Deadline:** First-Come, First Served Until January 7, 2021 or Until all Funds are Awarded

## North Texas Emissions Reduction Project

**Funds:** Up to 45% Funding to Replace Diesel Trucks with Electric Trucks

*\*Includes charging pedestal and installation cost, one per purchased vehicle*

**Deadline:** January 8, 2021

For a full list of available funding opportunities, visit [www.nctcog.org/aqfunding](http://www.nctcog.org/aqfunding)

# Hydrogen Funding Opportunities

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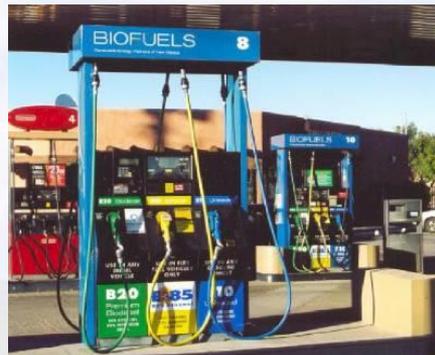




# Alternative Fueling Facilities Program (AFFP)

The AFFP offers grants for the construction and expansion of alternative fueling facilities in order to:

- provide fueling facilities for alternative fuel in the Clean Transportation Zone (CTZ);
- ensure alternative fuel vehicles have access to fuel; and
- build the foundation for a self-sustaining market for alternative fuels in Texas.





# AFFP Eligible Fuel Types

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## **Eligible fuels include:**

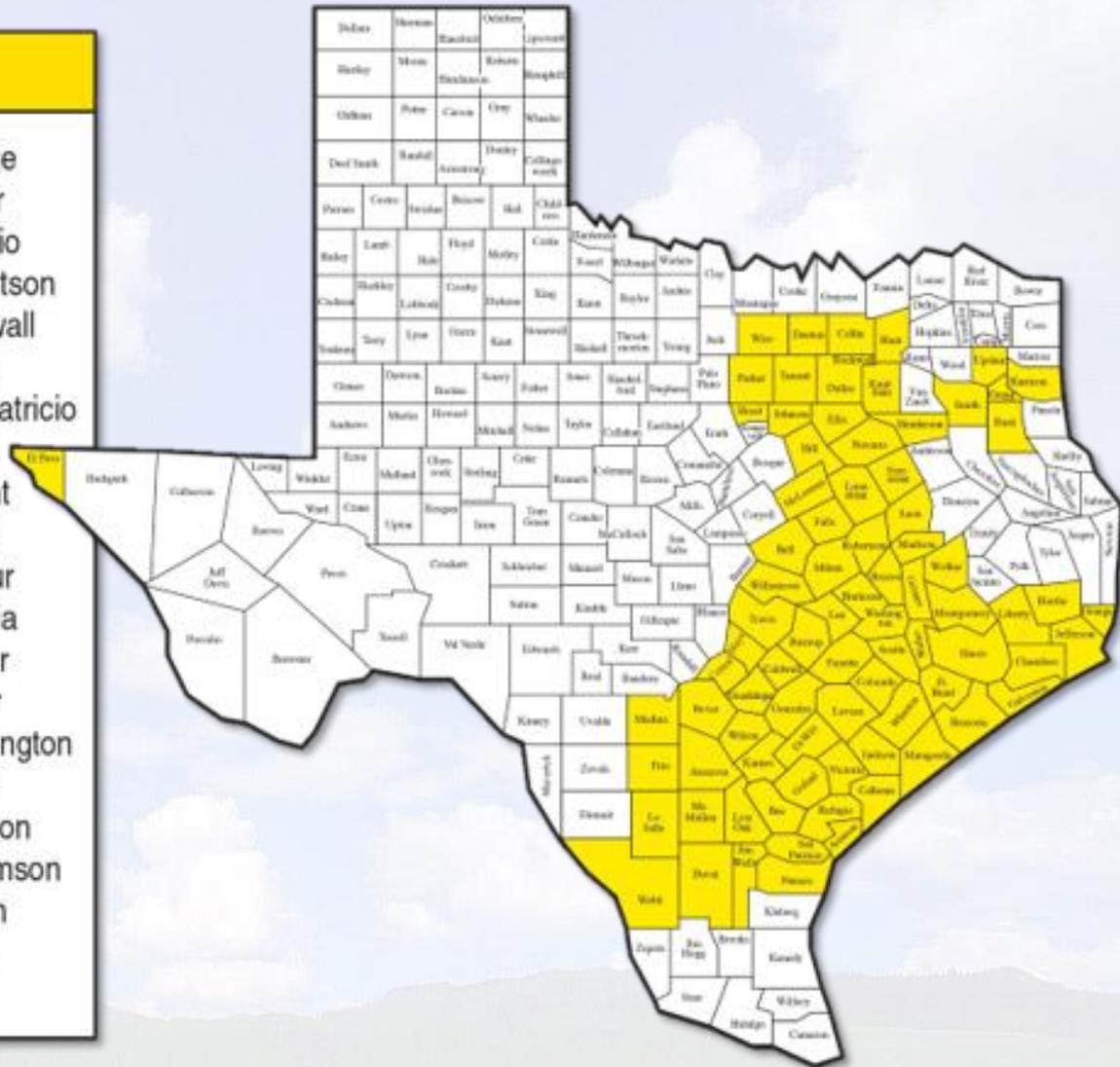
- compressed natural gas (CNG) and/or liquified natural gas (LNG);
- hydrogen;
- biodiesel (at least 20% by volume);
- propane;
- electricity; and
- methanol (at least 85% by volume).



# AFFP Eligible Areas Clean Transportation Zone (CTZ)

## Eligible Counties

Aransas	Ellis	Jefferson	Orange
Atascosa	Falls	Jim Wells	Parker
Austin	Fayette	Johnson	Refugio
Bastrop	Fort Bend	Karnes	Robertson
Bee	Freestone	Kaufman	Rockwall
Bell	Frio	La Salle	Rusk
Bexar	Galveston	Lavaca	San Patricio
Brazoria	Goliad	Lee	Smith
Brazos	Gonzales	Leon	Tarrant
Burleson	Gregg	Liberty	Travis
Caldwell	Grimes	Limestone	Upshur
Calhoun	Guadalupe	Live Oak	Victoria
Chambers	Hardin	Madison	Walker
Collin	Harris	Matagorda	Waller
Colorado	Harrison	Medina	Washington
Comal	Hays	McLennan	Webb
Dallas	Henderson	McMullen	Wharton
Denton	Hill	Milam	Williamson
DeWitt	Hood	Montgomery	Wilson
Duval	Hunt	Navarro	Wise
El Paso	Jackson	Nueces	





# AFFP Funding Available

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- Eligible grant awards include:
  - 50% of the total eligible project cost up to a maximum of \$600,000 for fuels other than natural gas.
- Next grant round in the FY22-23 biennium.



# TERP Contact Information

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- **Website:**            **[www.terpgrants.org](http://www.terpgrants.org)**
- **E-mail:**            **[terp@tceq.texas.gov](mailto:terp@tceq.texas.gov)**
- **Toll Free:**        **800-919-TERP (8377)**



# VW Infrastructure Funding

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A total of \$31,397,874 in funding is available for equipment to supply light-duty ZEVs with electricity or hydrogen for hydrogen fuel cells.

## Program Goals:

- Prepare for and sustain the increased use of light-duty ZEVs by providing the public with convenient access to supply equipment.
- Ease range anxiety between the population centers of Texas by providing access to supply equipment along or near interstate, US, and state highways in Texas.
- Complement other incentive funding programs (e.g. National ZEV Investment Plan and TERP Alternative Fueling Facilities Program).



# VW Infrastructure Funding

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- DC Fast Chargers & Hydrogen Fueling Facilities
  - \$20,931,916 available
  - Competitive grant awards based on program scoring criteria.
- Applicants may be eligible for:
  - Up to 60-70% of the eligible costs associated with electrical vehicle supply equipment;
  - Up to 33% of the eligible costs associated with installation of hydrogen dispensing equipment capable of at least 250 kg/day; or
  - Up to 25% of the eligible costs associated with installation of hydrogen dispensing equipment capable of at least 100 kg/day.



# **TxVEMP Contact Information**

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- **Website:**            **[www.txvwfunds.org](http://www.txvwfunds.org)**
- **E-mail:**             **[vwsettle@tceq.texas.gov](mailto:vwsettle@tceq.texas.gov)**
- **Toll Free:**         **(833) 215-TXVW (8989)**

# Policy/Incentives

# DOE Request for Information

## Medium and Heavy-Duty Truck Research and Development Activities and Super Truck Initiative

DOE seeking feedback on research needs and opportunities related to medium and heavy-duty freight trucking

**Category 1: Freight Operational Efficiency and System**

**Category 2: Internal Combustion Engine, Powertrain, Fuels, and Emissions Control**

**Category 3: Batteries, Electrification, and Charging of MD/HD Trucks**

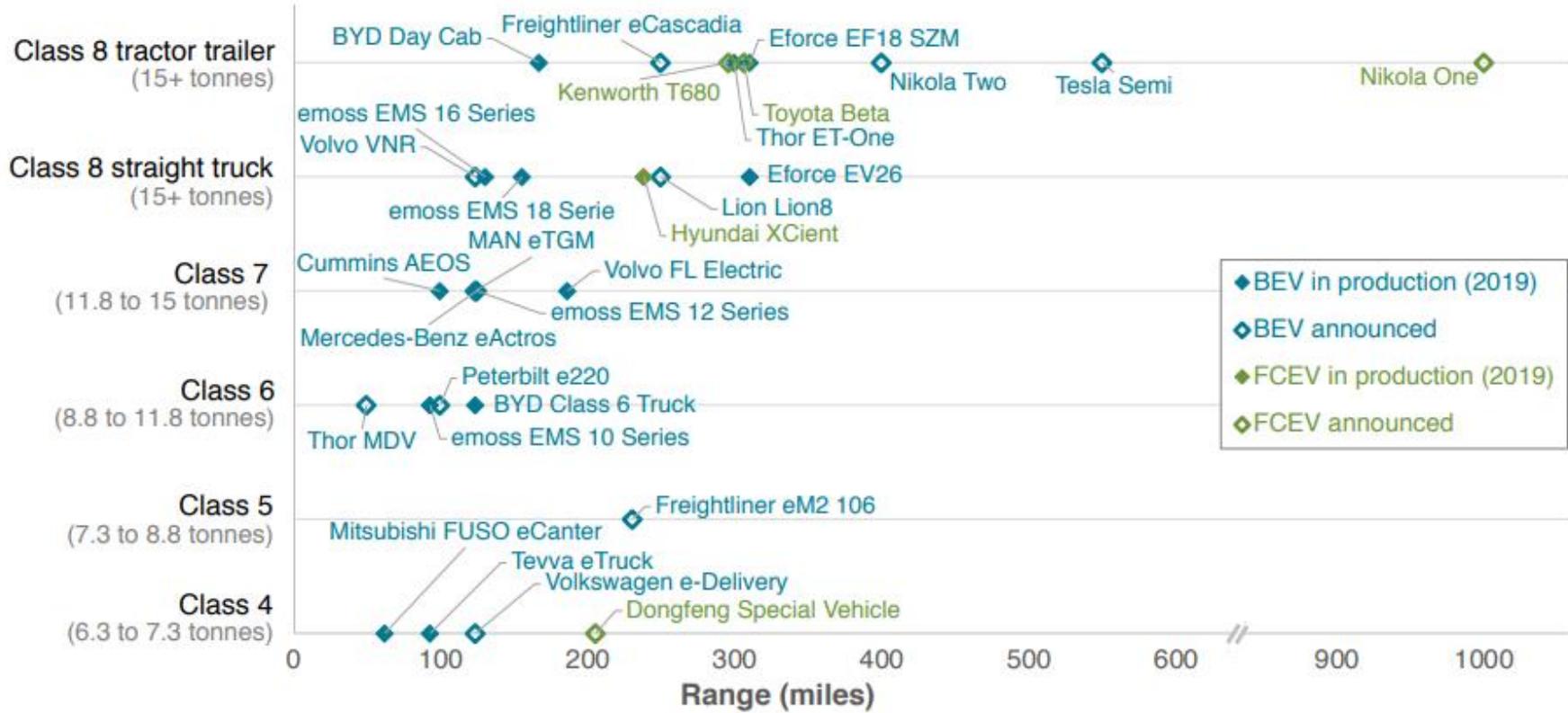
**Category 4: Hydrogen and Fuel Cell Trucking**

**Category 5: Other Important Considerations**

**Deadline: 5:00 PM ET November 9, 2020**

# Heavy-Duty ZEV Market

Gross vehicle weight class (U.S.)



**icct** THE INTERNATIONAL COUNCIL ON Clean Transportation

Source: Hall (2019) updates from Moultak, Lutsey, Hall (2017)  
<https://www.theicct.org/publications/transitioning-zero-emission-heavy-duty-freight-vehicles>

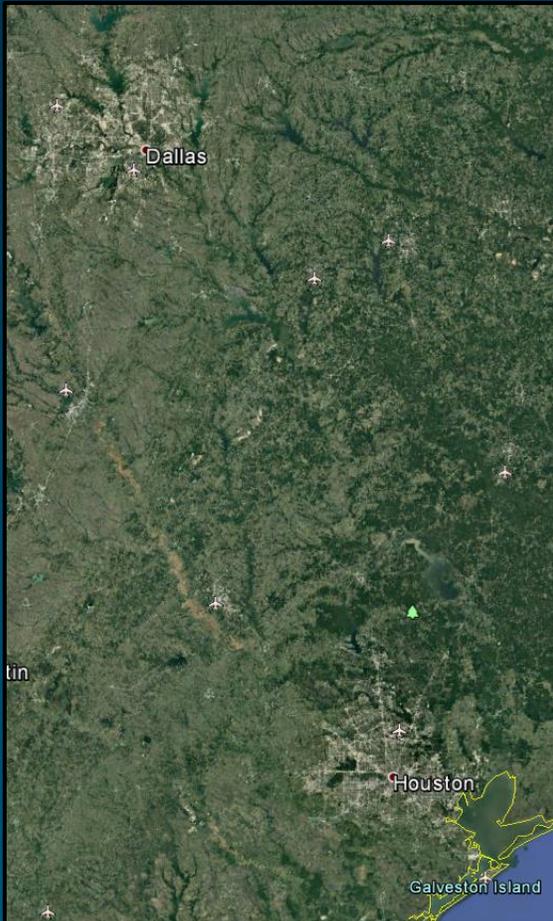
# Discussion

What are the main obstacles or gaps in TERP Programs?

What is the ideal funding level for ZEVs and infrastructure?

What policies need to be in place in Texas to drive OEM offerings of FCEV?

What are some of your policy asks? (Financial or otherwise)



# CONTACT

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NCTCOG/DFWCC

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[www.dfwcleancities.org/altfuelcorridors](http://www.dfwcleancities.org/altfuelcorridors)

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

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