

# Interstate Highway 45 ZEV Corridor: Policies/Incentives

## Agenda:

1. Welcome/Housekeeping
2. Discussion

Friday, April 2, 2021

**Call-In Information:** +1 346 248 7799

**Meeting ID:** 824 6640 8257

**Please mute yourself when you are not speaking**

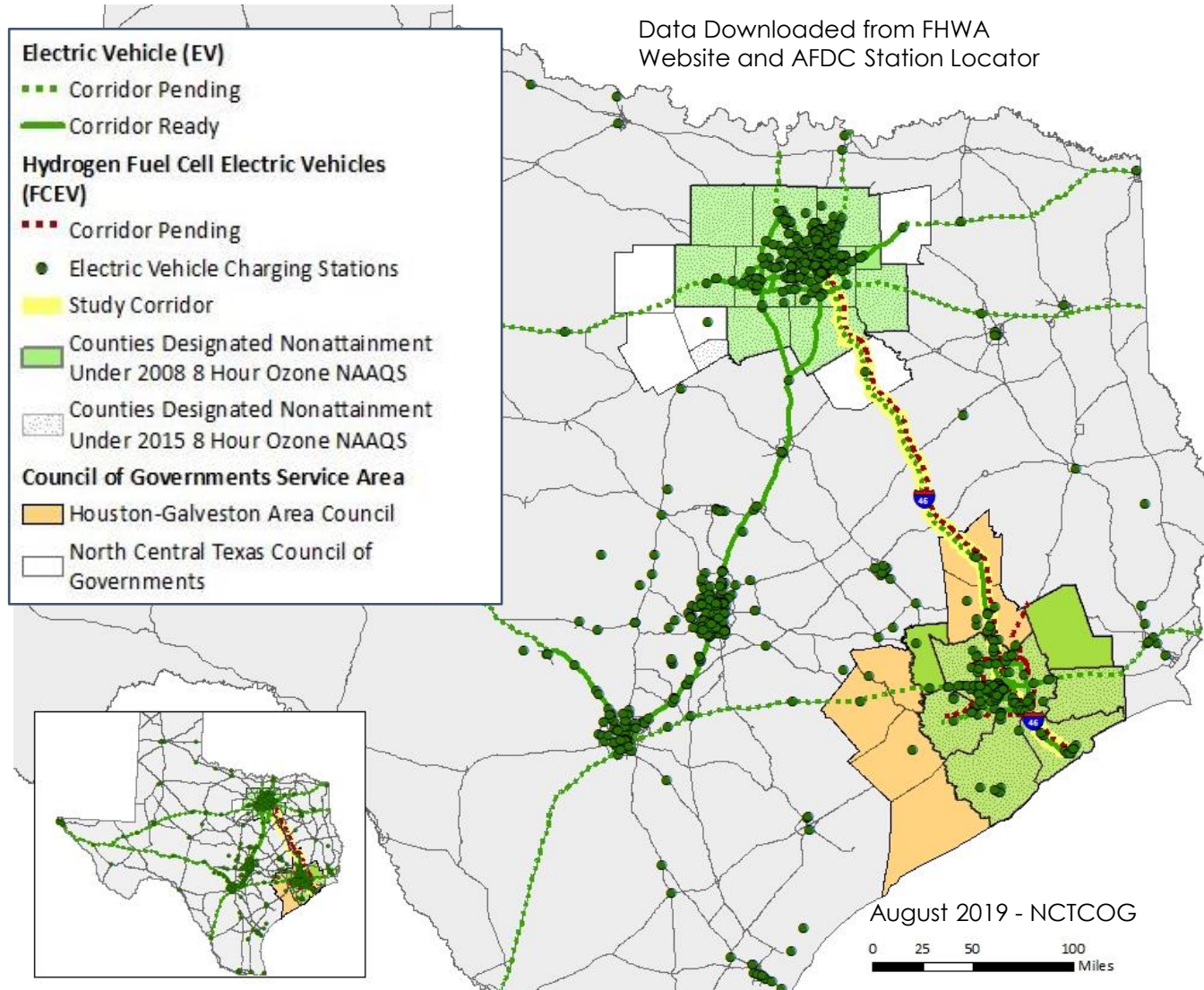


**Dallas-Fort Worth  
CLEAN CITIES**



**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

# Seeking Input

[Map your Experience](#) – Developing Comparable Tool for Alternative Fuel Stations

## Released Surveys

Fueling Providers – LIVE [www.nctcog.org/IH45-ZEV](http://www.nctcog.org/IH45-ZEV)

Fleets/Shippers– LIVE [www.nctcog.org/IH45-ZEV](http://www.nctcog.org/IH45-ZEV)

**Responses Requested by Friday, April 30**

# Seeking Input/Sources for GIS Layers

Boundaries	Utilities	Infrastructure	Ports
Cities	Electric Substations	Highways	Port of Galveston
Counties	Natural Gas Storage Facilities	Planned ZEV Stations*	Port Houston
Council of Governments	Electric Power Transmission Lines	Freight-Oriented Developments	Southern Inland Port of Dallas
Ozone Non-Attainment Counties	Electric Retail Utility Service Territories	Truck Stops and Fueling Stations	International Inland Port of Dallas
Sam Houston National Forest	Natural Gas Pipelines	Evacuation Routes	Dallas-Fort Worth International Airport
Environmental Justice Data	Hydrogen Pipeline	Weigh Stations	Alliance Airport- Fort Worth
Census Blocks		Truck Volumes	Transit Hubs
Land Ownership		OEM Dealerships	
		TxDOT Rest Areas	
		Major Distribution Centers	

\*Planned ZEV Stations are available from AFDC Station Locator. As of March 2021, there are no planned ZEV stations along the IH-45 ZEV Corridor.

# Key Takeaways

## Key Policies Include:

- Low Carbon Fuel Standard
- Statewide Emissions Requirements
- Weight Exemption

## What are the best approaches to incentives?

- First-come, First Served Vouchers → Immediate discount at sale; no application period
- Dealers Learn Voucher System → Fewer Complications for Fleets
- Wholistic Programs that Include Vehicles + Infrastructure
- Incentives that Fund Incremental Cost of New Purchase (as Opposed to Replacements)

## Key Incentive Constraints:

- Scrappage Requirement
- Buy America Requirement
- Eligibility for Vehicles OR Equipment



# FHWA AFC Updates

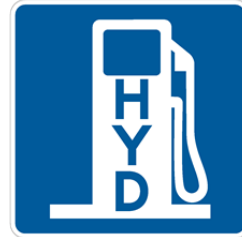
## I-45 ZEV Corridor Plan Policy/Incentives Subgroup

STEPHEN COSTA | U.S. DEPARTMENT OF TRANSPORTATION-VOLPE CENTER



# National Alternative Fuel Corridors

7



To improve the mobility of alternative fuel vehicles, the U.S. Department of Transportation (DOT) has designated national corridors in strategic locations along major highways for:

- ▶ Plug-in electric vehicle charging
- ▶ Hydrogen fueling
- ▶ Propane (LPG) fueling
- ▶ Natural gas (CNG, LNG) fueling

# Round 5 (2020) Request for Nominations

- Nominations were due on February 24, 2021
- 25 nomination proposals were received
  - Lead applicants included 17 State departments of transportation (DOTs), 4 State Energy Offices, 1 State Environmental Office, 2 local planning agencies, and 1 Governor's Office
- Anticipate designations announcement later in April



# Highway Signage

9

- Notice of Proposed Amendments (NPA) to the MUTCD
  - <https://mutcd.fhwa.dot.gov/>
    - Contains links to the NPA Federal Register Notice
    - MUTCD NPA Webinar Series
    - Current MUTCD Edition
- Includes AF Corridor requirements
  - Incorporates the AFC Memo issued in Dec 2016
  - Contains multiple new requirements related to alternative fuel signage for General service and Specific Service signs
- Comment period extended to **May 14, 2021**



I-93 (New Hampshire)

# Miscellaneous Updates

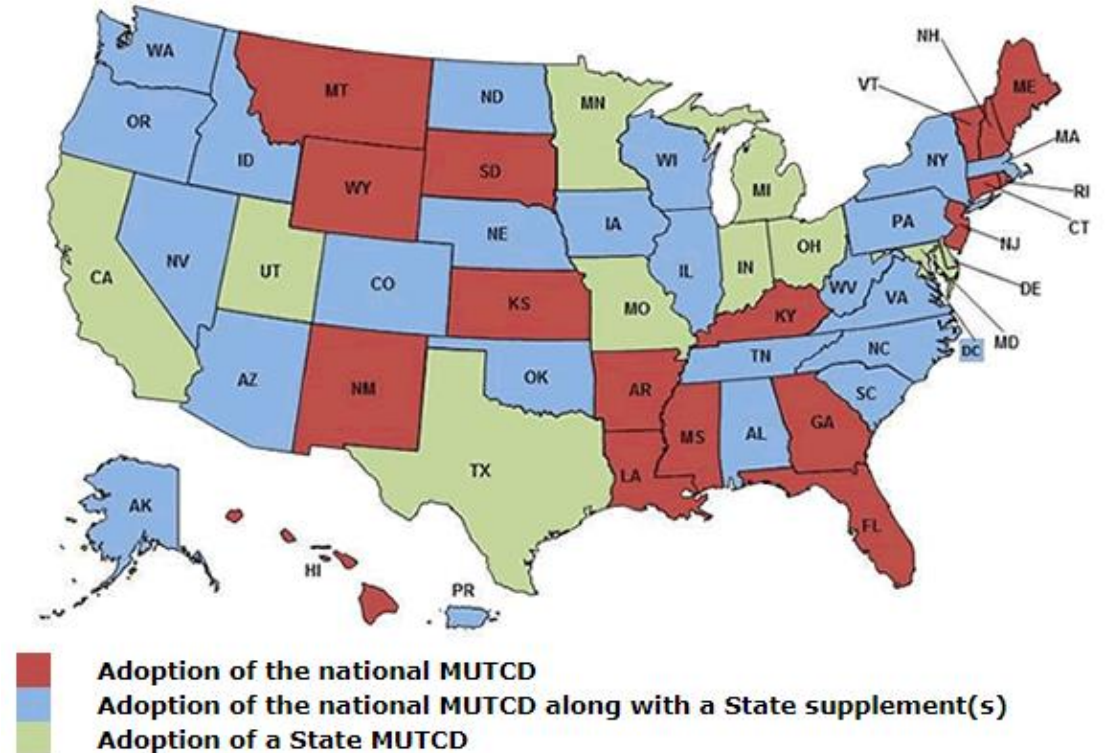
10

- The AFC team has been fielding multiple requests from the Administration regarding how the corridor work fits into the 500,000 charger deployment goal
  - Coordinating responses with DOE & the National Labs
- FHWA is preparing a document that will list all existing funding programs that include eligibility for AFC stations/chargers
- Determining how Equity & Environmental Justice focuses will be incorporated
- New DOT DAS for Climate Change, Andrew Wishnia presented at the Energy Independence Summit on 3/17
  - Heard about issues with Buy America, CMAQ and Highway Signage
- Administration's Infrastructure Proposal

# Manual On Uniform Traffic Control Devices (MUTCD)

# Manual on Uniform Traffic Control Devices (MUTCD)

- States May Adopt:
  - National MUTCD
  - State Version of MUTCD (Must Be in Substantial Conformance of National MUTCD)
  - National MUTCD with State Supplement
- Applies to All Public Roads and Private Roads Open to Public Travel



Imagery Provided By FHWA

# MUTCD TIMELINE

**December 2009  
and May 2012**  
Latest Edition and  
Revision

**November 28, 2016**  
FHWA Revisions  
Related to  
Alternative Fuel  
Corridors

**March 15, 2021**  
Current Proposed  
Comments Original  
Due Date

**May 14, 2021**  
Current  
Proposed Comments  
Final Due Date

**December 13, 2020**  
Current Proposed  
Comments  
Released

**February 2, 2021**  
Deadline Extended

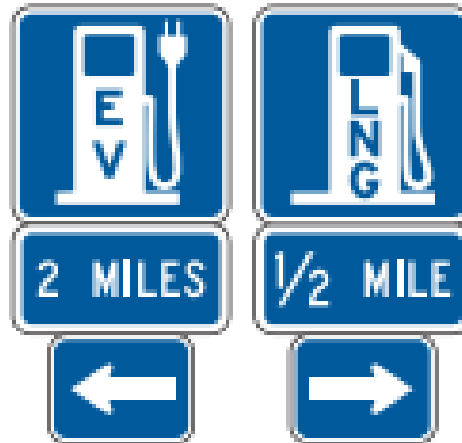


Imagery Provided By Gene Hawkins, Jr., Ph.D., P.E.  
<https://ceprofs.civil.tamu.edu/ghawkins/MUTCD-History.htm>

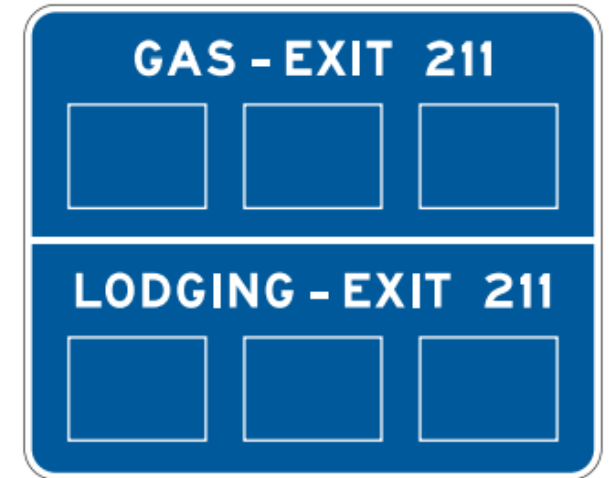
# Alternative Fuel Highway and Exit Signage



Alternative Fuel Corridor Signage  
(Section 2H.14)



General Services Signage  
(Section 2I)



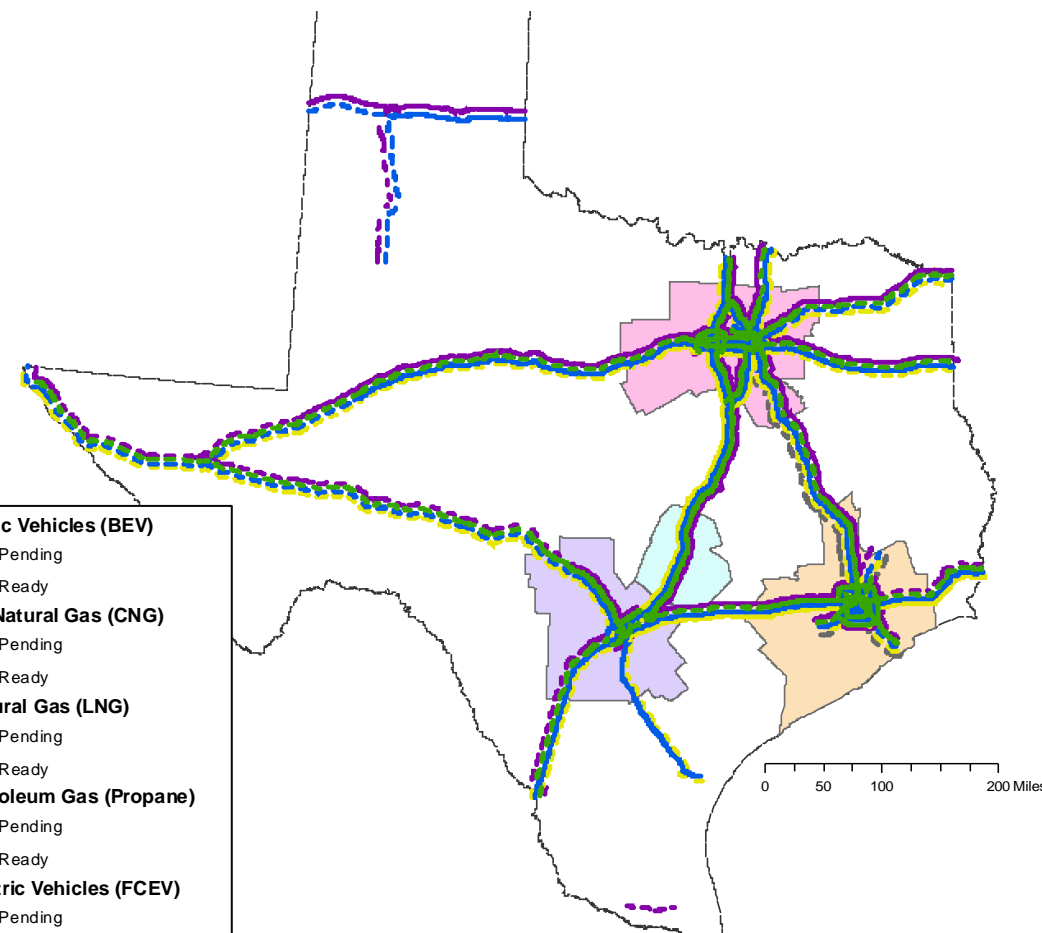
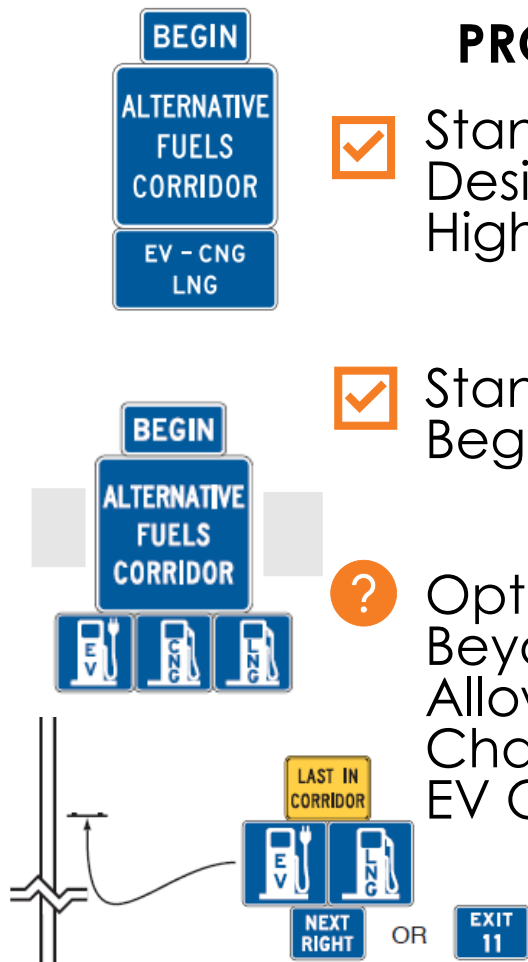
Specific Services Signage  
(Section 2J)

# Alternative Fuel Corridor Signage

(New - Section 2H.14 and Examples from Figure 2H-10)

## PROPOSED PLACEMENT

- ✔ Standard: Only Along FHWA-Designated Corridor-Ready Highways in a Sign Assembly
- ✔ Standard: One At/Near Beginning of Corridor
- ? Option: Additional Placement Beyond Major Interchanges; Allowed to Communicate Changes in Fuel Mix (e.g. End of EV Only)



<b>Battery Electric Vehicles (BEV)</b>	
--- (dashed green)	Corridor Pending
— (solid green)	Corridor Ready
<b>Compressed Natural Gas (CNG)</b>	
--- (dashed blue)	Corridor Pending
— (solid blue)	Corridor Ready
<b>Liquefied Natural Gas (LNG)</b>	
--- (dashed yellow)	Corridor Pending
— (solid yellow)	Corridor Ready
<b>Liquefied Petroleum Gas (Propane)</b>	
--- (dashed purple)	Corridor Pending
— (solid purple)	Corridor Ready
<b>Fuel Cell Electric Vehicles (FCEV)</b>	
--- (dashed grey)	Corridor Pending
<b>Clean Cities Coalitions</b>	
■ (light purple)	Alamo Area Clean Cities
■ (pink)	Dallas-Fort Worth Clean Cities
■ (orange)	Houston-Galveston Area Clean Cities
■ (light blue)	Lone Star Clean Fuels Alliance

NCTCOG March 2020

# General Services Signage

(Section 2I and Examples from Figure 2I-1)

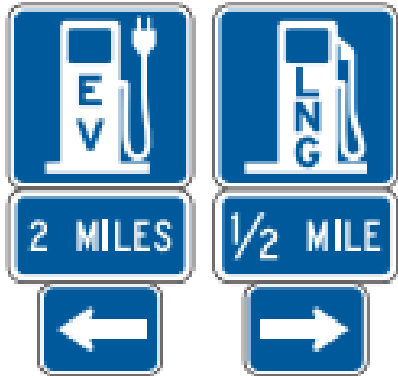
- ☑ Placed At Exits Where Posted Service is Available

- ❓ **Existing Guidance (Proposed Changes in Strike-Through)**

Gas, Diesel, ~~LP Gas~~, ~~EV Charging~~, and/or other alternative fuels if all the following are available:

1. Vehicle services such as gas, oil, and water;
2. Modern sanitary facilities and drinking water
3. Continuous operations at least 16 hours/day, 7 days/week; and
4. Public telephone

- ☑ **New Support and Option Statements Added that Acknowledge that Motorist Expectations and Criteria for Alternative Fuel Facilities May be Different**





# Specific Services Signage

(Section 2J and Examples from Figure 2I-1)

- ☑ Proposes **Standard** that a State Shall have a Statewide Policy
  
- ❓ Proposes **Guidance**: To Quality for Placement on a “GAS” Business Identification Sign, Must Offer:
  1. Gasoline, Oil, and Water;
  2. Continuous Operation at Least 16 Hours/Day, 7 Days/Week or 12 Hours/Day, 7 Days/Week Depending on Roadway Type
  3. Modern Sanitary Facilities and Drinking Water
  4. Public Phone
  
- ❓ Proposes **Standard**: Alternative Fuel Facilities that do not Offer Gasoline Shall Not be Signed Using GAS Signs
  
- ☒ Proposes **Option**: Supplemental Message for Alternative Fuel Availability May Only be Added to GAS Signs for Gasoline Facilities that Also Provide Alternative Fuels



Imagery Provided by Alabama Clean Fuels

# Texas Legislation

# Items of Note- TERP Revenue

## **SB 868 (Nichols)**

Discontinues Transfer of Portion of Title Fees in Nonattainment or Affected Counties from the Texas Mobility Fund to the TERP.

Net biennium impact to TERP: Estimated \$291.2 Million Decrease in Revenue

## **SB 1559 (Nichols)**

Discontinues Transfer of Portion of Title Fees in Nonattainment or Affected Counties from the Texas Mobility Fund to the TERP and Existing Accumulated Balance will not Transfer to the TERP fund.

Net biennium impact to TERP: Estimated \$291.2 Million Decrease in Revenue and Sweeps \$2 Billion Balance

## **HB 4472 (Landgraf)**

Lowers surcharge imposed on the retail sale, lease, or rental of new or used equipment in each county in this state from 1.5 to 1% of the sale price or the lease or rental amount; deposits fees to TERP fund that remits to Texas Mobility Fund.

Net biennium impact to TERP: Estimated \$48.2 Million Decrease in Revenue

## **HB 2140 (Thompson)**

Lowers surcharge amount imposed on the retail sale, lease, or rental of new or used equipment in each county in this state from 1.5 to 1 percent of the sale price or the lease or rental amount.

Net biennium impact to TERP: Estimated \$48.2 Million Decrease in Revenue

# Items of Note- TERP Allocations

## **HB 2468 (Thompson)/ SB 1454 (Alvarado)**

Allocates Up to \$10 million for Air Monitoring Equipment in Nonattainment Areas

Increases Allocation for AQ research to \$1 million

Increases Amount to \$5 million for Research and Other Activities Associated with Making any Necessary Demonstrations to the EPA to Account for the Impact of Foreign Emissions or an Exceptional Event

## **SB 622 (Gutierrez)**

Increases Allocation for the New Technology Implementation Grant from 3% to 6%

Decreases Allocation for the Texas Clean Fleet Program from 5% to 2%

## **SB 1804 (Johnson)**

Allocates Up to 2% for a Purchase Incentive Program for Certain Batteries and New Electrically-Powered Two-Stroke and Four-Stroke Non-Road Engines; Incentives May not Exceed 80% of the Cost of Eligible Purchases

## **HB 4384 (Hefner)**

Replaces the TERP LDPLIP with the Gas Flaring and Venting Reduction Program

## **SB 1303 (Blanco)**

Reserves 75% of the Funding in the Texas Clean School Bus Program for Electric School Bus Projects; Creates Requirements on Utility Services

# Items of Note- Other EV Items

## **[HB 2221- Electric Transportation Act \(Canales\)](#) – Similar Elements in [HB 3637 \(Goodwin\)](#)**

Establishes Texas Transportation Electrification Council; Requires Report on EV Charging Infrastructure

Requires TCEQ to Study Battery Recycling

Differentiates Electricity Providers that Provide EV Charging as Different from an Electric Utility or Retail Electric Provider

Modifies TERP LDPLIP to be Point of Sale and Adds \$4,000 Incentive for Pickups and SUVs

## **[HB 3637 \(Goodwin\)](#)**

Establishes Texas Transportation Electrification Council; Requires Reports on EV Charging Infrastructure

Requires TCEQ to Study Battery Recycling

Modifies TERP LDPLIP to be Point of Sale and Adds \$4,000 Incentive for Pickups and SUVs

## **[SB 1202 \(Hancock\)](#)**

Differentiates Electricity Providers that Provides EV Charging as Different than an Electric Utility or Retail Electric Provider

## **[HB 3963 \(King\)](#)**

Allows State Agencies to Enter Into Agreements Authorizing a Private Company to Place EV Charging Equipment at State Parks and Rest Areas

## **[HB 4379 \(Harris\)](#)**

Enables an EV Manufacturer/Distributor to Buy, Sell, or Exchange Motor Vehicles

## **[SB 839 \(Schwertner\)](#)**

Sets Standards for Regulation of EV Charging Equipment by Texas Department of Licensing and Regulation

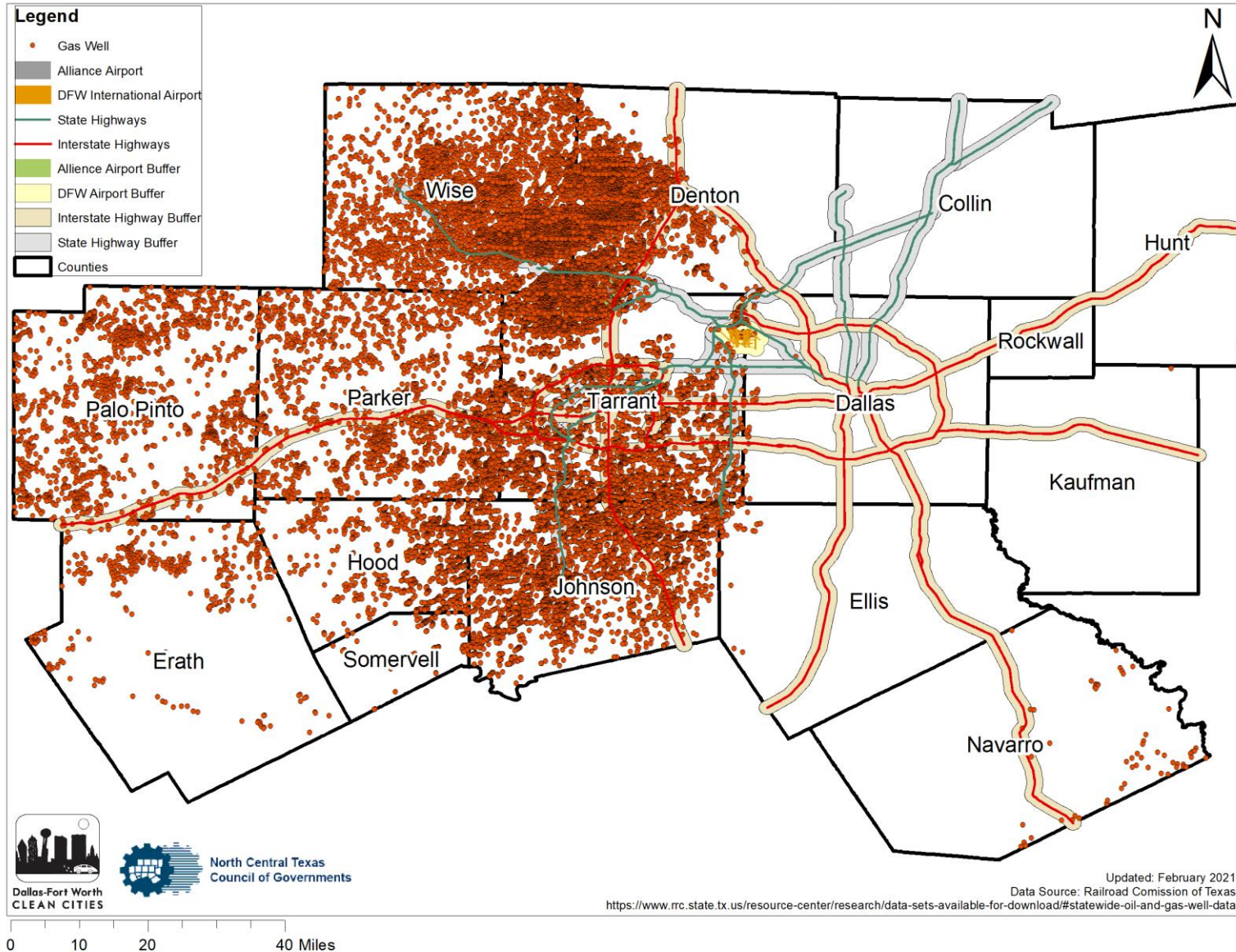
LDPLIP: Light-Duty Purchase or Lease Incentive Program

# Items of Note- EV Registration Fees

Bill (Author)	Impact	Light-Duty	Medium- and Heavy-Duty
<a href="#">HB 2986</a> (Martinez)	Creates Additional \$200 Fee for EV registration; \$300 if GVW is More than 10,000 pounds	\$200 if GVW up to 10,000 pounds	\$300 if GVW is More than 10,000 pounds
<a href="#">SB 1728</a> (Schwertner   Nichols   Powell)	Creates additional Registration Fee of \$200 for EVs up to 6,000 pounds and \$250 for EVs 6,000-10,000 pounds	EV: \$200 if GVW up to 6,000 pounds Hybrid: \$40 if GVW up to 6,000 pounds	EV: \$250 if GVW is between 6,000-10,000 pounds Hybrid: \$50 if BVW is between 6,000-10,000 pounds
<a href="#">SB 1711</a> (Springer)	Creates additional registration fee of \$225 for EVs and \$125 for hybrids	EV: \$225 Hybrids: \$125	
<a href="#">HB 427</a> (King)	Creates additional registration fee of \$200 for EVs and \$100 for hybrids	EV: \$200 Hybrids: \$100	
<a href="#">HB 3797</a> (Israel)/ <a href="#">SB1720</a> (Eckhardt)	Creates additional registration fee of \$100 for EVs and \$80 for hybrids	EV: \$100 Hybrids: \$80	

# Items of Note

# Gas Wells with Select Roadways



Interstate/Highway	Number of wells within a 1-mile buffer
IH-20	513
IH-30	271
IH-35E	49
IH-35W	806
IH-35	48
IH-45	8
Loop 635	36
Loop 820	369
State Highway 114	679
State Highway 121	543
State Highway 170	96
Alliance Airport	137
DFW Airport	44



# Department of Energy (DOE) Webinar

## [DOE's Request for Information \(RFI\) in Support of Medium- and Heavy-Duty Truck Research & Development Key Findings Webinar](#) – Presentation and Recording Now Available

- Webinar held in Dec. 2020 to discuss key findings from the [RFI](#) regarding the Medium- and Heavy-Duty Truck Research and Development Activities & SuperTruck Initiative.
- Gathered Input from Industry, Academia, Research Laboratories, and Government Agencies on Issues related to Medium- and Heavy-Duty Freight Trucking.
- RFI and discussions will help identify gaps and barriers to commercializing new technologies and help inform DOE's R&D and competitive funding strategy into the next ten years.

# Items of Note

[Department of Energy \(DOE\) Office of Energy Efficiency and Renewable Energy \(EERE\)](#)

Released 3 Notices of Intent; Funding Opportunities Expected within ~1 Month:

<b><u>SuperTruck3</u></b>	<b><u>Low Greenhouse Gas Vehicle Technologies Research, Development, and Deployment</u></b>	<b><u>Bioenergy Technologies Office Scale-Up and Conversion</u></b>
<p>Projects to develop medium- and heavy-duty vehicles with higher efficiency and lower emissions such as:</p> <ul style="list-style-type: none"><li>• Powertrain electrification (including hydrogen and fuel cell, batteries, and electric drive systems)</li><li>• Refueling or charging alternatives</li><li>• Biofuels and related technology</li><li>• Vehicle light-weighting</li><li>• Systems optimization</li></ul>	<p>Supports projects to increase efficiency and reduce emissions through:</p> <ul style="list-style-type: none"><li>• EV charging community partner projects and workplace charging</li><li>• Reduced cost of DC fast charging</li><li>• Increased efficiency and electrification of off-road vehicles</li><li>• Advanced engines and fuels that reduce emissions such as natural gas and propane</li></ul>	<p>Will fund projects to enable innovation of low carbon biofuels such as:</p> <ul style="list-style-type: none"><li>• Scale-up of biotechnologies</li><li>• Affordable, clean cellulosic sugars for high yield conversion</li><li>• Separations to enable biomass conversion</li><li>• Residential wood heaters</li><li>• Renewable natural gas</li></ul>

# Items of Note

## [NACFE High-Potential Regions for Electric Truck Deployments Report:](#)

Texas Triangle is behind California as one of the highest potential regions for BEV truck deployment but an extra push in the form of policies is needed.

- Did Not Consider TERP as Incentive Program (Only VW Funding)
- Considered Income Tax Credits for Incentives- Texas Does Not Have Income Tax
- Did Consider Utility Funding as Funding Availability
  - Texas operates differently and utilities are restricted from funding activities that increase grid demand.
  - Ability to work with utilities is a factor fleets consider on where to deploy EV trucks.
- Considered Policies Such as Advanced Clean Truck Rule and [NESCAUM Multi-State Medium- and Heavy-Duty Zero Emission Vehicle MOU](#) Supporting Truck Electrification

# Items of Note – Federal Actions

## Growing Renewable Energy and Efficiency Now (GREEN) ACT – **Reintroduced by US House of Representatives Committee on Ways and Means**

- Supports widespread adoption of zero-emission cars, vans, and buses through tax credits for purchasing vehicles and supporting deployment of publicly accessible EV charging
- Expands investment tax credit to provides an additional uncapped 20% tax credit (latest version includes hydrogen in addition to EV charging)

## **Webinars**

[June 9 - Opportunities for Renewable Hydrogen Production Using RNG \(BayoTech\)](#)

# ZEV Incentives



## Volkswagen Environmental Mitigation Program 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**

## North Texas Emissions Reduction Project & Clean Fleets North Texas

**Funds:** Up to 45% Funding to Replace Diesel Trucks with Electric Trucks  
*\*Includes charging pedestal and installation cost, one per purchased vehicle*

**Deadline:** April 9, 2021

## TERP Government Alternative Fuel Fleet (GAFF) Program **Coming Soon!**

**Funds:** Up to \$70,000 for the Purchase or Lease of Eligible Vehicles

**Webinar:** April 21, 2021 at 1 PM CT; Email [terp@tceq.texas.gov](mailto:terp@tceq.texas.gov) to RSVP

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

# CONTACT

## **Lori Clark**

Program Manager and DFW  
Clean Cities Coordinator  
NCTCOG/DFWCC  
[lclark@nctcog.org](mailto:lclark@nctcog.org)  
817-695-9232

## **Soria Adibi**

Senior Transportation/Air  
Quality Planner  
NCTCOG/DFWCC  
[sadibi@nctcog.org](mailto:sadibi@nctcog.org)

## **Bethany Ross**

Transportation/Air Quality  
Planner  
NCTCOG/DFWCC  
[bross@nctcog.org](mailto:bross@nctcog.org)  
817-704-5663

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



North Central Texas  
Council of Governments



Dallas-Fort Worth  
CLEAN CITIES