

Interstate Highway 45 ZEV Corridor: Policy/Incentives

Agenda:

1. Welcome/Housekeeping
2. Review of Subgroup Role/Objectives
3. Successful Incentive Programs
4. Discussion and Closing Remarks

November 12, 2020

11:00 am – 12:00 pm

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

Meeting ID: 893 2949 3463

Please mute yourself when you are not speaking

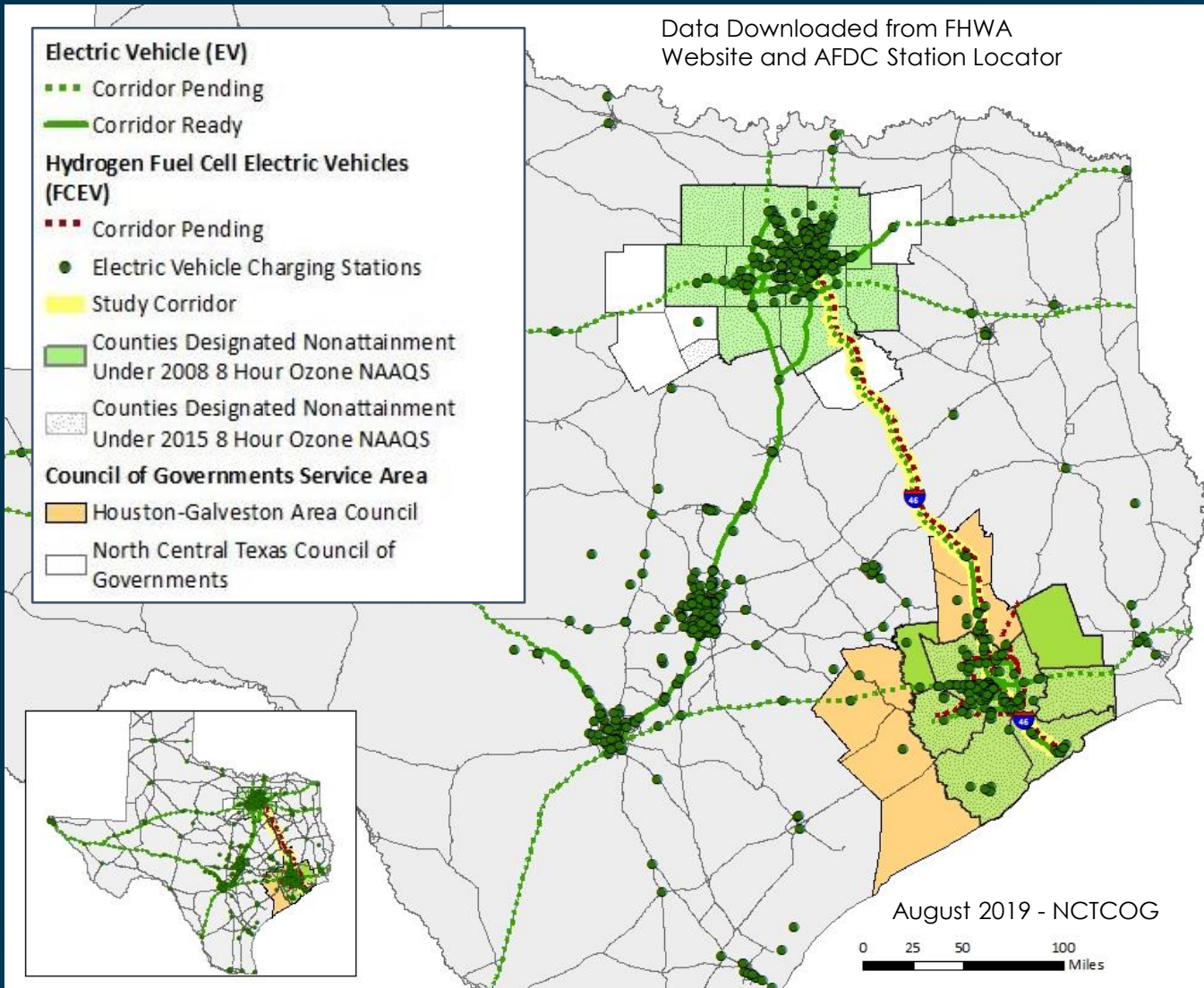


**Dallas-Fort Worth
CLEAN CITIES**



**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

What we Have Now/Work in Progress

Developing Surveys

Fueling Providers – Sent to Stakeholders for review
Fleets

Origin/Destination Data

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

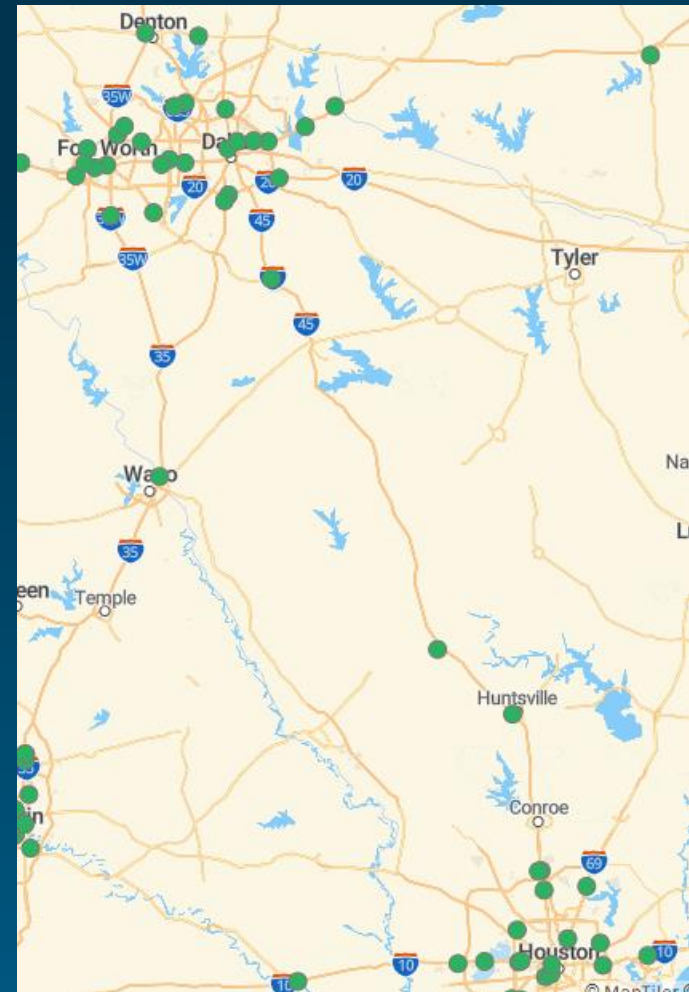
Data from 496 Trucks at New Waverly Weigh Station
~46% Destined for DFW as Final Destination
~23% Passing Through DFW, not Final Destination
Remaining ~31% Not Passing Through DFW

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





I-45 ZEV Corridor Workgroup Medium- and Heavy-Duty Incentive Programs

Alycia Gilde

Senior Director, Fuels and Infrastructure

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CALSTART: CHANGING TRANSPORTATION FOR GOOD





WHAT IS A VOUCHER INCENTIVE PROGRAM?

- Mechanism to accelerate deployment of cleaner vehicles
 - Reduces upfront costs to fleets
 - Provides immediate reimbursement to vendors
 - Brings automakers into new markets
 - Can be supported from many funding sources
 - Currently accelerating markets for clean medium- and heavy-duty vehicles





THE VOUCHER STRUCTURE ENABLES FLEXIBLE PROGRAM DESIGNS



- Voucher programs can be tailored to:
 - Support various technologies/ fuels/vehicle classes
 - Conform to requirements of funding source(s)
 - Set funding caps by category
 - Emphasize environmental justice

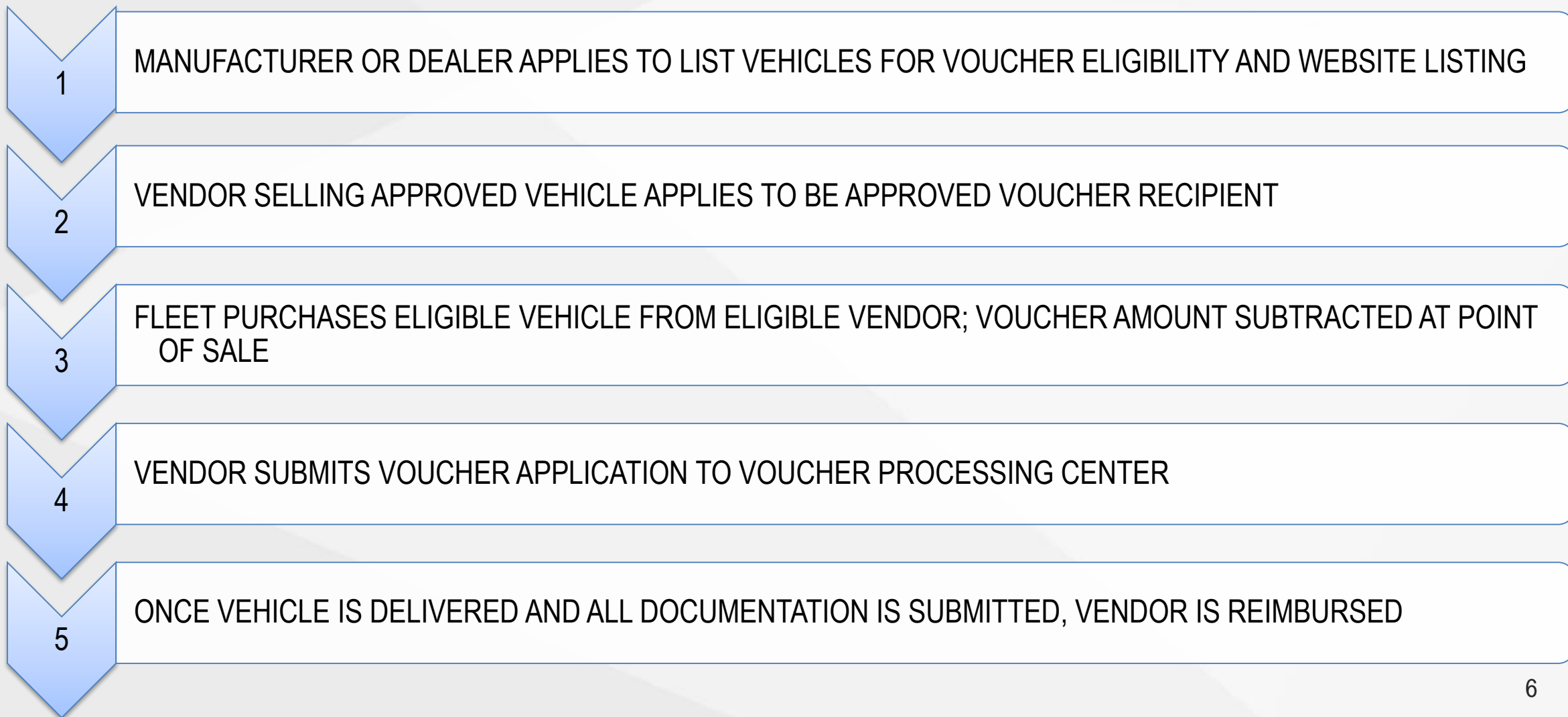


FUNDING SOURCES

- Potential funding sources
 - Federal: CMAQ, DERA
 - Volkswagen Settlement Appendix D (Mitigation Trust) funding
 - *State or Regional Cap-and-Trade (California AB32, RGGI, TCI)*
- Can be stackable with other incentive funds
 - E.g., HVIP + Carl Moyer in CA, CMAQ + VW in NY
- Funding should ideally be:
 - Reliable
 - Long-term
 - Clear about objectives



HOW DOES A VIP WORK?



About HVIP

The California Air Resources Board (CARB), in partnership with CALSTART, launched the **Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)** in 2009 to accelerate the adoption of cleaner, more-efficient trucks and buses.



Over 4,000 HVIP-funded vehicles are on California roads today.



A Streamlined Approach to Incentives

First-come, First Served Vouchers

Immediate discount at sale, live ticker, no application period

Dealers Learn Voucher System

Fewer complications for fleets

Set Aside Funding for Each Voucher

Price certainty, No scrappage

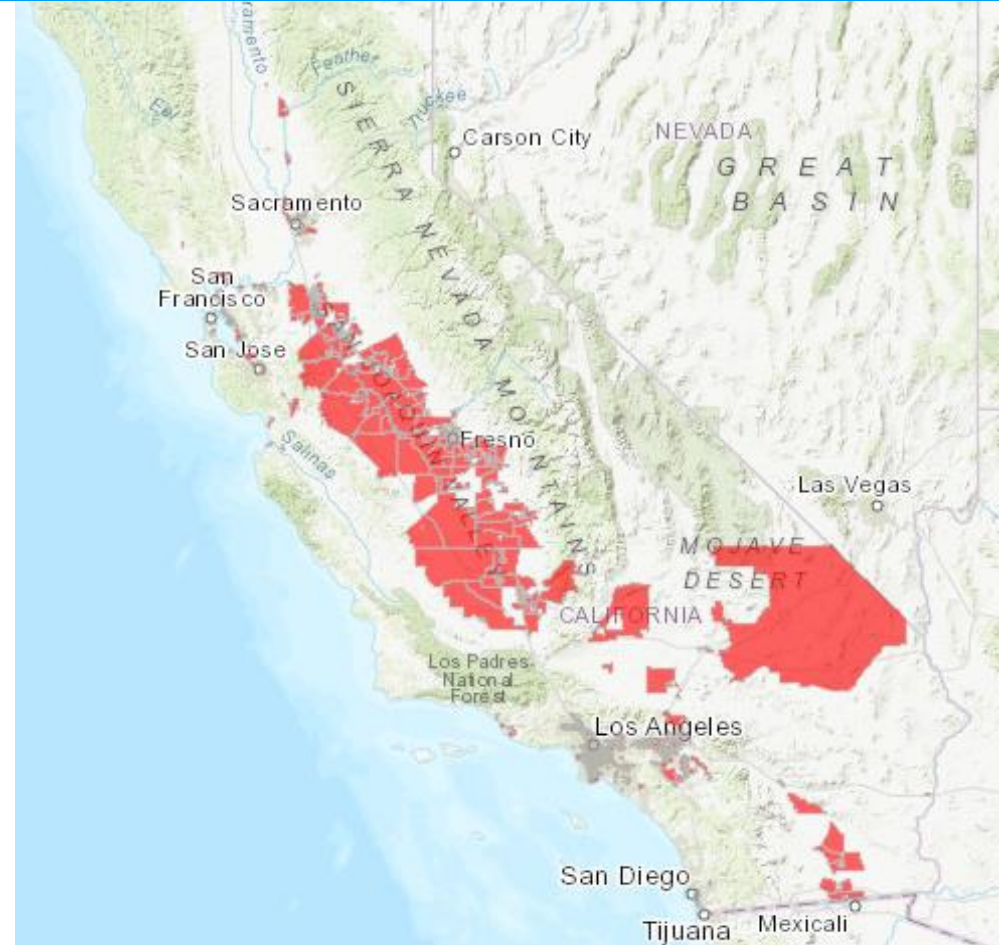
Streamlined and User-Friendly Voucher Process

For purchasers and lessees



Benefits for Disadvantaged Communities

- Increased incentives for vehicles domiciled in communities that are overburdened by the effects of air pollution due to socioeconomic and geographic factors
- 57% of vouchers benefit these communities



Tools to Educate and Connect

- Upgraded Voucher Processing Center; Salesforce-enabled insights into the complete voucher journey
- FundingFinderTool.org: Navigating MHD vehicle and infrastructure funding opportunities (separate presentation today)
- Total Cost of Ownership Calculator
- Infrastructure Planning Tools and Heatmap

August 2020

★ CALIFORNIA ★
CORE

Clean Off-Road Equipment Voucher Incentive Project



Moving Freight Forward



Voucher Amounts

Equipment descriptions are available at californiacore.org.

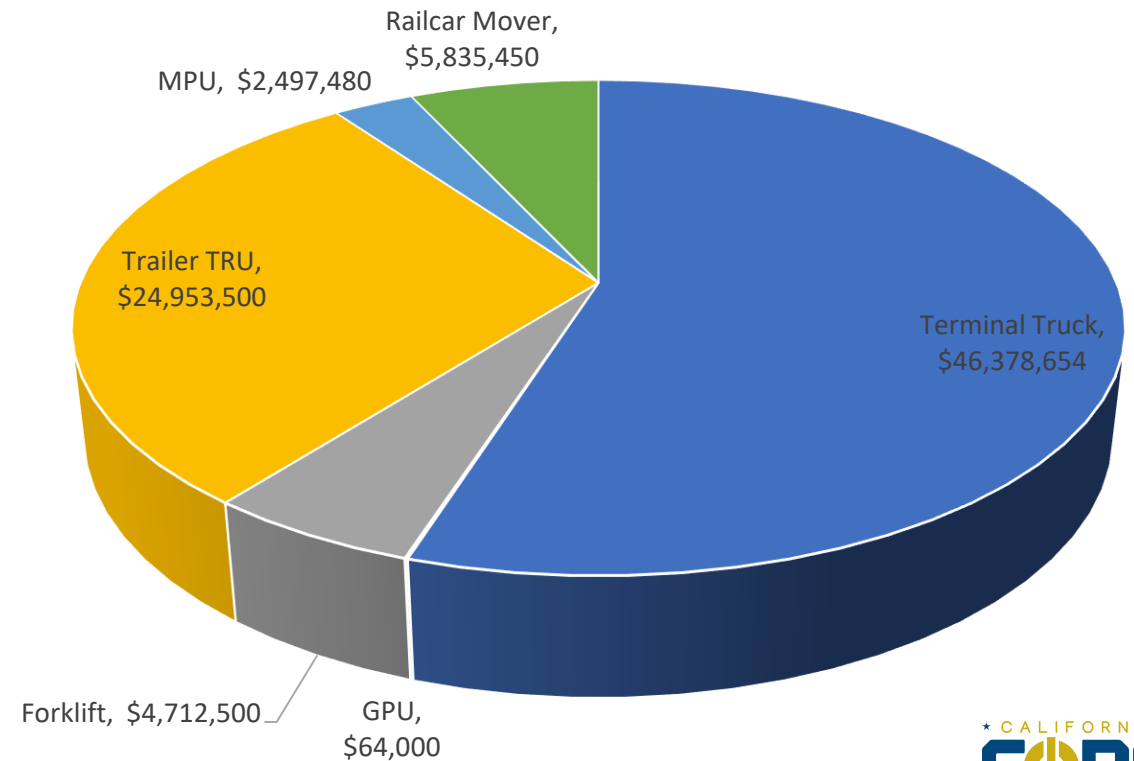
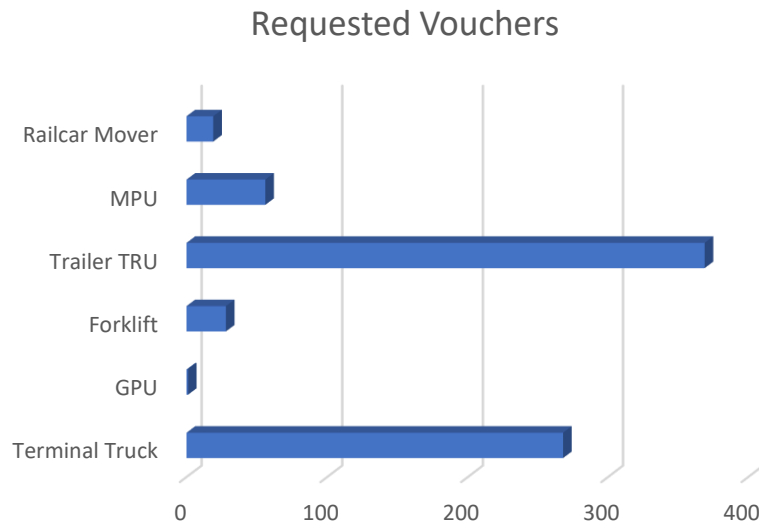


Equipment	Base Voucher Amounts
On- and Off-Road Terminal Tractor	\$150,000 \$100,000 Additional \$400 per kWh over 160 kWh up to an additional \$50,000 Up to \$200,000
Truck and Trailer Mounted TRU	Up to \$50,000 Up to \$65,000
Large Forklift	Up to \$15,000 Up to \$20,000 Up to \$90,000 Up to \$200,000
Container Handling Equipment (New or Conversion)	Up to \$500,000
Airport Cargo Loader (New or Conversion)	Up to \$50,000 Up to \$100,000
Wide-body Aircraft Tug (New or Conversion)	Up to \$80,000 Up to \$200,000
Railcar Mover	Up to \$225,000 Up to \$500,000
Mobile Power Unit (MPU) and Ground Power Unit (GPU)	\$400/kWh up to \$300,000 total Up to \$300,000
Mobile Shore Power Cable Management System	Up to \$500,000

Funding Status: **-\$46,573,877**

(As of 08.04.2020)

On August 4, 2020, the California Air Resources Board closed the voucher-request process for the Clean Off-Road Equipment (CORE) Voucher Incentive Project. The entire \$44 million dollars has been requested at this time. Voucher requests that are on the contingency list may be funded if funding becomes available.





Truck Voucher Incentive Program



drive clean
CHICAGO

Technology	# Fleets	# Vehicles	Voucher Funds
DPF	9	124	\$2,452,304.80
EV	18	65	\$5,673,093.00
CNG	4	71	\$3,033,524.00
CNG Conversion	4	15	\$334,272.00
Hybrid	22	83	\$1,198,179.20
Hybrid Conversion	3	236	\$1,830,776.00
Total	60	594	\$14,522,149.00

Technology	# Fleets	# Vehicles	Voucher Funds
EV-Truck	18	49	\$5,846,717.00
Hybrid-Truck	37	239	\$5,430,160.00
Total Truck	55	288	\$11,276,877.00
EV-Taxi	4	85	\$855,440.00
CNG-Taxi	1	2	\$16,000.00
Total Taxi	5	87	\$871,440.00

Frito Lay Zero- and Near-Zero Emission Freight Facility Project





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

LIGHTSproject.com



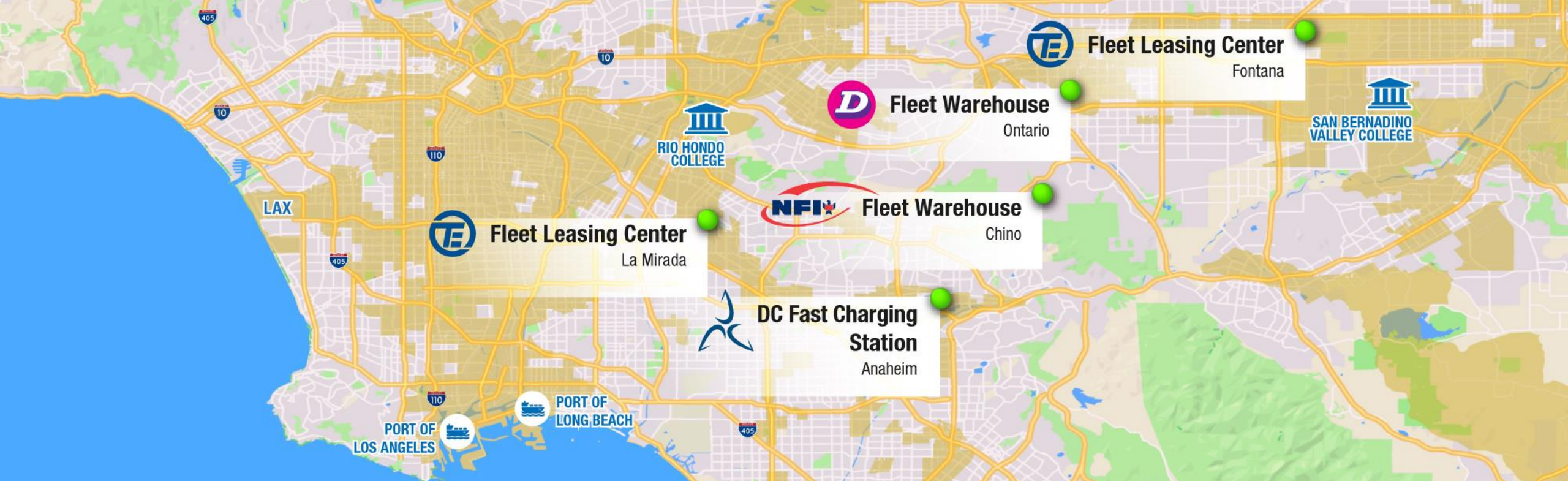
Advanced Vehicle Technologies



Charging Infrastructure



Sales & Service Network



23 Battery Electric Heavy-Duty Trucks



29 Battery Electric Equipment



58 Public & Private Chargers



2 Electric Truck After Market Service Centers



2 Colleges Designing Electric Truck Maintenance Programs



1.8 Million KWH Solar Energy Generation



2 Ports Providing Infrastructure Planning



Disadvantaged Communities Disproportionately Exposed to Unhealthy Air

Project Partners



Volvo LIGHTS is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy and improving public health and the environment —particularly in disadvantaged communities. www.caclimateinvestments.ca.gov



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Alycia Gilde

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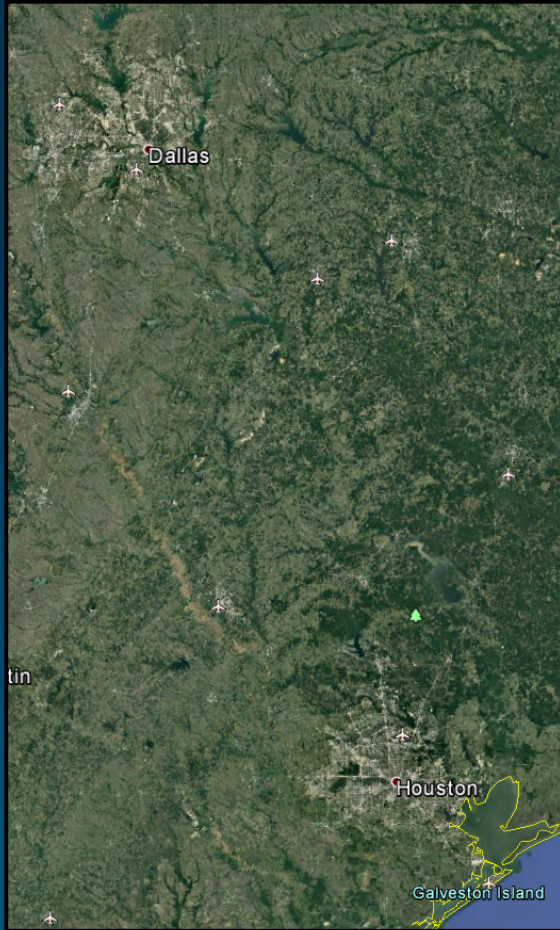
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Policy/Incentives

Discussion

Key Takeaways from Last Month



Group believes there should be an education effort with the Texas Legislature

Consensus that full-scale H2 Retail Stations can be approximately \$2-\$3 million each

Artificial \$ amount caps on H2 Stations are problematic and a % funding level with no cap is preferred

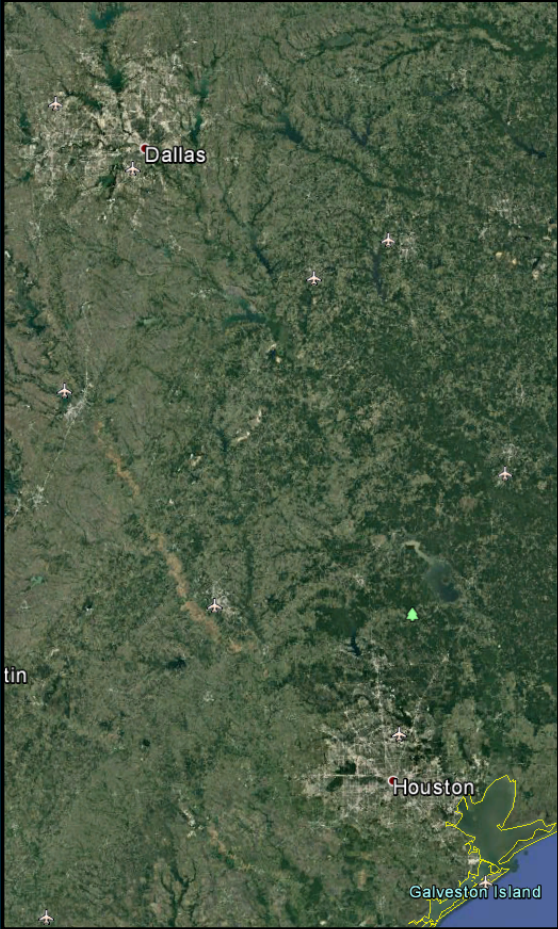
The TERP Alternative Fueling Facilities Program may not see an increase in funding under the TERP Trust fund due to current statutory appropriations language

Capacity payments under LCFS are key to economics

Matching funds requirements are challenging on federal programs - state incentives sometimes help but timing not aligned

Discussion

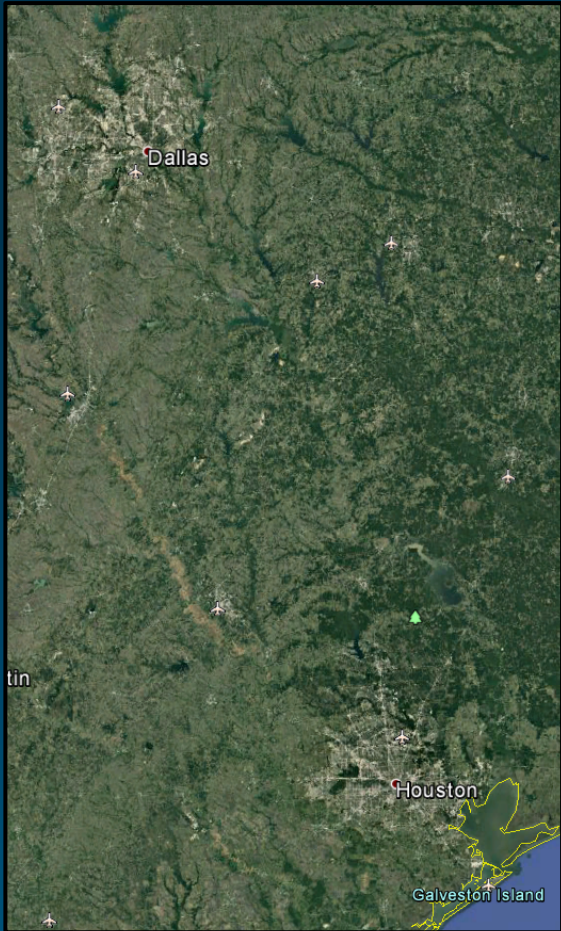
Texas Incentives



Grant Program	Eligibility Excludes EVSE	Requires Infeasible Buy America Compliance	Requires Scrappage of Old Diesel	Funding Level Inadequate
CMAQ		X		
EPA National Clean Diesel Funding Assistance Program			X	
Clean Fleets North Texas	X		X	
TERP Emissions Reduction Incentive Grants and Rebate Grants	X		X	X
TERP Texas Clean Fleet Program	X		X	
TxVEMP			X	
EPA Diesel Emissions Reduction Act (DERA)	X		X	
TERP Alternative Fueling Facilities Program				X (hydrogen)
North Texas Emissions Reduction Project			X	

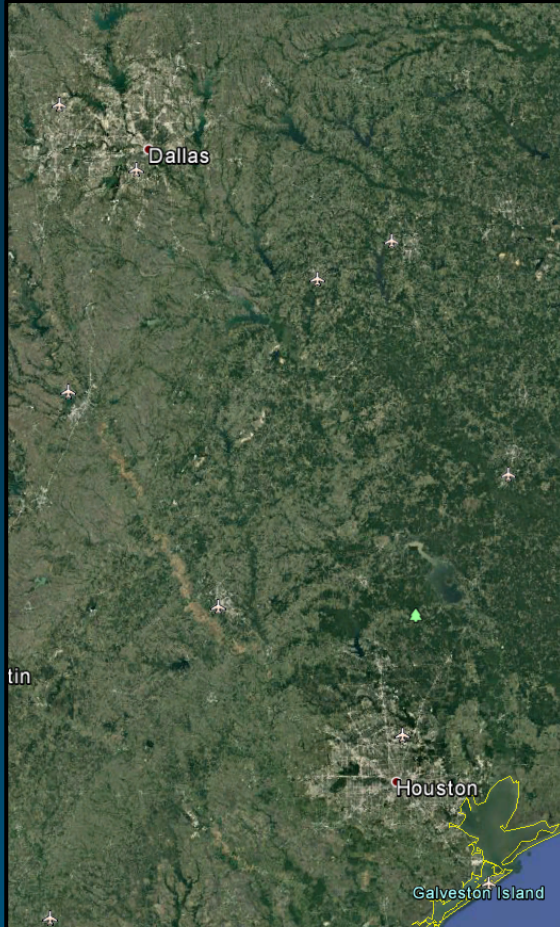
Discussion

Texas Bills to watch



Energy – Alt Fuels	Utilities – Electric	Vehicles & Traffic – Vehicle Registration
<p><u>HB 286</u> Relating to the eligibility for grants for alternative fueling facilities.</p>	<p><u>SB 170</u> Relating to a study regarding the feasibility of implementing certain renewable energy standards.</p>	<p><u>HB 427</u> Relating to imposing an additional fee for the registration of electric and hybrid vehicles.</p>

Discussion



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)

What are the most valuable Tax Incentive Strategies? How can they be applied in a State with no state income tax?

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

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**Dallas-Fort Worth
CLEAN CITIES**

www.dfwcleancities.org/altfuelcorridors

www.nctcog.org/IH45-ZEV

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