

Interstate Highway 45 ZEV Corridor: Infrastructure Development

Agenda:

1. Welcome/Housekeeping
2. Review of Subgroup Role/Objectives
3. Idaho National Lab Project Highlights
4. Discussion and Closing Remarks

December 8, 2020

1:30 pm – 3:00 pm

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

Meeting ID: 871 2822 6957

Please mute yourself when you are not speaking

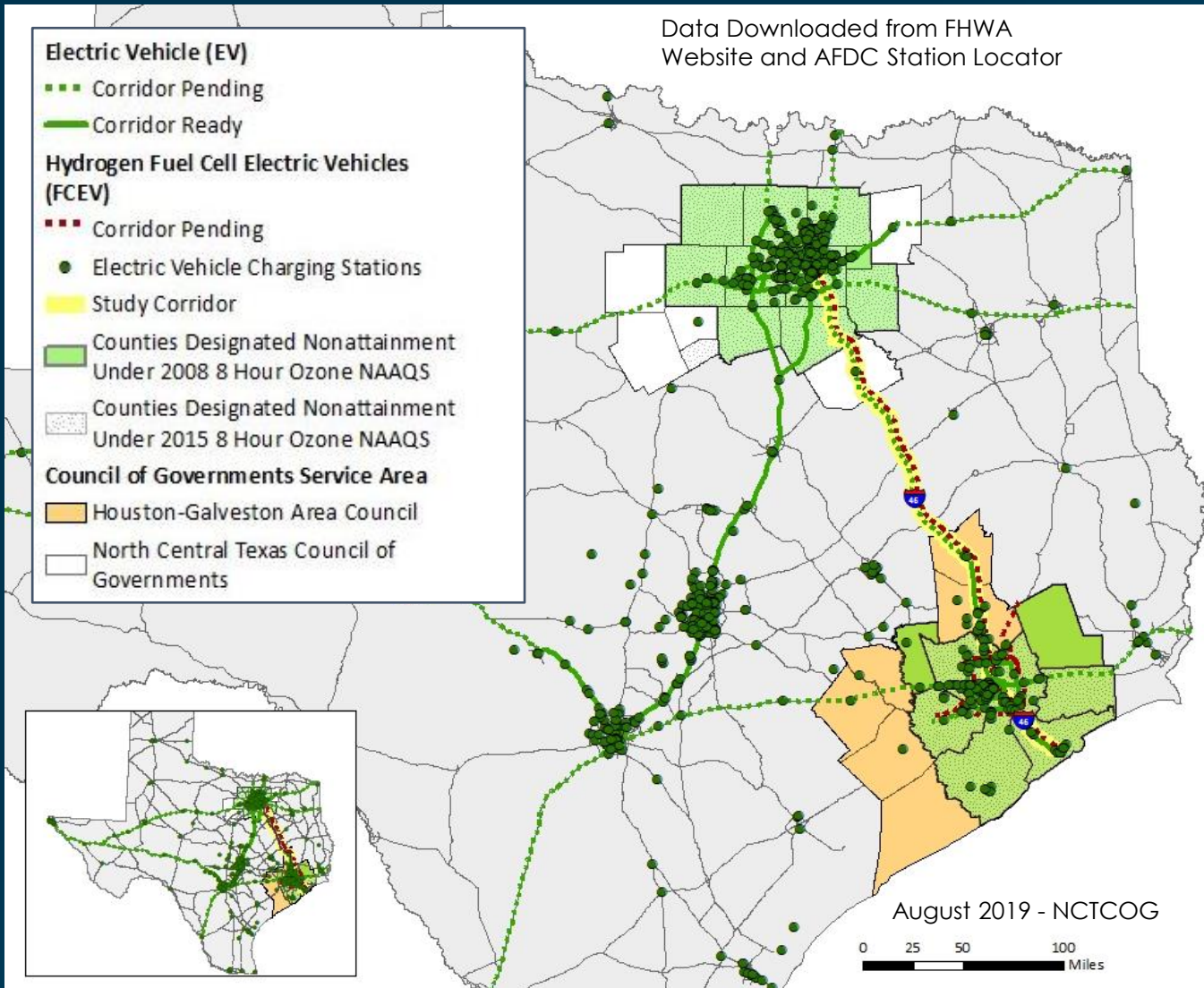


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IH-45 ZEV Corridor Plan Goals



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
Fleets

Origin/Destination Data

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

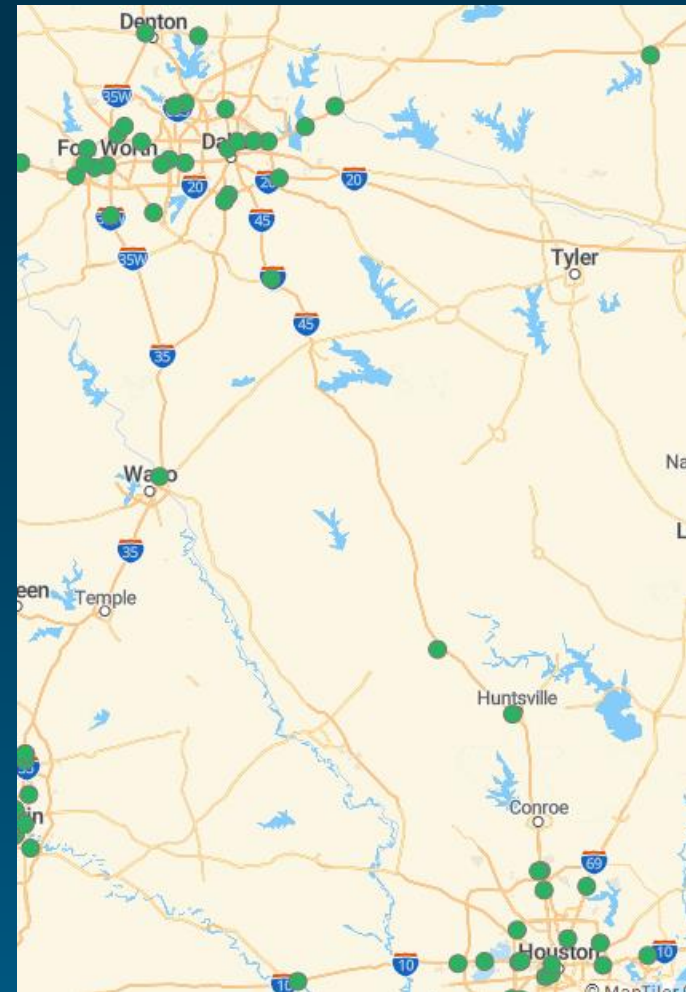
Data from 496 Trucks at New Waverly Weigh Station
~46% Destined for DFW as Final Destination
~23% Passing Through DFW, not Final Destination
Remaining ~31% Not Passing Through DFW

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

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

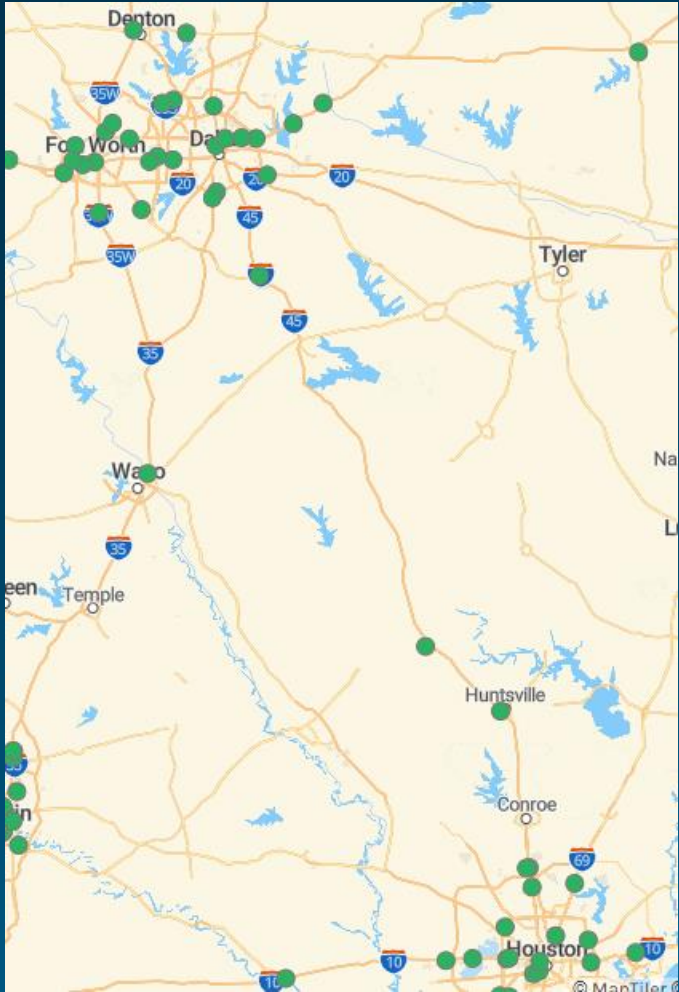
Total Truck Volume -> Trucks Suitable for BEV or FCEV
Transition based on Weight Class/Type and
Origin/Destination

Suitable Trucks -> Fuel Consumption



What we Have Now/Work in Progress

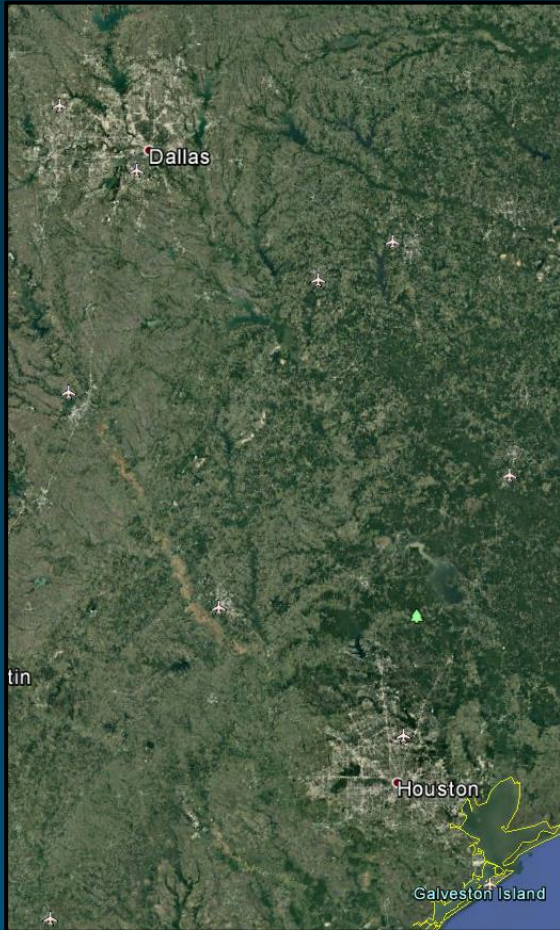
Total Truck Volumes Along Corridor



FHWA-Scheme F Classification	Corresponding EPA GVWR Classes for Trucks Based on TxDOT Weigh-in-Motion (WIM) Data	Total Traffic Volumes (2-WAY)
Class 1 - Motorcycles		406
Class 2 - Passenger Cars		351,493
Class 3 - Four Tire, Single Unit		116,082
Class 4 - Buses		1,652
Class 5 - Two Axle, Six Tire Single Unit	Class 3 - 10,001 - 14,000 lbs	15,615
Class 6 - Three Axle, Single Unit	Class 7 - 26,001 - 33,000 lbs	6,500
Class 7 - Four or More Axle, Single Unit	Class 7 - 26,001 - 33,000 lbs	236
Class 8 - Four or Less Axle, Single Trailer	Class 8a - 33,001 - 60,000 lbs	2,426
Class 9 - 5-Axle Tractor Semitrailer	Class 8a - 33,001 - 60,000 lbs	72,486
Class 10 - Six or More Axle, Single Trailer	Class 8b - >60,001 lbs	891
Class 11 - Five or Less Axle, Multi Trailer	Class 8b - >60,001 lbs	1,884
Class 12 - Six Axle, Multi-Trailer	Class 8b - >60,001 lbs	486
Class 13 - Seven or More Axle, Multi-Trailer	Class 8b - >60,001 lbs	3

Discussion

Key Takeaways from Last Month



Key Questions on deployment:

How many trucks?

How many dispensers?

How many stations?

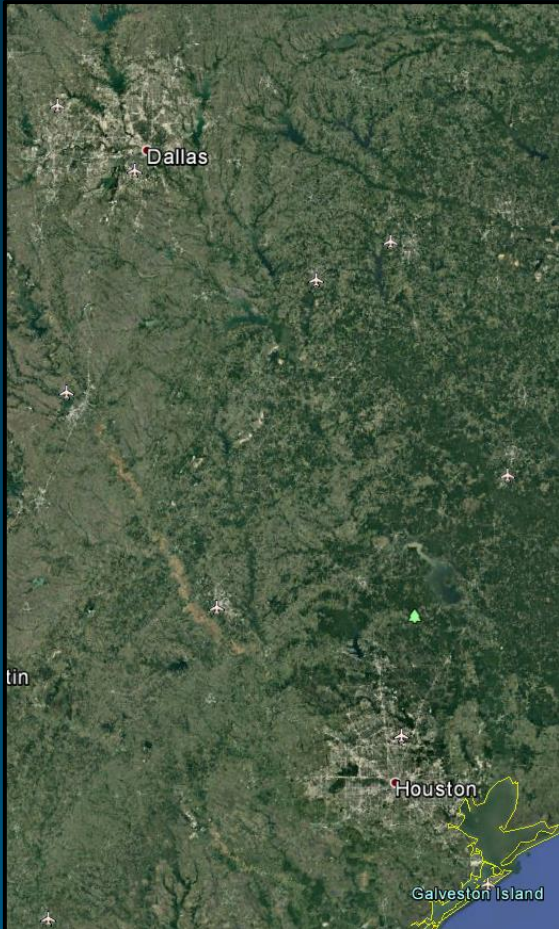
What size initial pilot makes sense?

What makes it feasible?

What is the size of the location?

	Minimum for Initial Pilots	Early Adopter Build-Out/ Mature Pilot Project Phase	Target for Full Deployment
H2 Stations	1 Hydrogen station in each metro area	Houston station, 2 DFW Stations + one in middle	Houston Cluster, DFW Cluster + One/Two in Middle
EV Stations	1 HD BEV station in each metro area + one in center area of corridor	Houston station, 2 DFW stations + two/three in middle	Full Cluster + one or two in the middle
Vehicle Deployment Size	10 Vehicles	50 Vehicles	>50 Vehicles

Discussion: Path to Hydrogen Buildout



What are the driving cost factors?

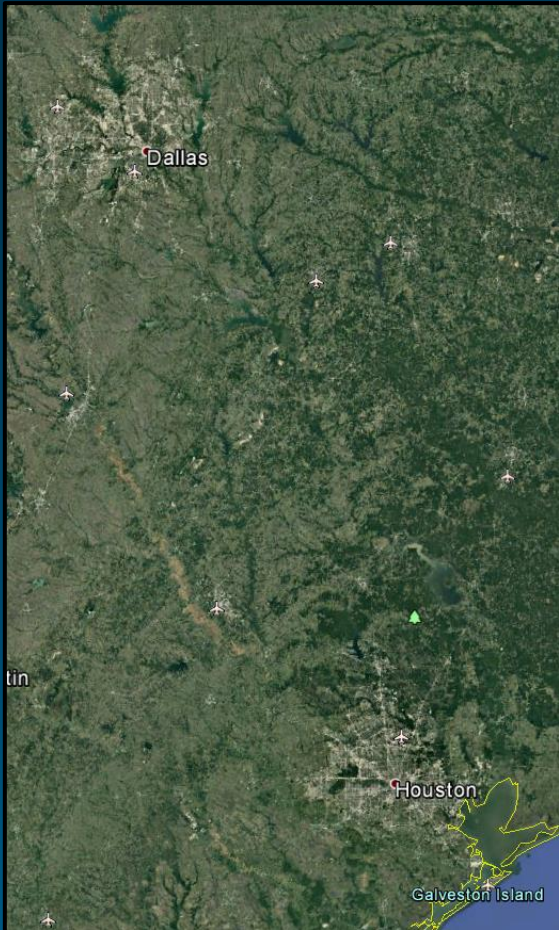
- Land
- Installation
- Hardware/Equipment
- Utility Needs

What information do we need from the utility perspective?

What is the critical minimum of trucks needed to support a station? (or, minimum fuel throughput?)

Discussion:

Ideal Siting/ Location Selection



What are the most critical factors in a location for a driver to stop to fuel?

Location
Amenities

Are there special autonomous truck considerations that are impactful?

Should we focus on co-locating hydrogen refueling stations with existing sites (truck stops)?

If a greenfield site, how much space is needed?

For greenfields, where can we get property ownership data?

Counties
TxDOT

Who is the best strategist here?

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

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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www.dfwcleancities.org/altfuelcorridors

www.nctcog.org/IH45-ZEV

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