HOUSTON-GALVESTON CLEAN CITIES COALITION Q1 2025 STAKEHOLDERS MEETING

March 25, 2025

Housekeeping

1. We are recording. The recording will be published on our website: Houston-Cleancities.org

2. PLEASE drop your name in the chat to help us with attendance

Thank You!

Q1 Stakeholders Meeting

Agenda

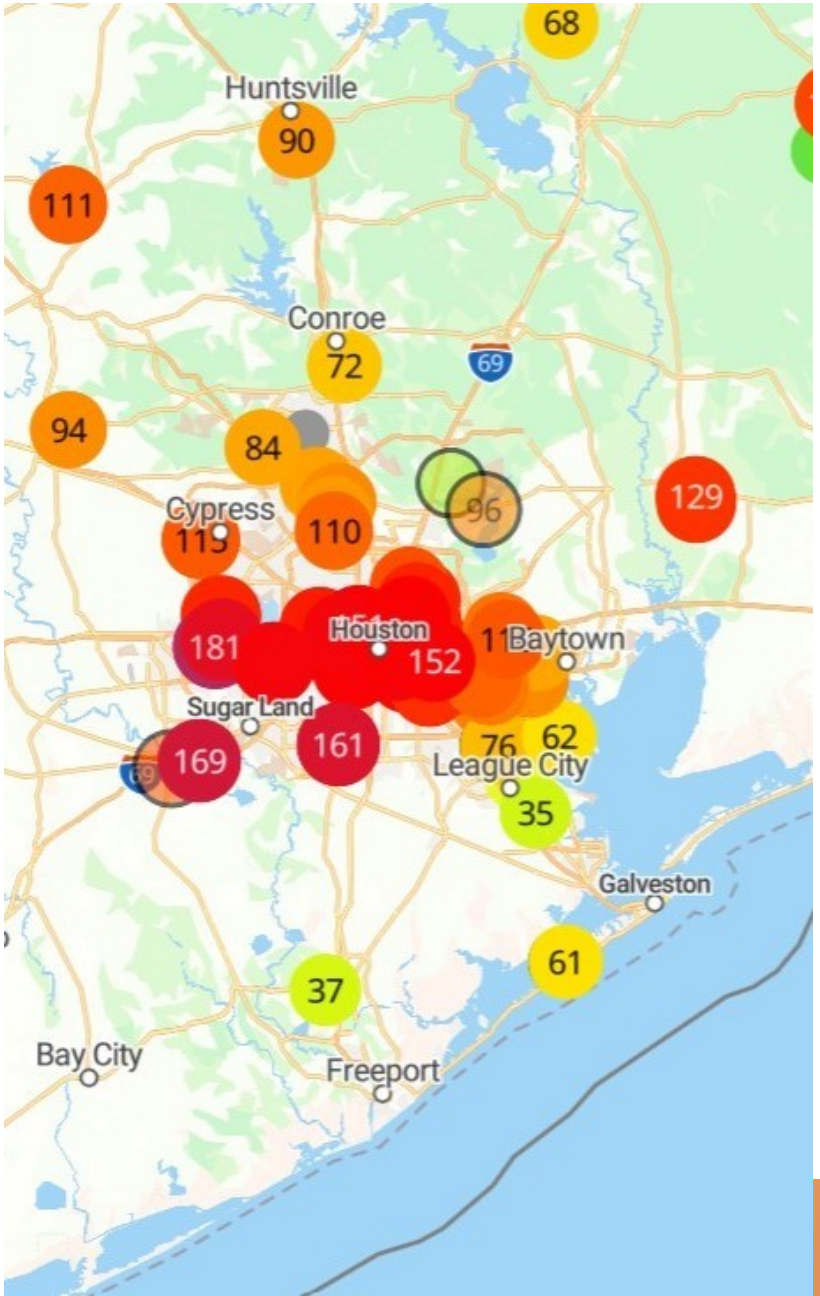
1. Introductions – Vincent Sanders, METRO / HGCCC Chair
2. Presentations
    1. EV Migration Plan – Raymond Burns Jr. – Harris County Precinct 2
    2. An Overview of the EV Dashboard – Vincent Polignano – H-GAC
    3. The Annual Report – J. Ben Finley - HGCCC
3. Updates on Advisory Board and Subcommittees – J. Ben Finley, *HGCCC*
    1. Grants
    2. Stakeholder Meetings
    3. Strategic Plan
4. Current Grant Funding Announcements and Updates – J. Ben Finley
5. Announcements:
    1. Hermann Total Distribution Services Open House (April 17)
    2. TxSWANA Annual Conference (April 20)
    3. Advanced Clean Transportation Expo (April 28)
    4. TxSWNA State Rodeo (June 6)
6. Adjourn meeting

EV MIGRATION PLAN

Raymond Burns Jr., Harris County Precinct 2

EV MIGRATION PLAN

THE WHY



- **Urgent Need for Clean Air and Longer Lives in Harris County Precinct 2**
  With the lowest air quality and life expectancy, immediate action is essential.

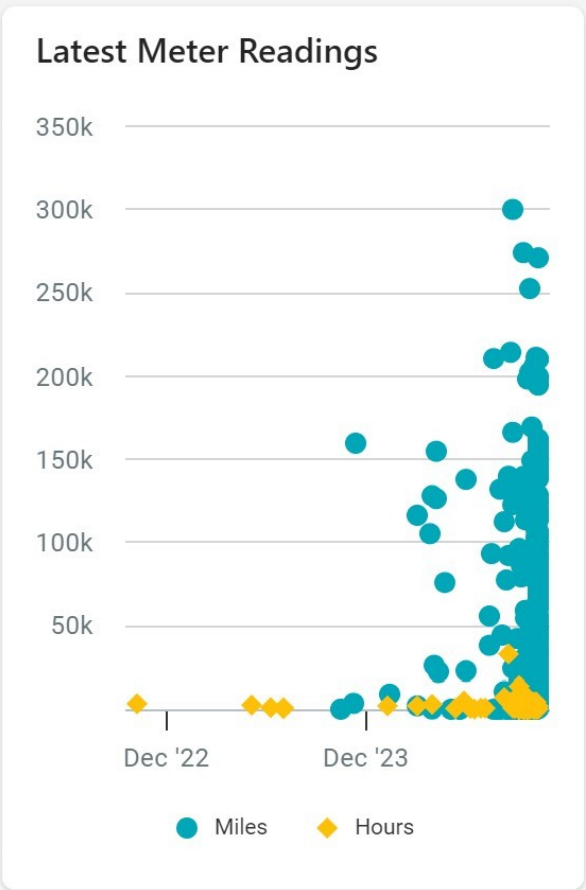
- **Top Priority For Disaster Response and Vehicle Availability**
  Ensuring rapid and reliable disaster response is critical for community safety.

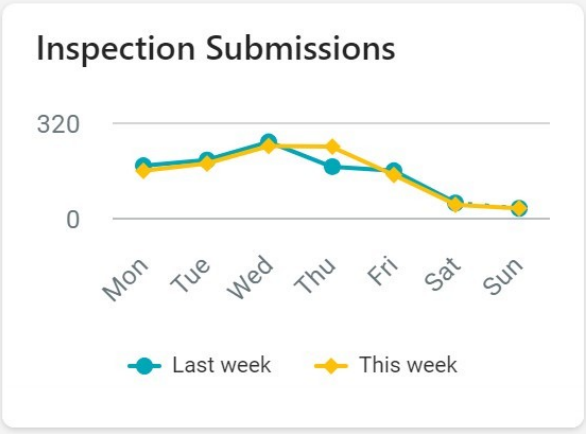
- **Fuel Diversity: Key to Effective Disaster Response**
  Diverse fuel options enhance our ability to respond swiftly and efficiently in emergencies.

- **Climate Change Mitigation in Hurricane-Prone Areas**
  Reducing our impact on climate change is crucial for protecting our community from severe weather events

- **Economic Savings and Cost Reduction**
  Utilizing an electric fleet introduces more constant formulas and cost metrics in comparison to variable cost with ICE


THE PLAN





FOCUS ON INFRASTRUCTURE

1. **Collect Data for Upcycling Opportunities**: Conduct thorough vehicle pre-trip inspections to identify potential for upcycling vehicle assignments to electric vehicles (EVs).

2. **Implement Level 2 Overnight Charging**: Prioritize the initial implementation of Level 2 Overnight Charging applications to ensure efficient and effective charging.

3. **Set Vehicle Lifecycle Standards**: Establish a 10-year, 100,000-mile lifecycle standard for passenger vehicles, with a minimum annual utilization of 6,000 miles.

4. **Enforce Idle Reduction Policies**: Minimize unnecessary carbon emissions by implementing strict idle reduction policies, highlighting opportunities for EV idling replacement.

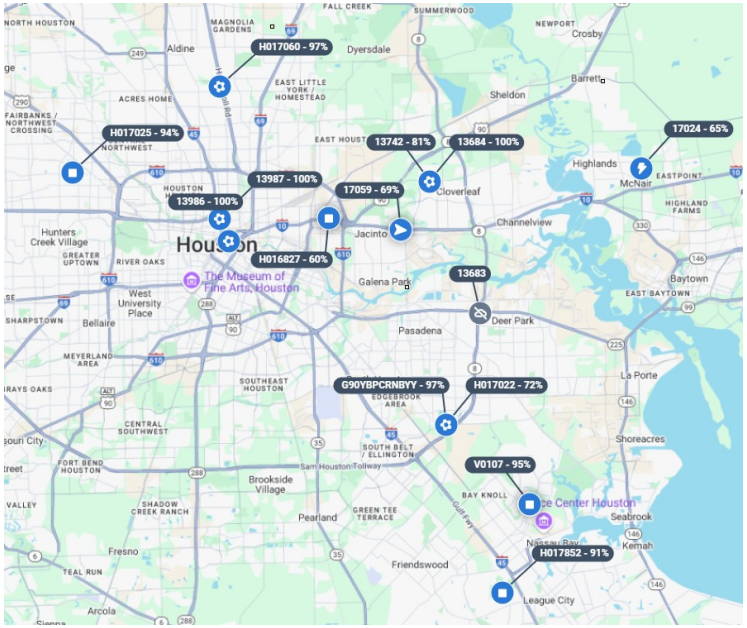
5. **Encourage Employee EV Adoption**: Create policies for employee charging to promote EV adoption among all staff members.

BENEFIT OF COLLECT DATA FOR UPCYCLING OPPORTUNITIES

Data collection through telematics is key to have a successful fleet for any government organization.

- Driver coaching opportunities are exposed to reduce cost in accident risk, excessive fuel use, and better battery health management.
- Driver behavior trends and metrics identify efficiency opportunities.
- Telematics installation savings exceed the cost of telematics service.

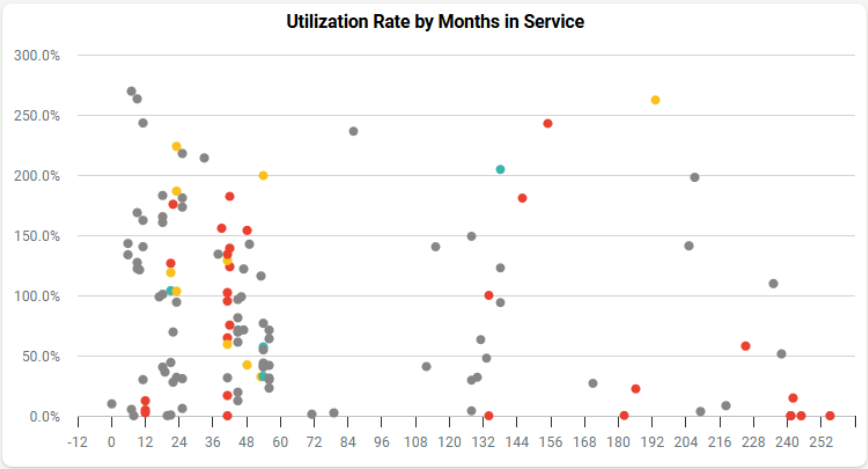
BENEFIT OF IMPLEMENT LEVEL 2 OVERNIGHT CHARGING

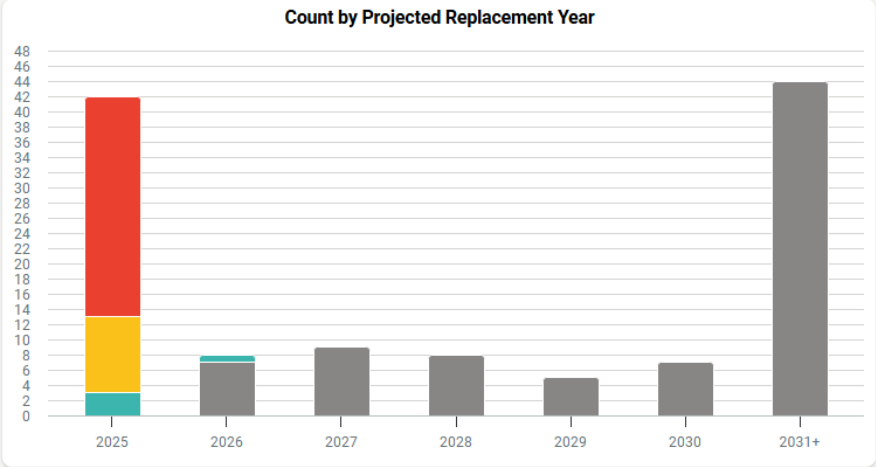


Level 2 charging is the best way to promote battery health and EV readiness.

- Level 2 charging is quick to install without needing extensive utility upgrades. (Diversify locations)
- Overnight charging is acceptable for most use cases of standard operation utilization.
- Reduces strain on electrical grid and offers opportunity for reduced rates through TOU.
- Enhanced safety and readiness availability with fully charged vehicles each morning.

BENEFIT OF SET VEHICLE LIFECYCLE STANDARDS

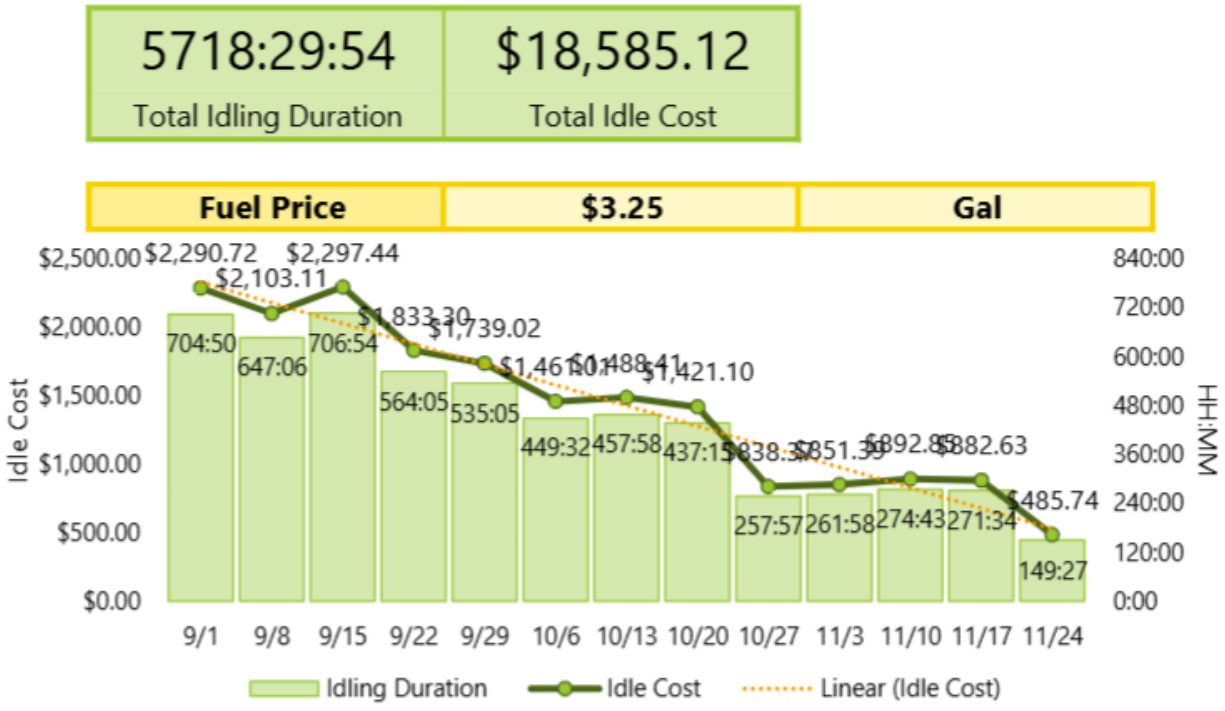




Vehicle lifecycling policies or standards are crucial for fleet health, driver safety, and reduced maintenance costs.

- Planned replacements reduce the likelihood of costly breakdowns and unexpected repairs.
- Reduces downtime caused by vehicle failures, ensuring operations run smoothly.
- A lifecycle policy helps forecast replacement cycles and associated costs, enabling better financial planning.

BENEFIT OF ENFORCE IDLE REDUCTION POLICIES



Idle reduction plans are the best cost savings to capture quickly.

- Idle reduction is good for the environment and pocketbooks.
- Idle reduction encourages EV adoption

SETTING THE CHARGING STANDARD

- Tested several Level 2 charging station manufacturers
  - Choose the most resilient private fleet charging station
- In addition to the Texas A&M study materials, the Enphase Level 2 charging station selected will provide the strongest charging environment through disaster and varying power supply incidents.
- Level 3 and Public Chargers can be assessed through grants and collaborations

CHOOSING VEHICLES

1. Purchase electric vehicles based on battery kWH and warranty.

2. No vehicle purchased with less than 250 miles rated range when possible.

3. Patience in the market for the best application and vehicle assignment.

8 – Chevrolet Blazer EV

6 – Chevrolet Bolt EV

10 – Chevrolet Silverado EV

~~8 – Toyota Highlander Hybrid~~

EXPANDING THE IMPACT

Passenger vehicles is a great starting point for infrastructure evaluation and vehicle lifecycling.

Identify other opportunities to collaborate and reduce the carbon footprint.

- $4 million grant for electric Semi Trucks and Buses
- Replacement Landmaster AMP UTV
- New Electric Forklift
- Replacement Stihl chainsaws and polesaws

Identify any opportunity to replace decommissioned equipment with electric alternative

AN OVERVIEW OF THE EV DASHBOARD

Vincent Polignano, H-GAC


Electric Vehicle Dashboard Demo & ZEV Infrastructure Study


Vinny Polignano, Planner
Houston-Galveston Clean Cities
03/20/25

Regional Collaboration • Transportation Planning • Multimodal Mobility

Houston-Galveston Area Council

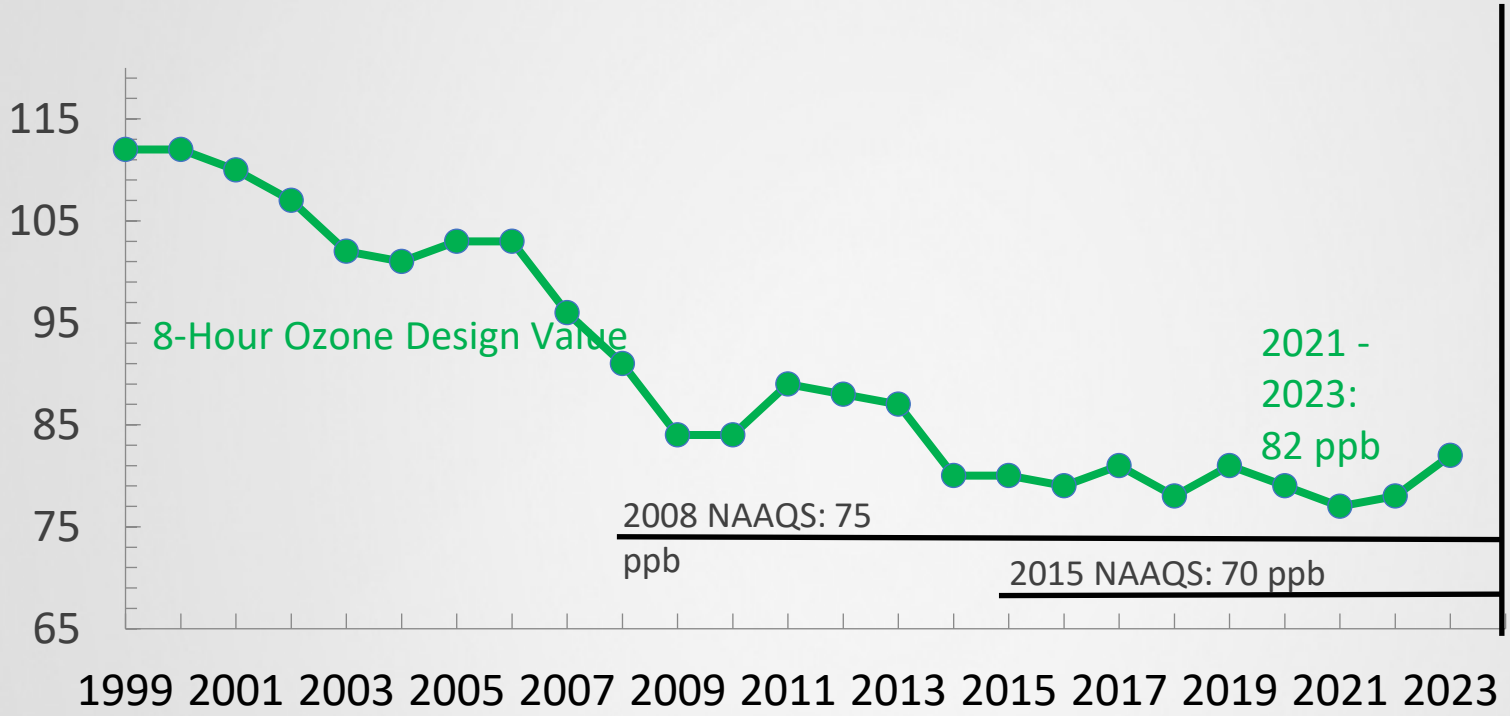
Agenda

- ZEV Study
- ZEV+ at H-GAC
- EV Dashboard Demo
- Contact Information

Background – AQ Issues

HGB Nonattainment Status

- 8 counties (2008 ozone) and 6 counties (2015 ozone)
- Transportation accounts for 63% of NOx in the region



Initial Study, (Hopefully) Eventual Plan

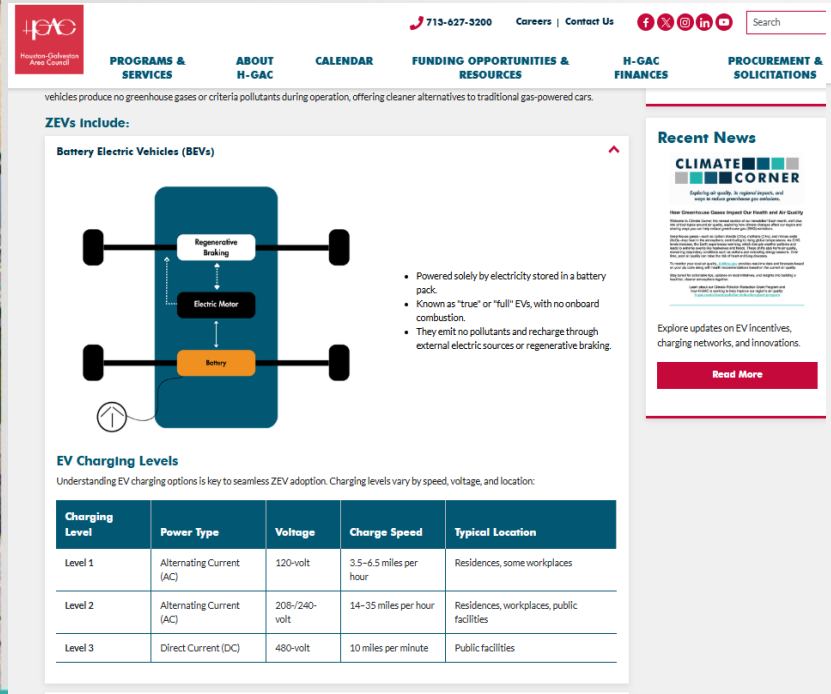
- Study – Staff led, shorter horizon
  - *BEVs/FCEVs background information/101*
  - National trends (registrations, industry advancements, costs, investments)
  - State trends - ZEV uptake, manufacturing, state incentives
  - Regional conditions
    - AQ challenges, demographics/population, terrain/weather, electric capacity, etc.
  - Analysis - existing/planned siting, EV registrations, freight/passenger feasibility, AFC corridors, etc.
- We hope to continue our ZEV efforts with a consultant-driven regional Plan in the future

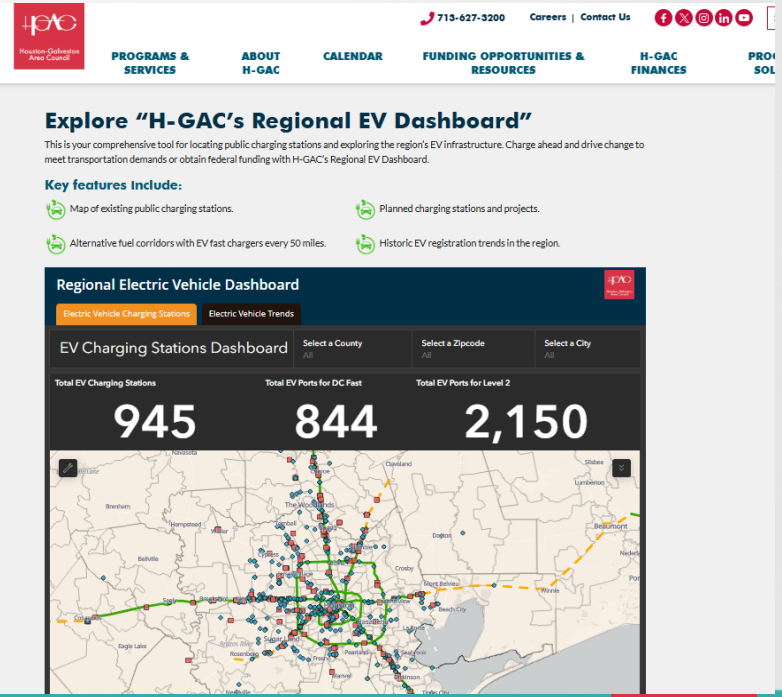
County Registration Increasing

County	Current EV Totals (December 2024)	Average Annual Percent Change (2019-2024)
Harris	45,680	+ 57%
Fort Bend	16,697	+ 65%
Montgomery	7,761	+ 60%
Brazoria	3,777	+57%
Galveston	3,108	+ 57%
Waller	337	+ 114%
Chambers	233	+118%
Liberty	176	+ 78%

ZEV Webpage

- Will go live very soon
- Central home for agency's ZEV work, background info +





Communications – Fact Sheets

Fuel-Cell Electric Vehicles (FCEVs): 1 page Fact Sheet

What powers FCEVs?

Electricity generated on-board using pure hydrogen gas (H_2) and oxygen from the air.

How are FCEVs different than Battery Electric Vehicles?

Both use electricity to power an electric motor. However, the electricity in FCEVs does not come from an external charger but is generated onboard. When hydrogen and oxygen combine in the vehicle's **fuel cell**, an electrochemical reaction generates electricity, powering the motor.

How is an FCEV refilled with hydrogen?

It is dispensed at hydrogen fueling stations, very similarly to standard gasoline fueling. It takes approximately the same amount of time, ~3-5 minutes for light-duty vehicles, and ~15 minutes for the larger tanks of medium- and heavy-duty vehicles. FCEVs can be refueled much faster than BEVs can be charged. Using the fastest chargers, a light-duty BEV may take up to 20 minutes to charge, and heavy- duty vehicles may take over an hour.

Pure hydrogen gas is stored in a carbon-fiber high-pressure tank onboard an FCEV. The tanks are designed to withstand the highest speed crashes[i].

Are FCEVs available for purchase?

Currently, light-duty FCEVs are only sold and operated in a few states. Only California and Hawaii have publicly accessible hydrogen fueling stations as of the fall of 2025.

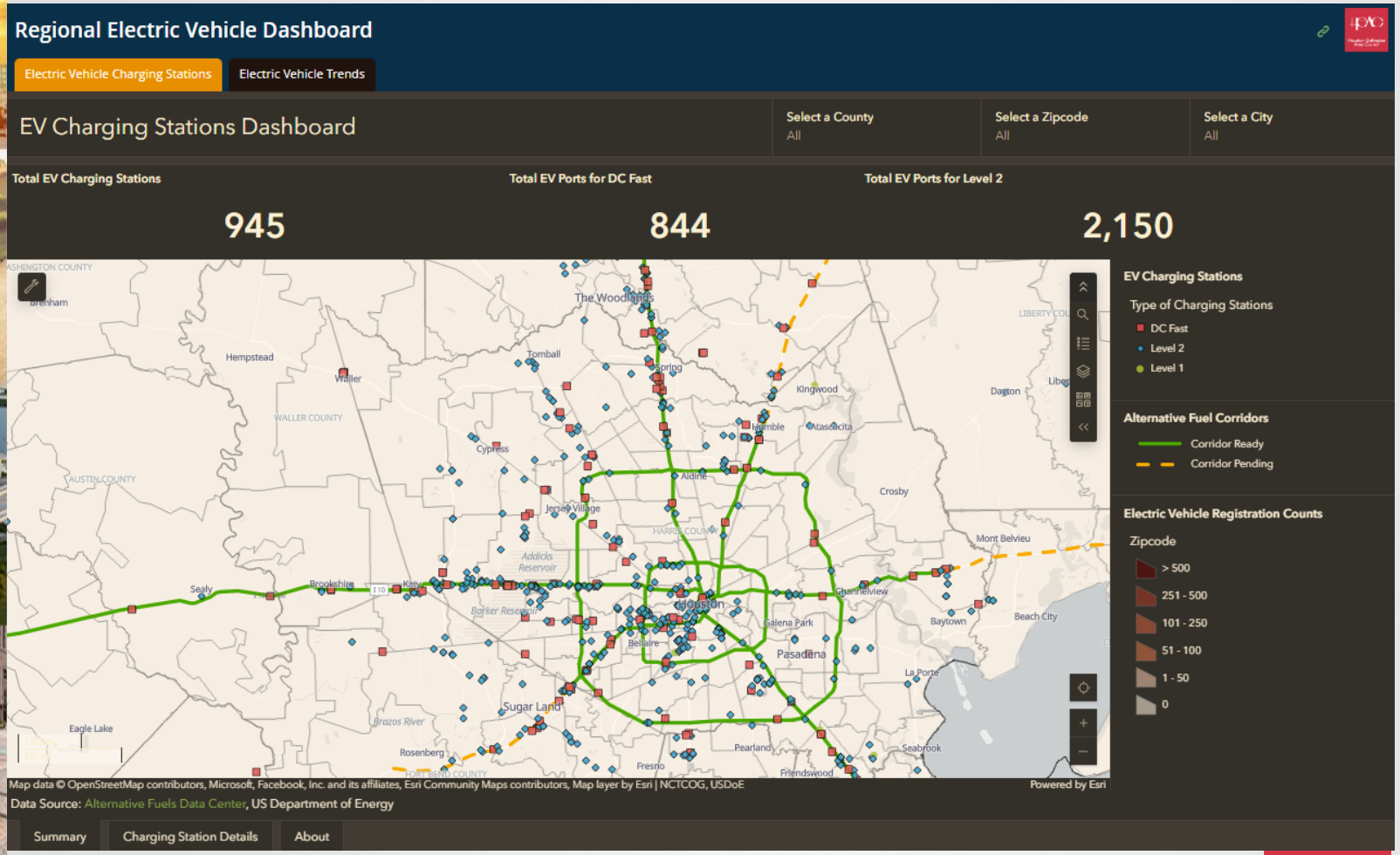
Medium- and heavy- duty vehicles are experiencing a boom in pilot programs nationwide, generally restricted to fleets with access to dedicated fueling stations.

Do FCEVs generate air pollution?

No. The only by-products of FCEV operation are water vapor and heat. Water does constitute *an* emission from the tailpipe, it does not contribute to air pollution, or the harmful emissions associated with internal combustion engines. FCEVs are considered zero-emission vehicles.

- Q&A Format
  - Common Qs but also some light technical detail and differentiation
- In review, then will get dressed up by our communications team

New and Improved Dashboard (Live Demo)



Contact Information

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  - 713-499-6662
- Pharr Andrews, Principal Planner
  - pharr.andrews@h-gac.com
- Andrew DeCandis, Air Quality Manager
  - andrew.decandis@h-gac.com

THE ANNUAL REPORT

J. Ben Finley, *HGCCC*

The Annual Report

- Our Coalition's obligation to the Department of Energy
- Documents regional efforts of transitioning fleets towards alternative fuels
- Calculates reductions in:
  - Gallons of Gasoline Equivalent (GGE)
  - Reduction in Greenhouse Gas (GHG) emissions
- Helps region to chart trends and plan for the future
  - Helps to accurately plan for future funding opportunities (grant programs)

Goals

- Increase Reponses by 5% to 7%
  - 2023 = 38
  - 2024 = 40 (5%) or **41 (7%)**
- Increase GGE by 1
  - 2023 = 17,475,718
  - 2024 > 2023
- Increase GHG by 1
  - 2023 = 57,659 tons
  - 2024 > 2023
- Increase in Electric Fuels
  - 2023 GGE = 125,807 (1.4% of all fuels reported in 2023)
  - 2024 GGE > 2023
  - 2023 GHG = 1,060 tons (7.8% of all fuels reported in 2023)
  - 2024 GHG > 2023

Strategies

- Increase Respondents
  - Send last year respondents prefilled forms
  - Focus on ISDs (discussed later)
  - Focus on respondents that "Aged Out"
    - Find contact person
    - Send prefilled form with last known information
  - Reach specialized organizations (Whales)
    - City of Houston
    - Harris County
    - Houston ISD
    - METRO
    - Port of Houston
    - TxDOT
  - TERP awardees (New Fish)

Strategies

- Increase Respondents
  - E-Mail blasts
    - Stakeholders
    - H-GAC Freight Committee
    - H-GAC AERCO
  - Work with partners
    - Evolve Houston
    - Texas Electric School Bus Project
    - Texas Hydrogen Alliance
    - Center for Houston's Future
  - Offer goodies
    - Creating a fleet database for grants
    - Circle back with Organization results

Strategies

- Increase GGE savings by 1
  - GGE tied to fuel
    - CNG Sales!!! (Hopefully, they increased sales)
    - Response from “Aged Out”
    - Increase in freight response
    - Increase in ISD response with alt fuel buses
    - Increase in EV response
    - Add “Functions and Events” to main report

Strategies

- Increase GHG reductions by 1
  - GHG tied to VMT
    - Increase response in Idle Reduction
      - Emphasis on school districts
    - Teleworking
      - Reaching out to H-GAC Commute Solutions
- Increase in electric activity
  - Target ISDs with known electric buses
    - Alief
    - Cy-Fair
    - Houston
  - Target Metro for electric activity
  - Partner with advocate organizations
  - Target Airport / Airlines

Current (As of 3/21/2025)

- Responses
  - Goal 41
    - 30 Responses = **11 responses short**
- Gasoline Gallons Equivalent (GGE) Savings
  - True Goal = 17,475,718 gallons (+1)
  - 20% Goal = 3,047,279 gallons
    - 4,903,233 gallons = **1,326,381 gallons more**
- Green House Gas (GHG) Reduction
  - True Goal = 57,659 tons
  - 20% Goal = 26,911 tons
    - 36,243 tons = **9,332 tons more**

Where do we go from here?

- Extend deadline to April 8
  - A few more whales might be working
  - Last minute Stakeholders?
- One more E-Mail Push (2 e-mails)

Future Actions

- Annual Survey Subcommittee Review
  - Study on Results
  - Strategy Effectiveness
  - Goals for 2026 (2025 data)
    - New Strategies

Questions / Comments?

- Current Subcommittee Members:
  - Eddie Murray, Freedom CNG
  - Timmy Sykes, Gulf Coast Transit District
  - Claire Alford, Highland Electric Fleets
  - Clean Cities Staff

E-Mail: Ben.Finley@h-gac.com

UPDATES ON SUBCOMMITTEES

J. Ben Finley, HGCCC

Grants

- Grants Database

Members:

- Heather Ball
- Scott Barrios
- Mandy Bishop
- Casey Brown
- Abner Martinez
- Eric Mullins
- Brett Perlman
- Vincent Sanders
- Timmy Sykes
- Brian Weeks

Stakeholders Meeting

- Re-evaluating flexible meeting date

Member:

- Claire Alford
- Heather Ball
- Scott Barrios
- Casey Brown
- Eddie Murray
- Vincent Sanders
- Susan Shifflett

Strategic Plan

- Finalizing the Staff Draft

Members:

- Scott Barrios
- Mandy Bishop
- Casey Brown
- Eddie Murray
- Brett Perlman
- Vincent Sanders
- Timmy Sykes
- Brian Weeks
- Terrance York

GRANT OPPORTUNITIES PRESENTATION

J. Ben Finley, Houston Clean Cities Co-Director

Vehicle Purchase, Lease, Replace, and Repower

Agency	Name	Might Be Good For	Close Date	Link
Environmental Protection Agency	Clean Ports Program	Ports and Port Authorities		
Texas Commission on Environmental Quality	Port Authority Studies and Pilot Grant Program	Ports and Port Authorities		Contact TERP

Infrastructure

Agency	Name	Might Be Good For	Close Date	Link
Department of Transportation	2025 Port Infrastructure Development Program	Ports and Port Authorities	4/30/25	MA-PID-25-001

Texas Volkswagen Environmental Mitigation Program

The All-Electric Program funded by the Volkswagen Settlement is open.
Eligible projects include replacements of:

- Class 8 freight or port drayage trucks
- Class 4-8 school bus, shuttles, and transit buses
- Class 4-7 freight trucks
- Airport Ground Support Equipment
- Forklifts and Port Cargo Handling Equipment
- Refueling Infrastructure

- Closing August 31, 2025

Tax Credits

- Tax Credits
  - Alternative Fuel Vehicle Refueling Property Tax
  - Electric Vehicle and Fuel Cell Electric Vehicle
    - Previously owned Clean Vehicle Credit

Others

- Department of Energy
  - Carbon Utilization Procurement Grants
    - Local and State Government Organizations
    - Closes April 30, 2025
- Department of Agriculture
  - Renewable Energy Systems and Energy Efficiency
    - Small Businesses
    - Closes (Once funds are allocated)
- What did I miss?

ANNOUNCEMENTS OF CURRENT & UPCOMING ACTIVITIES

Open Forum

Upcoming Events

- Hermann Total Distribution Services Open House (April 17)
- TxSWANA Annual Conference (April 20)
- Advanced Clean Transportation Expo (April 28)
- TxSWANA State Rodeo (June 6)
- Other

- Next Stakeholder Meeting (TBD)

Please visit our website:
Houston-Cleancities.org

Thank You!