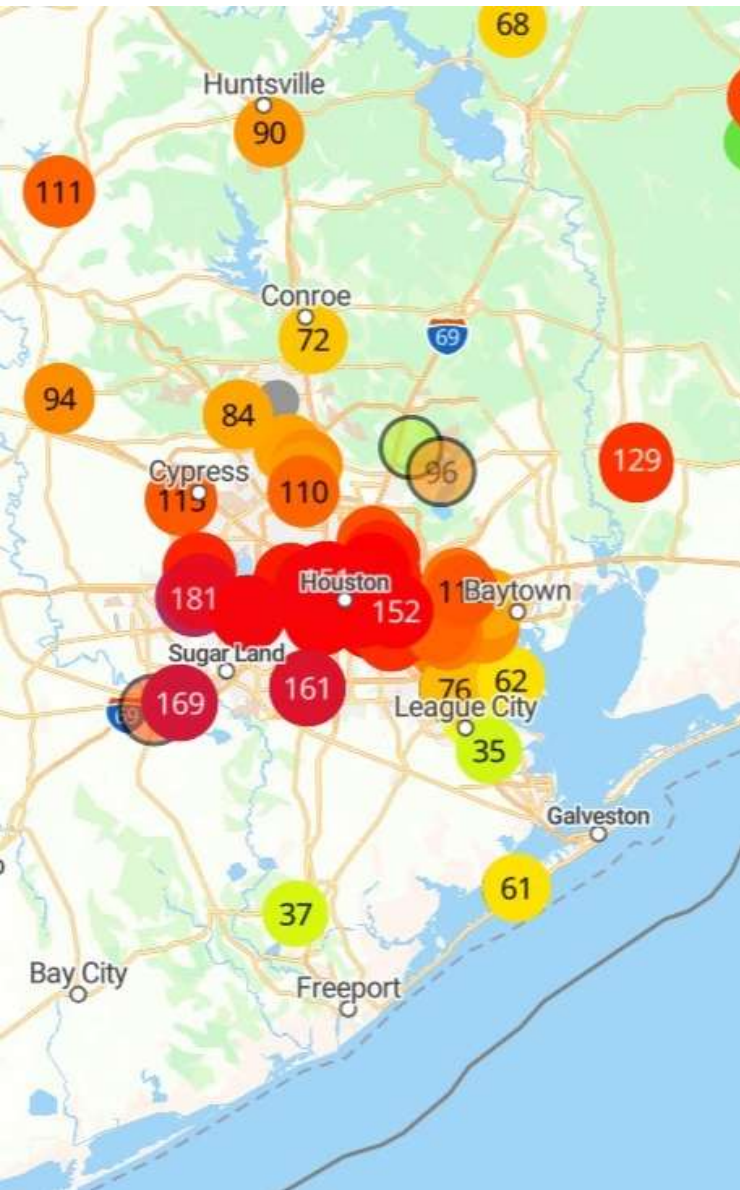


EV MIGRATION PLAN



**ADRIAN
GARCIA**
COMMISSIONER





THE WHY

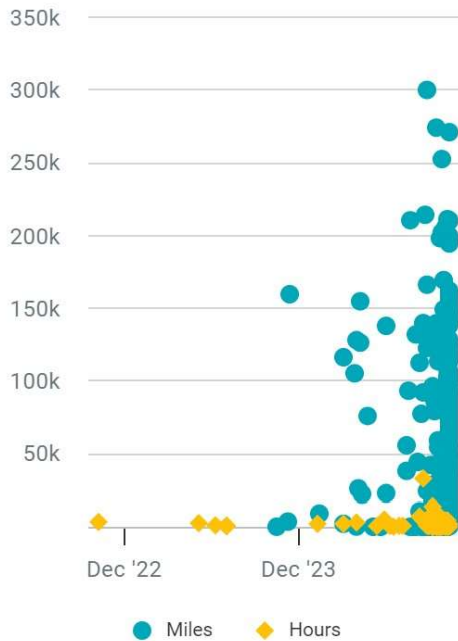
- **Urgent Need for Clean Air and Longer Lives in Harris County Precinct 2**
With the lowest air quality and life expectancy, immediate action is essential.
- **Top Priority For Disaster Response and Vehicle Availability**
Ensuring rapid and reliable disaster response is critical for community safety.
- **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



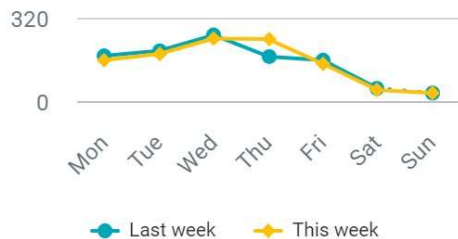
THE PLAN

FOCUS ON INFRASTRUCTURE

Latest Meter Readings



Inspection Submissions



- 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.

Total Monthly Savings

\$8,522.23

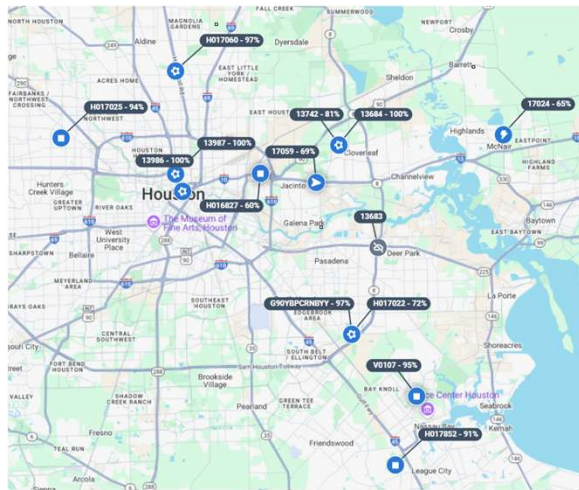
\$102,266.77 annual

Potential Savings

\$5,883.91

\$70,606.92 annual

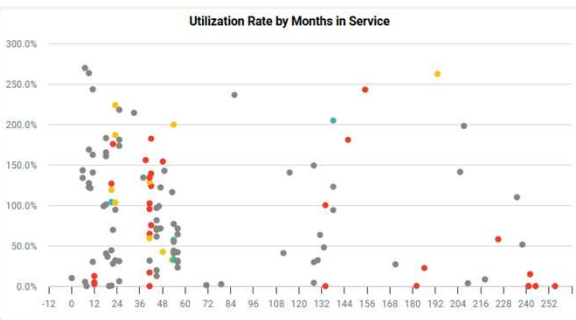
BENEFIT OF IMPLEMENT LEVEL 2 OVERNIGHT CHARGING



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

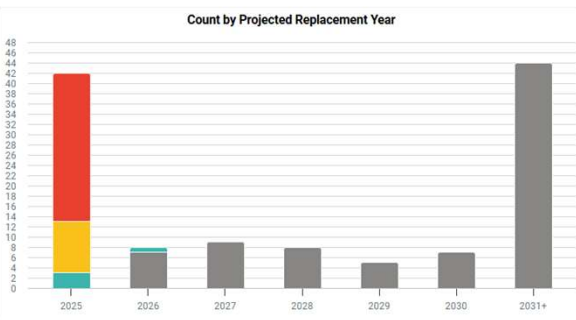
- Level 2 charging is quick to install without needing extensive utility upgrades. (Diversify locations)
- Overnight charging is acceptable for most use cases of standard operation utilization.
- Reduces strain on electrical grid and offers opportunity for reduced rates through TOU.
- Enhanced safety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

BENEFIT OF SET VEHICLE LIFECYCLE STANDARDS



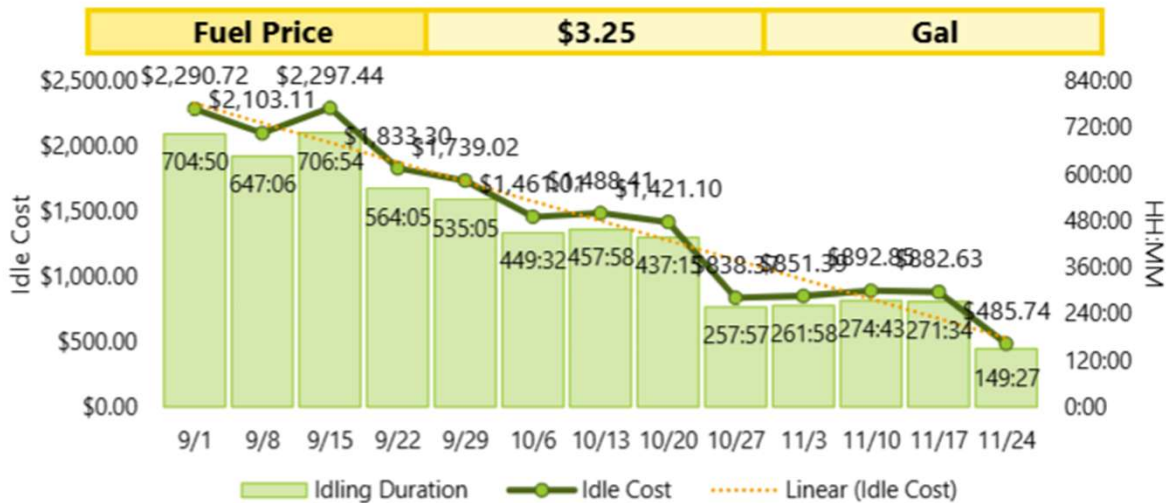
Vehicle lifecycling policies or standards are crucial for fleet health, driver safety, and reduced maintenance costs.

- 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

5718:29:54	\$18,585.12
Total Idling Duration	Total Idle Cost



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

