Electrifying Fleets nationally, and City of Houston Case Study

Contact: Yann Kulp, eIQ Mobility, a NextEra Energy
yann.kulp@nee.com C: 847-271-2813

NEXTera ENERGY RESOURCES | eIQ

RETAIL INDUSTRY LEADERS ASSOCIATION

June 2021

eIQ Mobility: market leader in fleet electrification assessments

- **#1 provider of fleet electrification assessment** solutions for utilities, OEMs, and fleets.
- **Widest experience with light-, medium- and heavy-duty vehicles** for utilities, telecom, delivery, pharma, food & beverage, cities, states, universities, K-12, and other fleets

dozens major customers

150,000+ vehicles

4+ Million trips

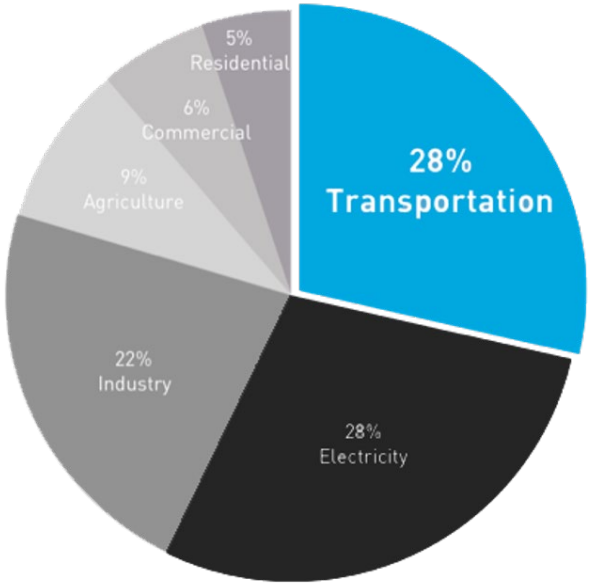
350+ Million miles

Fleets are a huge segment

300 billion
Miles Traveled

$200 billion
Annual Spend

30+ million
Vehicles



Auto manufacturers invest $250 billion in EVs for the US

Source: Bloomberg News 2021


Rivian R1T


Tesla model 3


Nissan Ariya


VW ID4


Ford Transit EV


GMC Hummer EV


Tesla Cybertruck


Lordstown Endurance


GM Silverado


Ford F150 EV


Tesla Semi


Chanje EV delivery

Rivian Amazon


LION 8 truck


Daimler eCascadia

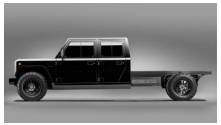

Volvo VNR EV

Arrival UPS


MOTIV box truck


Lightning E-450


Nikola Refuse


Bollinger class 3


Peterbilt 220 EV

Growing Policy, and sustainability mandates

Santa Monica, CA

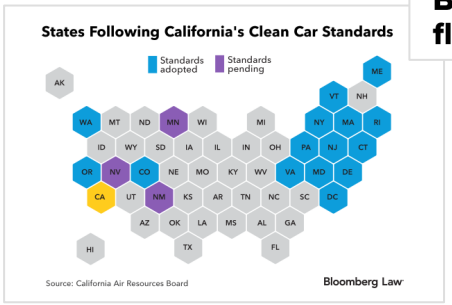
VA passes 5 EV-friendly bills

EVOLVE HOUSTON

CLIMATE MAYORS

EV 100

15 states follow CA clean car standards



First Student

Fleet Electrification is a very complex journey

Source: 300+ interviews, dozens of fleet customers, and 120,000+ vehicles analyzed by eIQ Mobility

1. Pick location, EVs, chargers, vendors, define costs, emissions and incentives
2. Finance and deploy assets: Electric Vehicles and charging infrastructure
3. Operate & optimize the new electric fleet and facilities
4. Learn from pilots, create a fleet-wide strategy and scale across operations

Scope of City of Houston's fleet

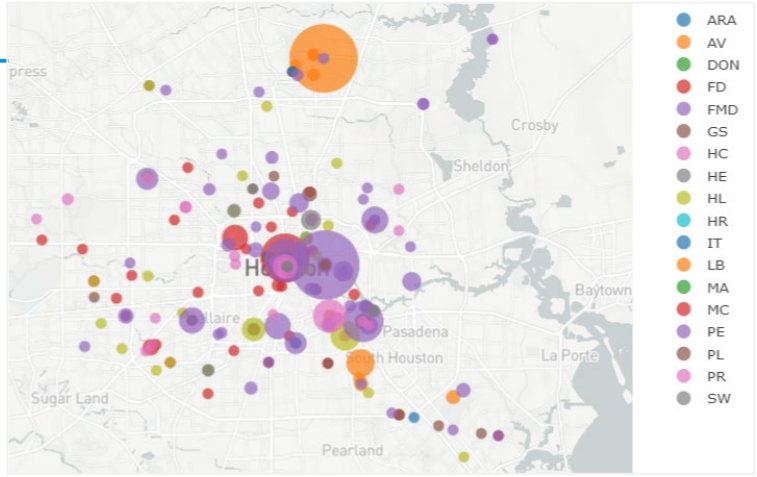
5,300 existing internal-combustion vehicles assessed

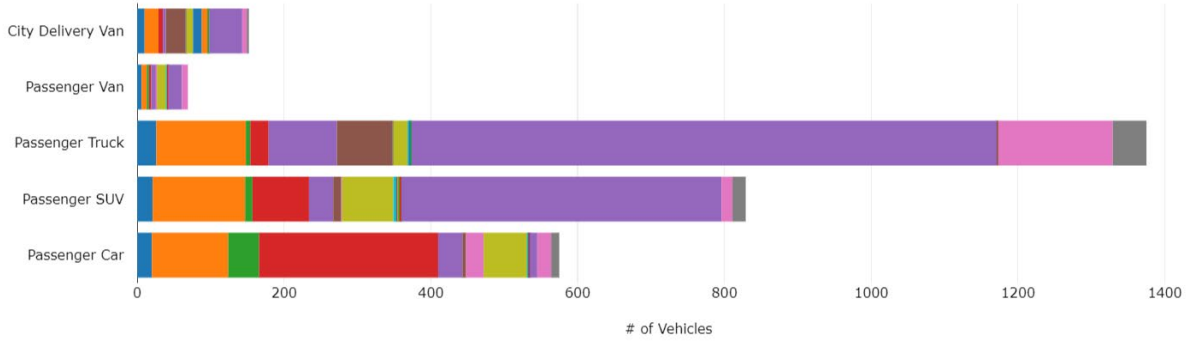
11 major locations, dozens of secondary facilities

3 major vehicle types: trucks, SUVs and sedans

12 hours, average operating hours / day, up to 14 max

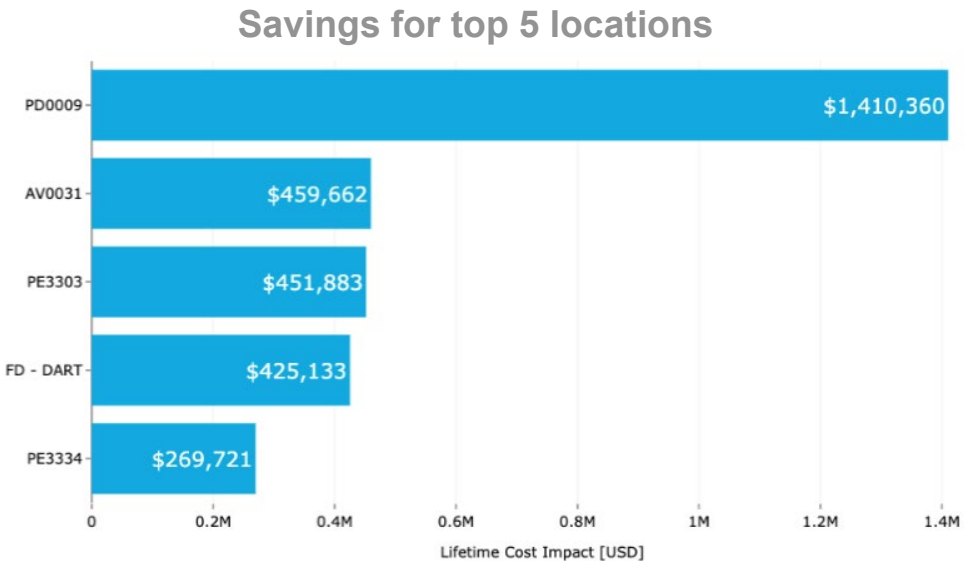
24 to 294 miles - Daily mileages range





Houston fleet EV opportunity – total fleet

- **4,157 technically feasible EVs**
- **1,345 economically* feasible EVs,**
  32% of total fleet !
- Electrifying these economically feasible vehicles alone could generate **$6.9 Million in lifetime total cost of ownership** (TCO) savings.
- Converting all 4,157 vehicles would reduce CO2 emissions by **13,577 metric tons annually**, equivalent to a 62% reduction for the selected vehicles.



** excluding chargers*

Lessons learned

DO

1. Collect & use existing data such as fuel, odometer, M&O, costs (telematics is a bonus, but fuel is OK)

2. Create scenarios based on class, ownership period, incentives, routes, mileage, etc.

3. Develop an execution plan based on best scenarios, and get stakeholder buy-in.

4. Start ASAP, even with a small pilot.

DON'T

1. Start by meeting and getting quotes for 30 to 50 different vendors

2. Obsess about using 'perfect' telematics data

2. Focus on procurement, without engaging stakeholders

3. Pilot just a few EVs without a data-driven plan

4. Wait till 'it gets better' (cheaper EVs, more public charging,…)

Q&A
Thank you

Yann Kulp, eIQ Mobility, a NextEra Energy
yann.kulp@nee.com C: 847-271-2813