

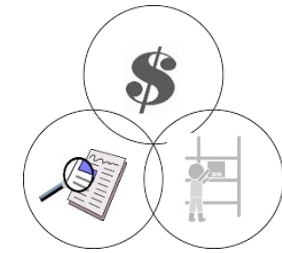
Executive Overview – Fleet BEV

Rick Harland | Assistant Director Fleet Mobility Services | 11/22/2021



Fleet Mobility Services Overview

- Fleet Mobility Services manages a comprehensive full life cycle management program for approximately 7,000 vehicles and equipment assets owned by the City of Austin. These services include budget, acquisition, make ready, maintenance and disposal as well as maintaining 45 fuel sites
- The Department is currently organized into three functional areas: Service Center Operations Division, Emerging Technologies Division, and the Business Operations Division



Mobility Strategy

Advance Automotive Technology on Multiple Fronts:

Alternative fuel vehicles, Electric vehicles, Telematics, Car Sharing Artificial Intelligence (AI) and Autonomous Mobility Services, Shop technology

Environmental Stewardship:

Focus on City's sustainability goals and objectives

Safety and Risk Mitigation Programs:

Advanced Driver Assistant Systems (ADAS) technology, telematics, driver feedback, accident reduction

Cost containment: All areas



WHERE WE ARE NOW

Ahead of plan on savings in spite of a challenging 2020

Shaping the future

Our 2021 BEV strategy was based on alignment with Austin City Council directive, fleet's mobility strategy, disruptive change in the automobile industry and the cultural challenge of introducing battery electric vehicles to a significant portion of our light duty fleet, with the build out of a supporting charging infrastructure. The goal is to take advantage of significant savings opportunities in fuel and maintenance costs as well as drive reductions in greenhouse gas impact.

Doing well by doing good

2021 fleet growth up 1% to 6787 fleet assets and achieving a milestone of 255 BEVs purchased with 125 City charging ports built. Although behind in our initial purchase quantity forecast due to COVID-19 resulting in the shut down of OEM factories, we are well on our way to the initial goal of 330 electric vehicles, which should be achieved in 2022. Cost savings to date are ahead of plan showing a 50% greater savings opportunity to the forecast of \$3.5M over 10 years.

Electrified vehicles are becoming viable and competitive; however, the speed of their adoption will vary strongly at the local level. The speed of adoption will be determined by the interaction of consumer, total cost of ownership and regulatory push, which will vary greatly at the regional and local level

Fleet Mobility Services – Fleet Electrification



ELECTRIFICATION PROJECT

An annual report

330

Plug In Electric
Vehicles

165

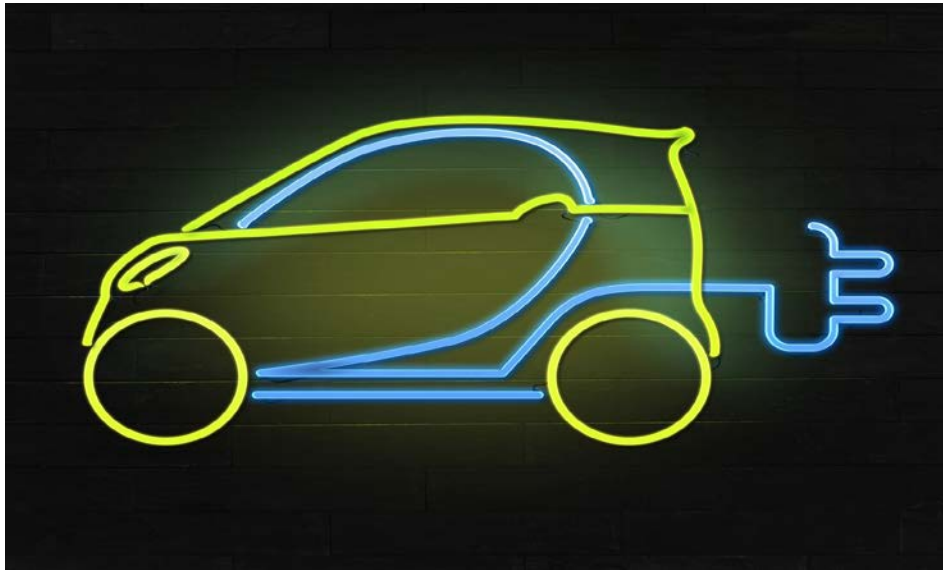
Charging Ports
2:1 Ratio

\$3.5M

10 Yr. Savings
Opportunity

12K

10 Yr. Tons
Carbon Savings



ELECTRIFICATION RESOLUTION

2016 Austin City Council passed a resolution 20160505-025 to assess opportunities to electrify the COA fleet in response to a 2015 Smart Cities Challenge

- Recommendations:
 - Replacement of 330 gas powered vehicles with a BEV or PHEV by calendar 2020
 - Expand charging station infrastructure as needed
 - Fund charging infrastructure through interdepartmental fuel surcharge

Emerging Technologies – Fleet Electrification



CITY OF AUSTIN PURCHASES

Behind on Purchases and Charging Port Installations

255

BEV Vehicles Purchases

5.36%

Percent of On Road Fleet

\$602K

FY21 Budget Investment 1.1%

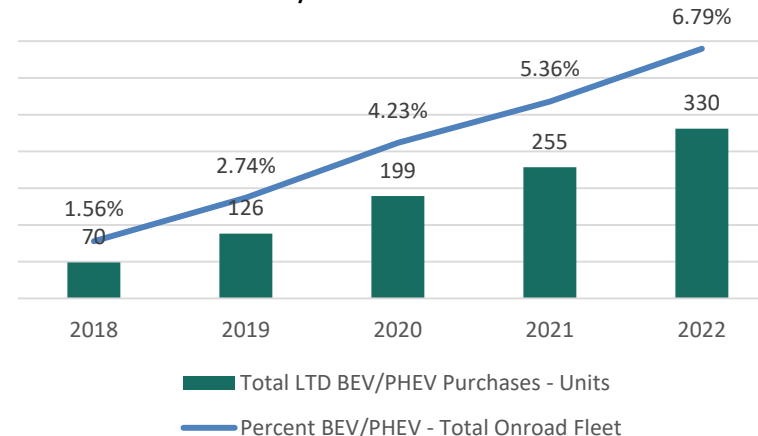
125

Charging Ports Installed

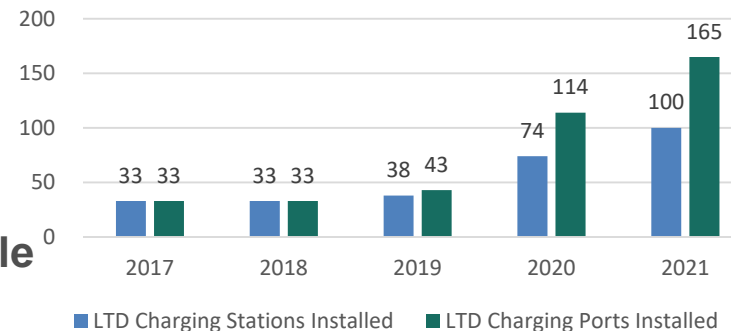
1100+

Public Charging Ports Available

BEV/PHEV Purchases



Charging Stations and Ports



CITY OF AUSTIN SAVINGS

Favorable on Savings to Goal in Year 3

Approx. Accumulated Savings to Date



52% Fuel



48% Maintenance



Fleet Mobility Services - COA Road Map



Looking forward

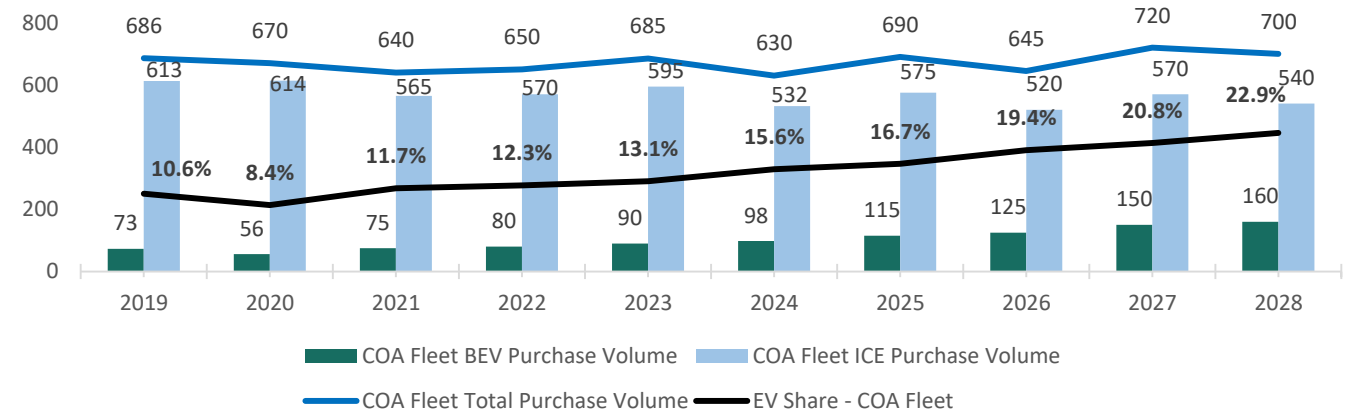
Stricter emission regulations, lower battery costs, more widely available charging infrastructure, and increasing consumer acceptance will create new and strong momentum for electrified vehicles (hybrid, plug-in, battery electric, and fuel cell) in the coming years.



COA ROAD MAP

An annual report

COA Fleet Purchases - BEV Volume



1

Invest in the Future
8.4% COA Purchases
3.0% New EV Sales

2

Transform Growth
247% 10 Yr. Growth
1148 by 2028

3

Integrated Solutions
13 Models
6 Manufactures

4

Culture Change to Win
86% Participation Rate
25 Department with EV

3

years into our 2021 strategy, we are ahead of the financial plan, despite responding to significant changes in times of transformation and disruption. The majority of electric vehicle fleet is comprised of light-duty cars and SUVs. Significant opportunity to increase our EV fleet in the near term resulting from light duty trucks being available in the 2022 model year.

Fleet Mobility Services – Automotive Industry Outlook



Shaping the future

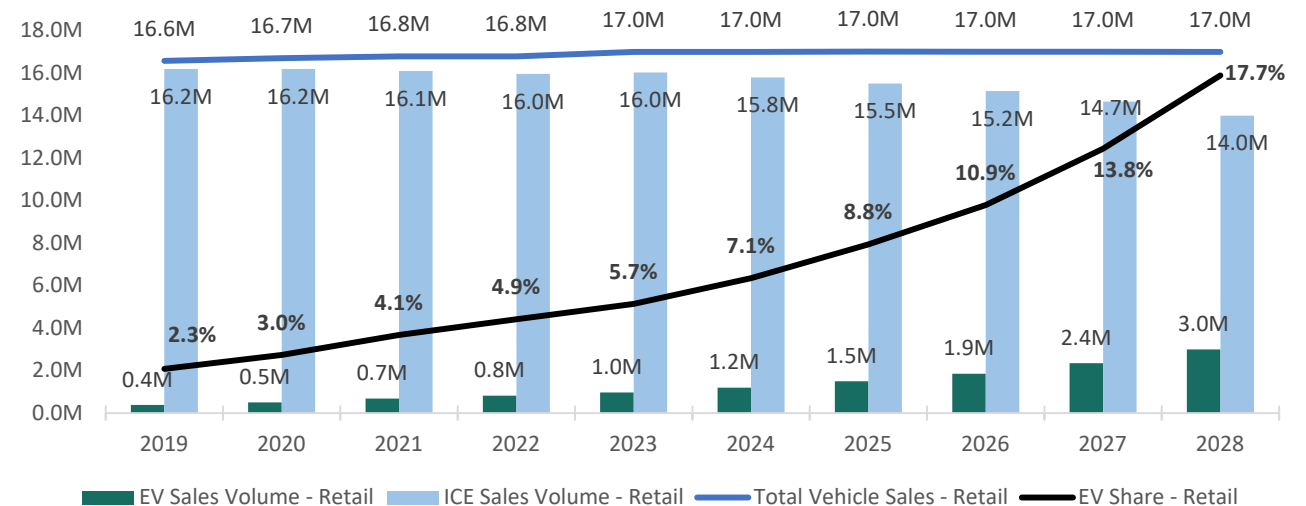
By 2028, the share of electrified vehicles could range from 10 percent to 30 percent of new-vehicle sales. Adoption rates will be highest in developed dense cities with strict emission regulations and consumer incentives (tax breaks, special parking and driving privileges, discounted electricity pricing.)



ROAD MAP

An annual report

Retail Vehicle Sales - BEV Volume



Despite a shift toward shared mobility, vehicle sales volume will continue to grow, but likely at a lower rate of about 2 percent per year. EVs are set to dominate shared mobility space such as car sharing, taxis, and ride hailing due to the favorable economics of fuel and maintenance cost driving greater adoption, innovation with larger batteries and cost reductions resulting from scales of economy.

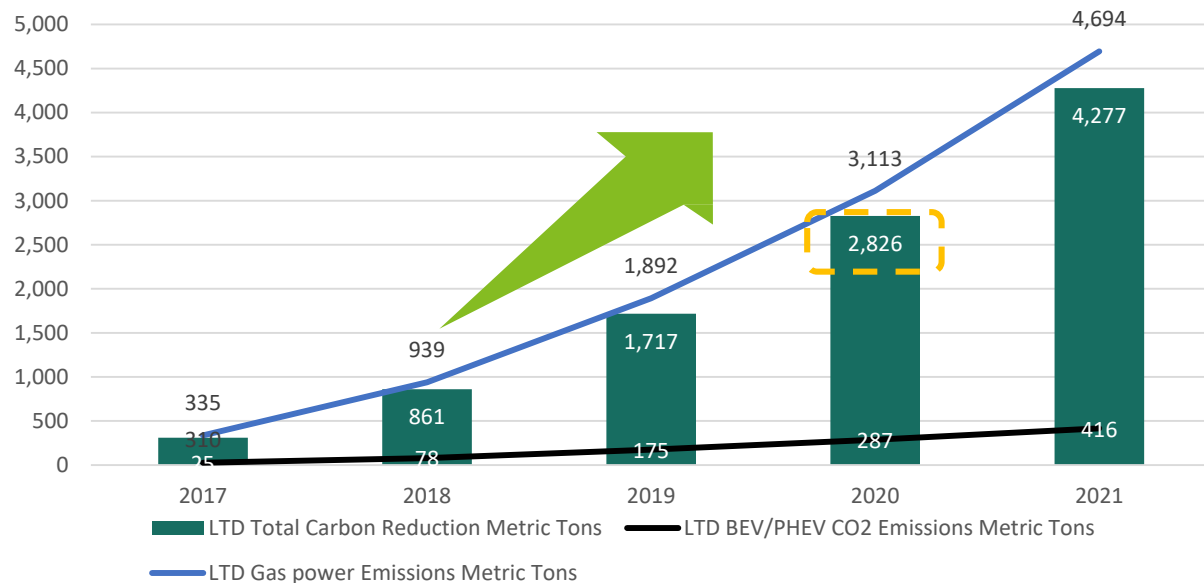
Fleet Mobility Services



ENVIRONMENTAL IMPACT

An annual report

LTD Total Carbon Reduction Metric Tons



2,826

METRIC TONS CARBON SAVINGS



2021 Forecast 4,277 Metric Tons
CO2 Savings on 330 EVs

BENEFITS OF GOING GREEN

The transportation sector accounts for over a quarter of total U.S. greenhouse gas (GHG) emissions. Because of this, many organizations now recognize the important role that they play in minimizing the harmful effects of climate change.


The City of Austin is focused on exploring low carbon fuel opportunities

*73% Alternative fuel consumed
87.8% vehicles capable of using Alt. fuels
5.3% vehicles are BEVs*


*Total Annual Carbon Reduction
8,769 Metric Tons*

City of Austin: Strengths and Challenges





MOBILITY



Battery
Electric
Vehicle
Program

Top Strengths

- Secured funding driven from savings
- City owned power company
- EV Everywhere program 1 account
- Top down, center led initiative
- Clear mandate
- Existing presence of charging infrastructure company
- Telematics
- Establish build out contracts
- Grant opportunities
- Strategic purchasing partnerships i.e. Sourcewell, Climate Mayors

Top Challenges

- Cultural change, range anxiety
- Battery charge time
- Very little level III charging stations
- Not enough charging infrastructure
- Cost per charging port
- Very little existing building code requirements. Need to future proof
- BEVs that fit the service duty i.e. pickup trucks, medium and heavy duty trucks
- Fleet or department sprawl

City of Austin: Lessons Learned

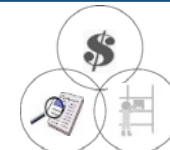


MOBILITY



Lessons Learned

- Start with charging station infrastructure planning
- Create a master plan for fleet, employee and customer parking for each facility
- Greater key stakeholder involvement early with a solid project management team
- Build charging infrastructure first. Start at least 1 year in advance
- Design for power resiliency
- Get telematics to see state of charge, capture odometer, and develop a BEV implementation strategy
- Consolidate the domicile location of the fleet
- Conduct a full fleet assessment and cost analysis
- Secure funding and seek grant opportunities where possible
- Seek legislative and government support at all levels
- Minimize charging companies and accounts (make it easy)
- Get a clear mandate from leadership
- Establish strategic partnerships, Sourcewell, Climate Mayors, Electrification Coalition



Thank you

