

DRAFT

CITY OF MESA

# Community EV ACTION PLAN

October 26, 2023



## EVs in Mesa Today

### The transition to EVs will take time.

Although EV sales are rapidly growing in Mesa, a majority of sales are still gasoline powered. It will take time for gasoline cars to be phased out.



#### Vehicles on the Road Today

These personal light-weight vehicles represent the 280 million cars, SUVs, vans, and pickup trucks on America's roads today. The vast majority run on gasoline.

#### Projected on the Road in 2035

Electric vehicles sales have been growing. Even if they reached 100% of sales in 2035, 60% or more of vehicles on the road would still be powered by gasoline.

#### Projected on the Road in 2050

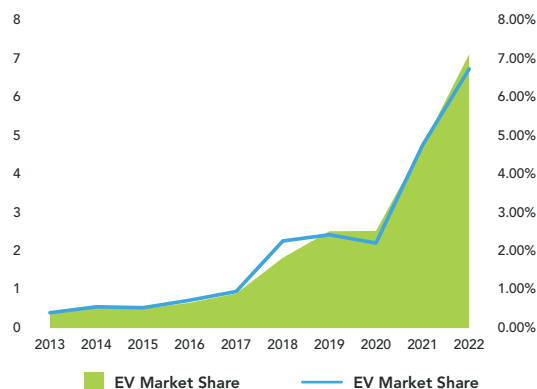
Even in 2050, after 15 years of selling only EVs, a small but significant share of vehicles on the road will still run on gasoline.

Electric Gasoline

### EV ownership and sales are increasing in Mesa and Arizona.

The number of EVs in Arizona has increased 66% over the past three years and account for almost 1% of vehicles on the road today. EV sales in Arizona have increased 205% over the same three year timeframe.

#### Arizona EV Sales



### Access to EV home charging is uneven across the City.

Existing infrastructure is spread across the city, but various high-traffic corridors and high-activity concentrations lack sufficient charging infrastructure. Multifamily structures in particular often do not have access to home charging, a critical component of EV infrastructure.

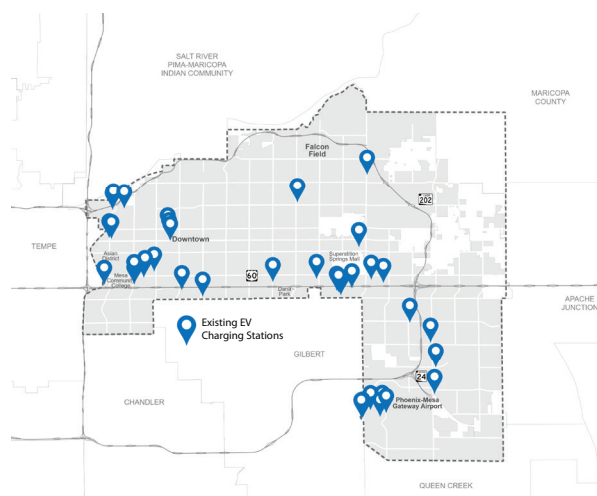
#### Housing Units in Mesa

62%  
Single Family

38%  
Multi-Family

### Public EV charging is concentrated along a few major corridors.

Most EV charging stations are located along major routes, including US-60, Main Street, and County Club Drive.



## EVs in Mesa 2030

The number of EVs in Mesa are projected to increase by 1,000% and account for 32% of all vehicles on the road by 2030.

Although this is considered a moderate growth scenario, supply and demand of electric vehicles is expected to increase greatly in Arizona and Mesa.

While most charging will occur at home, 15% of charging needs will be met with public charging stations.

Public charging stations are stations at gathering locations such as workplaces and shopping centers. By 2030, Mesa will need 2,795 public charging ports.

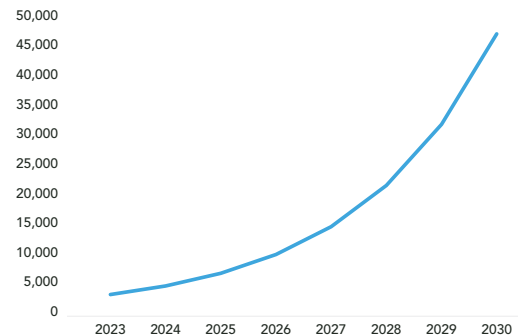
Demand for public charging will grow exponentially as the number of EVs on the road grows exponentially.

On average, there will need to be 386 ports built per year over the next seven years to meet public charging needs through 2030.

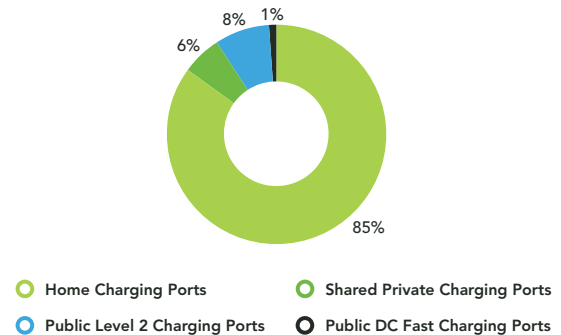
There is a significant gap in the number of public charging ports needed in Mesa today, with the greatest need being for additional Level 2 charging ports.

Currently, there are 107 EV charging ports in Mesa. There are 17 public DCFC ports and 90 public Level 2 ports. Today, existing ports only cover 20% of the projected need for public charging ports. In total, there is a gap of 422 public charging ports.

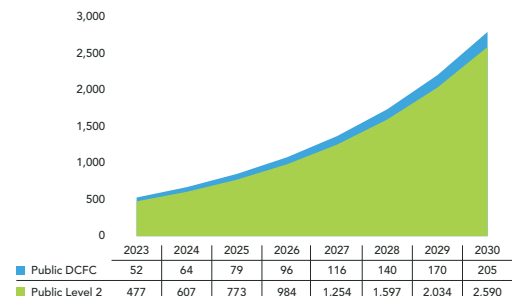
Projected EVs on the Road in Mesa



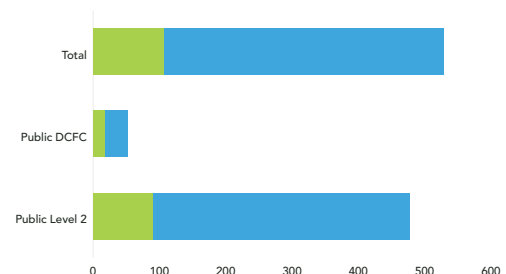
Distribution of Charging Ports Needed in Mesa in 2030



Projected Public EV Charging Ports Needed in Mesa



Public EV Charging Ports Needed Today (2023)



## What We've Heard about EVs

### Survey responses highlight low access to charging at home and in public.

Of the 575 survey responses received, 28% said they have access to charging at home, 26% at work, and 33% in public. These results highlight the real and perceived gaps in access to EV charging in Mesa.

### There is growing interest in EV ownership.

20% of survey respondents own an EV. 18% said they are interested in owning an EV.

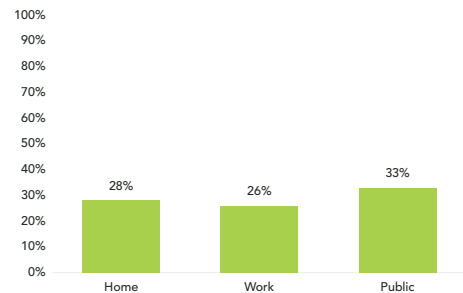
### Vehicle costs and access to charging are the biggest specific barriers to EV adoption in Mesa.

Among survey respondents, 30% said that vehicle cost is the biggest barrier to owning an EV while 13% said that access to charging is. Combined, these two factors account for 43% of the real and perceived barriers to owning an EV.

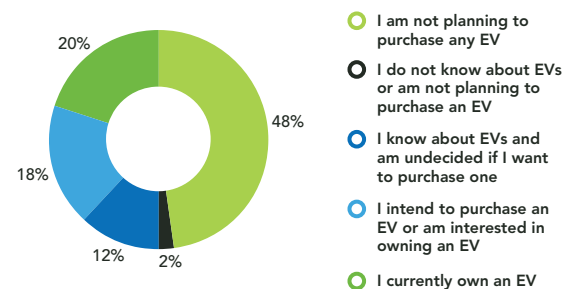
### Personal vehicles, private fleets, and public transit received the highest priority rankings for types of zero-emission vehicles to receive policy and funding.

Other modes considered in the survey are autonomous vehicles, rideshare, golf carts, e-bikes, and e-scooters.

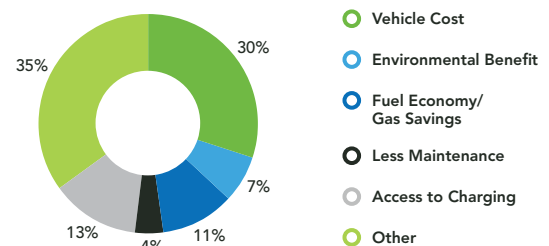
Do you have access to EV charging?



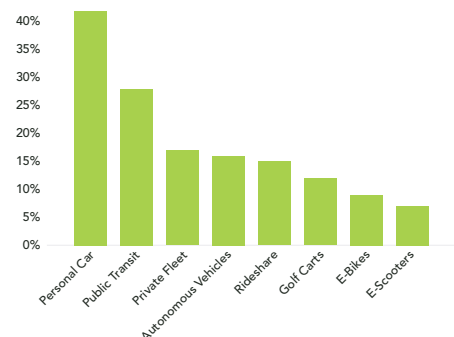
What Is Your Interest in Owning an EV?



What Would be the Most Important Factor in Buying an EV?

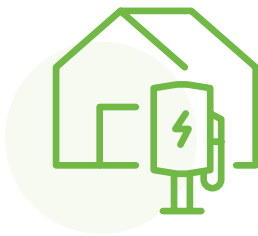


Highest Priority



# Mesa EV Strategies

Mesa will take a diversified approach to respond to and strategically invest in the City's EV transportation future. The strategies provide opportunity to partner with the private sector, make strategic public investments, streamline policies and processes, where appropriate, and consider other incentives to accommodate EV adoption. While the primary focus is on EV, there is also strategy focused on other alternative fuels, such as hydrogen. The market for EV and other zero-emission vehicles is changing rapidly. Creating a variety of strategies for EV adoption and expanding policy to include multiple alternative fuel sources will allow the City to be nimble and proactive with grant opportunities and changing market demands. The strategies listed below are based on analysis and community input during the Community EV Action Plan planning process.



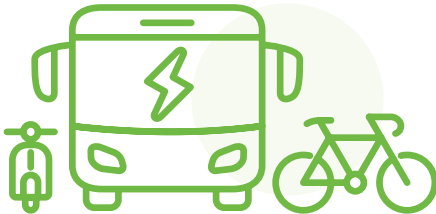
## 1. Increase charging access at home, particularly for people in multifamily housing.

- 1.1 Adopt EV charging ordinance that addresses new development and redevelopment
- 1.2 Streamline EV charger permitting
- 1.3 Create incentives for homeowners and property owners to install home charging ports and outlets



## 2. Increase access to public charging in neighborhoods, at work, and where home charging is less accessible.

- 2.1 Invest in charging hubs at civic destination
- 2.2 Develop strategies to support private fleet transition
- 2.3 Promote workplace charging



## 3. Support multi-modal access to electrification, including e-bikes, transit, neighborhood electric vehicles, and other micromobility devices.

- 3.1 Create an micromobility incentive program
- 3.2 Expand transportation demand management access with subsidized transit passes



## 4. Support development of a wide range of energy sources that reduce greenhouse gas emissions.

- 4.1 Identify locations for hydrogen fuel stations
- 4.2 Create incentives for bio-fuel production and sales
- 4.3 Actively pursue grant opportunities to create multiple sources of low and zero-carbon fuels



# Mesa EV Vision and Guiding Principles

Mesa will be well prepared for and optimally leverage an EV transportation future that is clean, connected, and easily accessible. The vehicles and devices people use to travel and move goods around Mesa will be available equitably, reduce carbon emissions, create opportunities for good jobs, be resilient, and expand mobility choices.

The City will achieve these desired outcomes by making strategic investments in public infrastructure, partnering with private companies to bring new EV transportation technology to the City, and adopting policies that streamline the City's vision for a transformed transportation future. Mesa's strategy goes beyond EVs as well. Mesa will be future-ready by proactively seeking and responding to a wide range of zero-emission fuels, vehicles, and supporting energy infrastructure.

## Mesa's EV future will be guided by these six principles.

**Convenient.** Plugging in to charge will be easy and accessible. Whether charging at home, work, or at public stations, the availability of these resources will facilitate an accessible, uninterrupted, and seamless transportation experience for daily life.

**Prosperous.** The EV transition will be a source of jobs and economic activity in Mesa. EV businesses will continue to open and operate in Mesa, creating a variety of goods jobs. Additionally, investment in EV infrastructure and payment for energy will be a source of productive economic activity, adding to Mesa's strong economic base as the City prepares for and responds to the transition to an EV centered transportation system.

**Diverse.** Mesa's transportation future is multimodal, and EV investments and policies will support a range of vehicles and devices. The goal is to prepare for and strategically invest in infrastructure that expands transportation choices, creates a safer transportation system, and reduces carbon emissions. Public transportation, e-bikes, neighborhood electric vehicles, as well as personal vehicles and other mobility devices are all examples of the City's transportation future.

**Equitable.** Investments and decisions to prepare for and respond to Mesa's EV transportation future will strive to ensure that all areas, residents, and businesses within the City have access to EV charging. These decisions will foster a future transportation landscape where every community within Mesa can thrive sustainably and economically.

**Resilient.** The City's EV transportation future will be prepared to accommodate a variety of vehicles and devices. Additionally, infrastructure will be developed to handle variations in climate and energy demand. The result is an adaptable transportation system that keeps people and goods moving, particularly in times of emergency and peak travel times.

**Ambitious.** Mesa is committed to being a leader in being prepared for and responding to the rapidly evolving EV transportation future. Other communities will look to Mesa as a source of leadership and inspiration to modernize their transportation system.

**Safe.** The installation, operation, and charging of EVs in Mesa will adhere to public safety best practices. The City will adopt standards to create safe charging and site conditions as well as invest in emergency response for battery and electrical fires related to vehicles and charging infrastructure.