

A photograph of a blue car on a road at sunset, with a green overlay. The car is on the right side of the road, and the sun is low in the sky, creating a warm, orange glow. The road has a white line. The green overlay is a semi-transparent band across the middle of the image.

# 5 Benefits & Challenges

of Implementing an Electric Fleet

AssetWORKS

What does the future of your fleet look like? Between right-sizing initiatives, the electric vehicle revolution, the dynamic age range of your technicians and the rapidly changing nature of tax budgeting, it may feel like most governmental fleets have to take on the industry one day at a time.

In some areas, you might have to – there are certain human elements that the best software can't always accurately predict (like surprise budget changes). But there are other areas which have become more defined, predictable and important, like the dawn of affordable electric vehicles. Even just the singular topic of electric vehicles has dozens of critical factors and sub-factors that you should consider. For today, let's just tackle five of the major benefits and challenges.

## Introduction

The objective of this white paper is to examine the different benefits and challenges of implementing an electric fleet. Topics of this paper include applicable government mandates and laws, the size of the vehicle fleet, the type of vehicles used, the lifecycles of these assets, the logistics of using an electric fleet and the energy savings and return on investment in doing so.



# Benefits of Implementing an Electric Fleet

## Favorable Government Perks and Incentives

There are now a lot of countries that have tax systems and other regulatory frameworks that are designed to encourage a transition towards cleaner and “greener” modes of transportation. The government of the state of California, for example, offers rebates for plug-in hybrid and zero emission light duty public fleet electric vehicles, battery-powered fully electric vehicles and for fuel cell electric vehicles. Other states in the U.S. and the European Union are also following suit.

## Less Maintenance Compared to Traditional Vehicles

One of the largest benefits of electric vehicles is their low maintenance requirements. This is based on the fact that electric vehicles have considerably fewer moving parts when compared to traditional cars. An electric vehicle does not have a traditional gear-heavy transmission because the motor is connected to the drive axels through a simplified process. By contrast, in a traditional combustion vehicle setup, the transmission assembly, by itself, is already composed of hundreds of individual parts, all of which can fail or break anytime during a vehicle's ownership lifecycle.

## Scalable Vehicle Fleet

Just like internal combustion engine vehicles, an all-electric fleet may also be easy to scale up or down depending on an organization's needs and the use cases of such assets. This can be done by simply acquiring new units from dealers, contracting with a leasing company or selling or auctioning them to private individuals (in the case that an organization needs to scale down).

## Longer Lifecycle for the Vehicles

Many of the electric vehicle manufacturers' representatives claim that electric vehicles can easily outlast their internal combustion engine counterparts. The perception is that electric vehicles are just designed to be simpler and therefore more durable compared to modern combustion-powered cars. The low maintenance and fewer total parts are the main contributing factors to this.

## Low Operating Costs due to Energy Savings

One of the biggest components of an organization's fleet operating expenses is the cost of fuel. Cars need fuel to run, and traditionally, that fuel comes in the form of gasoline or diesel, although hybrids and alternative fuels provide some middle ground solutions. An electric vehicle fleet is simply going to cost less to run in terms of miles per gallon or kilometers per liter compared to a fleet of traditional cars.



# Challenges of Implementing an Electric Fleet

## Limited Charging Infrastructure

One of the biggest challenges that organizations may have to deal with in case they do decide to transition towards owning an all-electric vehicle fleet is the limited availability of charging infrastructure. However, a government organization's operations are constrained to the footprint radius from the office compound of their city, county or municipality, thus this limitation would most likely have lesser impact. The inclusion of multiple charging stations throughout the footprint, or contracting with or using third party charging sites, can alleviate this stress as well.

## High Cost of Acquisition

Electric vehicles tend to cost notably more compared to traditional vehicles at time of purchase. Electric vehicle manufacturers claim that the high cost of acquisition can easily be offset by the low operating and low maintenance costs of electric vehicles. While this may be true it may take several years or even a full vehicle lifecycle to realize a significant ROI.

## After-Sales Limitations

The availability of after-sales services for electric vehicles is lower compared to that for traditional vehicles. This is largely due to the fact that the EV industry is still evolving. As more and more companies, organizations and private individuals make the transition towards electric vehicles, the impacts of this limitation will surely be minimized.

## Unavailability of Spare Parts

While it is indeed true that electric vehicles cost less to maintain on a per product lifecycle basis, it is generally harder to find shops that offer spare parts for EVs. The owners of electric vehicles have no choice but to buy spare parts from dealerships. Aftermarket spare parts are virtually nonexistent at this point of the EV industry's stage of development. Like most of the challenges associated with the decision to acquire an electric fleet, this limitation is going to be solved in the future.

## Range Anxiety

Range anxiety is arguably the biggest challenge that one may associate with having an electric fleet. It is not uncommon for mainstream EVs to have a range of around 250 to 300 miles. While this may indeed be more than enough for private use, it would be a problem for public-use vehicles. During times of natural disaster or region wide emergency, this could contribute to major challenges. In situations like this, the use of traditional combustion vehicles is still the preferred choice of most organizations, especially public ones.



## Conclusion

Indeed, the implementation of an electric fleet can present a myriad of challenges to an organization. Through the use of incentives and other governmental perks, positive return on investment can be achieved and the above-mentioned benefits can be realized. Depending on your municipality's location and the rules and standards that have been set forth, the transition to electric can become either easier or more challenging.

As the world moves toward a “greener” agenda in the face of climate change, your organization can partner with AssetWorks to help guide you and align you with industry experts skilled in these areas. So now that you know about electric vehicles, what will the future of your fleet look like?

Visit [assetworks.com/fleet](https://assetworks.com/fleet) to learn more.



Asset**WORKS**