The Truth About Electric Vehicles

Understanding common sustainability myths, making sense of implementing clean vehicles and key trends to look out for in the future

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Busting Common Fleet Sustainability Myths

Electric vehicles (EVs) aren't only the wave of the future; they're the topic of today. Leading the charge in significant carbon savings for companies across the globe, they positively impact our environment and also the bottom line for fleet-based businesses.

But what is the sustainability impact of fleets that are moving toward hybrid or fully electric models? Let's explore some of the common misconceptions about electric vehicles, and how they impact both global sustainability goals and everyday fleet operations.

Myth 1

Electric or hybrid energy is worse for the environment than internal combustion engine (ICE) fuels.

Some methods of generating the electricity used to charge EVs does create carbon pollution, such as coal or natural gas—but renewable energy sources like wind or solar do not.[1] And EVs don't create tailpipe emissions, making them responsible for much lower levels of greenhouse gasses than the average (brand new) ICE vehicle over their lifecycle. One study found that EV emissions can be up to 43% lower than from diesel vehicles.[2]

Renewable power is also predicted to expand by 50% by 2024[3], leading to even lower emissions for the overall EV lifecycle. Companies that are laying the EV groundwork now will be in a winning position as eco-friendly vehicles become even more mainstream.

Myth 2

The impact on the environment to manufacture EVs is more harmful than ICE vehicles.

Some may think that producing an EV battery can create more CO_2 pollution than a gasoline vehicle, mostly due to the amount of energy needed to create the battery. But the CO2 from manufacturing an EV battery actually equals the emissions from driving a gas-powered vehicle for only 1-2 years. The full lifecycle of an EV, battery included, creates significantly less CO_2.[4]

Today, approximately 50% of the emissions from EVs comes from the battery manufacturing and assembly[5], but producing those batteries using renewable energy can help substantially reduce lifecycle emissions—and there are many companies that are up to that task.

Myth 3

Just adding electric vehicles to your fleet is enough to see big sustainability results.

To realize the full potential of electric vehicles within your fleet, you need to maximize their utilization—and that's where fleet automation comes in. There's always a large amount of data coming from the vehicles that are a part of your daily operations, and it's critical to turn those insights into action, to automating decisions across various makes, models, and fuel sources.

Additionally, shared mobility will be a huge positive factor in sustainability models across the globe. Here are some of the ways it will positively impact fleets and consumers:

- Shared mobility eliminates expenses including car payments, fuel, insurance, parking, and maintenance.
- Shared services offer more freedom and flexibility offering a wider variety of vehicles to match mobility styles.
- Apps and key digitization have made it easier and faster to request rides or vehicles than traditional services.
- Ride and car sharing reduces private vehicle ownership, taking cars off the street and making city living more accessible while reducing carbon emissions.

Smarter utilization of our resources is vital to our planet, which means better solutions benefit us all. Making big strides in sustainability will require us to use more electric vehicles, and over the short and long run, it is much more environmentally friendly to implement EVs into your fleet.

Making Dollars and Sense of Implementing Electric Vehicles

Faced with ongoing supply chain challenges, material shortages and geo-political turmoil, fleet-based businesses are also tasked with finding more environmentally friendly and cost-effective ways to service the growing global marketplace.

But there is great news—while electric vehicles (EVs) require an initial investment, they can be a valuable component to running a profitable fleet long-term. Here's what you need to know about the cost of adding EVs to your fleet, and the benefits you can realize when it comes to profitability, efficiency and savings.

What does it cost to add an EV to your fleet lineup?

Adding new vehicles to your fleet always presents a significant financial investment. Fleet owners may see the price tag of the latest EVs and be concerned that they won't see ROI from moving toward a hybrid or fully electric fleet model. But while EVs often cost more, many cities, states, and countries are finding ways to incentivize electric vehicle ownership, and the cost of the entire lifecycle of an EV is probably less than you think.

While the starting average price point for an EV is around $10,000 more than a gas-powered vehicle, the federal EV tax credit is currently up to $7,500 for new passenger cars or smaller commercial vehicles in the US. Many states offer their own tax incentives too—and tax credits for bigger commercial trucks can be up to $40,000.[6]

An electric vehicle costs significantly less over its full lifetime than an internal combustion engine (ICE) vehicle[7], and because EVs are able to service more customers over a longer period of time, the reduction of fuel and service cost can be passed down to end consumers.

Are EVs expensive to maintain?

According to Consumer Reports, owners pay half as much to repair and maintain electric vehicles compared to a gas-powered car. EVs have fewer parts to service or replace, as they don't need oxygen sensors, spark plugs, motor oil, or timing belts.

It's estimated that scheduled maintenance for fully electric vehicles costs about 40% less than for gas-powered cars[8], which means consumers who own an EV can expect to save an average of $4,600 in repair and maintenance costs over the life of the vehicle.[9] This also makes EVs more sustainable, as their lifecycle can be much longer than ICE vehicles due to fewer parts needing to be replaced over time.

Is charging EVs difficult or costly? Are there enough charging stations in place?

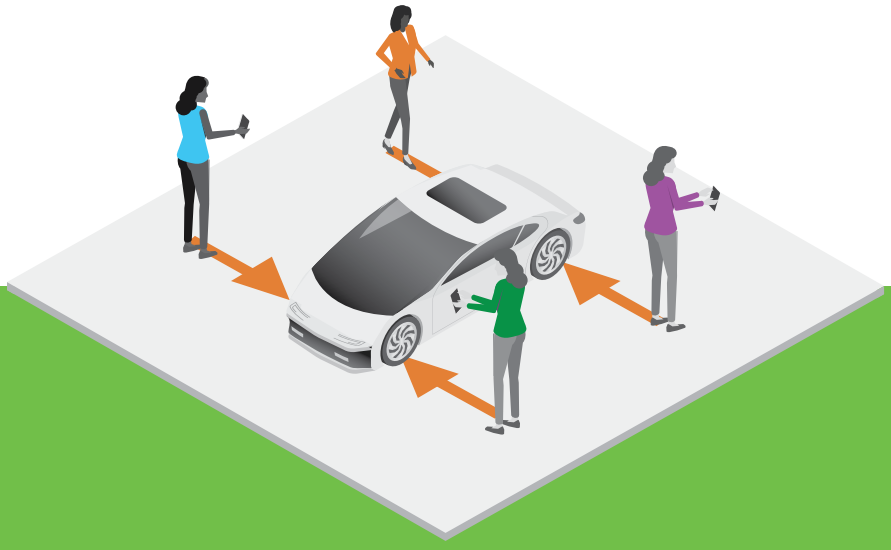
The lower pricing of electricity makes EVs more cost-efficient to operate than gas-powered vehicles. Mile for mile, it costs less than half as much to operate an EV than an ICE vehicle. EV owners, on average, spend 60% less on fuel compared to internal combustion engine vehicles.[10] The adoption of electric vehicles and fuel cell vehicles avoided almost 1.5 million barrels of oil per day in 2021 alone—about 3.3% of total demand.[11]

Fleets may also be concerned that they won't be able to charge vehicles as easily as filling up a tank with gas. However, this infrastructure need is being addressed on a global scale. Many government agencies, utilities, and companies are constantly expanding the network of charging stations. The U.S. currently has around 47,000 charging stations for plug-in EVs, and more are coming—the White House recently announced its goal of building a national network of 500,000 EV chargers along highways and in communities by 2030.[12]

Is it time for your fleet to make EVs a reality?

It is much more affordable to build an EV or hybrid fleet than many businesses realize. EVs are not only beneficial to the environment but also provide long-term financial benefits to customers and businesses.

And, in order to get the most out of the investment, vehicle utilization must be a core focus. Fleets can keep the transition to EVs smooth by digitizing vehicle access and automating tasks coming from all fleet vehicle data.

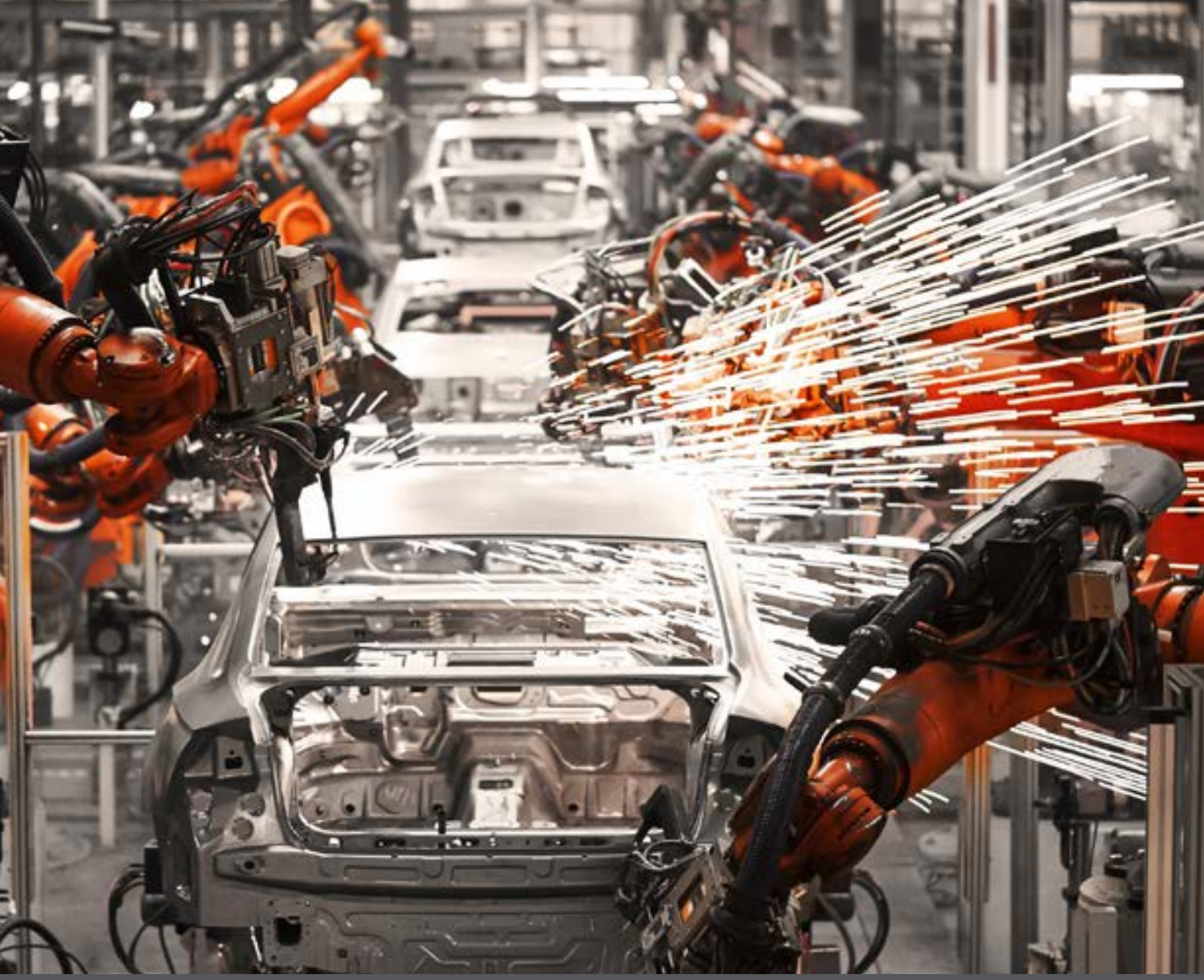


"With EVs, it's incredibly important to increase vehicle utilization so the vehicle is being used by multiple people and multiple shifts", says Aarjav Trivedi, Ridecell Founder and CEO. "Being sustainable requires fleet managers to use EVs at a higher volume as well as the data being collected from those vehicles, which is more than a traditional fuel-based vehicle. Fleet automation can help to automate decisions, such as charging locations and times, so the overall operation of these vehicles is much easier across makes and models, leading to smoother adoption".

Future Trends to Watch For

Electric vehicles (EVs) have emerged as one of the most impactful ways fleets can lessen their carbon footprint well into the future. So, it should be no surprise that the adoption of EVs is expected to surge in the next few years. It is projected that EV sales will rise from 6.6 million in 2021 to a whopping 20.6 million in 2025.[13]

But what are some of the key trends driving EVs into the future? Let's explore some of the latest EV trends and what you can expect to see in the future of EV fleets.



Trend 1

Automakers' commitment to EV production

While there have been recent headlines in the news about the limitations in the production of vehicles, the long-term outlook for producing EVs is strong. It is estimated that the automotive industry will invest over $500 billion by 2030 for its EV production.[14]

With this solid commitment to electrification from a number of traditional automakers, there will continue to be a variety of new electric models available to the public, which will make it significantly easier for businesses to add these vehicles to their fleets.

Trend 2

Legislation that's charging EVs forward

On both the federal and state levels, recent legislation has been passed to enhance and encourage the use of electric vehicles. From a federal perspective, the current administration recently passed three bills that will have future implications for the EV industry, including:

- **The Bipartisan Infrastructure Law:** This legislation is slated to invest $7.5 billion to help create the infrastructure for around 500,000 EV chargers. The goal? To help make sure that charging EVs is predictable, reliable and accessible.[15]
- **The Inflation Reduction Act:** This act provides a number of financial incentives for buyers of new and used EVs.[16]
- **The CHIPS and Science Act:** One of the objectives of this act is to make critical investments in building domestic capacity for the semiconductors necessary for electric vehicles.[17]

In recent years, policymakers in a number of states have contributed to the increase in hybrid and EV initiatives. However, the state of California has made one of the largest footprints thus far. In August of 2022, the state's regulators passed rules banning the sale of new gas-powered cars by 2035[18], as well as other initiatives that will push EVs forward. With the potential for other states to follow suit, many organizations are already preparing by transitioning their fleet to electric.

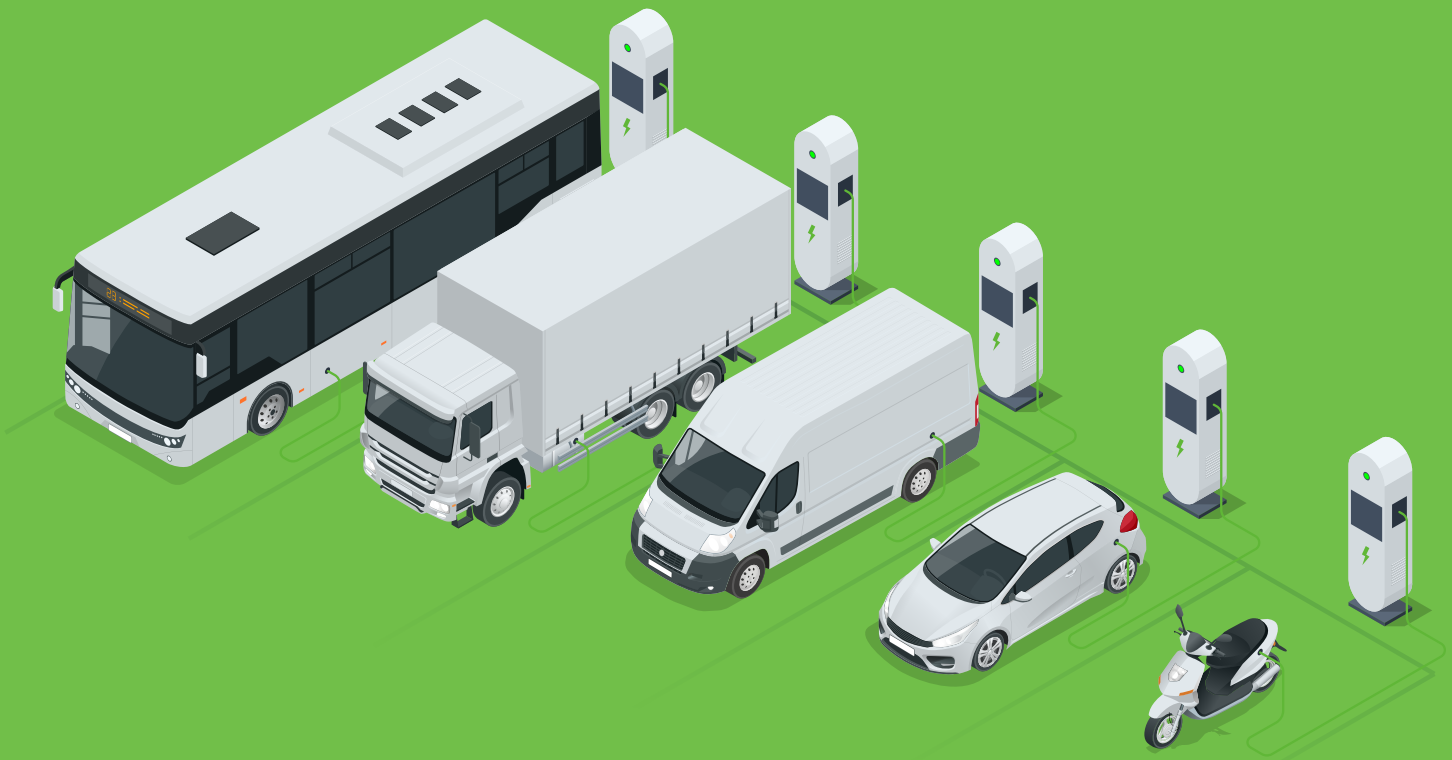
Trend 3

Automation + EVs = Better Business Outcomes

Recently, some of the biggest companies in the world have committed to implementing over 5.5 million vehicles to electric by the end of 2030. Not only are businesses adding EVs to meet environmental objectives, improve public perception and stand out from competitors, but they are also proving to be highly effective and efficient.

With the help of a fleet automation solution, organizations are already seeing some of their processes streamlined as a result of adding EVs to their fleet, including:

- **Improved workforce management:** Vehicles with low charges can be removed from the rotation, and dispatch orders for charging are automatically issued. When charging is complete, an automated workflow assignment is generated to unplug the vehicle and return it to its place in the fleet.
- **Automated EV-specific maintenance management:** Vehicle data is being used to identify and schedule maintenance jobs based on the vehicle type and usage. Real-time scans of the vehicle's information decipher and schedule unplanned maintenance—whether it's a standard gas-powered vehicle, hybrid, or electric.
- **Assign EVs based on mileage and load:** Expected mileage and load volume and can be used to calculate and display available vehicle options, making sure each driver is assigned the optimal vehicle for each task or trip.



There is no doubt that the future is going electric. There are great efforts already being made across the globe to hasten many industries toward electrification. In the coming years, it is expected that EVs will continue to have a larger impact on productivity and will become increasingly affordable. Fleets can make the transition to EVs smoother by using the right technology to digitize vehicle access and automating tasks coming from the vehicle's data. It's time to move the world better, electrically.

Visit us to learn more about how Ridecell helps customers around the world meet their sustainability goals while protecting and preserving the environment.

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