

ELECTRIC VEHICLES



Electric vehicles (EVs) are cars that use a battery as their primary source of power, also referred to as battery electric vehicles (BEVs). Electric-powered vehicles are charged by plugging them into a power source, and they are considered zero-emissions vehicles because they do not produce tailpipe emissions -- meaning there is no exhaust that comes out of the vehicle. As GHG emissions from single passenger vehicles remains a major concern, many cities are looking to increase EV adoption.

Although EVs have the potential to reduce transportation emissions, concerns such as range anxiety and high upfront costs are hurdles for mass adoption. Additionally, while electric vehicles do not directly produce emissions, many people worry about their total impact on the environment including emissions created in the production of electricity used to charge an electric vehicle, as well as current practices for EV battery use and mineral extraction.

Ensuring frontline communities have access to the benefits of EV technology without the repercussions of gentrification is another concern. As many low-income neighborhoods are disproportionately exposed to vehicle pollution, ensuring EV technology reaches and supports these same communities is of increasing importance to many cities.

Thanks to new technology, the electric vehicle market continues to evolve with new classes of vehicles at increasingly varied price ranges. Consumers are also beginning to recognize the cost benefits that EVs demonstrate in the long term – looking at the total cost of ownership of the vehicle versus the initial purchase price. In addition to reducing a car's carbon footprint, EV's typically incur cost savings through reduced maintenance needs and dependency on gas. New EVs also have increasingly better range with current models reaching 200-300 miles in one charge.

Key actions to support EV adoption in cities often center on committing to educating and demonstrating the value of EVs to residents at all levels of income. Some programs in California have successfully launched EV rideshare programs such as “Green Raiteros” that offers predominantly Latino, rural agricultural families access to an EV ridesharing service providing on-demand transportation to and from critical services. Other programs focus on supporting multifamily complexes with low cost EV car share programs.

Sources and Recommended Reading:

- [Hybrid and Plug-In Electric Vehicles, U.S. DOE](#)
- [Why Electric Vehicles are Better for our Climate, Union of Concerned Scientists](#)
- [Green Raiteros Connects Rural Californians to Vital Services, EVgo](#)
- [EV Car-Sharing Initiatives Take Root in Sacramento, Government Technology](#)

EV Cost Reductions

Declines in battery costs are reducing upfront EV costs. Analysts predict EV costs will be equal to gas-powered cars and SUVs as soon as 2024.