NOVEMBER 2023

Toyota's Goal:
Reduce carbon emissions as much as possible, as soon as possible.

We believe in the electric future.

We believe we must eliminate as much carbon as possible as soon as possible. And we believe we need to bring everyone along.

We believe customers deserve the ability to choose a cleaner powertrain that best fits their needs, lifestyles, and budgets.

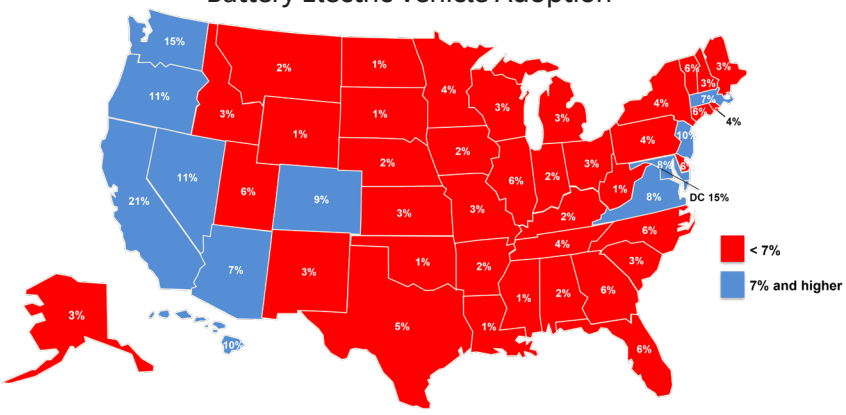
Battery Electric Vehicles: One Size Fits All?

The EPA has proposed new vehicle emissions standards that mandate automakers sell an unrealistic number of battery electric vehicles. **By 2032, the rule would effectively require 2 out of every 3 vehicles sold be a battery electric vehicle.**

In 2022, only 5.8% of vehicles sold (750,000) were battery electric vehicles. **To meet the EPA standard, the US auto industry would have to sell more than ten times the amount we've sold today.** And while there are many more BEVs on the market, YTD sales are tracking under 8% this year.

Battery Electric Vehicles are a great choice for some consumers, but not for all consumers. Sales of BEVs are concentrated in just a few states. Many consumers are not yet ready to switch to BEVs, due to concerns over access to charging, battery performance in weather, cost, and more.

Battery Electric Vehicle Adoption



Source: RL Polk, BEV adoption by state YTD 8/31/23

Plug-in hybrid: Combines battery electric technology and a internal combustion engine in one vehicle.

Benefits:

- Drive much of the time in zero emission mode
- Gas engine backup, no range anxiety
- No charging anxiety
- Smaller battery, less critical minerals
- Bridge technology to electric vehicles

The EPA proposal unfairly discounts the credit given to plug-in hybrids, making this 'bridge' technology less attractive and feasible for automakers to offer.

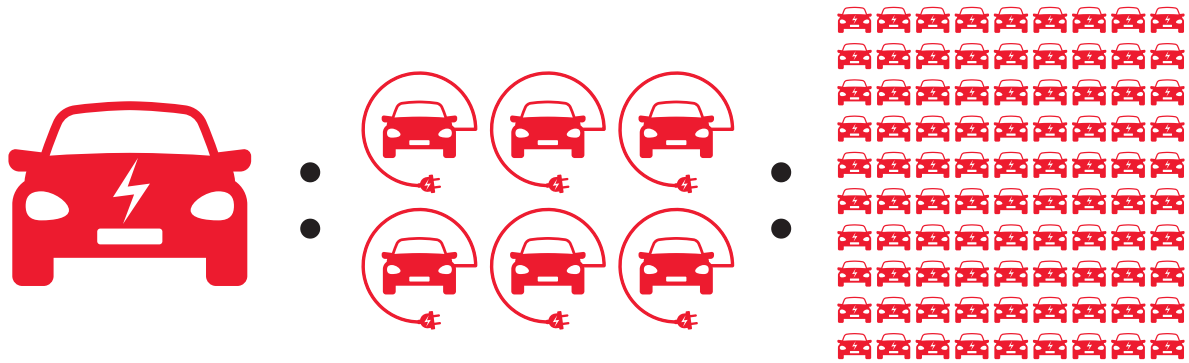

A Practical Path Forward

While we work to address these challenges, the most immediate way to reduce carbon emissions is through an 'all of the above' mix of electrified vehicle options.

Taking limited battery resources and sharing them among different options will get more customers in electrified vehicles and will take more carbon off the road.

The 1:6:90 Rule

The amount of raw materials in **one** long-range battery electric vehicle could instead be used to make **6** plug-in hybrid electric vehicles or **90** hybrid electric vehicles. For the same limited resources, instead of replacing one internal combustion engine vehicle, you can replace **90**. **The overall carbon reduction of those 90 hybrids over their lifetimes is 37 times as much as a single battery electric vehicle.**



1 Battery Electric Vehicle

6 Plug-in Hybrid Electric Vehicles

90 Hybrid Electric Vehicles

37x less carbon

Delivering on Toyota's Goal

Toyota has sold 25 million electrified vehicles globally in the past 25 years, the equivalent carbon reduction of 7.5 million battery electric vehicles.

Last year, 1 out of every 4 vehicles Toyota sold in the US had an electrified powertrain. This year to date, 26% of our sales mix was an electrified vehicle.

Toyota believes in an electric future. But there are significant challenges to widespread deployment that we must address first to get there. An 'all of the above' electrification strategy is the bridge to get us to overall lower carbon emissions.