



THE ROLE OF VEHICLE EFFICIENCY AND SIZE WHEN FUEL PRICES RISE

Oil price increases due to recent geo-political events have a huge impact on the costs facing families around the world. About 20% of the world's oil and liquefied natural gas (LNG) usually passes through the Strait of Hormuz and the conflict has sent global energy prices soaring. This has had huge knock-on impacts in pretty much every aspect of global economies from agriculture to manufacturing, medicine to transport. Recent increases at the pump have hit drivers particularly hard.

At times like these it is important to remember that greater fuel efficiency – particularly a move to electrification – would eliminate almost all of those additional costs. Fueling battery-electric vehicles (BEVs) has long been cheaper than petrol or diesel cars. The current on-going oil crisis has made that gap even wider.

GASOLINE v EV COSTS

Using the latest available data on petrol and electricity prices, real-world vehicle efficiency, and annual mileage in 18 countries, GFEI partner the International Council on Clean Transportation (ICCT) estimated the annualized cost for an average driver to fuel a gasoline car compared to a battery-electric car based on prices in April 2025 and April 2026.

An examination of these comparative costs has led to three major findings:

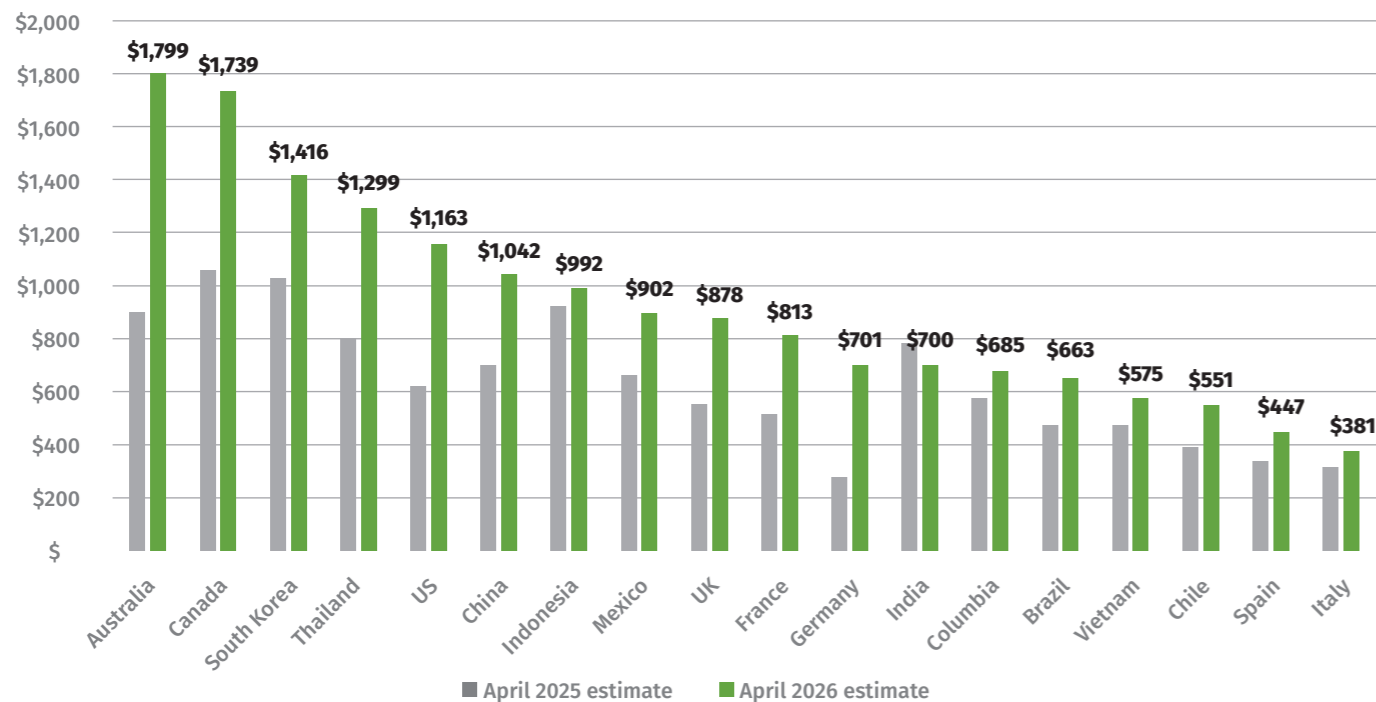
- Drivers of gasoline cars could be spending up to \$1,800 more to fuel their car each year than if they were driving a BEV, with over \$1,000 in annual savings available in advanced markets like China, the U.S., and South Korea as well as emerging markets like Thailand.
- Recent fuel price spikes have approximately doubled fuel costs in countries like Germany and Australia, compared to a year ago (Figure 1).
- Fuel costs have gone up for everyone, but larger vehicles are taking a much bigger hit, with large SUVs incurring a 60%–80% greater increase in annual fueling costs than small cars.

Most countries have stepped in with attempts to cushion the blow by cutting fuel taxes or having state-owned oil companies absorb price increases. But these interventions come at real cost to national economic outlooks. In the end, they only reduce or delay, rather than eliminate, the underlying pressure.

Oil prices are vulnerable to global supply shocks in a way that electricity simply is not. Unlike gasoline, which depends on global supply chains and trade networks that flow through critical geographic chokepoints, electricity can be generated from sources available in every country – hydropower, sun, wind, and more. These sources give BEVs an inherent resilience that goes beyond just saving money today.

The imperative of gaining energy autonomy and reducing oil dependence for both drivers and policymakers has never been greater. BEVs remain the best bet for reducing exposure to volatility in global energy supplies.

Figure 1: Additional annual fueling cost of a gasoline car compared to a battery-electric car



SMALLER IS BETTER

Analysis of annual fueling cost rises for three classes of gasoline-powered passenger vehicles – small cars, large cars, and large SUVs in China, the US, and Germany (Figure 2).

- Drivers of large SUVs could expect to pay \$350–\$620 more in fuel annually than they did a year ago, versus \$220–\$350 for a small car.
- The increase has been sharpest in the U.S., where large SUVs are the least efficient vehicles among these three markets.

This reinforces the importance of smaller cars in reducing energy expenses during periods of volatility, particularly when the savings from switching from ICE to BEV for different vehicle classes are considered. In Figure 3 opposite how much more a driver would spend fueling a petrol car than a BEV for a given vehicle class is considered, in China, Germany, and the U.S., based just on April 2026 data. Because of the inherently greater efficiency of BEVs, switching from a petrol to electric large SUV results in 60%–80% more fuel savings than switching from a petrol to electric small car.

In this era of high and volatile fossil fuel prices, both the electrification and right-sizing of cars are more appealing than ever but combining both strategies results in the most benefits. The greatest fuel savings would be moving from a large petrol SUV to a small electric car, as shown in Figure 4. Using April 2026 energy price data, drivers making such a switch could reduce their annual energy expenses by anywhere from 74% (Germany) to 93% (China). Additional benefits in terms of climate, resource use, cost, air quality and safety make such a transition a real win-win.

Figure 2: Families with bigger cars are more exposed to fuel price volatility

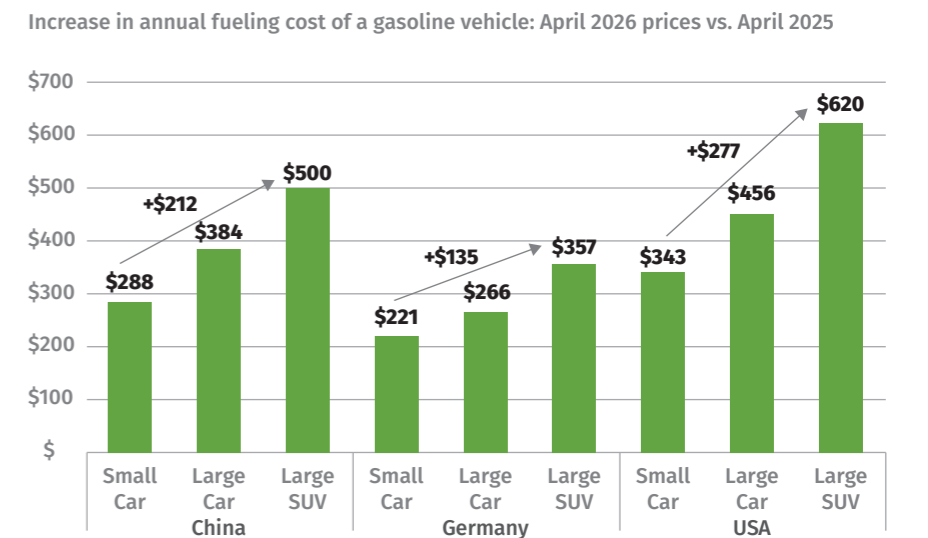


Figure 3: For bigger cars, a better switch: A gasoline-to-electric swap saves much more for an SUV than for a small car

Annual fuel savings of battery-electric vehicles in China, Germany and the U.S. (April 2026 estimates)

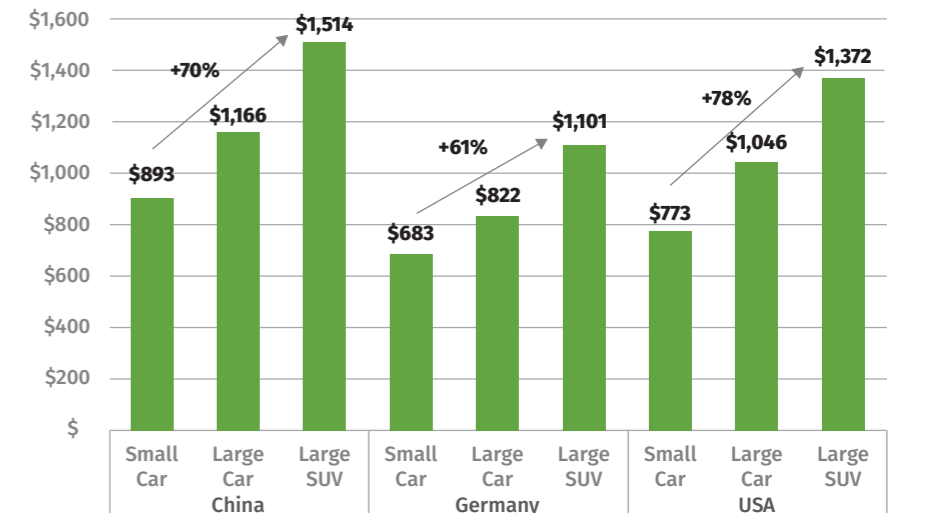
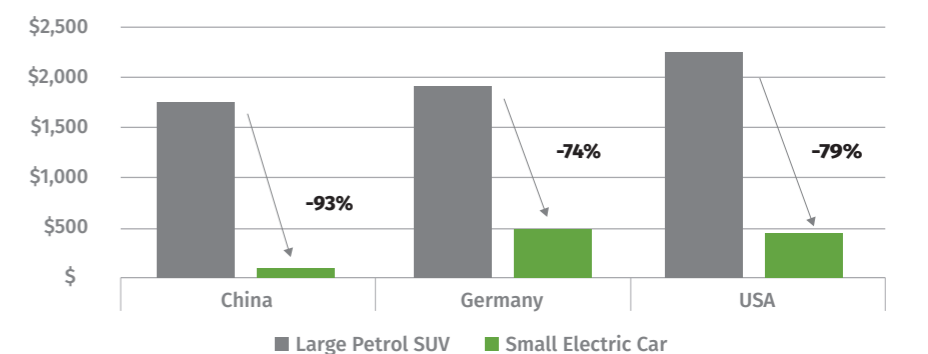


Figure 4: The smartest swap: Switching to a smaller electric car offers 74-93% fuel savings

Annual fueling cost (April 2026 estimates)



+21%



Fuel price increase at the pump have hit drivers hard

\$1,800



Drivers could save up to \$1,800 annually by switching to EVs

60% - 80%



Greater increase in annual fueling costs for large SUVs than small cars

NOTES:

- Electricity prices are residential estimates, so consumers who rely extensively on fast charging may have smaller savings.
- Mileage estimates are annual averages across all segments, so this analysis isolates the impact of differences in average energy intensity across segments. Consumers who drive more or less would see larger or smaller savings.
- India's trend is an outlier, since the government has taken several actions to blunt the spike in fuel prices, so fuel prices there are currently below April 2025 levels.
- This note focuses on petrol – diesel prices have risen even further.
- For further info on the benefits of EVs - <https://theicct.org/publication/a-global-comparison-of-the-life-cycle-greenhouse-gas-emissions-of-combustion-engine-and-electric-passenger-cars/>



For more information:

 www.globalfueleconomy.org

 [@globalfuelecon](https://www.youtube.com/@globalfuelecon)

 [global-fuel-economy-initiative](https://www.linkedin.com/company/global-fuel-economy-initiative)