




Earth911

[How to Recycle](#)

[Where to Recycle](#)

Earth Watch Living & Well-Being

Reading time: 3 mins

 **Listen to this article**

[NEXT](#)

# The True Cost of Car Ownership



By [Gemma Alexander](#)

FEB 21, 2023

[Climate Change](#), [environmental justice](#), [Pollution](#), [transportation](#)



Owning a car is more expensive than you think. Research has shown that people underestimate how much money they spend on cars and driving. It also shows that policymakers underestimate the social costs of car culture. We Americans love our cars. But if we really understood the full cost of private car ownership, we might be more willing to consider the alternatives.

## Direct Costs

A [recent study](#) in Germany calculated the direct cost of a lifetime of car ownership. They found that owning a small car cost \$414,000 while owning a luxury car cost more than 1 million dollars. These amounts are about double the estimates made by car owners in an earlier [consumer perception study](#).

Germans pay higher sales prices for their cars and fuel<sup>CLOSE</sup> gasoline than Americans as a result of different tax structures and the [U.S. subsidization](#) of the oil industry. On the other hand, the study was based on average German mileage. They used 9,321 miles per year (15,000 km) while the average American drives [13,474 miles per year](#), requiring more gas, repairs, and more frequent maintenance than the average German driver. AAA recently estimated [the average yearly cost](#) for Americans to own and operate a vehicle at \$10,728. Over an adult's lifetime of car ownership, their result is comparable to the German study.

## Social Costs of Cars

There are also social costs (what economists call negative externalities) associated with private vehicles. These externalities include things like road construction, public parking, and the costs resulting from societal impacts like air pollution. The German study found that society subsidizes car ownership to the tune of \$275,000 per small vehicle owner.

In the German study, they did consider some hard-to-quantify impacts. These included uncompensated crash damages and the impacts of climate change. But they could not calculate the full cost of negative externalities. [Per mile of travel](#), passenger vehicles are 10 times more likely to result in fatal accidents than buses, and 17 times more likely than trains. The average American spent more than [50 hours stuck in traffic](#) last year (that's still barely half the pre-pandemic loss of 99 hours/year). Those hours spent seated in cars have real but unmeasured public health impacts that are avoided by active forms of transportation like [cycling](#) or even walking to a bus stop or subway station.

As expensive as [bike lanes](#) can be, their social benefits outweigh the direct costs, while the costs of car-based infrastructure are harder to justify. Acknowledging the full social costs of automobiles is important to developing functional, [sustainable urban transportation](#) systems that offer the [social benefits](#) of urban design by prioritizing people over cars.



The typical passenger vehicle gets 25 mpg and emits 4.6 metric tons of carbon dioxide each year.

## Environmental Cost of Cars

It's hard to overstate the [environmental impact of automobiles](#). Transportation is the [largest component](#) of the average Americans' direct carbon footprint. Americans' transportation emissions are mostly from their private vehicles — only 8% of all U.S. transportation emissions comes from [other modes of transportation](#). The typical passenger vehicle gets 25 mpg and [emits 4.6 metric tons](#) of carbon dioxide each year. That doesn't include the emissions and other environmental impacts generated in the manufacture of the vehicle. Nor does it include the environmental impact of constructing the roads it drives on.

Automobiles also emit other [air pollutants](#) like nitrogen dioxide, carbon monoxide, hydrocarbons, benzene, and formaldehyde that account for about [a third of air pollution](#) in the U.S. Automobiles contain and off-gas [red list chemicals](#), generate mountains of hard-to-recycle [tires](#), and at the end of their life, generate pollution when [improperly disposed](#). Off-roading [damages sensitive ecosystems](#) and even legally constructed roads challenge wildlife by [fragmenting habitats](#).

## Social Justice

There's even a social and [environmental justice](#) aspect to car ownership. The German study concludes:

“*Most lower-income and many moderate-income households are harmed overall by policies that favor automobile travel over more affordable and resource-efficient modes.*”

Such policies induce middle-income households to overextend their finances to purchase a second car for commuting. Low-income households must choose to go into debt to purchase a car. Or they must learn to live with often underfunded and inefficient public transportation options. Even carless people who can only afford the bus are subsidizing drivers because their taxes support automotive infrastructure. At the same time, they are stuck breathing the pollution generated by wealthier households' vehicles.

An objective examination of the data encourages everyone to look for other modes of transportation and to demand that their cities begin to be designed for mobility without a car.

advertising



[Reading time: 3 mins](#)

[Carbon Calculating: Estimating Your Home Energy Impact](#)

[Reading time: 3 mins](#)

[Best of Earth911 Podcast: F4CR's Rick Wayman on Responding to the Climate and Nuclear War Twin Threat](#)



By [Gemma Alexander](#)

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing [here](#).