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# When and How To Get Rid of Your Old Car



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[Electric Vehicles](#), [vehicles](#)



Replacing all your old stuff with new green products scratches the consumer itch and feels like doing something good for the environment. But “replace” is not one of the 3Rs of environmentalism. When you’re trying to reduce, reuse, and recycle, hanging on to your old stuff as long as possible is usually part of the equation. That’s fine for items like [clothes](#), but the equation gets more complicated for items that continue to pollute every time you use them, like cars. Fortunately, the math isn’t very hard, and you have plenty of options for disposing of your old vehicle when it’s time to go electric.

## Embodied Carbon vs Carbon Footprint

When people decide to buy a new car to be more efficient, they are thinking about their [carbon footprint](#). A carbon footprint is a simple way to express the environmental impact of an activity. It is usually based on the amount of

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greenhouse gas emissions that activity produces, which <sup>CLOSE</sup> are measured in [CO<sub>2</sub>-eq](#). Driving a new car will have lower [carbon emissions](#) than driving an old one because newer cars are built to higher [emissions standards](#), are usually more [fuel efficient](#), and are less likely to [leak oil](#) or other pollutants.

But before a new vehicle drives its first mile, it has already created significant environmental impacts. Manufacturing new cars requires a lot of energy, uses a lot of materials, and often creates significant amounts of waste and pollution. The carbon footprint of everything that precedes the use of the vehicle is its [embodied carbon](#) (or sometimes, embodied energy). [Material production](#) accounts for about 20% of [life cycle](#) emissions in a fossil-fueled car. It's closer to 40% for an electric vehicle.

## Doing the Math

Whether it makes sense to upgrade depends a lot on what you drive now, and how much more efficient your new vehicle will be. It also depends on the [electricity source](#). An EV running entirely on coal-powered electricity won't reduce emissions as much as one powered by renewables. Replacing your three-year-old Honda Civic with a new [GMC Hummer EV](#) is not really doing the environment any favors.

Reuters used an Argonne National Laboratory model to determine [the point at which](#) an EV becomes cleaner than an equivalent gasoline car in terms of its lifetime carbon footprint. For a midsize vehicle, they determined the break-even point at 13,500 miles. Another study indicated that most EVs will offset the emissions from manufacturing [by 19,000](#) miles. These studies compare new vehicles – “paying off” the carbon debt of a new EV would take longer if compared to a used vehicle.

[Ars Technica](#) compared the impacts of a new EV with those of a 2010 combustion engine car. They concluded that the environmental impact of the EV would match that of the old car after two years. Beyond two years, the EV would be an improvement over the old car.

You can make a similar calculation to estimate emissions for your own situation:

1. Look up or calculate your current vehicle's gas mileage.
2. Estimate the number of miles you drive in a year.
3. Multiply 8,887 grams of CO<sub>2</sub> by the number of gallons of fuel you burn in a year.
4. Look up the [EPA emissions estimates](#) for the EV you are considering.
5. Multiply the results by your annual mileage.
6. Look for data on the embodied carbon of the EV you are considering. If you can't find it, use the Union of Concerned Scientists' estimate of 12,000 pounds of CO<sub>2</sub>.
7. Add the value in steps 5 and 6 to calculate the first year's emissions for the EV. Compare this to the value in step 3 for your current car.
8. Continue adding the values in steps 3 and 5 to their respective vehicles until the result for the EV is equal to or less than the result for your current car. This is the number of years before the old car's footprint exceeds that of the new EV.





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## Getting Rid of Your Old Car

Whether or not it makes sense to upgrade now, eventually you will need to get rid of your old car. If you are simply upgrading, trading it in or selling it is the obvious choice. You can help someone out there replace their old gas guzzler with your relatively efficient car.

But if your car is the guzzler, or if it gives up the ghost entirely, how do you dispose of it? You could [donate it to charity](#). Some charities repair drivable vehicles and give them to people in need. Others will tow away unusable vehicles to strip for saleable parts. Be sure to find out what happens to the vehicle and how the charity disposes of any unusable parts before you donate.

[By weight](#), vehicles are about 75% metal, both ferrous and non-ferrous, which is recyclable. The remaining 25% includes [tires](#) (which can be a challenge to recycle), fluids such as used oil, antifreeze, lubricants, gasoline or diesel, and other materials. These other materials include glass, plastic, fabric, rubber, and electronic components. Many of these materials are recyclable. Others are toxic and must be handled with care. Some materials are both toxic and recyclable. Breaking down your car requires a responsible recycler. [Salvage yards](#) are important for recycling [each material](#) found in motor vehicles. But they can also be a source of pollution and endanger the health of nearby communities without proper maintenance and regulation. Many responsible salvage yards require you to remove and dispose of [automotive fluids](#) before they accept your junk vehicle. You can find charities and recyclers using Earth911's [recycling directory](#).

## If You Do Buy

Consider buying a more [efficient secondhand vehicle](#). Any used car that gets better mileage than your old one is a step in the right direction, without generating additional embodied carbon costs. Also consider carefully whether

you actually need a pickup or SUV – weight and aerodynamics still affect the [efficiency of EVs](#). Whatever size vehicle you decide on, it is always [best to choose](#) the electric version.

If you don't choose an EV (for example, because your home's electric system won't support it without costly upgrades or your electricity comes entirely from coal plants), choose the car with the best gas mileage that you can get. Look for vehicles with continuously variable transmissions (CVT) – they are [10% more efficient](#) than the same model with an automatic transmission. Whatever car you own, you can reduce your [transportation carbon footprint](#) by keeping it well-maintained, never idling the engine, and driving less.

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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](#).

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