



What is the average number of carbon-equivalent emissions that are saved in a year if a person skips driving their car one day a week?

ChatGPT 4:

To estimate the average amount of carbon dioxide (CO₂) emissions saved by not driving a car one day a week for a year, we need to consider several factors, such as the average fuel efficiency of the car, the average distance driven, and the average emissions per gallon of fuel burned.

1. **Average Fuel Economy:** As of 2023, per the EPA the average fuel economy for new vehicles in the U.S. is roughly around 25 miles per gallon (mpg). However, this number can vary significantly based on the type of vehicle.
2. **Average Distance Driven:** Per the Federal Highway Administration (FHWA), the average American drives about 13,500 miles per year. Dividing this by 365 days gives an average of about 37 miles per day.
3. **CO₂ Emissions per Gallon of Gasoline:** Per the EPA, burning one gallon of gasoline produces about 8,887 grams of CO₂.

Let's calculate the CO₂ emissions saved:

- **Daily Emissions:** If an average vehicle drives 37 miles per day at 25 mpg, it uses 1.48 gallons of gasoline daily (37 miles / 25 mpg). The daily CO₂ emissions would therefore be 1.48 gallons * 8,887 grams/gallon = 13,153 grams or about 13.15 kg of CO₂ per day.
- **Yearly Savings for One Skipped Day per Week:** By not driving one day each week, the person skips driving for 52 days in a year. So, the total CO₂ savings would be 13.15 kg/day * 52 days = 683.8 kg of CO₂ per year.

This calculation is a rough estimate and can vary based on the specific vehicle, driving habits, and local conditions. Additionally, this calculation assumes only gasoline-powered vehicles; hybrid or electric vehicles would have different emissions profiles.

What is that converted into US pounds?

To convert kilograms to pounds, you can use the conversion factor where 1 kilogram is approximately equal to 2.20462 pounds. Let's convert the estimated yearly CO2 savings from kilograms to pounds.

We calculated 683.8 kg of CO2 saved per year. Converting this to pounds:

$$683.8 \text{ kg} \times 2.20462 \text{ lbs/kg} \approx 1,507.42 \text{ lbs}$$

So, by not driving one day each week for a year, a person could save approximately 1,507.42 pounds of CO2 emissions.