

Energy and the Environment CONTACT US

Greenhouse Gas Equivalencies Calculator



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Did you ever wonder what reducing carbon dioxide (CO₂) emissions by 1 million metric tons means in everyday terms? The greenhouse gas equivalencies calculator can help you understand just that, translating abstract measurements into concrete terms you can understand, such as the annual emissions from cars, households, or power plants.

Please note that these estimates are approximate and intended for communication purposes. They should not be used for emission inventories, formal carbon footprints, or formal emissions analysis. See [Other Resources](#) for additional tools that EPA maintains for emissions analysis and [Other Calculators](#) for additional calculators that EPA maintains.

Enter Your Data

There are two options for entering data into this calculator to develop greenhouse gas equivalencies. When you enter energy data, the calculator converts your entered values to carbon dioxide-equivalent greenhouse gas emissions based on emission factors for energy consumption or electricity reductions. It then displays equivalent ways to express those emissions. When you enter emissions data, the calculator displays equivalent ways to express those emissions. For additional information, see the equations and sources used for this calculator on the [Calculations and References page](#).

About This Calculator

- [How are the equivalencies calculated?](#)
- [Latest updates and revision history](#)
- [Frequent questions](#)
- To subscribe to the Greenhouse Gas Equivalencies Calculator Update Newsletter send a blank email to ghgecalc_news-subscribe@lists.epa.gov

Other Resources

- Want to estimate the emissions impacts of energy efficiency or renewable energy? [Visit AVERT](#)
- Want to estimate the health impacts of reducing emissions? [Visit COBRA](#)
- Want to learn more about quantifying the benefits of proposed policies & programs? [Visit the Multiple Benefits Guide](#)

Greenhouse Gas Equivalencies Calculator

Integrate the calculator widget into your website.

If You Have Energy Data | **If You Have Emissions Data**

kilowatt-hours of electricity

Calculate

Equivalency Results [How are they calculated?](#)

The sum of the greenhouse gas emissions you entered above is of Carbon Dioxide Equivalent. This is equivalent to: **3,083 Metric Tons**

Greenhouse gas emissions from

- 670** Passenger vehicles driven for one year
- 7,747,608** Miles driven by an average passenger vehicle

CO₂ emissions from

- 346,885** gallons of gasoline consumed
- 302,826** gallons of diesel consumed
- 3,407,333** Pounds of coal burned
- 40.8** tanker trucks' worth of gasoline
- 371** homes' energy use for one year
- 560** homes' electricity use for one year
- 17** railcars' worth of coal burned
- 7,137** barrels of oil consumed
- 126,023** propane cylinders used for home barbeques
- 0.0008** coal-fired power plants in one year
- 374,996,152** number of smartphones charged

Greenhouse gas emissions avoided by

- 1,049** Tons of waste recycled instead of landfilled
- 150** Garbage trucks of waste recycled instead of landfilled
- 131,170** trash bags of waste recycled instead of landfilled
- 0.641** Wind turbines running for a year
- 116,840** Incandescent lamps switched to LEDs

Carbon sequestered by

- 50,974** tree seedlings grown for 10 years
- 3,777** acres of U.S. forests in one year
- 21.1** acres of U.S. forests preserved from conversion to cropland in one year

[Print Your Results](#)