

CO₂ Calculators

October 2015 Review

There are organizations and individuals who are making contributions in promoting reductions in personal CO₂ emissions by creating CO₂ or greenhouse gas calculators. Many of our daily activities - using electricity, driving a car, or food choice - cause greenhouse gas emissions. Together these emissions make up a household's carbon footprint. The comparison chart below covers three areas: home energy, transportation, and food. Everyone's carbon footprint is different depending on his or her location in the country, habits, and personal choices. This paper includes five of the CO₂ Calculators that are publicly available.

Comparison Chart

There are numerous calculators that estimate personal CO₂ emissions or footprint. This comparison chart will give you some idea of what is available.

Tool	Measures CO ₂ emissions from			Allows for CO ₂		Characteristics	
	Housing	Transportation	Food	Calculation	Tracking	Detailed	Professional
Oroeco	√	√	√	√	√	√	√
Shrink that Footprint	√	√	√	√		√	√
Cool Climate Network	√	√	√	√		√	√
Carbon Footprint Calculator	√	√		√		√	√
CO ₂ List	√	√	√	√		√	

Snapshots of 7 Calculators

This is an overview of comparable tools. Follow links for more in depth exploration.

Oroeco - <https://www.oroeco.com>



Released in April 2014, this application allows users to monitor their carbon emissions by converting their spending habits into CO₂.

Oroeco links with a user's Mint.com account and uses expenditures, stated habits/preferences, and life cycle assessments (from peer-reviewed sources like EPA and UC Berkeley) to display CO₂ emissions over time.

It also displays suggested actions (including cost and cost savings) and the

ability to purchase offsets.

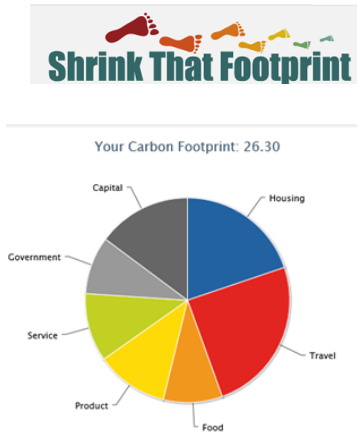
The concept, detail, and design are excellent and Oreoco has many credible partners and advisors (over 50 listed on their website).

Shrink That Footprint - <http://shrinkthatfootprint.com/carbon-calculator>

USA

Housing			
Use	Intensity	Footprint	
Electricity	4466 kWh/yr	0.71 kg CO2e/kWh	3.17
Natural gas	169 therms/yr	6.199 kg CO2e/thm	1.05
Fuel Oil	22 gal/yr	11.556 kg CO2e/gal	0.25
LPG	20 gal/yr	6.792 kg CO2e/gal	0.14
Waste	30 lbs/week	0.205 kg CO2e/lbs	0.32
Water	70 gal/day	0.011 kg CO2e/gal	0.28
			5.21

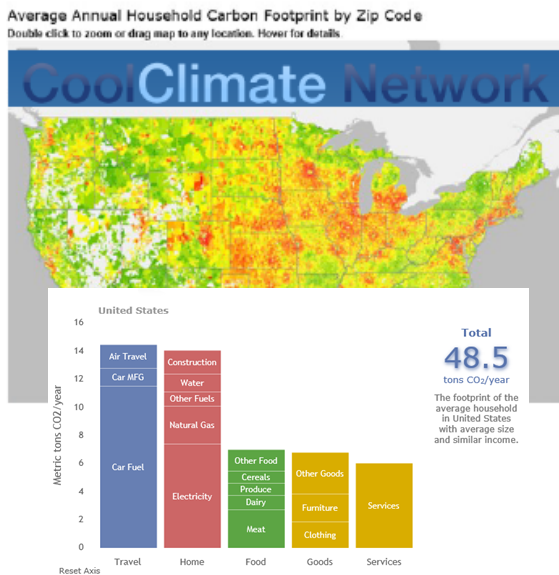
Travel			
Distance	Intensity	Footprint	
Car	14762 miles/yr	383 g CO2e/mi	5.65
Motorcycle	62 miles/yr	246 g CO2e/mi	0.02
Bus	501 miles/yr	145 g CO2e/mi	0.07
Rail	105 miles/yr	162 g CO2e/mi	0.02
Taxi	90 miles/yr	325 g CO2e/mi	0.03



Started by a British researcher named Lindsay Wilson, Shrink that Footprint provides a clean yet detailed way to calculate your personal carbon emissions and also see the per capita emissions of government, industry, and finance.

Users enter information for their housing, travel, food, products, and services. The website includes many graphics, tips, and a guide for reducing emissions.

Cool Climate Network - <http://coolclimate.berkeley.edu>



Berkeley's Cool Climate Network features a detailed household emissions calculator, a downloadable carbon emissions widget, and a map of average carbon emissions per household in various places in the US.

How do you use your home?

Regular Analysis | **Advanced Audit**

Please enter your zip code: 45506 **Begin Advanced Audit**

Household
 City with most similar climate to modeled house: Dayton
 Year house was built: 1964
 People living in the house, by age:
 0 to 5 years: 0
 6 to 13 years: 1
 14 to 64 years: 2
 65 years and older: 0

Describe windows on each side of the house

Window Type	Area
Front: Double-pane, clear, Wo	72.00
Back: Double-pane, clear, Wo	72.00
Left: Double-pane, clear, Wo	36.00
Right: Double-pane, clear, Wo	36.00

Clothes Washer: Yes
 Number of refrigerators: 1 Refrigerator

Carbon Footprint Calculator - <http://calculator.carbonfootprint.com/calculator.aspx?tab=8>

How many people are in your household? 1

Electricity: kWh
 Natural gas: therms
 Heating oil: US gallons
 Coal: kWh
 LPG: therms
 Propane: US gallons
 Wooden pellets: metric tons

Calculate Household Footprint

Your Carbon Footprint:

- House 0.19 metric tons of CO2e
- Flights 0.00 metric tons of CO2e
- Car 1.12 metric tons of CO2e
- Motorbike 0.00 metric tons of CO2e
- Bus & Rail 0.18 metric tons of CO2e
- Secondary 1.03 metric tons of CO2e

Total = 2.52 metric tons of CO2e



The calculator allows users to input actual values or dollar values to determine carbon emissions. The design is simple but clear and easy to use.

The company is a provider of carbon life cycle assessment.

CO2 List - <http://www.co2list.info>

The screenshot shows the 'Average Daily CO2 Emissions' calculator interface. At the top, there is a navigation menu with options like 'Home', 'Calculator', 'FAQ', 'About', 'Contact Us', 'Privacy Policy', 'Terms of Use', and 'Disclaimer'. Below the menu, a green banner contains instructions: 'Please enter any data you have in the white spaces, such as meter readings from old bills. Start with the oldest information.' A 'Check One Box' section includes a radio button for 'Kilos and Liters' and a radio button for 'Pounds and Gallons'. A line graph titled 'Electricity CO2 per Day' shows a flat line at zero on a scale from 0 to 1. Below the graph, there are several data entry sections, each with a 'Date' field and a 'Pounds CO2 per day' field. The sections are: 'Meter reading - kilowatt hours', 'Second Electric Meter', 'Natural Gas', and 'Number of gallons delivered'. Each section also includes a 'Pounds CO2 per day' field. At the bottom, there are tabs for 'Basic', 'Cars', and 'Transport'.

This is a comprehensive source of information with emissions data from a variety of reputable organizations. The calculator, an Excel spreadsheet, is incredibly detailed, but also complicated and confusing.