



Impact Tools: Offset Your Carbon

Carbon Offsets at Interactive Brokers

At Interactive Brokers, we're excited to introduce **Carbon Offsets**, a new IMPACT feature that lets you purchase carbon credits to help offset your carbon emissions. Elect to offset carbon from specific activities, like electricity and natural gas usage or annual auto gasoline usage, or offset an amount of "carbon tons." Track your progress toward lowering your carbon footprint at any time using the "Your Offset" drop-down box.

Carbon Offsets by Category

Users can choose from several different carbon-emitting activities within the popular categories of Housing, Transportation, and Food. See the table below for details, including the **Metric Tons of Carbon Dioxide (CO₂) Equivalent**, the standard metric used to calculate your carbon footprint. This measurement provides a conversion for activities that emit greenhouse gases other than carbon, like methane and nitrous oxide. A metric ton of methane, for example, has a warming effect 25 times that of CO₂, so the CO₂ equivalent of a metric ton of methane would be 25 metric tons. (<https://www.sustain.life/blog/calculate-carbon-footprint>)

Some of the most popular types of carbon offsetting practices include (taken from <https://carboncredits.com/the-ultimate-guide-to-understanding-carbon-credits/#7>):



- Investing in renewable energy by funding wind, hydro, geothermal, and solar power generation projects, or switching to such power sources wherever possible.
- Improving energy efficiency across the world, for instance by providing more efficient cookstoves to those living in rural or more impoverished regions.
- Capturing carbon from the atmosphere and using it to create biofuel, which makes it a carbon-neutral fuel source.
- Returning biomass to the soil as mulch after harvest instead of removing or burning. This practice reduces evaporation from the soil surface, which helps to preserve water. The biomass also helps feed soil microbes and earthworms, allowing nutrients to cycle and strengthen soil structure.
- Promoting forest regrowth through tree-planting and reforestation projects.
- Switching to alternate fuel types, such as lower-carbon biofuels like corn and biomass-derived ethanol and biodiesel.



Impact Tools: Offset Your Carbon

While you can select an activity to use for offset calculations, you can't choose to have your purchase applied to a specific practice or project. See the list of greenhouse gas-emitting activities we offer to help you offset your carbon footprint in the table below.

Housing

	Description	Avg Per-Person Annual Metric Tons of CO2 Equivalent
	Electricity	2.22
	Natural Gas	1.38

Transportation





	Description	Avg Per-Person Annual Metric Tons of CO2 Equivalent
	Vehicle Gasoline	0.47



Impact Tools: Offset Your Carbon

	Description	Avg Per-Flight Metric Tons of CO2 Equivalent
	Two-Hour Short Flight	0.5
	Five-Hour Medium Flight	1.25
	Ten-Hour Long Flight	2.5

Food

	Description	Avg Per-Person Annual Metric Tons of CO2 Equivalent
	Meat, Fish & Eggs	2.1
	Grains & Baked Goods	0.36
	Fruits & Vegetables	1.18
	Dairy	0.23

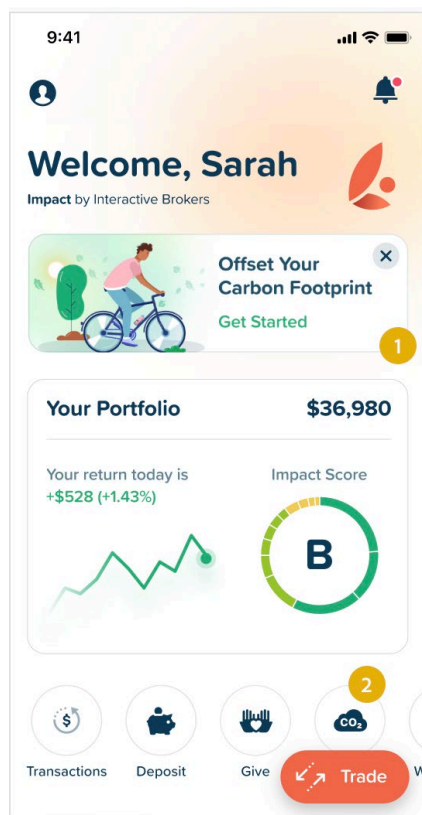
Find out more about Source Attribution and Calculation Assumptions for Carbon Tonnage in [Appendix A](#).



Impact Tools: Offset Your Carbon

User Experience

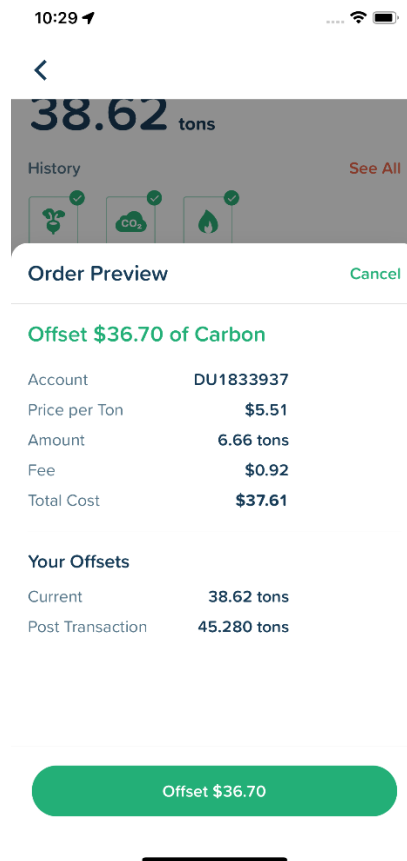
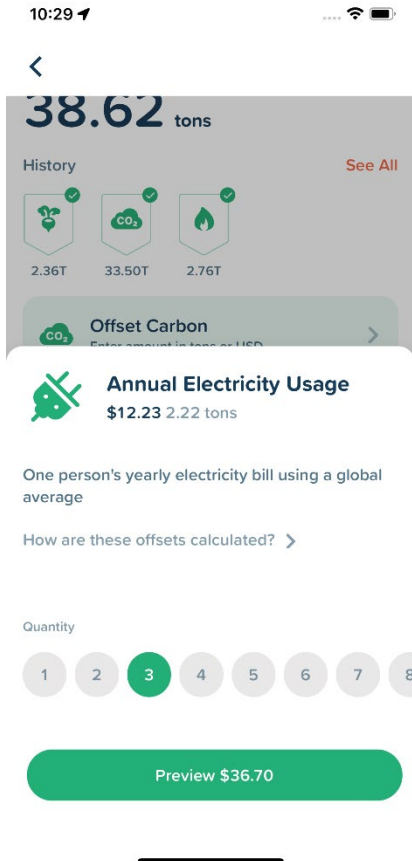
To get started, tap the “Offset Your Carbon” banner on the IMPACT homepage. From the list of carbon-generating activities, swipe to see costs and descriptions. Then, simply tap to select an activity to offset. **NOTE: You can select an activity to define the quantity to offset, but you cannot specify a project toward which your purchase will be applied.**





Impact Tools: Offset Your Carbon

Pick a quantity, preview the order, and tap “Offset” to submit.





Impact Tools: Offset Your Carbon

Alternatively, tap “Offset Carbon” to enter a dollar value or “tons” value for your order.

The image displays three sequential screenshots of a mobile application interface for carbon offsetting. The first screenshot shows the 'Offset Carbon' screen with a price of \$0.00 and a 'Preview' button. The second screenshot shows the same screen with a price of 16.00 and a 'Preview' button. The third screenshot shows the 'Order Submitted' confirmation screen with a green checkmark and the text 'Offset 16 tons of CO2 at \$14.98'. Below the screenshots is a 'Done' button.

Offset Carbon
Price per ton: \$14.98 | Available: 56.81K USD

Offset Carbon
Price per ton: \$14.98 | Available: 56.81K USD

Order Submitted
Offset 16 tons of CO2 at \$14.98

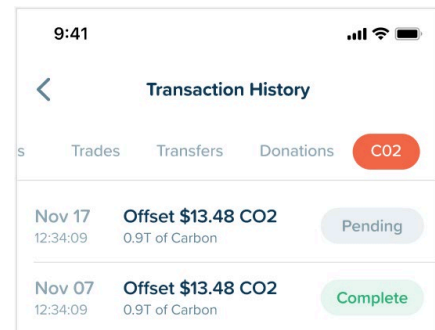
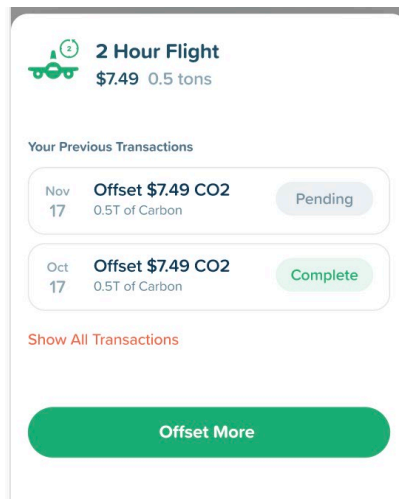
Your carbon offsets help fund clean energy projects such as wind, solar or hydro.

Done



Impact Tools: Offset Your Carbon

Users can see all carbon offsets they've purchased for the year:





Impact Tools: Offset Your Carbon

Appendix A: Source Attribution and Calculation Assumptions for Carbon Tonnage

Interactive Brokers has partnered with Sustain.Life, a group of sustainability and technology experts, to provide emissions data for each carbon emitting activity listed within the Carbon Offset feature.

Content below provided by Sustain.Life, Find out more at <https://www.sustain.life>

Electricity: We calculated country-level emissions by multiplying each country's recent annual electricity consumption (either 2019 or 2020 based on availability) by a country-specific emission factor. We then divided the sum of country emissions by the total population of countries for which electricity use data was available to obtain a global average. Our data covers 98% of the global population.

Source: <https://ourworldindata.org/grapher/per-capita-electricity-fossil-nuclear-renewables>
Sustain.Life international emission factor database

Natural Gas: We obtained total annual (2020) natural gas consumption for five global regions (North America, South and Central America, including Mexico, Asia Pacific, Europe and the Middle East, Turkey, and Africa), applied a regional natural gas factor and calculated total regional emissions based on regional population. We then divided the sum of regional emission values by global population to obtain a global average.

Source: <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-full-report.pdf> (pg. 38)
Sustain.Life international emission factor database

Gasoline: The BP 2021 Statistical review of World Energy shows a 2019 world value of 24,412 thousand barrels daily, while the EIA shows 26,475 for the same year. We used the EIA value, applied a CO₂e factor of 8.812 kgCO₂e/gal (includes AR6 CO₂e of methane and nitrous oxides) and divided by world population to arrive at the global per capita average.

Sources: <https://www.eia.gov/international/data/world/petroleum-and-other-liquids/annual-refined-petroleum-products-consumption>
https://www.epa.gov/sites/default/files/2021-04/documents/emission-factors_apr2021.pdf

Air Travel: We used the per-flight values outlined in the carbonindependent.org blog, which is maintained by a statistician and provides an in-depth methodology, including reputable sources



Impact Tools: Offset Your Carbon

and references, as well as transparency around limitations.

Source: <https://www.carbonindependent.org/22.html>

Food Emissions: We obtained GHG emissions per kilogram per food item from a scientific journal (Poore & Nemecek, 2018), then categorized the items into food groups and calculated average emissions for meat, fish, dairy eggs, rice, grain, fruits, and vegetables. We obtained annual (2017) consumption of each group by country and calculated total emissions per country. Consumption data for agricultural crops under the category of cereals (wheat, oat, maize, barley, rye, etc.) was not readily available, so we used total production by country and deducted the portion used for animal feed and biofuel generation. We then divided the sum of country emissions by global population to obtain average per capita emissions. Available country data covers over 95% of the global population for all food groups.

Sources: <https://science.sciencemag.org/content/360/6392/987>

<https://ourworldindata.org/environmental-impacts-of-food>

<https://ourworldindata.org/grapher/daily-meat-consumption-per-person>

<https://ourworldindata.org/grapher/fish-and-seafood-consumption-per-capita>

<https://ourworldindata.org/grapher/per-capita-meat-type>

<https://ourworldindata.org/grapher/per-capita-milk-consumption>

<https://ourworldindata.org/grapher/cereal-production>

<https://ourworldindata.org/grapher/cereal-allocation-by-country>

<https://ourworldindata.org/grapher/fruit-consumption-per-capita>

<https://ourworldindata.org/grapher/vegetable-consumption-per-capita>

Limitations: Gas factors are regional and don't account for variation between countries, though we believe this to be insignificant. Population data and consumption data years don't always match, though they're within a two-year window. Global gasoline consumption data does not distinguish between personal and commercial fuel use, wherefore the global average value for personal auto travel emissions will be smaller than the stated value. The values used for cereal consumption are not trade-adjusted. Accounting for imports and exports would yield a more accurate per-country emissions figure, but the data wasn't readily available. Global averages are far less useful than regional or country-level averages, as these values don't reflect regional consumption patterns and may be skewed by population size. For example, CO₂e emissions per capita from gasoline use in North America are much higher than in other global regions (3.8 MT/yr. in the U.S. and 3.13 MT/yr. in Canada). Some highly populated countries like China (0.3 MTCO₂e/capita/yr.) and India (0.001 MTCO₂e/capita/yr.) are less reliant on gasoline-powered vehicles, significantly reducing the global average.