

# CALCULATION METHODOLOGY

- The user must inform the quantity of fuel tanks (whose standard capacity we assume is 60 litres) consumed per month and their country of origin in order to determine the blend level used in gasoline. **(1 - INPUT).**
- Using the energy content parameters of each fuel (MJ / Litre) we can calculate how many MJ the fuel consumption (in litres) represents and using the carbon intensity (g CO<sub>2</sub> / MJ), what is the emission in CO<sub>2</sub> equivalent per year of this demand **(2 - CALCULATIONS).**
- The emission by fuel presents the "Emission from Origin Gasoline" that is the gasoline emission using the blend level informed by the user. The "Emission of gasoline from Brazil" uses the blending level in force in Brazil, 27% of ethanol. **(2 - CALCULATIONS).**
- Considering the emissions of each fuel, we calculated the percentage and the amount, in t CO<sub>2</sub>/year, of avoided emissions when using Brazilian gasoline (with a blend of 27%) compared to gasoline in the country of origin. **(RESULTS IF THEY WERE IN THE BRAZILIAN STANDARD).**

## 'SOURCE AND KEY ASSUMPTIONS

- The energy content of each fuel has as source the Brazilian National Petroleum and Biofuels Agency.
- The carbon intensity of gasoline corresponds to the average gasoline emissions in the world **(about 90 gCO<sub>2</sub>/MJ)**. Ethanol carbon intensity corresponds to the average of certifications for anhydrous and hydrated ethanol of Brazilian producers in RenovaBio. All carbon intensities are calculated considering the life cycle of the fuels.