



CARBON REDUCTION INSTITUTE



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Executive Summary

The Carbon Reduction Institute recently undertook an audit of the greenhouse gas emissions produced from the operations of SmartCar Australia. The audit provides SmartCar with an understanding of its climate change impacts so that it can benchmark and communicate the achievements from the implementation of future emission reduction strategies and carbon offset purchases.

The Carbon Reduction Institute's audits follow the standards outlined by the World Business Council for Sustainable Development's Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol).

In calculating the emissions from SmartCar's operations, the Carbon Reduction Institute applied a combination of Life Cycle Emission factors (for items such as travel, electricity, fuel usage and waste) and greenhouse intensity figures from Australian Input/Output tables. The emissions sources included in this study are shown in the table below.

Table 1: Emissions sources studied

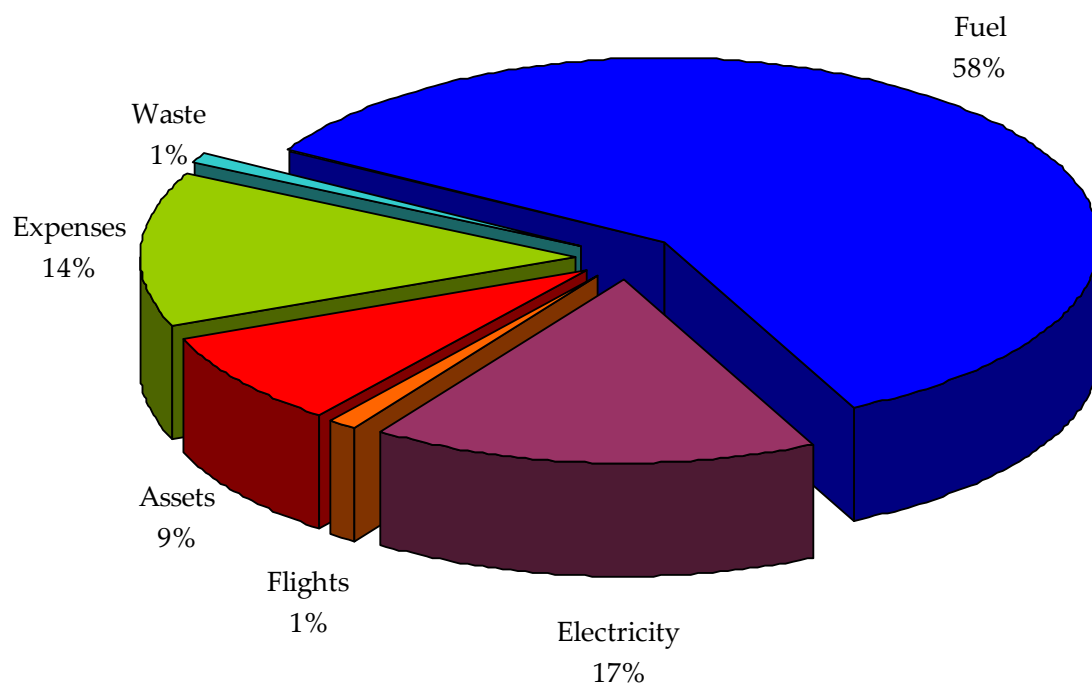
<i>Scope(s)</i>	<i>Source</i>	<i>Emissions Type</i>
Scope 1	Fuel	*Direct emissions from burning combustible fuels such as company paid staff travel and onsite Natural Gas usage
Scope 2	Electricity	*Indirect emissions from the burning of coal and gas at power plants to produce purchased electricity
Scope 3	Waste	*Methane emissions from the decomposition of waste in landfill
	Supply Chain	*Embodied emissions from each item of assets and expenses
	Staff Ground and Air Transport	*Fuel combustion – Direct and indirect CO ₂ e emissions from fuel use in car and air travel

From this greenhouse emissions audit it is concluded that the operations of SmartCar produced the equivalent of **225.39 tonnes of CO₂ equivalent greenhouse gas (CO₂e)** this year from the above emissions sources. Table 2 and Figure 1 below show a summary of the emissions produced from each source.

Table 2: Summary of Emissions by Source

Scope	Emission Source	Emissions
Scope 1 & 3	Fuel	132.15
Scope 2 & 3	Electricity	37.17
Scope 3	Flights	2.06
	Assets	19.03
	Expenses	30.08
	Waste	1.78
	Total	222.27

Figure 1: Breakdown of Emissions by Source



As shown in Figure 1, 58% of overall emissions are due to fuel consumption. As a ground transport business, this is the expected dominant emissions category. Electricity contributed 19% while assets and expenses accounted for 21% combined. Domestic flights and waste constituted a minority of emissions with a combined 2% of the overall 225.39 tCO₂e.

By undertaking a carbon audit, SmartCar will be able to develop an informed action plan to reduce its climate change impacts. In developing its climate change strategy, the Carbon Reduction Institute recommends that SmartCar pursue internal reduction measures through low and no cost investments. Potential opportunities for this exist in energy efficiency opportunities; and through staff engagement and education prior to purchasing offsets. Not only will this lower the costs associated to implementing any reduction strategy, it will also provide flow on educational benefits to SmartCar's staff and stakeholders about the simple actions they can take to minimise their greenhouse impacts.