

# Information Sheet: Car Costs and Emissions

May 2019

## What is the cost of owning a car?

This is a very difficult question to provide an accurate answer for every make and model, however to provide some guidance the below information has been developed based on a Toyota Corolla which is a common car used across ISMAPNG. The following costs are provided as a guide for the full cost of operating a car in its first year based on a number of different kilometers driven. Excluded from these costs are the additional costs we incur for accident claims which currently cost approximately \$500 per occurrence. As we are registered for GST we can claim back any GST, so all costs below are calculated exclusive of GST, so a purchase price of \$22,000 would really cost us \$20,000. The average fuel use for ISMAPNG vehicles since July 2015 to February 2019 is 65.5 litres per month which based on the below fuel consumption of 10 litres per 100 kms equates to an average of 7,860 kms per year. It is acknowledged that for this to be the average a number of cars are driven more and some will drive less.

Kilometers Driven	15,000 km (288 week)	10,000 km (192 week)	7,860 km (151 week) average	5,000 km (96 week)
Depreciation estimate (12.5% p.a)	2,500	2,500	2,500	2,500
Etag – tolls (Average usage per vehicle)	100	100	100	100
Fuel cost (based on number of kms a year with 10 litres per 100 km @1.45 litre)	2,175	1,450	1,140	725
Insurance	680	680	680	680
License cost (5 year license cost \$200 so divide by 5)	40	40	40	40
Loss of interest on car purchase cost including on road costs (\$20,000 * 4%)	800	800	800	800
Registration ( dependent upon state) average price used	750	750	750	750
Roadside assistance	100	100	100	100
Servicing (based on one per year)	400	400	400	400
Tyres (based on changing every two years so half cost shown)	300	300	300	300
<b>Total</b>	<b>\$7,845</b>	<b>\$7,120</b>	<b>\$6,810</b>	<b>\$6,395</b>
<b>Cost per kilometer</b>	<b>\$0.52</b>	<b>\$0.71</b>	<b>\$0.87</b>	<b>\$1.28</b>

The above calculations were based on a car being driven for different yearly and weekly kilometers to highlight how the fixed costs of car ownership do not change. If driven more or less then the only figure that would change would be the fuel cost as the majority of these costs are fixed and are not necessarily affected by the amount driven. Of course, not using toll roads can also reduce these costs, however they are included as this example was provided to portray an average car cost across the entire ISMAPNG fleet. It is also acknowledged that different states may impose slightly different costs for registration and insurance.



Based on the above estimate of 15,000 kilometers and cost, the cost of operating this car equates to **\$0.52 per kilometer driven**. Again, with fewer kilometers driven, this price per kilometer would increase and an example of a car that only drives 5,000 kilometers and taking into account the lower fuel use the cost would rise to **\$1.28 per kilometer driven**. The current average cost is **\$0.87 per kilometer**.

If including these costs over 6 years of ownership including the initial purchase cost of \$20,000 but excluding depreciation the yearly and weekly costs work out as:-

Yearly kms	Purchase price	6 year costs (excl. Deprn.)	Total	Yearly cost	Weekly cost
15,000	20,000	32,070	52,070	8,678	\$166.89
10,000	20,000	27,720	47,720	7,953	\$152.95
7,860	20,000	25,858	45,858	7,643	\$146.98
5,000	20,000	23,370	43,370	7,228	\$139.01

### What is the environmental impact?

Again this is a very difficult question to answer given that a true life cycle analysis of a car takes into consideration how every part of the car is sourced, refined, transported and disposed of. In terms of traditional carbon footprint reporting, fuel consumption is the commonly reported indicator and carbon emissions are based on the Governments' National Greenhouse Accounts Factors. Based on the above scenarios of driving 15,000; 10,000; 7,860 or 5,000 kilometers per year with standard fuel the carbon footprint from the fuel use would come in respectively as approximately **4,000; 2,666; 2,095 or 1,333 kilos of CO2 per year**.



The carbon footprint for the fuel use of ISMAPNG owned vehicles over the last 2 financial years with a 2018/19 part year result extrapolated to a full year result is shown on the following page.



## Tonnes of Co2 equivalent

Indicator	2016/2017	2017/2018	2018/2019 (to March)	Difference 16/17 to 18/19
Vehicle Fuel Co2	1018.0	970.0	927.3	-8.91%
Average No. of vehicles	560	533	517	-7.68%

Please note that the reduction in carbon footprint results is primarily based on the natural attrition of vehicles in the fleet rather than an interventional change as well as slight changes in emission factors utilised each year.

[The Simple Daily Gestures Booklet](#) outlines a number of options for transport and substituting using a car every time for some of these suggested alternatives all help to reduce the environmental impact.

### Questions?

Main contact person information: Chris Hill – Environmental Sustainability Manager

Email: [chris.hill@ismapng.org.au](mailto:chris.hill@ismapng.org.au)

Telephone no: 07 3866 4170

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