

ISMAPNG Environmental Sustainability Information Sheet - *Carbon Footprint*

November/December 2018

What's it mean?

A carbon footprint is historically defined as the total emissions caused by an individual, event, organisation, or product, expressed as carbon dioxide equivalent and usually measured in Tonnes of CO₂. In most cases, the total carbon footprint cannot be exactly calculated because of inadequate knowledge of and data about the complex interactions between contributing processes, especially those in relation to the influence on natural processes storing or releasing carbon dioxide.

What's a Tonne of CO₂ look like?

CO₂ is an invisible gas so it doesn't look like anything, however to represent the volume of one tonne of CO₂ this picture provides some perspective of size.



Picture - Tonne of CO₂ -
<https://www.bing.com/images>

How does ISMAPNG measure its Carbon footprint?

As mentioned above, there needs to be some form of measurable consumption data to establish the carbon equivalence in a recognised fashion. ISMAPNG uses the National Greenhouse Accounts Factors published each year by the Australian Government Department of the Environment and Energy. At this stage due to relevant consumption data not being readily available or currently measured, only certain indicators have so far been collated.

What's the Carbon Footprint of ISMAPNG?

The following table represents the results for consumption data that is currently able to be collected or calculated based on sampled data. To establish these calculations a number of assumptions have been made to model the baseload consumption and a plus or minus 15 percent tolerance is expected. As an example, with approximately 589 individual properties across multiple retailers, it was not possible to review every electricity invoice for every property for 4 quarters each year, or in some cases monthly invoices. So based on total expenditure and sampling of a number of the larger electricity invoices, the average cost per kWh was used to extrapolate the total kWh's and then this figure was used against the relevant years greenhouse factor for each state.



Other indicators, such as Flights, are a combination of extrapolated data and in later years there are dedicated carbon reports provided by the vendor.

Tonnes of Co2 equivalent

Indicator	2016/2017	2017/2018	Difference
Electricity	2,941.6	2,840.5	-3.44%
Vehicle Fuel	980.0	933.0	-4.80%
Natural Gas	870.7	784.1	-9.94%
Flights	267.4	275.5	+3.05%
Total	5,059.7	4,833.1	-4.48%

Please note there are a couple of points to be noted in relation to the above figures.

- Electricity, Gas and Vehicle Fuel results are primarily based on a reduction of properties and vehicles in the fleet rather than an interventional change. As the solar projects continue, there will be a measurable change attributed to this intervention and this will be reflected within the 2018/19 data.
- Flight data is only collected from FCM travel. It is acknowledged that there may be flight data from other providers however this data is excluded from these calculations.

What is ISMAPNG doing to reduce our Carbon Footprint?

As mentioned above, solar roll outs will definitely decrease our energy consumption and therefore the emissions. The fleet review will identify vehicles with lower carbon output and this will also contribute to a slight reduction. The development of the Environmental Management Plan that sits behind the Sustainable Living policy will identify carbon reduction targets based on considered interventions.

What can I do to reduce my own Carbon Footprint?

Again, there are a number of behaviours listed in the [Simple Daily gestures booklet](#) that will contribute to lowering your carbon footprint. For a guide to estimate your own carbon footprint try this calculator - <https://www.epa.vic.gov.au/AGC/home.html>

Laudato Si 26: *“There is an urgent need to develop policies so that, in the next few years, the emission of carbon dioxide and other highly polluting gases can be drastically reduced, for example, substituting for fossil fuels and developing sources of renewable energy.”*

Questions?

Please contact chris.hill@ismapng.org.au for any questions you may have in regards to this fact sheet.

References https://en.wikipedia.org/wiki/Carbon_footprint