

# Environmental sustainability

## survey

### 2020

Cars and other vehicles emit a range of gaseous pollutants that are harmful to the environment and our health. Understanding community beliefs and attitudes is essential in promoting and delivering initiatives to manage the impacts of car travel in meeting the needs of current and future generations.

Vehicles emit pollutants such as oxides of nitrogen (NO<sub>x</sub>), hydrocarbon emissions (including methane, benzene, toluene, xylene, and benzo[a]pyrene), carbon monoxide (CO), oxides of sulfur (SO<sub>x</sub>), particulate matter (PM), ozone (O<sub>3</sub>) and carbon dioxide (CO<sub>2</sub>) which collectively impact negatively on human health and the environment.

In 2015 alone, it is estimated that air pollution contributed to the deaths of 2,566 people in Australia<sup>1</sup>, more than twice the number of road deaths nationally in 2018 (1,145 people)<sup>2</sup>. Further, on a per capita basis, Australia's emissions are 44 per cent above the Organisation for Economic Co-operation and Development (OECD) average and almost four times the global average<sup>3</sup>. Approximately 18 per cent of all greenhouse gas emissions and 25 per cent of total CO<sub>2</sub> emissions in Australia are caused by transport<sup>4</sup> and this is projected to substantially increase.

Western Australians rely on a range of transport options in their day to day lives, for many different reasons. On average, we each drive around 11,400km a year<sup>5</sup>, generating approximately 3.13 tonnes of CO<sub>2</sub> emissions a year<sup>6</sup>.

**Did you know, that means our cars emit around twice their own weight in CO<sub>2</sub> emissions every year?**



**To offset these emissions, over 53 tree seedlings would need to be planted and grown for 10 years<sup>7</sup>.**



With these current challenges, and as demand for travel in Western Australia (WA) increases with our growing population it will be essential to reduce harmful vehicle emissions. Part of the solution will be alternative technologies and fuels, initiatives targeting vehicle purchasing decisions, congestion management and promoting active and public transport; as well as urban planning practices. The mobility choices we make today should not impact

negatively on the lives and lifestyles of future generations.

To better understand what Western Australians think and feel about environmental issues such as climate change, air quality and pollution, RAC undertook a targeted online survey in July 2019. The survey was completed by 805 respondents<sup>8</sup> (63 per cent were RAC members and 37 per cent were non-members) from across Perth and regional areas. Seventy-two (72) per cent lived in the Perth metropolitan area and 28 per cent in regional WA. Data was weighted by age and gender to reflect the overall population.

Ninety-three (93) per cent of survey respondents had a driver's licence and 95 per cent owned at least one motor vehicle (with an average of 1.98 vehicles per household).

These were predominately petrol fuel vehicles (74 per cent of primary vehicles owned by respondents), followed by diesel fuel vehicles (23 per cent) and electric or hybrid vehicles (3 per cent).

<sup>1</sup> Australian Institute of Health and Welfare (2019), "Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015", <https://www.aihw.gov.au/getmedia/c076f42f-61ea-4348-9c0a-d996353e838f/aihw-bod-22.pdf.aspx?inline=true>, at page 167.

<sup>2</sup> BITRE (2018), "Road deaths Australia", <https://www.bitre.gov.au/publications/ongoing/files/Road%20trauma%20Australia%202018%20statistical%20summary.pdf>

<sup>3</sup> International Energy Agency (2018), "CO<sub>2</sub> emissions from fuel combustion 2018 HIGHLIGHTS", [https://webstore.iea.org/download/direct/2373?fileName=CO2\\_Emissions\\_from\\_Fuel\\_Combustion\\_2018\\_Highlights.pdf](https://webstore.iea.org/download/direct/2373?fileName=CO2_Emissions_from_Fuel_Combustion_2018_Highlights.pdf)

<sup>4</sup> Department of Environment and Energy (2018), Australian Greenhouse Gas Emissions Information System - National Greenhouse Gas Inventory 2016. Accessed at <http://ageis.climatechange.gov.au/>

<sup>5</sup> ABS (2019), "Survey of Motor Vehicle Use, Australia, 12 months ended 30 June 2018 - Table 4".

<sup>6</sup> Estimated based on the average CO<sub>2</sub> emissions per km travelled by car (274.58g/km) calculated using data from the Australian Greenhouse Gas Inventory and BITRE Australian Infrastructure Statistics (car VKT in WA).

<sup>7</sup> The United States Environmental Protection Agency Greenhouse Gas Equivalencies Calculator <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

<sup>8</sup> Sample size equates to a margin of error of +/- 3 per cent.



**For the better**

# Climate change

**Many Western Australians of all ages believe the world's climate is changing and that it is caused by human activity. They also feel a level of personal responsibility, with some already having made practical changes to the way they live to reduce their impact on the environment.**

When asked what they believed were the key social, community or environmental issues weighing on the minds of people living in WA, unprompted, respondents reported the top issues as being crime and drugs (33 per cent), the environment/ climate change (28 per cent), the economy/jobs (22 per cent), community/ homelessness (19 per cent) and cost of living concerns (19 per cent).

However, when asked what such issues are particularly important to them personally, the environment/climate change (22 per cent) emerged as the top issue.

Based on a prompted list of environmental issues, when asked to what extent they felt each was a priority that needed to be addressed in WA, climate change ranked fifth with 67 per cent saying it was a high or extremely high priority (after waste management/recycling, 77 per cent; water quality/conservation, 75 per cent; extinction of native animals, 71 per cent; and use of non-renewable energy sources, 67 per cent). However, climate change was ranked as the top priority that needed to be addressed most urgently (26 per cent, followed by waste management/ recycling, 21 per cent; and water quality/ recycling, 17 per cent).

When asked what words, thoughts or feelings first come to mind when hearing the term "climate change", around one in two respondents (48 per cent) said something relating to weather changes/ events, and 17 per cent said they were worried/scared and urgent action was needed.

As shown in Figure 1, 87 per cent of respondents believe the world's climate is changing, with those in age groups of 44 years and under being more likely to hold this belief. When it comes to the degree to which they believe it is caused by human activity, 72 per cent said it is (46 per cent saying "a great deal" and 26 per cent saying "a lot"), with females (74 per cent compared to 68 per cent of males) and those living in the Perth metropolitan area (73 per cent compared to 66 per cent of regional residents) being more likely to think so.

*"Climate change is my greatest concern and the slowness of governments to respond".*

*"Climate change is my main focus right now".*

*"Definitely global warming and climate change".*

*"For me the greatest issues related to global warming and the flow on impacts that has on our economy - agriculture, land management".*

Half of those who believe the world's climate is changing felt a "great deal" or "a lot" of personal responsibility to help ease the impact of climate change. A further 29 per cent felt a "moderate" personal responsibility.

Figure 2 provides a summary of the views in relation to climate change, its causes and their sense of personal responsibility to act.

Respondents had personally taken action to reduce their impact on the environment, including having installed solar panels (35 per cent), smart meters (21 per cent), solar hot water systems (21 per cent) and rain water tanks (15 per cent) in their homes; and 8 per cent had committed to a green energy plan.



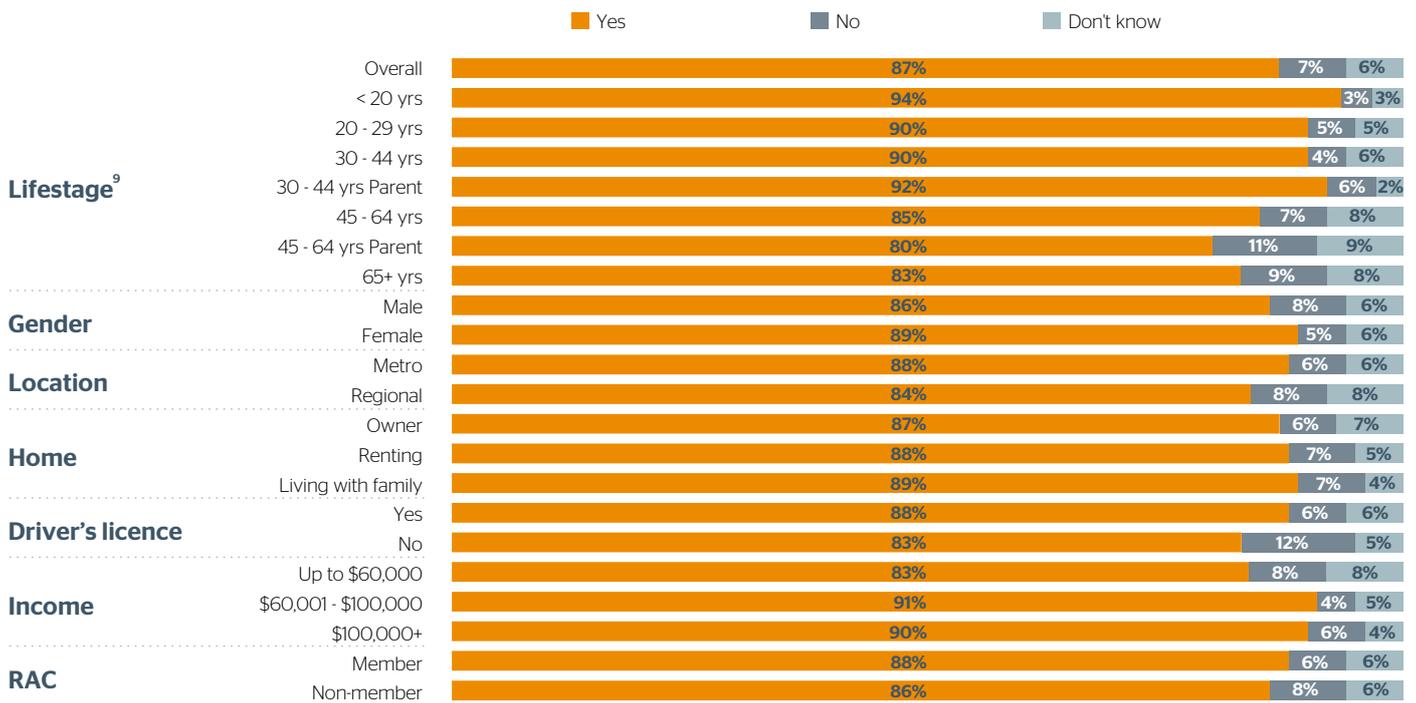


Figure 1 » Belief that the world's climate is changing

### Community Segments<sup>10</sup>



Figure 2 » Community attitudes to climate change

<sup>9</sup> Based on RAC's standard member lifestages. Note, parents and non-parents within the 30-44 years and 45-64 years age brackets have been segmented for all RAC surveys as their attitudes/opinions/behaviours/preferences were found to significantly differ during member profiling research.

<sup>10</sup> This segmentation analysis is based on respondents' perceptions around whether they feel climate change is real. For those who said it is, it also considered their responses about the extent to which it is caused by human activity and/or the extent to which they feel they have a responsibility to help fix it (if they said 'a great deal' or 'a lot' to one or both questions).

# Air quality and pollution

While many Western Australians have not noticed air quality issues in their local areas, pollution is causing health issues for some. Vehicle emissions are believed to be a key contributor, and some have taken action to change how they travel as a result.

The survey asked respondents whether they had noticed any changes in air quality and/or pollution in their local areas in recent years; 60 per cent reported they had not and 13 per cent said they did not know. The remainder said they had noticed a change, with 23 per cent saying it had got worse and four per cent saying it had improved.

When asked if they feel they currently experience any negative impacts of air pollution, one in five respondents said they do (this was greatest amongst parents aged 30 to 44 years, 24 per cent; parents aged 45 to 64 years, 23 per cent; and those aged 65 years and over, 23 per cent). Of all of those affected, 44 per cent

reported eyes, nose and throat irritations, a further 35 per cent had difficulty breathing and another 30 per cent were worried about their children's health.

On average, those noticing impacts of air pollution in their local area attributed this to vehicles (73 per cent ranked this in the top three from a prompted list of potential sources), bushfires (64 per cent) and industry (64 per cent). Metropolitan Perth residents were significantly more likely to attribute the cause as being vehicles and construction, whereas regional residents were slightly more likely to attribute it to electricity generation and agriculture.

Almost one in two respondents (48 per cent) said they had made a change to the

way they travelled over the past 12 months (which may have had a positive impact on the environment), 14 per cent of which stated that they had made these changes with the intention of improving air quality (those under 20 years of age were the most likely to have done so at 28 per cent, compared to only nine per cent of parents aged 45 to 64 years).

Of the one in two (52 per cent) respondents reporting that they had not made any changes to the way they travelled, 36 per cent cited lack of public transport and 12 per cent reported that the distance needed to travel as reasons for it being difficult to make a change (28 per cent felt there were no barriers).

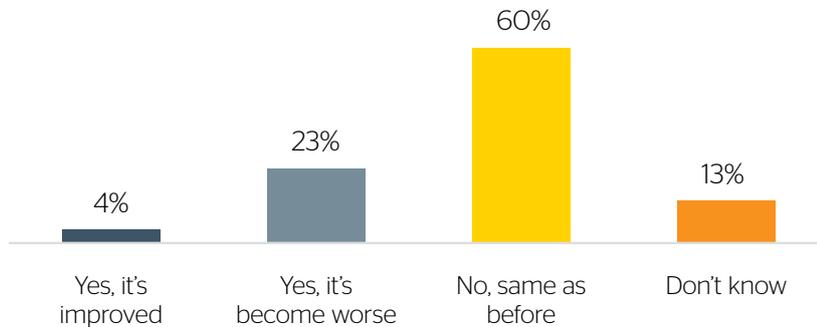


Figure 3 » Noticeable changes in local air quality / pollution

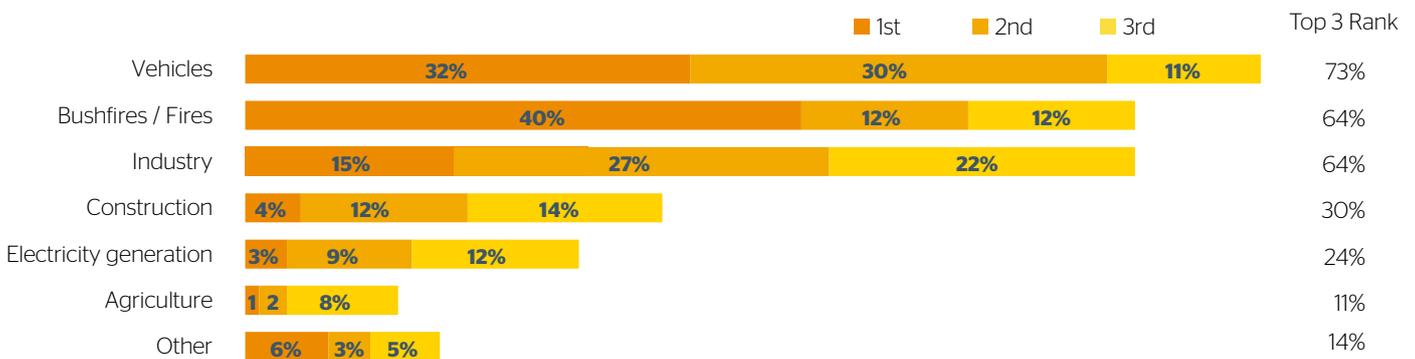


Figure 4 » Top three causes of air pollution<sup>11</sup>

<sup>11</sup> Based on those respondents that have experienced negative impacts of air pollution in their local area.

## Key findings



### The Environment

- › The environment is a top issue for many Western Australians.
- › Climate change, waste management and water conservation are the environmental topics of greatest concern.
- › Younger people are the most concerned about climate change.
- › 50 per cent have taken action to reduce their environmental impact, with solar panel installation being the most common.



### Climate Change

- › Nearly 9 in every 10 people believe that climate change is occurring, with the majority also believing that it's caused by human activity.
- › Nearly 1 in every 2 Western Australians believe they have a responsibility to help address climate change.



### Air Quality

- › 1 in every 5 people are impacted by air pollution in their local area, with many attributing this to vehicles, bushfires and industry.
- › 14 per cent have changed their travel habits to improve air quality, but many others cited a lack of public transport options as a barrier to them doing so.



### Vehicle Emissions

- › Nearly two thirds want the government to do more to reduce vehicle emissions.
- › Only one quarter are confident that the government will address this issue.
- › Providing incentives to purchase low emission vehicles is seen by many as a priority action that the government should take.



### Electric / Hybrid Vehicles

- › Most people have heard of electric/hybrid vehicles, and many raised concerns in terms of cost, ease of recharging and practicality.
- › Despite these perceived limitations, 46 per cent would consider buying an electric/hybrid vehicle next time they are in the market for a vehicle.

## Future considerations

**Most West Australians are aware of the environmental benefits of low and zero emission vehicles and there is an appetite to consider these options for their next vehicle purchase. There is a strong desire for government to lead, invest and act to implement a range of strategies to reduce vehicle emissions.**

Almost all respondents (96 per cent) were aware of electric or hybrid vehicles before participating in the survey, but currently only three per cent own either as their primary vehicle (and a further 1 per cent have a hybrid as their second vehicle). When asked what they know about them, unprompted, 20 per cent specifically mentioned environmental benefits and 25 per cent mentioned something relating to them being expensive to purchase.

*“I understand that they reduce emissions. Also they are expensive and we are hesitant to purchase one yet as we believe there are not enough charging stations and they are limited by how many kms they can go”.*

*“Electric is still in its infancy, are expensive, lack infrastructure to charge and the batteries have insufficient life”.*

Despite the low ownership levels currently, there is an appetite amongst respondents to consider buying an electric or hybrid vehicle when they are next in the market for a new car, with 46 per cent saying they would consider it. The remaining 54 per cent stated they would not do so, with cost, access to charging infrastructure and range anxiety being the top reasons.

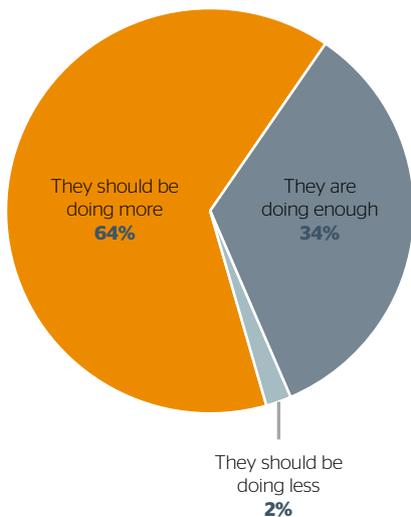
Respondents were asked the degree to which they think the State and Federal governments need to take action to reduce vehicle emissions (Figure 5) and 64 per cent agreed more should be done.

Just over a third (34 per cent) said they think that the government is doing enough, and two per cent said they think the government should be doing less. However, when presented with a statement about the scale of greenhouse

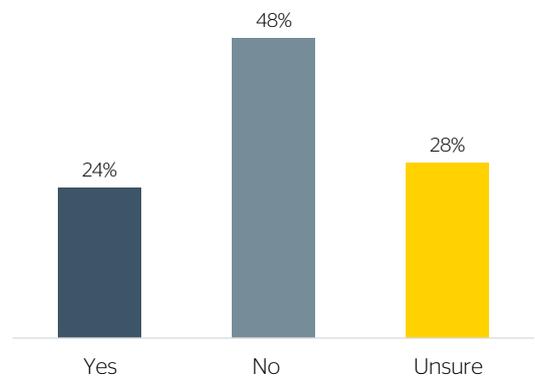
gas emissions from transport and the impact of air pollution on health, two in five (42 per cent) of these respondents changed their mind and said government should be doing more.

When all respondents were asked if they had confidence in the government to address vehicle emissions (Figure 6), 48 per cent said no, 28 per cent were unsure and 24 per cent said they had confidence.

When prompted with a list of potential actions the State and Federal governments could take to reduce vehicle emissions (Figure 7), respondents felt the top three priorities were to provide incentives for purchasing low or zero emissions vehicles (56 per cent ranked this in their top three priorities); transitioning the public transport fleet to low or zero emissions vehicles (41 per cent) and investing in electric vehicle charging infrastructure (38 per cent).



**Figure 5 » Views on action by government to reduce vehicle emissions**



**Figure 6 » Community confidence in the government to address vehicle emissions**

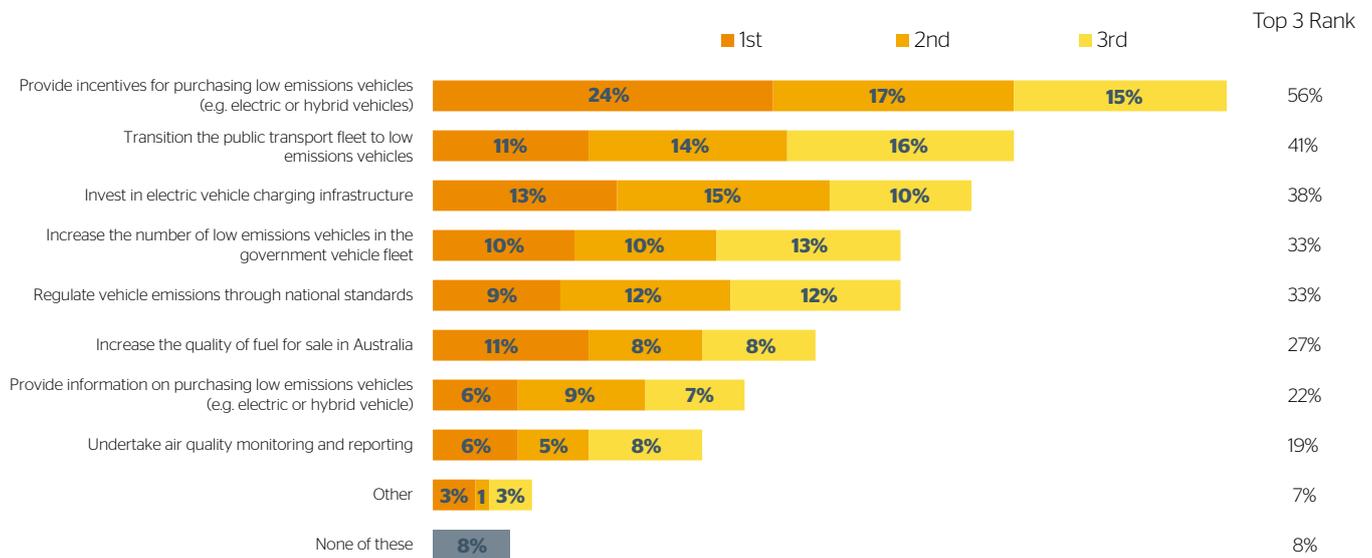


Figure 7 » Potential strategies to reduce vehicle emissions

### What is RAC doing to help reduce CO<sub>2</sub> emissions?

RAC is committed to working with the community and all levels of government to look at ways to reduce vehicle emissions, improve fuel quality and provide Western Australians with access to clean and safe vehicle technologies. We do this through our advocacy activities (including submissions to government) and initiatives.

RAC's Less Emissions Mission gives members who own qualifying lower CO<sub>2</sub> emissions vehicles with access to

discounted finance, lower insurance premiums, free membership upgrades and discounted vehicle servicing as a reward for reducing their carbon footprint.

The RAC Electric Highway®, a network of 11 publicly accessible electric vehicle fast-charging DC stations in the South West of WA, seeks to help reduce range anxiety which can be a deterrent to electric vehicle ownership.



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