Australian Automobile Association

aaa@aaa.asn.au
+61 2 6247 7311
aaa.asn.au

OFFICE
Level 1, 103 Northbourne Ave
Canberra ACT 2601

PO BOX
GPO Box 1555
Canberra ACT 2601

# AAA submission to Senate Standing Committee on Environment and Communications: Greenwashing Inquiry

**Introduction**

The Australian Automobile Association (AAA) is the nation's peak motoring body, representing Australia's state-based motoring clubs and their 9.5 million members.

The AAA is an apolitical and technology-neutral advocate for federal transport policy that improves safety, affordability, sustainability and equity. It regularly commissions research and develops in-depth analysis of issues affecting transport systems, including affordability, road safety, and vehicle emissions.

The AAA has previously made a submission to the Committee's inquiry into Greenwashing and welcomes the opportunity to provide further information to the Committee.

With the increased focus on emissions abatement and technology transition across the economy, Australians are increasingly paying a premium to purchase vehicles that deliver better environmental performance than traditional internal combustion engine vehicles. However, this cost is not always justified by how these vehicles perform in real driving conditions.

This submission provides additional information about the AAA's Real-World Testing Program, which helps consumers see through the figures provided by vehicle brands about CO2 emissions and environmental performance at point of sale and in their marketing materials.

The Program plays an important role in reducing greenwashing in the new vehicle market and supporting the New Vehicle Efficiency Standard (NVES) by helping consumers to apply pressure to carmakers to ensure their laboratory-based claims match real-world outcomes. It also supports the technology transition in the light vehicle market by helping to address range anxiety – a significant barrier to uptake of electric vehicles in Australia.

The AAA continues to work with all political parties to demonstrate the important role the Real-World Testing Program will play in coming years to support emissions reduction from the light vehicle fleet and the need for continued funding for the Program in the 2026 Federal Budget.

## 1. Recommendation

The AAA recommends that the Committee recognises in its report:

- The increasingly complex regulatory environment for light vehicles in Australia
- The increasing risk of car manufacturers seeking ways to optimise laboratory test results to comply with the New Vehicle Efficiency Standard, and
- The important role of the AAA's Real-World Testing Program in providing consumers with independent data on the environmental performance of new cars in the Australian market

## 2. Recap on Real-World Testing Program

The new car market is inherently susceptible to greenwashing. Given the average cost of new vehicles in Australia (estimated by Canstar Blue to be more than $37,000 in 2023[1]), the impacts of greenwashing in this market can be significant. New cars are expensive and regardless of whether they deliver the expected environmental performance they remain in the fleet for around 19 years.

Under Australian regulations, every new car sold in Australia must include a label on its windscreen showing the fuel consumption for that vehicle. This label aims to assist consumers to make informed purchasing decisions.

However, the windscreen label shows fuel consumption (and in the case of electric vehicles, battery range) based on the mandatory laboratory testing required under the Australian Design Rules.

The AAA's Real-World Testing Program measures the on-road fuel use and emissions performance of new Australian internal combustion engine vehicles and driving range of battery electric vehicles and compares these with the figures reported by carmakers from their respective mandated laboratory tests.

The Program's creation followed the Volkswagen scandal of 2015, which demonstrated that regulation of vehicle emissions incentivises carmakers to optimise laboratory performance. This means that laboratory results cannot be relied upon to replicate real-world performance, which can be misleading for consumers and regulators alike.

Real-world testing highlights the gap between the reported lab results, and on-road performance. This allows consumers to make more informed purchasing decisions rather than discovering worse-than-expected performance once they have purchased the vehicle.

[1] Average Car Cost in Australia | New Car Costs - Canstar Blue

The AAA Real-World Testing Program is funded by the Commonwealth with bipartisan support and will test up to 200 of Australia's most popular makes and models. The Program was launched by the Prime Minister in October 2023.

The pressure on carmakers to sell vehicles with better environmental outcomes continues to build – both through consumer demand and regulatory imperative. Consumers are demanding vehicles with increasingly lower fuel consumption and emissions, while regulation (the NVES) adds further pressure through penalties where brands do not meet legislated emissions targets.

If emissions performance is measured solely from laboratory testing, Australian consumers will be increasingly at risk of greenwashing and the NVES will not deliver the emissions reductions expected within the regulatory framework.

## 3. Real-World Testing Program results so far

Results from the Program so far demonstrate the importance of ensuring consumers have independent, credible information from a trusted source when they are considering a new car purchase. Based on results to date, it is clear consumers can't rely upon manufacturer's laboratory tests to assess its real-world environmental impact or determine how much a car will cost to run .

The Program's data can help consumers to identify which vehicles deliver environmental performance as advertised and also avoid higher-than-expected fuel costs for internal combustion engine vehicles or an unexpected shortfall in range for electric vehicles:

- Of 114 internal combustion engine (ICE) and hybrid vehicles tested, 77% used more fuel and produced up to 35% more CO2 emissions on road than reported by manufacturers from lab tests. One in five vehicles exceeded Australian regulations for noxious emissions despite passing them in their laboratory tests.

- Of five electric vehicles (EVs) tested to date, none travelled as far on a single charge as advertised, falling short by between 5% and 23%.

The Program results are demonstrating that mandatory laboratory testing results continue to mislead consumers, meaning new car windscreen labels are too often over-stating their fuel economy and environmental performance.

Figure 1 shows the variation between the mandatory lab results reported by car makers compared to the on-road performance recorded through the Real-World Testing Program for 114 vehicles. Variation ranges from vehicles that recorded 35% more fuel on-road compared to the mandatory lab test, through to 13% less.

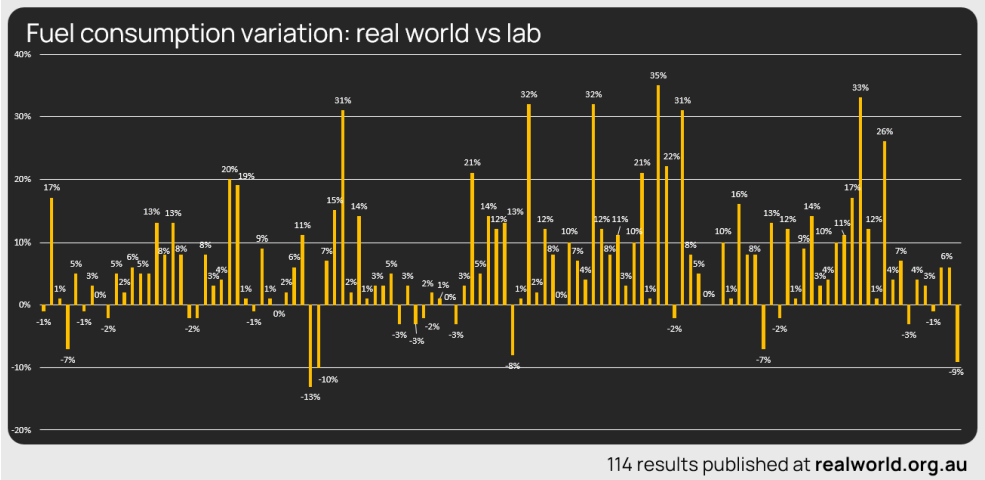


FIGURE 1 - VARIATION BETWEEN LAB AND ONROAD RESULTS (114 VEHICLES)

These results demonstrate that consumers cannot rely on manufacturer's laboratory tests to determine how much a car will cost to run or assess its real-world environmental impact. Furthermore, the inconsistency in variation between vehicles also means that better performance in the lab does not guarantee better performance on the road.

As pressure builds on car makers to

- report lower emissions due to the emissions regulations recently implemented;
- meet regulated targets; and
- avoid financial penalties

the AAA is concerned that the gap will grow between reported lab results and real-world outcomes.

## 4. New Vehicle Efficiency Standard

The Program provides critical support for the New Vehicle Efficiency Standard (NVES) which commenced in January 2025.

Established under the *New Vehicle Efficiency Standard Act 2024* the NVES sets carbon dioxide ($CO_2$) emissions targets for new passenger cars and light commercial vehicles, such as utes and vans, entering the Australian market from 1 July 2025. The NVES applies to all new passenger and light commercial vehicles up to 4.5 tonnes gross vehicle mass (GVM).

Regulated entities (such as car manufacturers and suppliers that hold a vehicle type approval) must meet or beat set emissions targets for all new vehicles they bring into Australia.

Regulated entities must report their CO2 emissions from laboratory tests with compliance based on the sales weighted average CO2 emissions across every vehicle imported by the entity each year.

Over time, the emissions target is lowered. To continue to meet or exceed the target, entities must reduce their sales weighted average CO2 emissions by selling more fuel-efficient, low or zero emissions vehicles across their fleet.

Under the NVES, entities can still sell any vehicle type they choose, including sport utility vehicles (SUVs), sedans, four-wheel drives (4WDs), utes and vans, but they'll need to sell more efficient models to offset less efficient models.

The NVES is designed to encourage car makers to sell more affordable low emission vehicles into the Australian market and progressively reduce CO2 emissions from the light vehicle fleet.

The NVES is a market-based regulatory intervention. Its design aims to shape the light vehicle market by measuring the emissions levels reported by car makers from mandatory laboratory tests. For the 2029 calendar year, the NVES emissions target across all new passenger cars sold is 58g of CO2/km – equivalent to 2.5l/100km for a petrol engine vehicle.

Success of the NVES relies on increased supply and uptake of battery electric vehicles and low emissions ICE vehicles.

The NVES will reshape the Australian passenger vehicle market. With many new market entrants expected in coming years, some from companies unfamiliar to Australians, the RWTP will help consumers avoid purchasing vehicles that over-promise and under-deliver on fuel efficiency, emissions and battery range.

Manufacturers who do not meet the NVES target emissions level will face penalties. However, compliance is predicated on the mandatory laboratory tests required under the *Road Vehicle Standards Act 2018*.

This is why the Real-World Testing Program is essential to ensuring that car brands cannot optimise their laboratory tests without those benefits being delivered in the real world. It is also essential to supporting uptake of electric vehicles by giving potential consumers trust in the range that their vehicle will travel in real driving conditions, thereby relieving range anxiety.

By independently testing vehicles under real-world conditions and reporting this information, consumers can reward car manufacturers who deliver vehicles that perform well in both real and laboratory conditions. The transparency of the RWTP will be a critical support to the effectiveness of the NVES, ensuring the gap between the laboratory-tests and real-world performance is minimised and real emissions reduction is achieved.

## 5. Battery Electric Vehicles

Electric vehicles will play an important role in the Australian light vehicle fleet over coming decades as part of the transition to net zero. Electric vehicle uptake is also a critical part of the success of the NVES in reshaping the emissions profile of the Australian light vehicle fleet.

In May 2024 QBE reported that based on consumer research it had undertaken 74.1% of EV owners cited environmental impact as a key consideration in their purchasing decisions[2]. But for this environmental performance to be delivered, the vehicle needs to perform as advertised and meet the real transport needs of the consumer who has purchased it.

In August 2025 the AAA expanded the reach of the Real-World Testing Program to include battery electric vehicles, releasing results for five electric vehicles.

These tests found that the driving range of these five vehicles was between 5% and 23% less in real driving conditions than recorded in mandatory laboratory tests by their manufacturer.

These and future electric vehicle results give potential EV buyers an independent indication of real-world battery range and help them understand which cars perform as advertised and which fall short. As the library of results grows consumers will be able to compare results for their preferred vehicles and not need to rely solely on information put into the marketplace by car manufacturers.

AAA conducted consumer research in late July 2025 which showed that 60% of people who identify as likely EV buyers held concerns about vehicle range saying that recharging was "the main concerns or hesitations that might prevent you from choosing an electric vehicle (not a hybrid) for your next car purchase".

As with conventional vehicles, independently testing the range of new electric vehicles helps to protect consumers from carmakers that over promise and under deliver when it comes to electric vehicle performance.

Further, by understanding real-world performance from independent sources, consumers can build confidence that a particular battery electric vehicle can meet their household and/or business needs.

The first EV tests found:

- the 2024 Smart #3 EV performed closest to its official laboratory test result with a real-world driving range of 432km – 5%, or 23km, less than recorded in its mandatory laboratory test.
- The 2022 Kia EV 6 and the 2024 Telsa Model Y both had driving ranges of 8% less in the real-world tests than recorded in laboratory tests,
- The 2024 Tesla Model 3 had a real-world range of 441km on a full charge, 14% less than the 513km achieved in the lab.
- The 2023 BYD Atto 3 recorded the largest variation from its official lab test – with a real-world range of 369km on a single charge – 23% less than the 480km recorded in its laboratory test.

[2] EVs in Australia – the polling results are in | QBE AU

Continued testing of electric vehicles under the Real-World Testing Program will ensure that consumers are able to see which models will meet their needs in real conditions. This will help shape the market by limiting the ability for manufacturers to use laboratory-based test results that cannot be replicated in the real world.

## 6. Hybrids

As the Program continues to mature, the AAA is now able to deliver market insights that can educate consumers about marketing materials that (either deliberately or inadvertently) greenwash potential consumers.

The word "hybrid" when applied to motor vehicles signifies to consumers that the vehicle will demonstrate improved fuel consumption and environment performance. For this reason, buyers of hybrid vehicles are generally prepared to pay more for these vehicles (over their ICE counterpart).

Sales of hybrid vehicles grew 190% from the first quarter of 2023 to the second quarter of 2025, and now account for around one in seven of Australia's new light vehicle sales[3].

Several different hybrid vehicle types are currently available in the Australian vehicle market; however not all hybrids offer the same environmental benefit:

- Conventional (full) hybrid electric vehicles have both an internal combustion engine and an electric motor powered by a battery that cannot be plugged into a charging station but instead recharges using the kinetic energy from braking. They can use their internal combustion engine or electric motor together or separately. These vehicles tend to drive in electric-only mode at low speeds, most notably in stop/start traffic.

- Plug-in hybrids are powered primarily by an electric motor with a rechargeable battery. Their internal combustion engine is used as back-up if the electric motor's battery depletes.

- Mild hybrid electric vehicles (MHEV) are fitted with a small battery and small electric motor to assist the internal combustion engine (ICE) in short bursts to improve fuel consumption. These vehicles do not typically drive in electric-only mode.

Hybrid technology will continue to evolve. So-called "super hybrids" are expected to emerge in the Australian market in the near future, promising increased power and range to their conventional counterparts. Of course, these claims will also be based on laboratory tests which will be difficult for consumers to verify[4].

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[3] Electric Vehicle Index - Australian Automobile Association
[4] Super Hybrids arrive as an alternative to Toyota's dominance | news.com.au — Australia's leading news site for latest headlines

The consumption of liquid fuel is proportional to the CO2 emissions produced when driving the vehicle and therefore buyers of internal combustion engine vehicles who may be motivated by fuel consumption cost savings will also reduce emissions. The fuel consumption from laboratory and real-world testing is reported so that these consumers can choose a vehicle based on fuel consumption, which will deliver a corresponding emissions result

The AAA's Real-World Testing Program has tested both the hybrid and internal combustion engine (ICE) variants of thirteen popular vehicle models. It has found different hybrid vehicles provide very different rates of return. These are shown in the table below:

| Vehicle tested (hybrid and ICE models) | | Total Trip | |
|---|---|---|---|
| | | Difference in fuel consumption shown on Green Vehicle Guide | Difference in fuel consumption shown in Real-World Test |
| Toyota | RAV4 | -21.7% | -29.4% |
| Toyota | Corolla | -30.0% | -32.3% |
| Toyota | Camry[3] | -38.2% | -32.8% |
| Toyota | Kluger | -32.5% | -31.8% |
| GWM | Jolion | -38.3% | -16.5% |
| Honda | CR-V | -22.5% | -23.5% |
| Hyundai | Tucson | -20.9% | -17.4% |
| Hyundai | Kona | -37.1% | -25.7% |
| Hyundai | i30 Sedan | -36.1% | -25.8% |
| Nissan | X-Trail | -21.8% | -18.3% |
| Kia | Sportage | -39.5% | -32.5% |
| Subaru | Forester[#] | -9.5% | +2.8% |
| Suzuki | Swift | -16.7% | -17.5% |

# The RWT Program tested a 2023 Subaru Forester Hybrid. This model has now been superseded. The new model has not yet been tested by the Program.

These results demonstrate that consumers are paying a premium to purchase vehicles based on environmental performance promised by the vehicle brand and recorded on the Green Vehicle Guide, which is not matched in the real world. This is particularly important for fleet purchasers where fleet policies specify a preference for hybrid technology despite the inconsistent results across the hybrid market.

## 7. Green Vehicle Guide

The Green Vehicle Guide (GVG) is a website (www.greenvehicleguide.gov.au) managed by the Commonwealth to help consumers by providing user friendly tools to search for and compare the environmental performance and fuel

consumption of new light vehicles (up to 3.5 tonnes gross vehicle mass) sold in Australia since 2004.

The site uses the CO2 emissions values for each light vehicle as the key measure for ranking and comparing all light vehicles. In this context, a "light vehicle" means any four-wheeled road vehicle with a gross vehicle mass under 3.5 tonnes[5].

However, the data listed on the Green Vehicle Guide for each vehicle is taken from the mandatory laboratory tests conducted as part of the certification process.

Since 2022 the Government also funds the RWT Program to provide consumers with improved information on the environmental performance of new vehicles, but this data is currently not available on the Green Vehicle Guide.

Inclusion of Program results as part of a revamped Green Vehicle Guide would:

- ensure consumers have ready access to all relevant information about vehicles that have been tested under the Program
- allow consumers to make informed decisions about the real environmental impact of vehicles they are considering purchasing.

## 8. Case studies

The following case studies are presented to demonstrate in practice some of the findings from the Program so far. They reinforce the importance of the Program continuing beyond its current funding horizon to support the changing regulatory environment and technology transition within the light vehicle flee.

### *8.1 Use of the term "hybrid" can be misleading for consumers*

The images below show the real-world test results for two similar hybrid vehicles – the Suzuki Swift and the Toyota CHR. Both vehicles returned a laboratory test result of 4.0 litres per 100 km, however the Suzuki used 31% more fuel in the real world while the Toyota's real-world result was a 10% variation. Over the life of the vehicles these results translate to a significant difference in emissions and running cost, however use of the term "hybrid" combined with the laboratory results may lead consumers to expect similar performance from each vehicle.

[5] https://www.greenvehicleguide.gov.au/Home/About



*8.2 Fuel grade used for testing can maximise laboratory results*

The fuel consumption (and in the case of electric vehicles, battery range) shown on the mandatory windscreen label which must be displayed at point of sale is based on the mandatory laboratory test performed as part of the vehicle certification process (ADR81/02). Under the regulation, this test must be performed using fuel with an octane level (RON) of at least 95RON, despite many of these cars available in the Australian market being permitted by the vehicle brand to operate using 91 RON fuel.

Octane level of fuel is important to the fuel economy and CO2 performance of a vehicle. Assuming the vehicle engine is designed to maximise the use of different fuel grades (as is the case for most new cars), on average 95 RON can give around 4 per cent lower fuel consumption than 91. Similarly, using 98 RON might give a further 3 per cent reduction over 95 RON[6].

The Real-World Testing protocol specifies that "fuel used in testing shall correspond to the minimum fuel grade recommended as suitable by the vehicle manufacturer. For example, where a vehicle manufacturer recommends 91 RON as suitable, the fuel used in testing shall be 91 RON."

The reason for this inclusion in the protocol is to ensure that the real-world test accurately reflects the way vehicles are used in the real world, and to minimise the opportunity for vehicle brands to maximise their environmental credentials via laboratory tests using higher grade fuels.

Since the start of the Program, at least two manufacturers have raised concerns about this approach claiming that they test their vehicles using higher grade fuel and that the Program should use the same fuel. However, in both cases consumers are advised that lower grade fuels can be used in these vehicles and this information is provided on the fuel filler flaps of the respective vehicles.

[6] The facts about fuel: which RON is best for you? | Advice and How-to | Open Road | The NRMA

In the case of Example A, the vehicle brand claimed that they had tested their vehicle using 98 RON fuel and that a real-world test using 95 RON would not return the same level of fuel efficiency. However, the vehicle fuel filler cap shows that 95 RON is suitable for the vehicle meaning that consumers can use that fuel. This would mean the vehicle would immediately deliver a lower level of fuel efficiency from that provided on the windscreen label. While this is within the rules it is potentially misleading to the consumer whose only source of fuel consumption information is from the vehicle brand.


Example A

In Example B the vehicle brand advised that the mandatory laboratory test was conducted using 95 RON (as per the regulations) and that the owner's manual also specifies using 95 RON. However, as can be seen in the photograph, the fuel filler flap for the vehicle advises that 91 RON fuel is acceptable. Again, this is confusing and potentially misleading to the consumer as 91 RON will not deliver the same fuel efficiency as the 95 RON used for the laboratory test.


Example B

The introduction of the NVES will further incentivise vehicle brands to seek out ways to optimise the laboratory testing results to avoid possible financial penalties. This could include using higher grade fuel for the mandatory laboratory testing than that recommended for in-service use. The Real-World Testing Program will be essential to ensuring consumers have independent information to identify this optimisation and to ensure the NVES outcomes are achieved in the real world, not just the laboratory.

## 9. Future of the Program

As the regulatory environment for light vehicles becomes more stringent to support Australia's transition to net zero and other environmental outcomes, the information provided to consumers is becoming increasing complex and contradictory.

The Real-World Test Program cuts through this confusion and:

- enables consumers to make more informed buying decisions
- makes it easier to choose more efficient vehicles with lower running costs
- helps deliver environmental benefits
- helps assess whether emissions regulations are having a 'real-world' impact
- incentivises carmakers to develop technologies that deliver real-world benefits, rather than focusing on achieving better lab results

The Program has been funded by the Government for an initial four years. The funding expires in July 2026, and the AAA will be advocating for the Program's continuation for a further four years.

The Program has demonstrated that some vehicles perform as advertised, but most do not, and there is no "rule of thumb" factor that can be applied across the fleet to estimate the gap between real-world and laboratory performance.

The AAA's Program is seeking to provide consumers with the relevant information they need when considering the running costs, range and environmental performance of a new car. This will influence the market and reward carmakers that deliver genuine financial and environmental savings.

Car makers will be increasingly incentivised to maximise lab results with the introduction of the Government's New Vehicle Efficiency Standard, which came into effect on 1 January 2025, with penalties applying since July 2025.

The AAA's Real-World Testing Program has a critical role to ensure that the gap does not grow between mandated laboratory test results required under the regulations and how vehicles perform when driven in real driving conditions.

The AAA continues to work with all political parties to demonstrate the important role the Real-World Testing Program will play in coming years to support emissions reduction and the need for additional funding in the 2026 Federal Budget.