
FCAI Submission to: Low Emissions Technology Statement 2022



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INTRODUCTION

The Federal Chamber of Automotive Industries (FCAI) welcomes the opportunity to provide input into the **Low Emissions Technology Statement 2021 (LETS 2021)** and provide guidance on the development of the **LETS 2022**.

FCAI commentary will only be specific to certain elements of LETS 2021 and the development of LETS 2022 as it pertains to light duty motor vehicles (passenger cars and light commercial vehicles) and motorcycles.

The FCAI is the peak Australian industry organisation representing the importers of passenger vehicles, light commercial vehicles, and motorcycles in Australia.

The automotive industry in general, and the FCAI membership specifically has and continues to make significant contributions towards climate change goals both internationally and domestically through the introduction of a range of Zero and Low Emission Vehicle (ZLEV) technologies.

FCAI member organisations are at the cutting edge of innovation, according to Boston Consulting Group 2021 Most Innovative Companies Report¹, four (4) vehicle manufacturers are in the top fifty (50) most innovative companies. The global companies that we represent collectively spend over \$100b a year in Research and Development (R&D) to bring new technologies to market. In comparison global defence and aerospace R&D spending is around \$22b.

These companies see countries across the world put in place an extensive range of policy measures to increase the use of zero emission vehicles [battery electric (BEV) and fuel cell electric (FCEV)] and other low emission vehicles, from funding infrastructure to mandating ZLEV fleet targets and providing purchasing incentives for consumers. These countries have taken this policy action because they recognise that significant barriers exist for these new vehicle technologies to be adopted by consumers in numbers necessary for the transport sector to play its role in meeting net zero CO₂ targets. International experience demonstrates that with the right policy settings, the market share of ZLEVs can increase considerably beyond the gradual increase in consumer demand typically observed based on natural market forces.

In a demonstration of the automotive industry's absolute resolve to address climate change, in 2020, all FCAI members agreed to a voluntary CO₂ code of conduct with an overall target to reduce light transport emissions through to 2030 in line with the Paris Climate agreement. Progress towards this target is being tracked and reported annually². To meet these stringent targets emissions will have to reduce on average, by four percent for passenger vehicles and light SUVs and three percent for large SUVs and light commercial vehicles.

¹ <https://www.bcg.com/en-au/publications/2021/most-innovative-companies-overview>

² <https://www.fcai.com.au/news/publication/view/publication/180>

FCAI strongly supports Governments increasing investment in the infrastructure required for these advanced powertrain vehicles. Battery Electric Vehicles (BEV) require electrical recharging infrastructure and the emerging Fuel Cell Electric Vehicles (FCEV) require hydrogen refuelling infrastructure. FCEV technology is expected to be critical particularly for larger vehicles where available payload is of paramount importance combined with extended range capabilities which is vital in the Australian context. Similarly, as is the need for a hydrogen guarantee of origin scheme to stimulate the availability of low carbon sources of hydrogen fuel.

Finally, achieving meaningful reductions in emissions will require a range of solutions. This includes encompassing ZLEV vehicles including hybrid and low emission Internal Combustion Engine (ICE) vehicles that require fuel standards commensurate with those published in the Worldwide Fuels Charter. Currently Australia has the worst fuel quality in the OECD; preventing Australians from accessing some of these advanced low emission ICE powertrains.

OVERALL COMMENTRY

FCAI absolutely supports Government investment in charging and hydrogen refuelling infrastructure that is necessary to ensure consumers of advanced powertrain vehicles can refuel their vehicles no matter where they choose to travel. Electrical charging points/stations are generally concentrated along with the coastal line of Australia where major cities and the population resides. Interestingly, almost 40% of DC quick chargers are located in NSW (mainly Sydney), whereas Northern Territory has next to none.

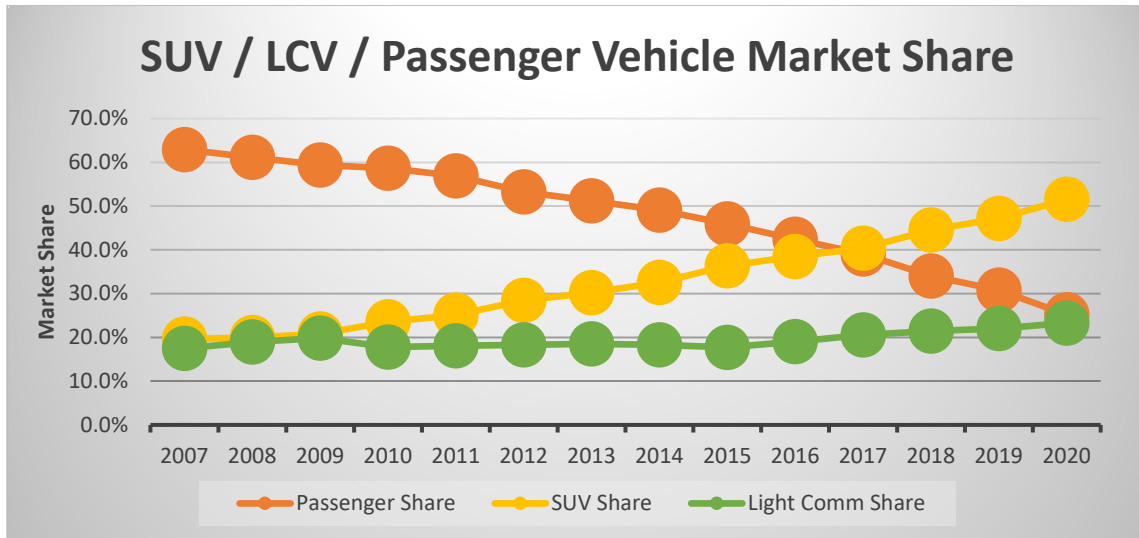
Hydrogen refuelling stations are extremely limited at present and therefore it is challenging for businesses or consumers contemplating the use of these fuels despite trials of vehicles being made available. We look forward to the establishment of hydrogen hubs, however it will be important to ensure refueling facilities are established particularly around key freight hubs and along key freight routes initially to support heavy vehicle transition.

However, FCAI is extremely concerned about some of the statements made in LETS 2021 that in our opinion are misleading at best, based on outdated international generalisations³ and are not relevant or applicable to the unique aspects of the Australian automotive market:

“Battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) will become price competitive over the next five to ten years.”

- The Australian market is unique from many world markets in the first instance being Right Hand Drive (RHD) vs Left Hand Drive (LHD) meaning that many BEV models are not developed for RHD configuration.
- Additionally, as distinct from European markets, Australia has a declining share of passenger vehicles (sedans and hatchbacks) and an increasing propensity for Sports Utility Vehicles (SUV) and Light Commercial Vehicles (LCV).

³ McKinsey 2019, making electric vehicles profitable



- In terms of powertrain electrification platforms from manufacturers, these are being developed primarily for passenger vehicles, electrification of SUVs and LCVs requires larger batteries and increases the cost differential to ICE powered vehicles.
- While both based on an electric drivetrain, FCEVs have some differences in their cost structure to BEVs. We therefore suggest the Government consider the individual timelines for price parity for FCEVs and BEVs.
- Most of the development of BEVs is occurring for markets where Governments have implemented vehicle CO2 emissions targets usually in conjunction with a suite of consumer incentives to increase demand.
- FCAI expects that without a nationally mandated CO2 emissions target, manufacturers will continue to prioritise zero emission products to overseas markets where there is a penalty regime in place.
- There is also a risk of brands withdrawing fit for purpose heavy vehicles from the market due to lack of suitably priced zero emissions technologies.
- In lieu of such a target, FCAI developed a voluntary CO2 standard (referred to earlier) in conjunction with our members which is designed to encourage member brands to considerably reduce their vehicle emissions – FCAI encourages the Government to adopt our voluntary standard as a mandatory standard. Such an action will position Australia as being serious about climate change, signalling to manufacturers the need to prioritise Australia in making suitable low and zero emission vehicles available.

Therefore, should the Government wish to expedite the affordability of ZEVs to 5-10 years, they will need to provide greater levels of support and incentives complimented by a CO2 scheme.

FCAI Commissioned Research

FCAI commissioned some international research in late 2021. This work focussed on and considered the structure of the domestic automotive market in Australia combined with the supply chain factors. Insights gained from this work are vital in understanding and predicting likely outcomes of the likely outcomes of the prospective pathways to electrified powertrain adoption to 2033.

Specifically, the detailed research helps to bring international evidence-based research on:

- Market fundamentals - comparative analysis on the effectiveness and relevance of policy settings in 15 major automotive countries which also produce vehicles for Australia.
- BEV Price /volume scenario analysis – e.g., forecasts on potential price disparities by segment out to 2033 by vehicle type.
- Strategy assessments on portfolios of the highest selling OEM groups with respect to product/propulsion offerings in Australia under three policy setting scenarios including what potentially happens to segment volume/price under extreme policy settings e.g., RHD mid-size pick-up trucks.

The FCAI has commissioned this research to ensure that policy makers are able to drill into the international development and go beyond isolated opinions by bringing facts to the debate on how and when products will be developed and sold, as well as how policy will impact the Australian Consumer.

Commentary on the transition to electrified powertrains (based on research)

- The transition will be markedly different in this region in comparison to international markets.
- The premium segment is expected to transition more rapidly circa 2027/28.
- The non-premium (or volume) vehicle segments will transition more gradually.
- The RHD mid-size pickup segment is likely to have marginal electrification by 2033.
- The role of Hybrid and Plugin Hybrid vehicle is expected to be substantial.

FCAI would be pleased to brief the Government on this research on request.

Missing from the LETS 2021 is acknowledgement that, to meet increasingly stringent noxious emissions regulations such as ADR 79, which is based on UN Regulation 83 and to improve vehicle efficiency thereby reducing CO2 emissions, an improvement in fuel quality, in line with EN228 (petrol) and EN590 (diesel) is imperative. Without the requisite fuel quality level, CO2 reductions will be limited given that ICE powered vehicles will continue to power most of the fleet in the near to medium term. Climate change will require a coordinated effort to reduce CO2 across all powertrain types.

Meeting increasingly stringent transport emission targets will require a range of strategies. This will need to consider the various powertrain electrification strategies, Hybrid Vehicles, Plug in Hybrids, Battery Electric Vehicles as well as Fuel Cell Electric Vehicles and Low Emission Internal Combustion Engines.

Low emission combustion engines require high quality fuel to operate. Thus, any discussion on refining must include an earlier obligation than 2027. In fact, some of our FCAI member brands are already severely restricted on the product options based on our fuel quality that is the lowest in the OECD.

FCAI has made a submission to the Fuel Quality Standards Review which details our position.

ELECTRIC VEHICLE CHARGING AND REFUELLING INFRASTRUCTURE

LETS 2021 conveniently joins the requirements of recharging BEVs and refuelling FCEVs. These should be separated into their respective requirements. For this reason, FCAI will comment on them separately.

Electric Vehicle Charging

Whilst FCAI does not agree with the Government on the likely projection on price parity for vehicles being sold in the Australian market in the absence of greater levels of Government support, we still expect an increasing number of consumers choosing (largely on environmental grounds) to purchase BEVs as is evidenced by the latest VFACTS sales figures.

Battery Electric Vehicle Sales Data⁴

	Battery Electric Vehicles (BEVs)	% Increase	Total Market	BEVs % of Total Market
2020	1769		916,968	
2021	5149	191%	1,049,831	0.49%

Note: VFACTS data does not report Tesla vehicle sales (Largest BEV retailer), Tesla sales would be in addition to the BEV sales and the Total Market Sales as reported in VFACTS.

Excluding Tesla, BEVs represented around half a per cent of all vehicles sold in Australia in 2021. While BEV vehicles are a small portion of the market, we are observing a rapid increase in consumers purchasing BEV vehicles. To support those consumers who have and will choose to purchase and operate BEVs, it is vital charging infrastructure be expanded. Suitable fast charging facilities must be available on major traffic routes and within regional destinations. It is important that consumers purchasing these vehicles espouse a positive experience which can only be achieved when appropriate charging facilities are ubiquitously available.

FCAI absolutely supports Government investment in charging infrastructure that is necessary to ensure consumers of advanced powertrain vehicles can refuel their vehicles no matter where they choose to travel. FCAI agrees with the assessment that there are currently too few chargers for BEVs particularly in rural and regional areas. We welcome the focus on developing fast charging stations in charging blackspot areas.

Electrical charging points/stations are generally concentrated along with the coastal line of Australia where major cities and the population resides. Interestingly, almost 40 per cent of DC quick chargers are located in NSW (mainly Sydney), whereas the Northern Territory has only two.

FCAI questions whether the current level of investment is sufficient? To this end FCAI are in the process of commissioning a report based on international experience to understand the requirements for charging based on vehicle population.

⁴ FCAI VFACTS

FCAI would be pleased to brief the Government on this research when it is available.

Smart Charging

FCAI agrees with the Government's assessment that smart charging technology will be necessary to reduce grid overload, optimize grid integration of BEVs and to bring forward favourable outcomes for BEV consumers and the Australian electrical grid. More than being a significant demand on the grid, BEVs can and if desired by the consumer, provide flexible, reliable, affordable, and secure aggregate supply on an as needs basis. For this to be the case, the Commonwealth needs to provide clear, nationally consistent policy intent on smart charging which, in turn, will give vehicle providers the required certainty to bring the necessary technologies to the Australian market in the BEVs that they supply.

Hydrogen and Refueling Infrastructure

FCAI welcomes the Government's focus on developing the infrastructure required to facilitate the establishment of Hydrogen Hubs as a method to accelerate the development of an Australian clean hydrogen industry. In the vehicle space access to hydrogen refueling is a fundamental requirement for the introduction of these vehicles.

Both Hyundai and Toyota have made available Hydrogen Fuel Cell Vehicles (FCEVs) on limited or trial basis. To support these vehicles both organisations have invested substantially in local refueling facilities. Whilst we accept that initial introductions of FCEVs may well be in the heavy haulage sector, in that sector refueling facilities must also be aligned to heavy haulage routes and freight hubs. As the cost of hydrogen reduces driven by technological advancements and both domestic and international demand, the same cost drivers will facilitate the introduction of hydrogen fueled powertrains to other vehicle types including Light Commercial Vehicles (LCVs) or Sports Utility Vehicle (SUV) products.

FCAI MARKET ANALYSIS SUMMARY COMMENT

Based on the research and analysis undertaken for FCAI, there will be considerable variations in the time taken to transform to a low emissions vehicle environment based on Government policies. In addition, it is also expected that there will be different trajectories in the speed of transformation according to vehicle type which is reflective of the primary sales markets.

Electrification of SUV and LCV product's powertrains is likely to be more gradual considering the complexities and costs of batteries required for these types of products whilst retaining the utility that these vehicles offer:

- Towing
- Multiple passengers transport up to 8 persons.
- Capability for long distance travel, with typical distance ranges 600-800 kilometres.
- Cargo carrying.
- Tools of trade utility.

FCAI REQUESTS FOR LETS 2022

Based on FCAI's far reaching international research there will be limited change expected for the volume segments of the Australian new car market expected in the next decade, outside of some specific segments.

FCAI is prepared to brief the Government on this research on request.

To instigate meaningful change that enables Australia's light vehicle industry to commit to environmental global CO2 targets, there are several actions that the Government can take which includes:

- Formally adopt a Net Zero CO2 target in 2050
- Implement a mandatory new car CO2 regulation in line the FCAI's voluntary standard.
- Urgently, improve Australia's fuel quality in line with our previous submission.
- Rapidly increase investment in on public infrastructure for electric vehicle charging and FCEV refuelling.
- Increase fleet and private infrastructure for electric vehicle charging and FCEV hydrogen refuelling.
- Provision of non-financial incentives for Zero and Low Emission Vehicles (ZLEV) such as access to transit lanes, parking charge relief, free charging.
- Mandate aggressive Government ZLEV fleet procurement targets.
- Consumer incentives that address the initial price barrier.

End of Submission