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FCAI Response to  
*Fuel Efficiency Standard—  
Cleaner and Cheaper-to-run  
Cars for Australia  
Consultation paper  
May 2023*

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## GLOSSARY

ACCU	Australian Carbon Credit Unit
ADR	Australian Design Rules
BEVs	Battery Electric Vehicles
DITRDCA	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
EVs	Battery Electric Vehicles and Plug in hybrid electric vehicles
FBT	Fringe Benefits Tax
FCAI	Federal Chamber of Automotive Industries
FES	Fuel Efficiency Standard
NEDC	New European Driving Cycle
NEVS	Australian Government National Electric Vehicle Strategy
NRSS	National Road Safety Strategy
RDE	Real Driving Emissions test
RVSA	Road Vehicle Standards Act 2018
VFACTS	Federal Chamber of Automotive Industries' monthly statistics on new cars sales, by brand and model
WLTP	Worldwide harmonised Light vehicles Test Procedure
ZLEV	Zero and Low Emission Vehicles

## INTRODUCTION - FCAI POSITION

The Federal Chamber of Automotive Industries (FCAI) welcomes the opportunity to provide its views to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) 'Fuel Efficiency Standard—Cleaner and Cheaper-to-run Cars for Australia' consultation paper posted to the Department's consultation hub on 19 April 2023.

As stated in the submission to the National Electric Vehicle Strategy consultation, the FCAI fully supports the introduction of an ambitious but achievable, technology agnostic FES that it is designed and implemented with a focus on the Australian consumers' needs.

### 10. What design features should the Government consider in more detail for vehicle fuel efficiency standards, including level of ambition, who they should apply to, commencement date, penalties and enforcement?

If the Commonwealth decides to implement a Fuel Efficiency Standard for all new light vehicles, FCAI would like to assist with establishing the detail of that standard, based on our recent experience in this area.

FCAI recommends the following fundamentals, drawn from international standards, for any Fuel Efficiency Standard developed for the Australian market:

- A mass-based limit curve
- Separate targets for passenger cars/light SUVs and light commercial/heavy 4WD SUV vehicles with slope of the limit curve commensurate with the fundamental vehicle use.
- Ability to accumulate credit for over-achievement in any one calendar year to offset under achievement in a subsequent period.
- Ability to pool and trade credits between segments and brands.
- Credit for actual CO<sub>2</sub> reductions not demonstrated by the laboratory vehicle test.
- A review mechanism.

Commencement should take into account the product cycles previously mentioned and the availability of low emission vehicle models in RHD and suitable for Australian market conditions including unique regulatory requirements.

Any standard should include a review process which allows for adaption, adjustment and flexibility in response to the market, performance and global supply.

This will allow the most efficient and ambitious targets *possible* to achieve, taking into account the supply pressures and challenges the sector faces. Without the flexibility, the standard risks being too lax, not cutting emissions as much as could have been achieved, or too strict, causing immeasurable harm and adverse impact on consumers and the economy.

Source: FCAI National EV Strategy consultation paper submission

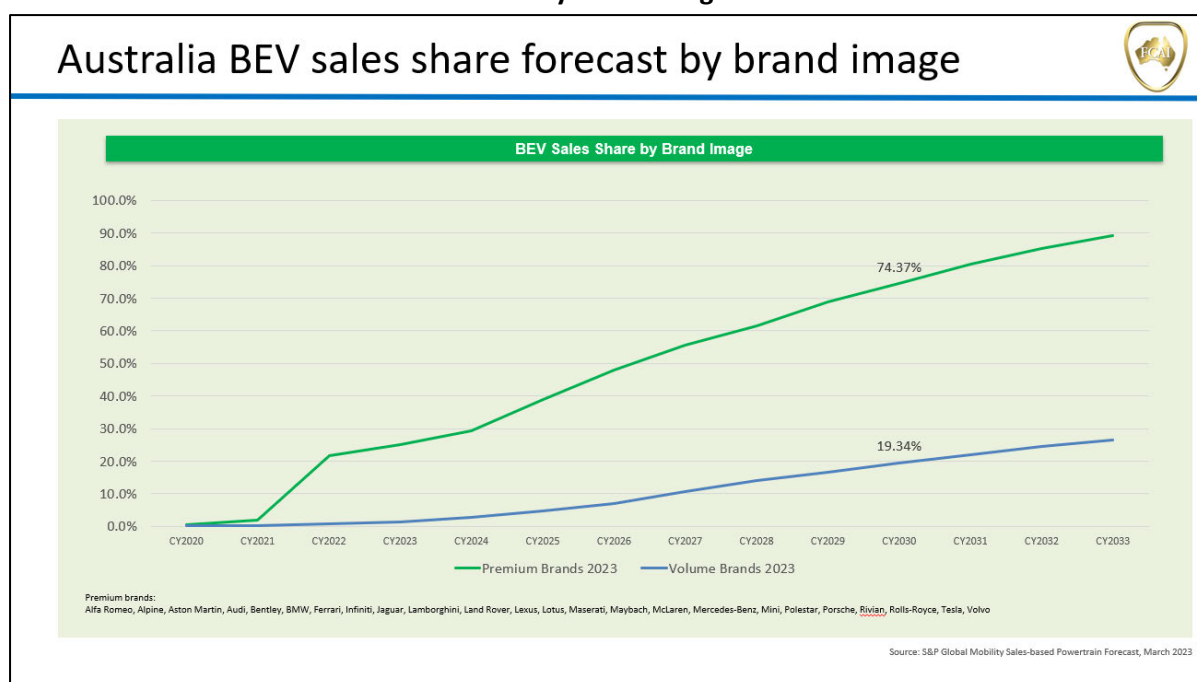
The FCAI and its members want to continue to play their role in combating climate change and providing Australians with the zero and low emission vehicles they want to drive and vehicles that meet their family, personal, recreation or work needs.

The ultimate aim of this policy should be to decarbonise the light vehicle sector in the most efficient and effective way in the Australian context. Central to this notion is that any policy that does not bring consumers along the path of reform will, by definition, fail. Key to the transition for consumers is the availability of product that they want or need at an affordable price.

FCAI has undertaken detailed research including member input that can assist Government to gain a clearer picture of the reality of supply of all powertrains across categories and entry level pricing of volume EVs from 2023 through 2035. Reflecting Australia's specific political, environmental geographic, demographic and economic challenges, a technology mix (including hybrid, plug-in hybrid, battery and fuel cell electric vehicles) and other future options including carbon-neutral, bio or synthetic fuels, is the most pragmatic way ambitious outcomes can be achieved.

Research from S&P Global, the world's pre-eminent automotive research experts, which utilises their global reach, demonstrates that by 2030, without any further policy change, three quarters of premium brand new car sales in Australia will be Battery Electric Vehicles (BEVs). However, in the volume end of the market this number is just 20 per cent in 2030. It notes that premium brands represent around 12 per cent of the Australian market.

**Chart 1 – Australia BEV sales share forecast by brand image**



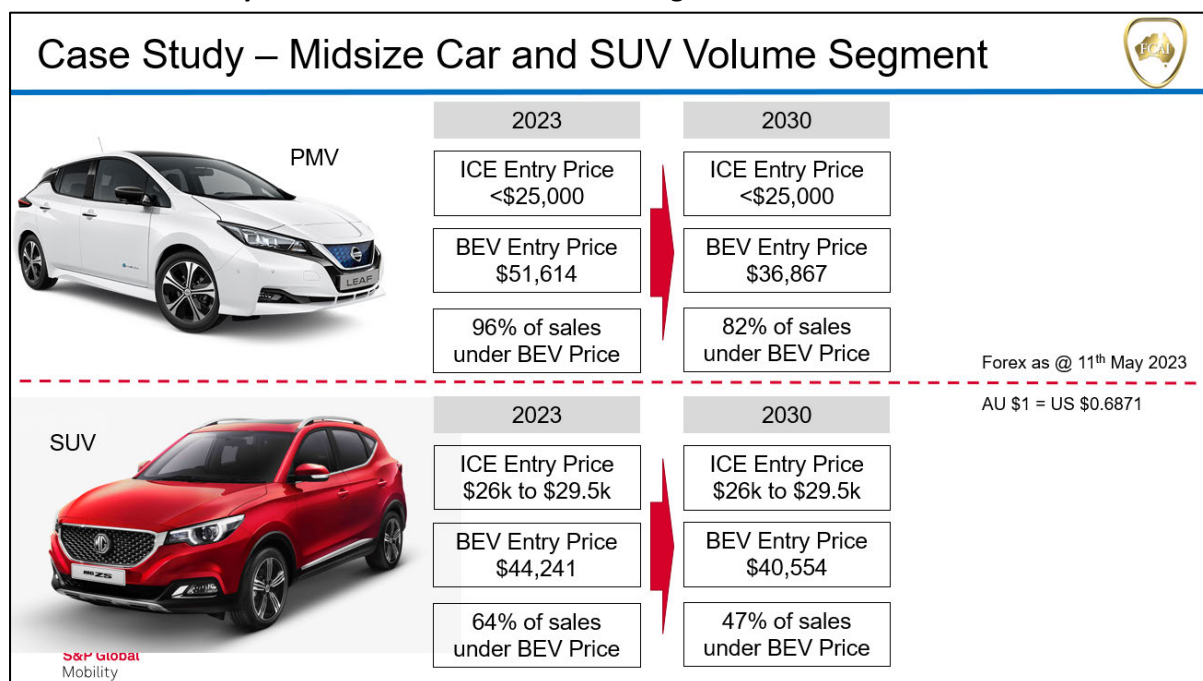
Source S&P Global Mobility Sales Based Powertrain Forecast March 2023

The following chart outlining a case study on pricing in the C vehicle segment has been developed based on information sourced from S&P Global. The case study illustrates the challenge of bringing volume consumers along on the transition to a decarbonized new vehicle market. The diagram uses the example of C segment vehicles in the passenger motor vehicle and SUV segments of the market, the two most popular segments of the Australian market. The diagram shows that the entry price point for a BEV passenger motor vehicle in the C segment in 2030 is forecast to be almost \$37,000, a price premium of around \$12,000 on the forecast entry point for the equivalent internal combustion engine vehicle. In addition, 82 per cent of the internal combustion engine passenger motor vehicles in this segment in 2030 will be priced below the entry point BEV.

In the SUV segment the analysis is similar. In this segment a BEV is forecast to be around \$40,500 a price premium of around \$11,000 on the forecast entry point for the equivalent internal combustion engine vehicle. In addition, 47 per cent of the internal combustion engine passenger motor vehicles in 2030 will be priced below the entry point BEV.

The question is whether the price conscious consumer will be willing and/or able to pay the premium to purchase the BEV technology. To some degree, the size, nature and form of complementary measures will influence the consumer's answer to this question. But, simply put, if the answer is no, then the policy will not drive the desired change in consumer behaviour and the resultant reduction in CO<sub>2</sub> emission.

**Chart 2 – Case Study – Midsize Car and SUV Volume Segment**

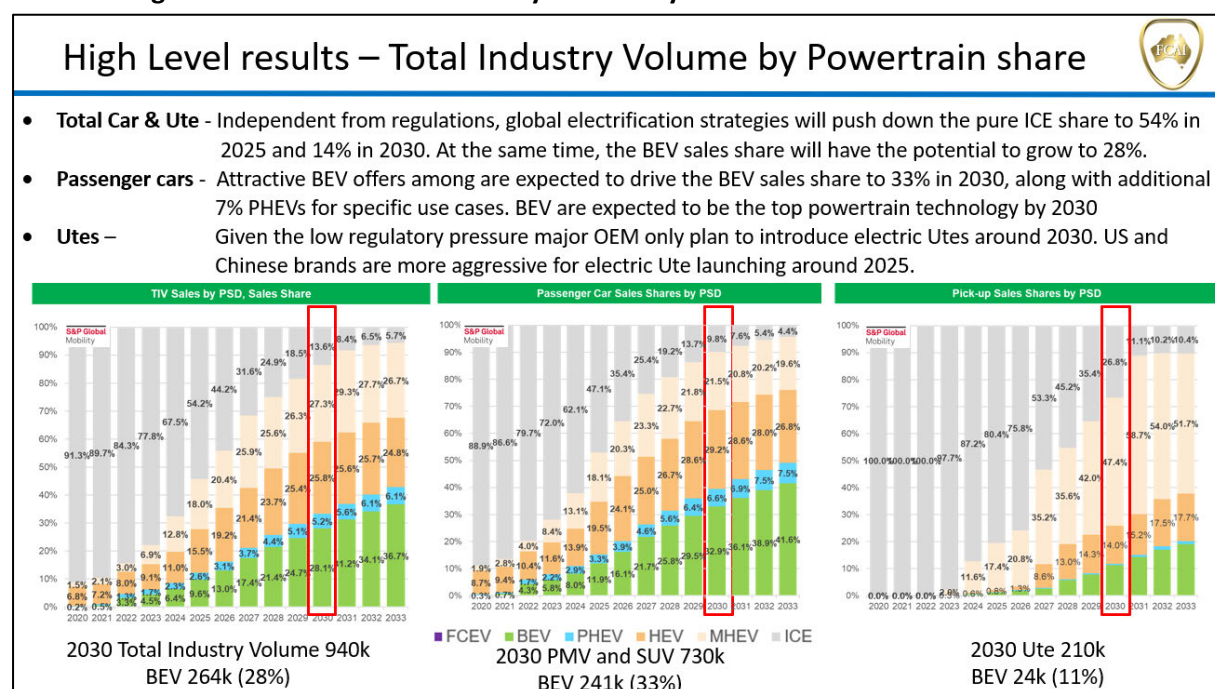


Source S&P Global Mobility Sales Based Powertrain Forecast March 2023 and other sources

The following chart 3 illustrates how the market is likely to react in the absence of any further policy change as we inevitably move to a lower emissions future. The S&P Global research states that the entire market by 2030 will be 28.1 per cent BEV with only 13.6 per cent of the market being pure internal combustion engine vehicles. The rest of the market will have some form of electrification through hybridisation. The profile of the combined passenger motor vehicle and SUV segments of the market is expected to be very similar with BEVs representing a third of sales. However, the ute market,

which is forecast to be 22 per cent of the entire market, is expected to only reach 11 per cent BEV penetration in 2030. This is due to the cost of electrifying such vehicles whilst retaining the necessary capability including suitable payload capacity and range.

**Chart 3 – High Level Results – Total Industry Volume by Powertrain Share**



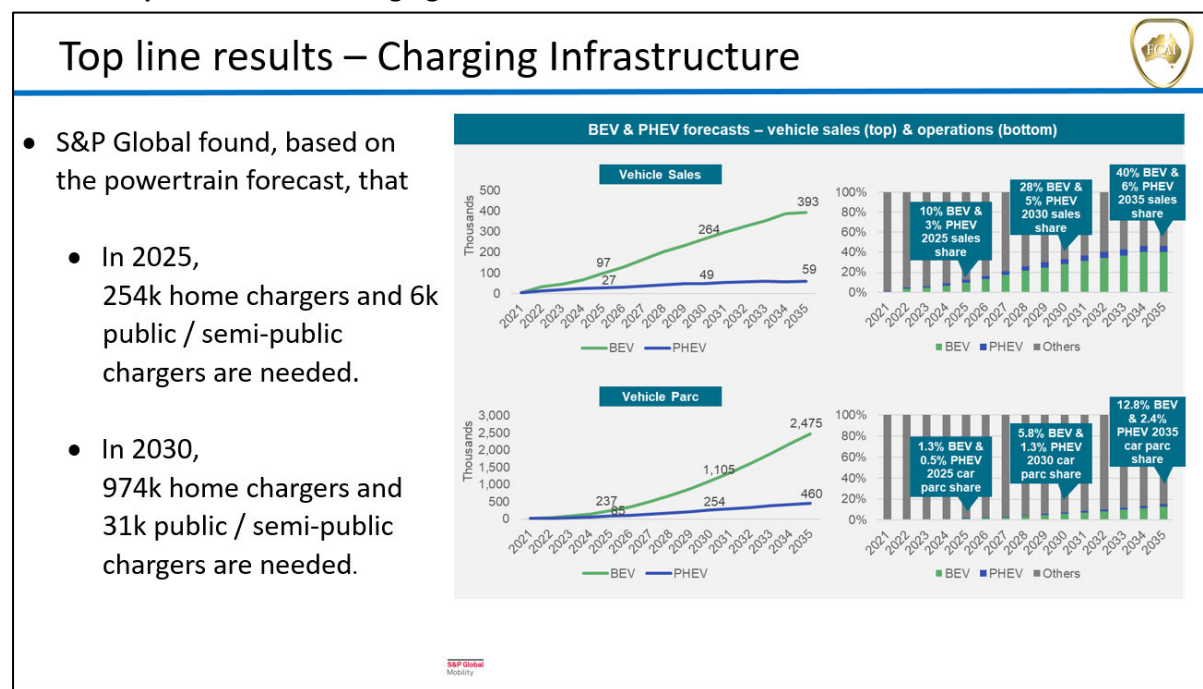
Source S&P Global Mobility Sales Based Powertrain Forecast March 2023

FCAI recognises both the challenges and the opportunities of implementing a FES. These include model cycles and allocation of vehicles to markets with favourable policy settings such as the US, EU and China. The design and the ambition of the FES needs to consider the Government’s ability to implement a suite of complementary policies as have been provided internationally including public, fleet and private charging and purchase incentives.

To support the transition to a greater number of EVs that will be on Australia roads, there needs to be a commensurate increase in the number of EV recharging stations across the length and breadth of Australia. This is one example of how the strategy needs to be holistic in its approach, as a lack of charging infrastructure will undermine the community’s response to the transition.



Chart 4- Top Line results – Charging Infrastructure



Source S&P Global Mobility Sales Based Powertrain Forecast March 2023

FCAI also recognizes current challenges faced by the global industry in the area of key commodity availability, and current and projected global shortages of batteries. The traction battery supply chain is long and involves many players. It is an industry under global development with many new players and investors with multiple sectors to serve (e.g. energy storage). Automotive OEMs are taking equity stakes in the supply chain and / or establishing key partnerships both nationally and globally to secure the necessary resources to their battery production and to provide recovery mechanisms for end-of-life or damaged / defective battery components. The ability of the global automotive and mining industries to supply the batteries required to meet EV demand in line with the regulations and incentives of the major markets of US, EU and China by 2035, let alone the whole developed world is uncertain.

FCAI looks forward to working closely with Government towards implementing an efficient and effective Fuel Efficiency Standard and working towards a decarbonised future.

Are these the right guiding principles? Are there other principles that you think we should keep in mind?

FCAI agrees with the guiding principles of effectiveness, equity, transparency, credibility and robustness which should ensure that the Fuel Efficiency Standard (FES) enables all available emissions reducing technologies with the sole purpose of reducing emissions and ensures that Australian families and businesses are not disadvantaged in terms of choice and price.

Within these guiding principles, FCAI believes that it is important to consider responsiveness and flexibility, remaining specific to the Australian market whilst cognisant to international trends and administrative efficiency. Lastly, and perhaps most importantly, a FES must be consumer focused maintaining a range of vehicles with the capabilities needed by Australian business and private consumers at affordable price points.

Are there any design assumptions that you think will put at risk the implementation of a good FES for Australia?

Are the exclusions for military, law enforcement, emergency services, agricultural equipment and motorcycles the right ones?

The underlying design assumption should be outcome focused and performance based. The purpose of the FES is to reduce tailpipe CO<sub>2</sub> emissions of the new vehicle sales in Australia. Each and every gram of CO<sub>2</sub> abated is equally valuable, regardless of its source. With this outcome in mind, the primary design principle must be technology agnostic. It must work to reduce the average tailpipe CO<sub>2</sub> emissions of the total new vehicle sales in order to maintain consumer choice for vehicles that Australians want and need to drive.

FCAI agrees that the FES should be established in Commonwealth legislation and be mandatory.

It should apply to all new light vehicles (under 3.5 tonnes GVM), and other N category vehicles where the weight of the battery is likely to put their GVM above 3.5 tonnes. The FCAI also agrees that it should be subject to specific exemptions including military, law enforcement, agricultural equipment, motorcycles and potentially non-RAV entry imports under the Road Vehicle Standards Act (test and evaluation vehicles).

Whilst it should apply to vehicle suppliers rather than vehicle dealers, Government needs to consider complex multi-distribution arrangements that may exist for individual brands.



Are there any particular FES features that you think we need to take particular care with?
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This question in the discussion paper seeks opinion on principles to be considered when setting a CO<sub>2</sub> target, how far ahead targets should be set and what the FES average annual emissions ceiling should be along with how strong, how quick, what flexibilities, when to commence, what penalties and what governance should be applied. These questions are generally answered in FCAI's responses to the Technical Questions and, by demonstration, in the operation of FCAI's industry led CO<sub>2</sub> standard.

Whilst acknowledging the enormous task in front of Australia to reduce its tailpipe CO<sub>2</sub> emissions, it is important to understand what rate of improvement that is technically, financially, commercially and politically possible within the short and medium term. It is also important to understand the potential negative impact on the environment from consumers not purchasing new, more efficient vehicles if the vehicles on offer are too expensive and/or do not meet their needs.

When considering and comparing that rate of improvement that might be possible in Australia against the rate of improvement being targeted or having been achieved in other developed markets, it is important to remember that the Commonwealth Government has already ruled out many of the consumer incentives that are available in those other markets. Many, indeed, most, of these factors have a direct effect on which vehicles consumers in those markets chose to purchase and drive. FCAI acknowledges the passing of the Government's FBT concessions Treasury Laws Amendment (Electric Car Discount) Act 2022<sup>1</sup> and the positive effect that it has had on EV uptake, and this demonstrates the importance of complementary measures which FCAI believes must be internationally competitive to have a positive incremental effect on vehicle supply and consumer demand.

FCAI also acknowledges the range of temporary incentives being provided to consumers by the State and Territory Governments as part of their respective electric vehicle/emissions reduction strategies.

FCAI's market research indicates that Australian consumers are becoming increasingly willing to buy ZLEVs (zero and low emissions vehicles) but will not support a policy outcome that forces them to do so. The research also shows that consumers are price sensitive to the transition. The FES needs to be consumer demand focused and be designed to bring the new vehicle buyer along on the journey towards the ZLEV future.

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<sup>1</sup> <sup>1</sup> Treasury Laws Amendment (Electric Car Discount) Act 2022 <https://www.legislation.gov.au/Details/C2022A00086>

What principles should we consider when setting the targets?
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It is important that Government understands vehicle development cycles and lead times in order to understand the implication of various approaches to CO<sub>2</sub> emissions level ceiling and multi-year reduction pathways. Vehicle product development is a global process which, even in light of international best practice, typically requires a minimum of three to five years lead time. In addition, vehicle models generally remain in the market for in excess of five years for passenger cars and in excess of eight years for light commercial vehicles.

Significant change to a model architecture or platform in mid cycle is either structurally impossible, or is, at least, very expensive. Stepwise change to vehicle efficiency is most effectively implemented at the initial development of a platform. Flexibility needs to be available to smooth out the stepwise nature of significant platform change. Government needs to be aware of the fact that brands do not always have vehicles across the whole spectrum of the vehicle market, often concentrating in a specific sector with a limited range.

Government should also consider that the Australian market has specific, unique, mandatory regulatory and certification requirements that necessitate additional development and production preparation time and after-sales support, even where it may seem that a brand has suitable Right-Hand Drive (RHD) model availability in a different market. Unique Australian Design Rules such as ADR 34/03, 42/05, 61/03 are not harmonized with international UN regulations and add to cost and model complexity. The Road Vehicle Standards Act (RVSA) requires all models to be certified by the Commonwealth, and the process by which that certification approval is facilitated is slow, cumbersome and adds cost, complexity and lead time to the supply of vehicle models to the Australian market.

A potential concession may be to allow direct acceptance of type approved vehicles from global major markets in full volume supply under the Road Vehicle Standards Act (RVSA). This may remove many of ADR related development barriers that result in increased development time and cost for Australian market vehicles for OEMs bringing ZLEVs from major markets.

FCAI continues to advocate for a reduction in the complexity of administrative processes for the certification of models for the Australian market. The time taken for Vehicle Type Approval applications and their complexity when considered against comparable global systems is a barrier to entry and further discourages brands from providing some ZLEV models to the Australian market.

Despite what some commentators may want to have Government believe, the FCAI's industry-led CO<sub>2</sub> standard is a robust and ambitious set of targets across the two chosen categories which is proving to be difficult to achieve in the absence of Government intervention. FCAI believes that it could form a realistic basis for the cautious start period of a "Cautious Start-Finish Strong" approach to a mandatory FES.

#### RECOMMENDATION:

FCAI recommends Government adopt a cautious start to its mandatory FES with an accelerated finish. FCAI also recommends flexibility is built into the FES with a long-term, visionary target of up to ten years and regular reviews of the annual rate of reduction as described later in this submission.

How many years ahead should the Government set emissions targets, and with what review mechanism to set limits for the following period?

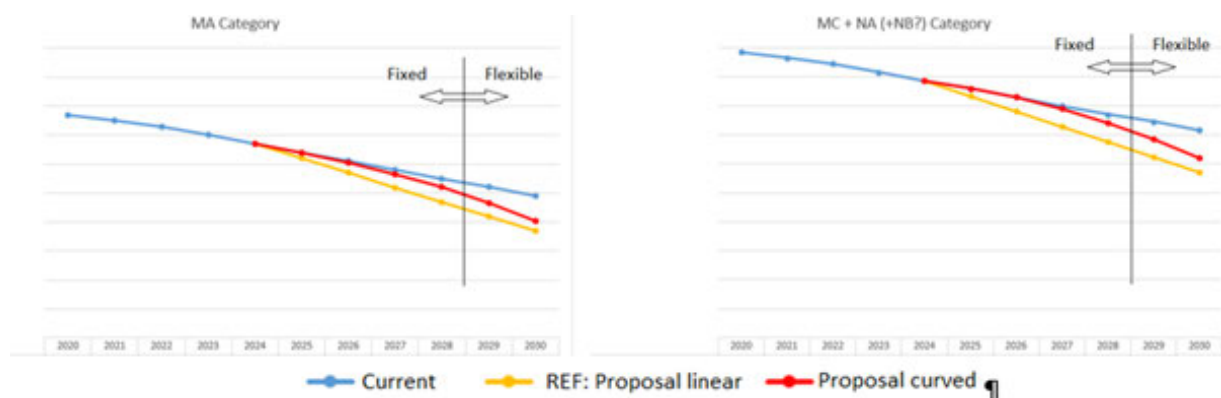
How should the Government address the risks of the standard being found to be too weak or too strong while it is operating?

A long-term goal is important and provides a visionary target around the long timeframes that exist for vehicle product cycles. However, an important mechanism within any long-term plan is a review process to understand changes to environment, technologies and market conditions. An example of this is the Commonwealth's National Road Safety Strategy which is a ten-year, visionary goal and timeframe, broken down into more manageable National Road Safety Action Plans of three to four year review periods.

Mindful of the model development cycles mentioned above, short-term reviews would enable Government to adjust targets whilst giving suppliers sufficient lead time to make adjustment to their product offering for the Australian market to the extent that this is possible.

Conceptually, this would mean that if an initial FES was launched in 2023, it would provide fixed targets for 2024-2028 with reviewable "flexible" targets for 2029-2033; the review in 2026 then sets firm targets for 2029-2033, and flexible targets for 2034-2036.

**Chart 5 Fixed and Flexible FES targets (Concept)**



#### RECOMMENDATION:

A strategy similar to that utilised for the NRSS should be applied to the FES where an ambitious but achievable long-term, visionary goal is set, with annual interim targets and a formal review on a regular basis. FCAI suggests reviews be conducted every three years with annual targets and the long-term 10 year visionary goal to be adjusted. This will ensure that a FES found to be too weak or too strong can be adjusted and calibrated to suit the domestic and global circumstances of the period.

What should Australia's CO<sub>2</sub> FES targets be?

How quickly should emissions reduce over what timeframe?

Should the Australian FES start slow with a strong finish, start strong, or be a straight line or take a different approach?

This question, and charts 1 and 2 in the consultation paper, are far too simple way of distilling a highly complex topic into a single question. This question cannot be answered without the context of the multiple parameters that exist in a modern, robust and effective Fuel Efficiency Scheme. A number of these parameters are explored later in the consultation paper. Questions behind "What should Australia's FES target be?" must include:

- Which vehicles will be included and how will they be categorised?
- Will the FES be based on an attribute-based limit curve and if so what will the attribute be?
- What will be the relationship between the attribute and Fuel Efficiency (CO<sub>2</sub>)?
- What will be the slope of the attribute curve?
- What is the current level of Fuel Efficiency?
- What complementary measures/incentives can be utilised to assist the provision of Fuel Efficient models?
- What complementary measures/incentives can be utilised to assist with the uptake of those Fuel Efficient models?

FCAI believes that a multi-dimensional view is essential and a single FES target number in isolation without the context of other parameters would not be prudent at this early stage of FES design.

As stated in our submission to the National Electric Vehicle Strategy consultation paper and previous consultation on this matter back to the 2016 Ministerial Forum on Vehicle Emissions, FCAI has long been supportive of an ambitious FES, with a rate of improvement commensurate with the rates achieved in comparable markets. Any such international targets reflect the complementary measures that are designed to increase the uptake of lower emission vehicles. This is the basis of the FCAI industry-led CO<sub>2</sub> standard that has been in place, in the absence of Government intervention, since 2020.

Any target set for the Australian market should be appropriate to the Australian context. The FCAI's industry-led CO<sub>2</sub> standard was developed using world's best knowledge in 2018~2019 and designed to be ambitious but achievable underpinned by research by ABMARC following work it undertook for the Australian Automobile Association.

FCAI's industry-led standard is proving to be difficult to achieve after three years of operation, especially in the absence of any government support or assistance. Recent announcements supporting the uptake of electric vehicles can be expected to support the rate of emissions reduction. However, the level of ambition of FES targets is directly influenced by complementary measures that can be applied to incentivise a change in consumer demand and preference.

FCAI acknowledges significant change in the international environment which can and should be considered as Government moves to regulate a FES in Australia. FCAI and its membership remain

committed to assisting Government to bring knowledge and experience from within the FCAI membership and our global partners to reach a consensus view on what is an ambitious but achievable target. This also brings a consumer perspective to the discussion, which parameters are important and which of those have biggest influence over reduction of tailpipe CO<sub>2</sub> emissions.

#### RECOMMENDATION:

Government should start from the current level of average tailpipe CO<sub>2</sub> emissions from the new vehicle market and target an average rate of improvement commensurate with what other developed markets have achieved but mindful of the lower level of direct support particularly to the private consumer in Australia when compared with the support available in those markets.

Should an Australian FES adopt a mass-based or footprint-based limit curve?

If Australia adopts a mass-based limit curve, should it be based on mass in running order, kerb mass, or another measure?

Should Australia consider a variant of the New Zealand approach to address incentives for very light and very heavy vehicles? If so, noting that new vehicles that weigh under 1,200 kg are rare, where should the weight thresholds be set?

In development of the FCAI industry-led CO<sub>2</sub> standard, the vast majority of brands supported the adoption of mass as the attribute for the limit curve. The reality is that either of the two attributes used in larger global markets have their own unique advantages and disadvantages, as noted in the consultation paper. Mass-based CO<sub>2</sub> standards are used in the markets that most vehicles offered in the Australian market are drawn from and is consistent with the United Nations based regulations developed under Working Party 29 which are used in Australia.

Vehicle mass is, and continues to, increase over time as a result of increased safety, environmental and convenience technologies and equipment being required by regulation and/or offered to and demanded by consumers.

It is also worth noting that as a result of electrification there is the potential that some NA category vehicles will move up into the NB category if the weight of the traction battery is included in the mass criteria.

This should be taken into consideration when determining the vehicle categories included in the FES. A guiding principle might come from Article 2, section 1(b) of EU regulation 2019/631 which allows an N category vehicle that exceeds the light goods category mass criteria to be counted as a light goods category vehicle if the excess mass is due only to the mass of the energy storage system.

FCAI sees no particular reason to flatten the limit curve above and below specific mass values, given that this is a distortion which adds administrative complexity for limited benefit.

#### RECOMMENDATION:

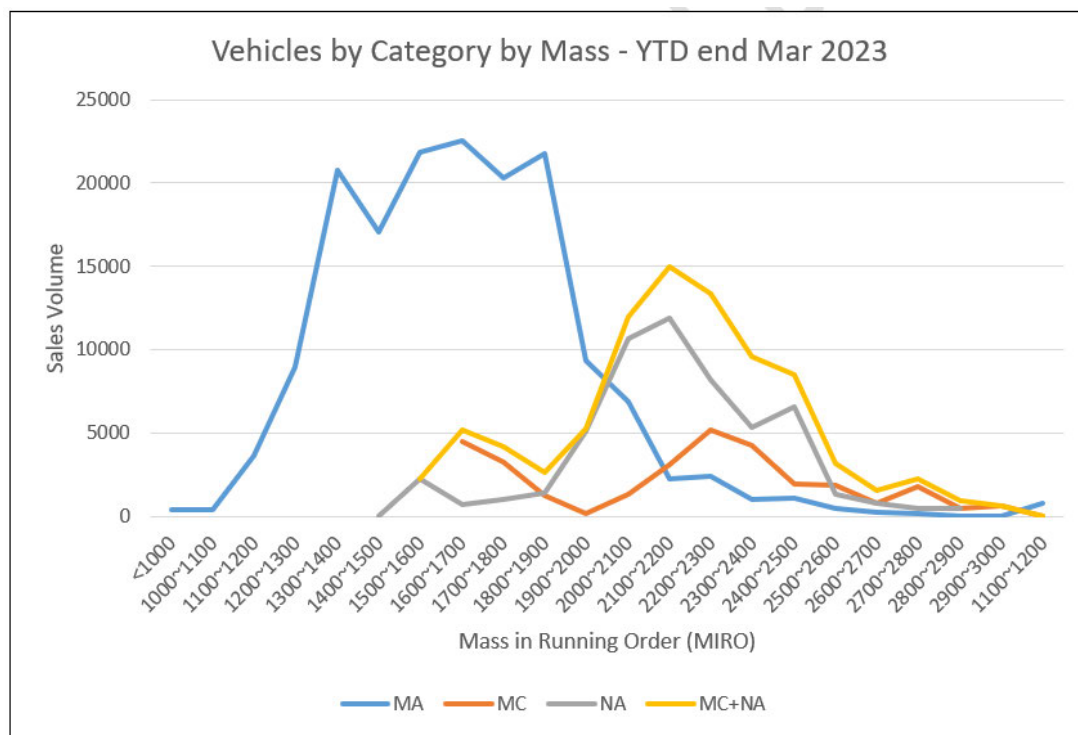
Mass is the appropriate attribute for an Australian FES. FCAI's industry-led CO<sub>2</sub> standard uses Mass In Running Order (MIRO) guided by the European fuel efficiency regulation. It can be noted that MIRO has a direct relationship with kerb mass so either could be used equivalently with an appropriate horizontal shift of the limit curve along the x-axis.

## Should an Australian FES adopt two emissions targets for different classes of vehicles?

There is a clear case for adopting separate emissions targets for different categories of vehicles. The primary use case of commercial vehicles and of large, 4WD off-road SUVs is capability to carry payload and to traverse difficult and often challenging terrain. This primary capability changes the fundamental relationship between mass and CO<sub>2</sub> emission for this category of vehicles. It is this relationship which establishes the slope of the limit curve.

ABMARC's research, when assisting with the formulation of FCAI's industry-led CO<sub>2</sub> standard, determined that the most appropriate split of vehicle categories would be similar to the split adopted in the US Fuel Efficiency regulation. FCAI's industry-led CO<sub>2</sub> standard therefore adopts separate targets for MA category and MC combined with NA category vehicles. The following chart shows a clear demarcation between the categories and demonstrates the primary use case assertion in practical terms.

**Chart 6 Vehicles by Category by Mass**



Source: FCAI VFACTS

The slope of the limit curve and the target reference mass are critical parameters to consider and vary significantly between the two categories as a result of primary use case.

Electrification of the vehicle fleet generally increases the average mass of vehicles due to the mass of the traction battery. As consumers' range concerns are solved with larger and larger traction batteries, this trend is likely to continue. It is FCAI's understanding that the EU Fuel Efficiency regulation provides for the exclusion the traction battery to cater for this trend.

### RECOMMENDATION:

FCAI recommends that Government adopt the two limit curves from the FCAI industry-led CO<sub>2</sub> standard and additional research is undertaken to confirm that the slope and reference mass parameters for the annual targets remain contemporary.

Is there a way to manage the risk that adopting two targets erodes the effectiveness of an Australian FES by creating an incentive to shift vehicle sales to the higher emission LCV category?

Clear and unambiguous parameters which enable a vehicle to be categorized as an MC category model ensure that a relatively small percentage of models are eligible to be certified in this category. A Vehicle Type Approval can only be issued for one vehicle category and there is significant cost and complexity within the Commonwealth's homologation and certification system for each Vehicle Type Approval. There is no clear evidence of brands shifting vehicle models between categories for the purpose of gaining benefit for the FCAI industry-led CO<sub>2</sub> standard. Flexibilities including credits, banking, pooling and transfers, discussed later in this submission, further minimize the risk of this occurring.

**RECOMMENDATION:**

FCAI recommends that ensuring that any credit regime which allows transfers between models and/or brands should be done on an absolute g/CO<sub>2</sub> per km basis. This will minimize any risk of eroding the effectiveness of the FES.

Is there anything else we should bear in mind as we consider this design feature?  
Are there other policy interventions that might encourage more efficient vehicle choices?

The afore mentioned use case of light commercial vehicles, and their payload carrying requirements makes it more challenging to electrify their powertrain. The mass of traction battery and other EV hardware detract from the payload available for commercial purposes.

To what extent should the Australian FES allow credit banking, transferring and/or pooling?  
Should credits expire? In what timeframe?

The purpose of a FES is economy wide CO<sub>2</sub> reduction, and flexibilities allowing credit banking, transferring and/or pooling are effective incentives which allow brands to effectively manage their product development cycles, vehicle model life and certification and homologation complexity and cost.

Credits should be time limited to five years and allow carry forward and carry back to account for product development cycles.

Any credit management arrangement should be open and as flexible as possible whilst requiring regulated entities to resolve credit/debits within the regulated entity group before allowing trading externally.

Flexibility should enable transfers between vehicle categories, regulated entities and brands. Finally, all transactions within the credit management system should be reported transparently and publicly.



Should an Australian FES include multiplier credits for ZLEVs?

Multiplier credits for ZLEVs are an effective means of incentivizing the supply of these vehicles to market especially in the absence of other internationally competitive policy levers such as direct consumer incentives.

Multiplier credits adopted in other global markets targeted specific technologies rather than focusing on the primary objective of reducing CO<sub>2</sub> emission. However, the FCAI industry-led CO<sub>2</sub> standard applied multipliers at a percentage of the limit curve value. This ensures a technology neutral, ongoing reduction of the CO<sub>2</sub> emission is required to gain the benefit of this type of credit and that the multiplier effect reduces over time.

In the FCAI industry-led CO<sub>2</sub> standard, the exception to this natural reduction of the multiplier effect over time is the zero emission multiplier which by the very nature of being zero remains constant. This effect could be reduced by the zero emission multiplier specifically being phased out. This could be considered as part of the review process.

It is important that any multiplier effect included in the FES is transparent, technology agnostic and achieves the desired outcome of real CO<sub>2</sub> reduction over time.

**RECOMMENDATION:**

The FES should include multiplier credits which are linked to the limit curve in the absence of a suite of other internationally competitive policy levers. Where any such multiplier credit does not reduce naturally over time as the limit curve becomes increasingly stringent, their application and generosity should be considered as a part of the review process.

If so, what level should the multipliers be, should they apply equally to both classes of vehicle (if adopted) and for how long should they apply?

FCAI's analysis of research undertaken by S&P Global shows that the level of multiplier may be more significant for light commercial vehicle category than the passenger vehicle category. It **may be** possible to incentivise adoption of low emission powertrain technologies in the more difficult to electrify categories if applied unequally across vehicle categories. This is worthy of further investigation.

Subject to the issues discussed in the previous question, if linked to a percentage of the limit curve making them more difficult to qualify for over time, multiplier credits should remain in place across the term of the FES, to provide brands with encouragement and certainty for their development into new technologies.

If Government considers early withdrawal of multipliers, this should be done on the basis of market penetration of ZLEV rather than being time based. Experience in other global markets has demonstrated that withdrawal of a market incentive can result in immediate reduction of consumer demand for ZLEV product.

Any early withdrawal of multipliers should not occur until at least the first review of the FES, again providing certainty for brands across Product Planning cycles.

Should the total benefit available from these credits be capped?
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Noting that FCAI believes that multiplier credits for ZLEVs are a means of incentivizing the supply of these vehicles to market, if limited in the manner described earlier in this submission, FCAI does not see a clear case for capping credits generated by ZLEVs.

If not, should the Government consider another approach to incentivising the supply and uptake of LZEVs?
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This standard needs to be implemented with a suite of Federally led, nationally consistent complementary policies focused on:

- Public charging and hydrogen refuelling
- Fleet and private charging and hydrogen refuelling
- Non-financial Zero and Low Emission Vehicle (ZLEV) incentives (access to transit lanes, free parking, free charging)
- Mandated government fleet ZLEV procurement targets
- Purchase Incentives

FCAI notes that some of these policies have been confirmed in the National Electric Vehicle Strategy which was released concurrently with the FES consultation paper. FCAI also notes that purchase incentives available to the retail consumer have generally been provided by the state and territories and are capped by volume rather than by market penetration.

Should an Australian FES include off-cycle credits for specified technologies?

If so, should the per-vehicle benefit be capped and how should an Australian FES ensure that off-cycle credits deliver real emissions reduction?

Should the Government consider any other form of off-cycle credits for an Australian FES?

Inclusion of Off-cycle Credits recognize that actual CO<sub>2</sub> emissions reductions through vehicle technologies are not always captured, and not equally represented on the laboratory based, fuel economy testing that underpins CO<sub>2</sub> reporting. Where it can be demonstrated that actual CO<sub>2</sub> emissions reductions can be achieved, then it is reasonable to include these reductions in the FES.

FCAI industry-led CO<sub>2</sub> standard accepts on face value off-cycle credits for any technology which has been recognised under international FES at face value and at the equivalent credit value as is allowed in the source regulation. Allowing the FES to adopt international practice provides consistency as well as reducing the administrative burden required by government and industry to implement and maintain.

The Government should take a pragmatic approach and allow for any new technology which can be scientifically demonstrated as genuinely reducing off-cycle CO<sub>2</sub> emissions to be included in the Australian FES.

Internationally, any such credits are generally capped to a maximum and FCAI agrees that such a cap is appropriate.

**RECOMMENDATION:**

Government should allow off cycle credits in line with international FES precedence.

Should an Australian FES include credits for using low global warming potential air conditioning refrigerants, and if so, for how long should this credit be available?  
Could the issue of high global warming potential refrigerants be better dealt with by another policy or legislative framework?  
If such a credit is permitted, should the emissions target be lowered to ensure consumers realise the fuel cost savings and EV availability benefits of a FES?

Low Global Warming Potential refrigerants is an area where actual CO<sub>2</sub> reduction can be achieved, again not recognized under laboratory based, fuel economy testing that underpins CO<sub>2</sub> reporting.

The phase down of Low Global Warming Potential refrigerants is a very long-term process and not directly applicable to vehicle fuel efficiency. It is controlled by a different Commonwealth Government Department from that responsible for the FES. However, it is a complementary issue which can be incentivised through the FES, effectively increasing the uptake of LGWP refrigerants in advance of their phase down under the Montreal Protocol.

This would add some complexity to a FES in recording and monitoring refrigerant use. FCAI reduced this complexity in the FCAI industry-led CO<sub>2</sub> standard by averaging refrigerant use across each vehicle category and applying that average across the standard for each category.

**RECOMMENDATION:**

Government should include provisions that allow credit for the adoption of Low Global Warming Potential air conditioner gases but not necessarily lower the emissions target as a result.

When do you think a FES should start?

How should the start date interact with the average annual emissions ceiling?

Should the Government provide incentives for the supply of EVs ahead of a FES commencing? If so, how?

To maximise the effectiveness of the FES and the contribution of the light vehicle transport sector to Australia's climate change ambition, the FES should start as soon as legislation can be drafted, passed, and administrative arrangements can be put in place to operate the system. Leadtime needs to be given to ensure participants in the scheme are adequately informed and educated to ensure forward planning production and delivery of vehicles is not unnecessarily disrupted.

Clearly the sooner the FES is finalized, the greater time and certainty brands will have to make business decisions and take actions to meet its CO<sub>2</sub> reduction obligations. Any start of the FES must be cognisant of, and take into account the current, actual CO<sub>2</sub> emission level being achieved from new vehicle sales at commencement. If Government chooses to take an aggressive approach to CO<sub>2</sub> reduction from commencement of the FES, i.e., "Start Strong" scenario, brands will need some lead time to make adjustments to their future product offerings, model development and production plans in line with any available complementary measures offered by Government in that scenario.

FCAI may be able to assist Government with some of the technical detail of the FES and the administrative arrangements. FCAI is open to discuss data requirements and underlying system issues with Government.

In order to reduce administrative and reporting complexity, FCAI believes the FES should apply to calendar year vehicle sales and commence in the earliest possible calendar year following the passing of the legislation and the implementation of the administrative and educational arrangements. The complexity of those administrative arrangements may prove to be a critical factor in the date from which Government can commence its FES.

Three years of factual information is already available from the FCAI industry led CO<sub>2</sub> standard which provides a strong baseline and data for year-on-year comparison. FCAI will continue to publish results of the FCAI industry-led CO<sub>2</sub> standard in line with current protocols until such time as the Commonwealth's FES is in place and operational so that the public continues to be informed of the Australian new vehicle sales fuel efficiency performance.

FCAI is very supportive of the idea of incentivising the supply low and zero emission vehicles on a technology agnostic basis, not specifically EVs, in advance of the commencement of a FES. Most importantly, any incentive would preferably be Federally led and nationally consistent, with all state and territories supporting the Commonwealth in their delivery. The following is a non-exhaustive list of incentives that could be applied.

- Public charging and hydrogen refueling
- Fleet and Private charging and hydrogen refueling
- Non-financial ZLEV incentives (access to transit lanes, free parking, free charging)
- Mandated government fleet ZLEV procurement targets
- Direct consumer purchase incentives



What should the penalties per gram be? Would penalties of A\$100 per gram provide a good balance between objectives? What is the case for higher penalties?

The fundamental aim of the FES is CO<sub>2</sub> abatement. However, FCAI contends that this should be done at least cost to all parties whilst maximizing the potential for Australian consumers to continue to be able to afford to buy and drive the types of vehicles that they want, and which meet their mobility requirements. There may be a case for tying the value of penalties to the Australian Carbon Credit Unit (ACCU) price and allowing the market to determine the most efficient means of achieving CO<sub>2</sub> abatement through the FES.

Any penalty should minimize the risk of brands withdrawing from the market and limiting consumer choice. The New Zealand example shows that this is of serious risk.

Penalties are a last resort for vehicle suppliers and should likewise be a last resort for Government too. Non-financial penalties have proven to be a deterrent in some international markets and should not be discounted completely from Government's consideration.

Penalties need to be considered in light of other elements of the scheme.

What if any concessional arrangements should be offered to low volume manufacturers and why? If so, how should a low volume manufacturer be defined?

FCAI is open to discuss derogation arrangements for manufacturers who operate under full volume Vehicle Type Approval but sell limited volume in that sector. Any such manufacturer must still have obligation under the FES to make some form of contribution to the overall CO<sub>2</sub> abatement objective. According to FCAI's 2022 calendar year end VFACTS report, niche brands with sale volumes less than 1000 units comprised 0.41% of the Australian new light vehicle market. FCAI is willing to work with Government to determine whether this, or some other value is a reasonable demarcation to define a low volume manufacturer and whether any other consideration or determinant may be required.

FCAI does not believe that similar arrangements should apply to suppliers operating in the concessional space due to the inherent risks of enabling unintended growth in this sector which circumvent the full volume Type Approval requirements. The Specialist and Enthusiast Vehicle Scheme (SEVS) should be reserved for genuinely specialist and niche vehicles which are not available in the Australian market rather than a parallel import of main-stream models.



The Government is keen to ensure any regulatory administrative costs are kept to a minimum while ensuring that outcomes are robust. What should the department keep in mind in designing the system for suppliers to provide information and in relation to record keeping obligations?

FCAI is the owner of the VFACTS database which is the pre-eminent source of new vehicle sales in Australia. VFACTS is operated by the internationally renowned S&P Global and represents the most comprehensive and complete source of Australian new vehicle sales data. All member brands, and most non-member brands supply their model specification and sales data. VFACTS is used extensively by both the government and the private sector for new vehicle sales information. The VFACTS database also forms the basis of, and holds all necessary data for, the FCAI industry-led CO<sub>2</sub> standard.

The Department will need to select a robust, contemporary IT platform upon which to develop the system underlying the FES. The challenge and timeframe for this should not be underestimated.

The time and resources needed to design, develop, test, and commission the administrative processes for a FES are substantial including, but not limited to sales reporting, CO<sub>2</sub> accounting, and credit administration. The FES should not commence until these are deployed for use, thoroughly tested and proven fit for purpose. With reference to discussion elsewhere in this submission, depending on the regulated entity, the FES may need to be able to distinguish between vehicles imported and distributed by an OEM and a number of other business entities. It will also need to be able to identify the date of “provision” to market and be more specific on the definition of provide than is allowed for in the Road Vehicle Standards Act.

**RECOMMENDATION:**

1. Government negotiate use of the FCAI VFACTS database as the key source of sales-based information for the FES.
2. Government work with FCAI and member brands to co-design the system to interrogate the VFACTS database to produce FES reporting which should be transparent and publicly available in line with international best practice.

What should the reporting obligations be?  
What information should be published and how regularly?  
How long should suppliers keep required information?  
Is a penalty of 60 penalty units appropriate for this purpose?

International Fuel Efficiency standards generally report on an annual basis using calendar year sales. It seems reasonable that an Australian FES would follow global convention and adopt the same publication cadence.

With the potential of significant commercial ramification of credits and/or penalties, internationally brands are provided with adequate time at the end of the period to check and ensure the accuracy of the information and to verify such detail as the existence and quantum of any credits or exemptions. Government must provide similar time in the Australian FES.

Suppliers should be required to keep information consistent with normal Australian legal and regulatory convention. Suppliers should be able to delegate their record keeping obligations to the operator of FCAI's VFACTS database under commercial contractual basis through the FCAI.

Suppliers should only be penalized for deliberate or negligent information errors. Assuming the rate of \$275 per penalty unit as at 1 January, 60 penalty units could otherwise result in significant financial risk for accidental or unintended data errors.

Should the regulator be the department? What other options are there?

FCAI does not have a strong view on this question but agrees that the Department is probably the most appropriate FES regulator. FCAI sees no particular benefit in the cost and complexity of establishing a separate regulatory body. Regardless, the regulator needs to have appropriate technical capabilities and contemporary industry understanding.

How should the regulated entity be defined in an Australian FES?

Government must be mindful of the complexity of relationships between Original Equipment Manufacturers and their sometimes-multiple distributors in Australia when determining how the regulated entity should be defined. With all light vehicles provided to the Australian market being designed, developed and manufactured overseas, product allocation decisions are made on the basis of global product strategy.

For simplicity, the supplier of the vehicle to the Australian market should be the regulated entity. However, such a definition may require long-term distribution agreements to be reviewed and revised. Government will need to provide sufficient time for any such adjustments to be made.

What reasons are there to depart from the standard regulatory tool kit for an Australian FES?

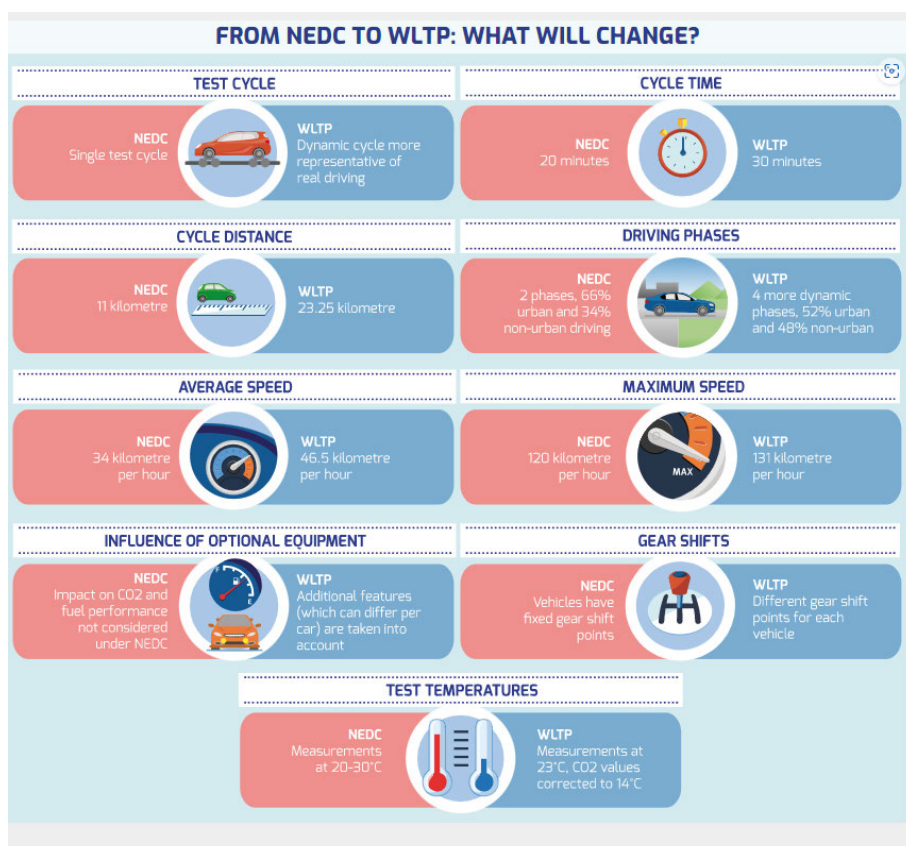
FCAI does not see any reason to depart from the standard regulatory toolkit in the *Regulatory Powers (Standard Provisions) Act 2014*.

Should an Australian FES use WLTP test results in anticipation of the adoption of Euro 6 and if so, what conversion should be applied to existing NEDC test results, or how might such a factor be determined?

FCAI has long supported the view that fuel quality standards, noxious emissions standards and fuel efficiency standards are co-related and cannot be considered in isolation. It is essential that the FES is implemented concurrently with updated Fuel Quality standards for petrol (10ppm sulfur and 35% max aromatics) and diesel (cetane and PAHs) and introduction of the Euro 6d suite of noxious emissions standards (WLPT, RDE and residual tailpipe emissions regulations).

On the assumption that the laboratory fuel consumption test cycle regulated under ADR 81/0x will almost certainly change to WLTP with the introduction of the suite of ADRs implementing the Euro 6d level tailpipe emissions regulation, FCAI agrees that the FES should be fundamentally based on the WLTP test results. This does introduce additional complexity into the FES because until the ADRs introducing WLTP are fully implemented with an “All Models” mandate, there will always be the potential for product certified under a Vehicle Type Approval reliant on NEDC to be sold into the market. For any such vehicles, it is appropriate for Government to provide a conversion factor to allow NEDC test results to be used in lieu of WLTP test results.

**Chart 7 – Differences between NEDC and WLTP**



Source: <https://www.wltpfacts.eu/>

Website by ACEA

## CHART 8 – Difference between NEDC and WLTP test Procedures

### MAIN DIFFERENCES BETWEEN THE TWO TEST PROCEDURES:

	NEDC	WLTP
Test cycle	Single test cycle	Dynamic cycle more representative of real driving
Cycle time	20 minutes	30 minutes
Cycle distance	11 kilometre	23.25 kilometre
Driving phases	2 phases, 66% urban and 34% non-urban driving	4 more dynamic phases, 52% urban and 48% non-urban
Average speed	34 kilometre per hour	46.5 kilometre per hour
Maximum speed	120 kilometre per hour	131 kilometre per hour
Influence of optional equipment	Impact on CO <sub>2</sub> and fuel performance not considered under NEDC	Additional features (which can differ per car) are taken into account
Gear shifts	Vehicles have fixed gear shift points	Different gear shift points for each vehicle
Test temperatures	Measurements at 20-30°C	Measurements at 23°C, CO <sub>2</sub> values corrected to 14°C

Source: <https://www.wltpfacts.eu/> Website by ACEA

FCAI is aware of the report that was developed by International Council on Clean Transportation (ICCT) for the New Zealand Ministry of Transport (NZ-MoT) and this may provide a useful starting point for discussions on the potential for an Australian specific conversion factor which takes into account the final regulatory position which Government arrives at in respect of ADR 111/00, 112/00, 79/05 and 81/0x. On a very technical level of detail, Government will need to ensure that every alternative standard certification pathway is catered for in the conversion tool.

[https://www.transport.govt.nz/assets/Uploads/NZ-conversion-factor-report\\_20210302\\_final-1.pdf](https://www.transport.govt.nz/assets/Uploads/NZ-conversion-factor-report_20210302_final-1.pdf)

It goes without saying that if the Department decides to develop a conversion factor to apply to existing NEDC test results, then this must be proven to be robust, repeatable and consistent for all conversions.

### RECOMMENDATION:

Government should investigate the development of an Australian specific, NEDC → WLTP conversion tool for use from FES commencement until an updated ADR 81/0x is fully implemented.

[END OF SUBMISSION]

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