

TOYOTA

Submission by
Toyota Australia
to the
Fuel Efficiency Standard
Consultation Paper
May 2023

INTRODUCTION

Toyota Australia (Toyota) welcomes the opportunity to provide a submission in response to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) 'Fuel Efficiency Standard – Cleaner, Cheaper to Run Cars for Australia' consultation paper (FES).

In responding to the FES consultation paper, it is important that the department does not read each response in isolation, but rather considers the collective positioning as a whole. International benchmarks show that a holistic package of arrangements including targets, support towards infrastructure, consumer incentives, credits, and other complimentary policy measures are required.

As previously noted, Toyota supports the introduction of an ambitious but achievable fuel efficiency standard which takes a technology agnostic approach and acknowledges both supply and demand factors appropriate in the context of the Australian market. An Australian FES which provides policy certainty will better support industry to effectively plan and consider introduction of future product to market. Consideration needs to be given to whether the level of ambition delivers effective CO2 abatement at the lowest cost. A range of impacts need to be considered:

- Consumer: can they afford and will they buy zero/low emissions vehicles (ZLEVs) at the market price?
- Economy: impact across the economy?
- Supply: To what extent does the FES expand ZLEVs supply?

Toyota is the number one seller of passenger and commercial vehicles in Australia. Toyota has been the market leader for 20 consecutive years with a market share of 21.4 per cent delivering 231,050 vehicles to Australian customers in calendar 2022. Toyota has had a presence in Australia since 1959.

Together with our dealer network, Toyota imports, markets, sells and services motor vehicles and related components, parts, and accessories in Australia and distributes all vehicles via its network of independent franchisees.

Toyota maintains a diverse range of operations including the centrepiece: Centre of Excellence (COE) on our former manufacturing site in Altona. COE functions include:

1. Product Planning & Development, Conversions and Accessories – Design, develop or customise vehicles to meet the needs of the Australian market
2. Product knowledge centre – Carry out vehicle evaluation on a 1.2km test track purpose built to replicate Australian road conditions
3. Hydrogen Centre – Victoria's first integrated hydrogen site including generation of hydrogen and refuelling station
4. Corporate Social Responsibility (CSR) initiative – Sharing Toyota Production System knowledge with local industry through our Toyota Production System Support Centre (TSSC) + broader community support through Toyota Community Trust contributions
5. Business Operations – National parts warehouse, vehicle storage, museum/experience centre

Toyota continues to invest more than \$130m per annum towards innovation projects, many of which are set to deliver positive environmental outcomes.

The company directly employs approximately 1,500 Australians, with most operations based in Melbourne and has an expansive dealer network that comprises of approximately 280 dealership sites across Australia with a workforce of 15,000 employees.

Toyota welcomes the opportunity to provide a response to the Fuel Efficiency Standard Consultation Paper and we look forward to continuing to work with Government throughout the consultation process.

This submission provides specific comments in relation to our business. Toyota also endorses the submission of the industry's peak body, the Federal Chamber of Automotive Industries (FCAI), which provides additional market and evidence-based information.

KEY PRODUCT FACTS

- Market leader in hybrid technology
 - Introduced the first mass produced hybrid vehicle to the Australian market (Toyota Prius, 2001)
- Pioneer in hydrogen fuel cell vehicle (FCEV) technology
 - Established Altona Hydrogen Centre comprising education facilities, hydrogen generation and refuelling infrastructure
 - Introduced the Mirai to the Australian market
 - Currently trialling a fuel cell bus and several types of forklifts
- Toyota hybrid and other zero and low emissions vehicle product range:
 - Hybrids
 - Yaris
 - Corolla Sedan and Hatch
 - Camry
 - RAV4
 - C-HR
 - Yaris Cross
 - Corolla Cross
 - Kluger
 - Hydrogen Fuel Cell Electric Vehicle
 - Mirai
 - Battery Electric Vehicle
 - bZ4x (2023)
- Trialled a broad spectrum of ZLEVs comprising of HEV, PHEV, BEV and FCEV in Australia testing against Australian market conditions in partnership with key target groups (fleets, corporates, etc.)

GENERAL QUESTIONS

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

Toyota agrees with the proposed guiding principles, so long as any fuel efficiency standard is considered in conjunction with all other associated support mechanisms to understand the achievability of the target, market impact and over what period. The totality of the arrangement needs to be modelled to understand costs/benefits across the economy.

Consideration needs to be given to the principle: “effective in reducing transport emissions from light vehicles.” The proposed FES scheme will only focus on tailpipe emissions of new light vehicle sales. There are a broad range of other factors in the light vehicle ecosystem that will require addressing over time e.g. source of the energy used to power vehicles, aging vehicles already in the car parc, end-of-life recycling, etc.

The key focus of the FES should be CO₂ emissions abatement – allowing flexibility for future change conditions and technologies which achieve reduction e.g. carbon neutral fuels.

The discussion paper often focuses on supply of vehicles to market, however it’s equally important to consider the breadth of customer types and market needs to ensure no one is left behind. As stated in the consultation paper, the FES must reflect Australia’s transport sector challenges and needs to ensure that there is no change to how people use their vehicles.

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

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

2. The FES needs to take a holistic approach incorporating target levels, availability and operability of infrastructure, fuel quality, consumer incentives, etc. All of these factors are interrelated and required to deliver a robust standard as is international market practice. In the area of consumer incentives, Government support in Australia is significantly lower than support in other markets. Current incentives are generally State-based, inconsistent and may have volume caps. Therefore, compensating factors need to be considered else risk delivery against desired ambition.

3. In line with international practice and current industry convention, these exclusions are necessary to ensure vehicles are available for emergency and essential services. In addition to those listed, consideration should be given to exclusion for non-RAV imports.

4. Are there any particular FES features that you think we need to take particular care with?

4. The design features of any FES are interrelated, and should be considered collectively. The current industry code provides good guidance in terms of the range of features that should be incorporated into a new FES. The desired level of ambition is linked to the associated flexibility mechanisms such as credits, etc.

5. What principles should we consider when setting the targets?

5. The primary objective of the FES should be to support the reduction of CO2 emissions whilst remaining technology agnostic and continuing to match market needs. Factors such as the need for improved fuel quality and consideration of model cycles and lead times are important when setting targets and their trajectories. Targets should be a floor, not a ceiling and subject to review and adjustment over time. Similar to other jurisdictions, they should have a cautious start with the view to accelerate over time (“cautious start- finish strong”, p. 17 FES Consultation Paper). A long term aspiration of around 10 years would provide the market and industry with policy direction and certainty. A built-in periodical review mechanism should also be included to allow assessment of progress and inform future policy setting.

The other two scenarios mentioned on p. 17 of the FES Consultation Paper, “start strong” & “straight line,” do not match OEMs ability to adjust their product offerings in the short term. They also do not account for supply/cost constraint challenges experienced by industry.

In global terms, Australia is a small right-hand drive market and is a product taker, not a product maker. This is further complicated, given that Australia has a range of unique ADRs including: top tether child restraint, airbag switch and side impact requirements. These require additional and unique engineering to ensure compliance.

6. How many years ahead should the Government set emissions targets, and with what review mechanism to set limits for the following period?
7. How should the Government address the risks of the standard being found to be too weak or too strong while it is operating?

6. Consideration should be given to establishing a scheme with a long term vision of around 10 years. This provides industry with policy direction and allows for improved model planning and model introduction to market. In the EU and US regulations, the initial 4-5 years after the regulation matches OEM locked-in product plans. The outlying years provide line of sight to plan for future product introduction. Similarly in the Australian market, consideration needs to be given to this introduction phase, else risk market disruption.

Toyota believes projecting ahead provides policy certainty that industry needs to be able to plan and consider introduction of product to market. An Australian FES target needs to be within the scope of what is possible because unlike the US and EU, Australia is a taker not maker of vehicle products. Internationally, support arrangements vary in terms of the delivery of consumer incentives, rules surrounding the availability and operability of recharging/refuelling infrastructure and other key mechanisms which significantly impact market demand and vehicle supply. Support arrangements may also be linked to other large scale economic initiatives such as domestic manufacturing (e.g. the Inflation Reduction Act – USA).

7. As is practice in overseas markets, a built-in periodical review mechanism can provide opportunity to evaluate the progress of a legislated scheme towards its stated ambition. For example, if an FES is implemented in 2024 the scheme could be subject to a review in 2026 to assess its progress and suitability.

TECHNICAL QUESTIONS

8. What should Australia's CO₂ FES targets be?
9. How quickly should emissions reduce over what timeframe?
10. Should the Australian FES start slow with a strong finish, start strong, or be a straight line or take a different approach?

Industry has been tracking performance through the NTC report (data sourced from the industry's voluntary code). A logical starting point is to use the figures reported starting 2020, which will provide the baseline figures and trajectory and can be built upon. Note: the current industry voluntary code uses 2005 figures as a baseline, matched to the Kyoto Protocol. The industry code provides tracking of year on year performance and targets out to 2030 for both segments (MA & MC+NA.) Toyota welcomes the transition to a government legislated scheme.

Toyota believes a mandated FES should reflect Australian market conditions and be stretch but achievable. At this point we have not provided specific target numbers, however we welcome the opportunity to explore what is possible – which must account for targets in conjunction with supporting mechanisms.

Built-in review mechanisms will also need to be put in place in order to assess targets and other policy measures (credits, consumer incentives, credit transferring between segments and brands, infrastructure support, etc.) to understand where there is need for change.

The introduction of a FES should adopt a cautious start and finish strong. This will allow industry to take on the challenge and make improvements.

11. Should an Australian FES adopt a mass-based or footprint-based limit curve?
12. If Australia adopts a mass-based limit curve, should it be based on mass in running order, kerb mass, or another measure?
13. 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?

11. The industry code, which has been reporting since 2020, already adopts a mass-based attribute. This was an agreed position by the FCAI and its board. Toyota's position is that we should continue to use a mass-based attribute.

12. The current industry code already formulates its CO₂ position based on mass in running order (MIRO), as it closely reflects the vehicle usage conditions. Toyota believes it is logical to continue on this basis and see no need for change.

13. As the primary focus of the FES should be on emissions reduction, Toyota believes that there should be no flattening of any portion of the limit curve.

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

Yes, the current industry code provides industry agreed positioning based on MA and MC+NA. This is logical as these categories are well-defined and established, allowing for comparison to data from previous reporting years. Consideration should be given to allow credit transferring between segments as is available in other markets.

15. 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?

We acknowledge general discussion around the risk of shifts between vehicle segments, however we don't believe this is a material issue that requires addressing. The actual CO₂ emissions for each vehicle do not change regardless of the reporting category. Categories are clear, if a vehicle complies it has met the definition of the category.

16. Is there anything else we should bear in mind as we consider this design feature?

17. Are there other policy interventions that might encourage more efficient vehicle choices?

16. Two targets split between MA and MC+NA is logical as it will mean data moving forward can be compared with previous data already reported by industry and the NTC, and is largely comparable to international markets.

In the development of the industry code general consensus across industry was to adopt the approach which is now in place i.e. two targets split between MA and MC+NA. In the absence of a fundamental flaw, Toyota recommends retaining existing practice. Consideration needs be given to the fact that the commercial vehicle segment is much more difficult (due to global absence of scale solutions). In the

development of the FES, it is important to be cognisant that industry's model cycle processes mean vehicles intended to be delivered to market in the short term are already locked in. This is a well understood convention and is reflected in the ways we transition ADR adjustments.

17. In overseas markets, support mechanisms are provided which are currently not available in Australia such as much higher levels of consumer incentives; and other market specific initiatives such as America's Inflation Reduction Act. Toyota strongly encourages Government to consider levelling up to offer similar support and would welcome further discussions on equivalent alternatives that the Government may be considering.

Toyota acknowledges some support measures are provided at a state level (consumer incentives, infrastructure), however the cap on volumes or support means funding available to the market is much lower than that which is available in overseas markets. In the absence of significant consumer incentives, other mechanisms such as super credits, off-cycle credits, etc. are critically important to encourage brands to bring their products to market.

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

Yes, Toyota agrees that credit banking, transferring, pooling and five year carry forward credits and debits (with dispensation in early years for debits) are important attributes of any new scheme. This is standard practice in other key markets. Consistent with international practice, Toyota believes five years is a reasonable timeframe.

19. Should an Australian FES include multiplier credits for LZEVs? 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?

Yes, current practice provides a mechanism based on the limit curve whereby multipliers are generated based on performance. The industry code multipliers currently range between 1.5-3. Financial incentives accompanied with multiplier credits will support greater choice of LZEVs are brought into the Australian market. A multiplier credit promotes penetration of new technologies in the market resulting in CO2 reductions. Limit curves are important because they support a technology agnostic approach and allow for any type of improvement that delivers lower emissions.

In addition, specific consideration should be given to light commercial vehicles which are more challenging.

There is growing international focus on carbon neutral and synthetic fuels which may also deliver a positive outcome. If such vehicles come to market, they should equally be eligible for such credits.

20. Should the total benefit available from these credits be capped?

In the absence of the level of support mechanisms (including incentives) already available in overseas markets, Toyota believes these credits should not be capped on the basis that they continue to drive delivery of LZEVs to market. Consistent with other elements of a new scheme, credits should be subject to periodical review and subject to change based on market conditions.

21. If not, should the Government consider another approach to incentivising the supply and uptake of LZEVs?

A holistic approach should factor in a range of mechanisms. In line with Toyota's response to the National EV Strategy, industry sees the need for the following complementary measures:

- Public charging and hydrogen refuelling
- Fleet and private charging and refuelling
- Non-financial incentives including priority access to express lanes, free parking, free charging, registration discounts, etc.
- Mandated Government fleet procurement
- Consumer purchase incentives

In the absence of any complementary measure, dispensation is needed in other areas.

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

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

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

The current industry code already allows for off-cycle credits as already approved in the EU and USA schemes. Given those markets have already gone through the rigors of testing, we don't believe it is necessary to repeat validation for Australia. If new technologies arise and are approved in these overseas markets, they should equally be considered and applied in the Australian market. Toyota Australia acknowledges that

there should be a cap on credit that a specific vehicle can provide e.g. limit to max 7-10g.

25. 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?
26. Could the issue of high global warming potential refrigerants be better dealt with by another policy or legislative framework?
27. 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?

25. This is important in the context of the Australian market where presently only a very low proportion of vehicles have transitioned to the low global warming potential (LGWP) refrigerant gas for AC (i.e. 1234YF). In addition to tailpipe emissions reduction, LGWP delivers real environmental benefits i.e. Replaces R134A. Toyota acknowledges Australia has joined the Montreal Protocol and over time this credit may be phased out. However, international practice has demonstrated that in early stages of an FES scheme, this credit is beneficial to build momentum.

Consideration should also be given towards air conditioner high efficiency credits within the FES. The following provides details on the US standard which presently provides support in this area:

Air-conditioning system credits

Air-conditioning (AC) system credits remain the same as previous regulations. Air-conditioning systems contribute to GHG emissions through two mechanisms: the leakage of hydrofluorocarbon refrigerants (AC refrigerant leakage or direct emissions) and additional fuel consumption to provide power to the AC (indirect emissions). Direct emissions can be significantly reduced by using leakage-tight systems or refrigerants with low global warming potentials. Indirect emissions can be reduced by improvement in AC efficiency. The maximum available AC system credits are 18.8g/mile for cars and 24.4 g/mile for trucks. These numbers are further broken down to a maximum of 13.8 g/mile for cars and 17.2 g/mile for trucks for alternative refrigerants, or 6.3 g/mile for leakage-tight methods without the use of alternative refrigerant for cars and 7.8 g/mile for trucks. Maximum credits for improved AC efficiency are 5 and 7.2 g/mile for cars and light trucks, respectively. Table 4 shows the maximum AC system credits that can be generated by a manufacturer for each MY from 2023 to 2026.

Table 4. Maximum AC system credit per manufacturer (g/mile)

	Car	Truck
Direct credit - leakage	6.3	7.8
Direct credit - alternative refrigerant	13.8	17.2
Indirect credit - AC efficiency	5	7.2

(Source: [U.S. light-duty vehicle greenhouse gas standards for model years 2023–2026 and corporate average fuel economy standards for model years 2024–2026 \(theicct.org\)](#))

26. Toyota acknowledges that there are already processes in place to control R134A at point of import and use. It's important to bundle this as part of any CO2 regulation because it provides additional encouragement to OEMs to consider this as part of the decision making in vehicle development.

27. We understand the vision as prescribed by the National Electric Vehicle Strategy (NEVS) is to increase the take up EVs to reduce our emissions and improve the wellbeing of Australians. With this in mind, Toyota believes all CO2 abatement initiatives are a good thing. Allowing this credit to be offset against the existing CO2 target is the appropriate way forward – at least in the short to medium term. We acknowledge that the reduction isn't directly related to tailpipe emissions, however the result of an AC refrigerant gas credit does result in additional positive environmental outcomes. AC refrigerant gas credit is an important mechanism to increase the pace of LZEV take up.

28. When do you think a FES should start?

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

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

28. Ideally, the FES will start as soon as legislative processes are complete and administrative arrangements are in place to facilitate the scheme's operation. The current Industry Code and its methodology can provide a strong foundation for government to formulate a FES tracking and reporting mechanism as already adopted by the NTC. This would aid in introducing the standard within the timeframe set out in the NEVS (end 2023).

29. Toyota welcomes an FES which will provide policy certainty and direction. In deciding the initial mandatory timing, consideration should be given to how other key nations have approached this issue: usually with a cautious start (matched with suitable support mechanisms) and accelerated finish, which links to industry's new model planning and introduction processes. A key element of the level of ambition is its link with associated complementary measures. If the Government were to consider a more ambitious start further consideration of support mechanisms is required to realise the objective of the standard. The FES level of ambition has strong interdependencies to government support mechanisms such as level of infrastructure support, consumer incentives, etc.

30. Toyota notes that governments (federal and state) are providing a range of targeted support measures. However, we note that in the recent Federal Budget, there are not additional consumer incentive support measures. Instead FBT concessions related to

PHEVs will now be phased out. At a state level, there are a range of consumer support mechanisms, however the number of vehicles to which they can be applied to are limited (volume caps) and their value is significantly lower than those in overseas markets.

In many instances, these financial support mechanisms will be winding down by the time the proposed FES starts. Other nations such as the USA, EU and Japan all provide significant national based consumer incentives over an extended period. This appears to be absent from the current planning for an Australian system. Consideration also needs to be given to potential future solutions (such as carbon neutral fuels) with support equally available to such technologies.

31. 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?

Toyota acknowledges that in mandated schemes throughout the world, penalties are common practice. Penalties are an appropriate mechanism to send a signal to the market but should be applied as a last resort. Consideration should be given to a lower penalty regime in the initial years, with potential to increase over time. Increase in scaling is a practice that has been observed in other jurisdictions.

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

In the context of the Australian market where there are over 1 million new cars sold each year, we recommend no or only a very low concessional threshold for any holders of full volume type approval. We note that low volume imports such as the Specialist and Enthusiast Vehicle Scheme (SEVS) should be subject to 100% compliance, else risk creating the unintended consequence of a loophole and further expanding existing issues with this scheme.

33. 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?

In order to implement a scheme in a timely manner, Toyota believes the FCAI's VFACTS database is an existing and robust resource. VFACTS is already operated by S&P Global and used broadly across many industry sectors as a reliable and accurate source of new vehicle sales data. Entities such as the NTC continue to use this database for detailed

industry analysis. Consideration can be given to additional checking and validation measures by government agencies.

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

34-35. International convention is generally reporting annual calendar year outcomes of sales results. Toyota believes that it is logical to follow this same approach. This matches the FCAI's current reporting practice at both MA and MC+NA levels.

36. Information should be retained matched to other government legislative requirements. Seven years is logical given this is the timeframe in place for the record keeping obligations under the RVSA. As is the current process, suppliers should be able to delegate their record keeping to the data that is already largely stored within the VFACTS database.

37. Toyota acknowledges there should be requirements to maintain accurate information and a penalty regime for a failure to do so. A data validation process should be incorporated to assess if the reporting is intentional. Unintentional errors should not be unnecessarily penalised. At this point it is unclear to when the 60 penalty points would apply, e.g. 60 penalty points per error? Or each recurrence of the error?

We would need further information to understand the application but ideally want the penalty to be a signal and not an overreach.

- 38. Should the regulator be the department? What other options are there?

DITRDCA is well positioned with necessary certification data already readily available. However, the department could also retain oversight of the existing industry reporting process which utilises the robust and well accredited VFACTS data managed by S&P Global.

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

In the case of Toyota's operations in Australia, TMCA is the import approval holder for Toyota and Lexus vehicles sold across all Australian states and territories. We believe it is appropriate to nominate the import approval holder as the regulated entity. However, we note automotive brands are structured in different ways which may have implications as to how other automotive imports are regulated. Parallel importers should be responsible for the products that they bring into the Australian market.

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

The Australian FES should align with standard regulatory requirements. This can be applied against a new system developed within government as well as oversight across an existing external scheme such as the current industry code.

41. 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?

Ideally, the FES scheme should be introduced at the same time as WLTP implementation (mandatory across all models.) However, given that NEDC is the current requirement for Australian market, an Australian-specific conversion factor should be developed and provided to convert NEDC values to WLTP until the ADR 111/00 is implemented. In addition, Toyota would request government provide the conversion factor as part of this consultation process so industry can be informed as to what the targets will be.

[END OF SUBMISSION]