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Attention: Director, Fuel Efficiency Standards—Surface Transport Emissions and Policy Division
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To Whom It May Concern,

Climateworks Centre submission on Fuel Efficiency Standard Consultation Paper

Climateworks Centre supports the Australian Government's commitment to introduce a fuel efficiency standard (FES) at this critical time for decarbonising transport and appreciates the opportunity to respond to the Fuel Efficiency Standard Consultation Paper. Climateworks develops expert, independent advice and solutions to assist the transition to net zero emissions for Australia, Southeast Asia and the Pacific. A non-profit organisation, Climateworks was co-founded in 2009 by the Myer Foundation and Monash University, and works within the Monash Sustainable Development Institute.

Implementing a FES is a crucial policy for reducing emissions, accelerating electric vehicle (EV) uptake and meeting strong Australian demand to purchase EVs. It will also improve the efficiency and reduce emissions of internal combustion engine (ICE) vehicles, making them cheaper to run.

It is critical that a FES be designed with its focus on meeting existing EV uptake targets and Australia's legislated emissions reduction target. Australia is starting from behind the pack on EV uptake, but can learn from countries who have already implemented a FES. A FES can ensure Australia catches up with the global market, giving consumers access to low-emission vehicles at globally competitive prices. Australia is not limited by its past low rate of EV uptake; conditions have changed to allow for significantly higher uptake as automotive technology maturity means manufacturers are able to meet a more stringent standard more easily than five years ago.

Climateworks Centre suggests setting a FES in the order of 95g CO₂/km in 2024, and ensuring its design is simple, transparent, trackable and goal-oriented such that it is clearly linked to achieving Australia's emissions reduction targets. To be on track for a least-cost trajectory to net zero by 2050, a FES will need to reduce to 0g CO₂/km by 2035 for all vehicle classes (IEA 2022). Australian vehicles generally remain in use for 15 years, and so this timeline provides adequate time to achieve a fully electrified vehicle fleet that will support the national target of net zero by 2050.

RECOMMENDATIONS

- + Align the FES with a national EV uptake and emissions reduction targets, including interim targets, to provide confidence for the market, gain immediate cost savings and be a first step towards broader net zero goals.
- + Introduce federal fuel efficiency standards that are, at minimum, consistent with meeting Australia's emissions reduction goal. To be on track for net zero in 2050, the standard needs to ensure that all new vehicles sold from 2035 are zero emissions and provide manufacturers and importers with a clear roadmap towards reaching 0g CO₂/km by 2035, including by setting annual rates for the FES in advance.
- + Conduct regular reviews of the FES to assess impact on EV supply and emissions reduction targets, changing technology, and progress catching up with global markets.
- + Implement government-led data collection with mandatory reporting from manufacturers and importers on EV uptake and emissions reduction. Pursue opportunities to improve data to assist with infrastructure planning and transitioning the entire vehicle fleet beyond new car sales.
- + Use credits and penalties in the FES scheme to ensure real-world emissions reductions are achieved.
- + Avoid supercredits, off-cycle credits and other similar credits, which have limited benefit in helping reach emissions reduction goals in the current technology context and are not recommended to include in an Australian FES. Some time-bound consideration could be made for these credits only where vehicle or technology is still emerging.
- + Implement a FES scheme that achieves maximum emissions reduction and ultimately reaches to 0g CO₂/km by 2035 across all passenger vehicle classes. A single standard spanning all vehicle classes offers major benefits. If a multi-classes scheme is used, additional mechanisms will be needed to ensure it does not perversely incentivise larger, higher-emitting vehicles.
- + Consider complementary policies that support the EV transition, including fleet uptake, second-hand vehicles, and structural pricing schemes, as well as a consistent and efficient approach to charging roll out and grid integration.
- + Develop a comprehensive 'national transport decarbonisation strategy' that goes beyond EVs to consider mode shift and freight, and fully decarbonises transport to contribute to Australia's emissions reduction targets and bring Australia closer to net zero.

Context

Introducing a mandatory FES will unlock supply of EVs and fuel-efficient vehicles to Australia. This will drive down costs and accelerate EV uptake by meeting the growing demand in Australia to purchase EVs. Designed effectively, a FES will require manufacturers to bring more EVs to Australia by placing a limit on the total average emissions across all cars sold by each manufacturer. This incentivises the supply of more efficient vehicles to balance out higher emissions vehicles. A FES also improves the fuel efficiency and running cost of ICE vehicles. The Australian Government's National EV Strategy (NEVS) consultation in 2022 found overwhelming support to swiftly implement standards. The Government has support to implement ambitious, robust standards in 2024

Implementing a mandatory national FES can ensure Australia is realising the full benefits of the EV transition. With the majority of countries having already brought in vehicle CO₂ standards – to great effect – it is crucial for Australia to catch up with global momentum (IEA, 2022).

A FES will create financial savings for vehicle owners. Climateworks' analysis in 2022 found that the average Australian will spend an extra \$19,500 on vehicle running costs over the life of an ICE vehicle, compared to an EV (Climateworks Centre, 2022). The country can also improve energy security and provide health and economic benefits for Australians alongside reducing emissions (Climate Change Authority, 2014).

Australia has the opportunity to leapfrog straight to best practice, by learning from other countries' experiences in implementing a FES. There are a number of comparable markets to Australia that have recently introduced or updated their FES, such as New Zealand and the United States. Australia's EV uptake was around 3.8% for 2022, an increase from 2.1% in 2021, including zero-emissions vehicles as well as hybrids (EVC, 2023). The United States saw uptake grow more quickly from 3.2% in 2021 to 5.6% in 2022 (Mihalascu, 2023), while New Zealand's EV sales grew more quickly again from 8.2% in 2021 and to 19.7% in 2022 (EVDB, 2023). Both countries introduced or increased the stringency of their FES in recent years.

Looking at the design and impact of these two schemes can help Australia select a pathway to maximise emissions reduction and EV uptake. New Zealand has introduced a strong FES alongside a range of other complementary measures to achieve uptake and supportive community sentiment (Bleakley, 2023). Through reviewing performance of its FES, and in light of maturing technology, the United States recently made their FES more stringent, improving the design to ensure all vehicle classes contribute fairly. Table 1 below compares design parameters and includes key lessons on setting trajectory, credits, penalties, supercredits and complementary measures for Australia. These areas will be explored further in this submission.

Table 1: FES comparative analysis of the United States and New Zealand

	NEW ZEALAND	UNITED STATES	LESSONS FOR AUSTRALIA
Growth in EVs (2021-2022)	8.2% to 19.7%	3.2% to 5.6%	Adopt lesson learned from fast growing markets like New Zealand
Trajectory¹	+ Cars and SUVs: 63g CO ₂ /km in 2027 + Utes and vans: 85g CO ₂ /km in 2027	+ Cars: 82g CO ₂ /km by 2026 + Light trucks: 116g CO ₂ /km by 2026	95 g CO ₂ /km by 2025-26 is within international norm
Timeframe and governance	Set to 2027	Set to 2026, considering proposals for 2027-2032	Set annual standards for first period, building in consistent reviews
Credits	Yes, can bank, pool and trade credits	Yes, can bank, pool and trade credits	Include in line with international trends
Penalties	Yes, penalties for manufacturers who fail to meet the required standard	Yes, penalties for manufacturers who fail to meet the required standard	Include in line with international trends
Supercredits	No	Yes	Risk undermining real world emissions reduction
Multiple classes	Yes, narrow difference in rates of change	Yes, perverse outcome of incentivising larger vehicles, recent update to course correct	Ensure all vehicles are on track for 0g CO ₂ /km by 2035.
Complementary measures	Yes, feebate scheme (discussed further below)	Yes, varied, focused on supporting local manufacturing industry	Complementary standardisation of incentives

Selecting a standard and trajectory in line with the most stringent levels globally is the best way for Australia to catch up on EV uptake. Climateworks' analysis shows that Australia can achieve substantial emissions reduction by accelerating EV uptake.

¹ Note: different jurisdictions use different methods to evaluate the fuel efficiency of vehicles.

Design of a standard – principles

The Consultation Paper sets good principles for a FES, broadly. Climateworks suggests strengthening these in the following ways:

- **Effective:** Be clear on the emissions reduction target for a FES – show how a FES contributes to a transport sector emissions target that support's the Government's efforts to meet or exceed its 43% emissions reduction target by 2030 and net zero by 2050.
- **Equitable:** Demonstrate need for tailored interventions to support uptake of fuel-efficient vehicles by lower socioeconomic groups – create an accessible second-hand market by introducing reforms to Australia's grey and parallel second-hand imports; tailor rebates and, or a subsidy schemes to low-income households; and retrofit charging infrastructure for rentals or lower socioeconomic groups.
- **Transparent:** Lead on data collection – mandate reliable and consistent reporting from manufacturers and importers. See more in 'reviews and data' in the section below.
- **Credible and robust:** Set standards at a level ambitious enough to shift the domestic market and catch up with global markets.
- **Enable:** Take swift action to implement a FES – the sooner a standard is in place, the sooner consumers will be able to access the best and latest vehicle technology, including access to the lowest-emission and safest vehicles.

Design of a standard – Goals and trajectory

EV uptake targets

Drivers, businesses, car manufacturers and government all need a clear plan that provides certainty for decision-making and maximises the benefits of the EV transition. The NEVS notes state and territory EV uptake targets provide an overall aggregated 46% EV sales target by 2030 or 86% by 2035 (Khan et al, 2022). A FES can help states deliver, or even over-deliver, on their EV sales targets and, further, setting and delivering a FES in line with a national EV uptake target can ensure Australia is on track to broader emissions reduction targets.

Climateworks modelled emissions reduction scenarios in line with keeping global warming below 2°C and 1.5°C in the report *Decarbonisation Futures* (ClimateWorks Australia 2020a, 2020b). In our modelled scenario aligned with limiting temperature rise below 2°C EVs make at least half of new vehicle sales in 2030 and under the 1.5°C scenario, three-quarters of new car sales in 2030, which equates to 28 per cent of the total vehicle fleet being electrified (see Table 2).

Table 2: New EV sales from 2°C and 1.5°C scenarios

	2°C SCENARIO	1.5°C SCENARIO
Share of new car sales	50%	76%
Per cent of total car fleet	15%	28%

Recommendation:

Align the FES with a national EV uptake and emissions reduction targets, including interim targets, to provide confidence for the market, gain immediate cost savings and be a first step towards broader net zero goals.

Trajectory

Designing a FES for Australia involves setting a timeframe for implementation and forward trajectory to the end goal of zero emissions passenger vehicles.

Climateworks considers the following factors critical in designing a FES. A FES will be more effective if it:

- is clear about the end goal, providing a trajectory that puts Australia on path to net zero by 2050 consistent with Australia's net zero goals and interim targets, and global best practice. According to the IEA (2022) this means 0g CO₂/km for all new light vehicle sales by 2035. Australian vehicles generally remain in the fleet for 15 years, and so this provides adequate time for fleet turnover to achieve a fully electrified vehicle fleet.
- outlines a clear roadmap with annual decreases in the rate of the FES towards achieving 0g CO₂/km by 2035 for all light vehicle classes.
- provides industry a clear timeframe to meet the standard. Climateworks supports the introduction of a FES in 2024 at the latest. We also support setting a target for each year for a five year period in advance, with review points to progressively tighten targets and set the next five year block of targets.
- puts Australia on track to catch up with other countries' percentage of EV sales rather than simply aiming to achieve a similar uptake rate. Conditions have changed; it is easier to achieve faster uptake now than it has been in the past due to increasing availability of EVs. Other markets have begun the transition, providing insights into how quickly and smoothly manufacturers can respond when given mandatory standards to meet.
- incorporates regular reviews to ensure the FES design and trajectory are having the required impact. The trajectory and design of a FES needs to achieve a level of EV uptake that ensures the transport sector is on track to contribute to Australia's emissions reduction targets.

To achieve maximum emissions reduction, a FES scheme will need to consider either a single standard or differentiation by vehicle classes. Climateworks considers a single standard that spans light vehicle classes offers major benefits. Such a standard would provide manufacturers with flexibility in how they reach these rates and discouraging switching between vehicle classes for more lenient standards (Khan et al, 2022). It is noted though that if multiple standards are set for different classes, the rate of change for each class needs to ultimately converge to 0g CO₂/km by a set date, as noted Climateworks recommends by 2035. If a quicker reduction rate is used for light passenger vehicles – due to the technology readiness – than other vehicles such as utes and vans, there is a risk this may perversely incentivise supply and purchase of larger, higher-emitting vehicles. Other mechanisms would be needed to manage this risk. See further discussion about this in the 'Design of a standard – multiple vehicle classes' section.

Recommendation: Introduce federal fuel efficiency standards that are, at minimum, consistent with meeting Australia's emissions reduction goal. To be on track for net zero in 2050, the standard needs to ensure that all new vehicles sold from 2035 are zero emissions and provide manufacturers and importers with a clear roadmap towards reaching 0g CO₂/km by 2035, including by setting annual rates for the FES in advance.

Design of a standard – reviews and data

Reviews

To ensure a robust scheme which is effective in achieving its goals, a mandatory FES can be complemented by legislated regular reviews to ensure the standard is having the required impact on EV supply and emissions reduction.

To provide industry and manufacturers with certainty, standards should set annual rates of emissions reduction for set periods in advance and commit to reviews. The United States' scheme reviews the standard every four years, while New Zealand reviews every five years and have different rates for each year. Having a review locked in enabled the U.S. EPA to recently propose tighter standards, due to technology development and production (EPA, 2023). The European Union locked in an overall standard for five years, and as a result, manufacturers had less specific annual guidance and were

found to delay improvements to the fleet until towards the end of the time period, or prioritise other markets with more ambitious regulatory incentives (Transport & Environment, 2021). To avoid this risk, Australia can set annual standards or rates, similar to the United States and New Zealand's schemes, to allow opportunities to adapt in response to outcomes from implementation. Climateworks suggests setting individual annual targets each year for five years in advance, with set review points to progressively tighten targets and set the next five year block, so that industry has certainty regarding rate ahead.

In order for legislation to provide continuous progression towards 0g CO₂/km, mechanisms should be considered that will require or enable the standard to only be ratcheted up not down, similar to provisions included in federal climate legislation where adjustments must represent an enhancement (e.g. Commonwealth Government Climate Change Act 2022 Part 2 10 (6)).

Recommendation:

Conduct regular reviews of the FES to assess impact on EV supply and emissions reduction targets, changing technology, and progress catching up with global markets.

Data

Access to robust and transparent data will be critical for Australia to track and monitor the impact of FES implementation and the emissions reduction impact of EV uptake. New Zealand provides clear guidance to manufacturers on data collection required (New Zealand Transport Agency 2023). This is provided transparently to the public with a weekly update report (Ministry of Transport 2023). Australia can draw on these resources to collect and publicly share FES reporting to track the impact of a FES, including:

- Market data: data on all manufacturers and importers, all vehicle classes
- Sales: EVs' share of total car sales
- FES compliance: new vehicle CO₂ emissions rates
- Credits (and supercredits if used): reporting on real-world emissions as well as tracking and monitoring the impact of credits and supercredits where used.

Additionally, broad, reliable, regular and granular collection and publication all of available EV data in Australia - beginning prior to implementation of a FES – can assist the EV transition, for example:

- Sales: EVs' share of total car sales, EVs' share of the second-hand market sales, and EVs' share of total fleet
- Total fleet efficiency: CO₂ emissions rates for the entire current vehicle fleet
- Price: tracking cost parity and vehicle affordability
- Location data: registrations, charging station distribution and usage
- Age: average vehicle age, average fleet age and average rate of fleet turnover.

Current reporting faces challenges; data on EV sales is collated and released by industry, following changes to the data into multiple categories and multipliers, it is difficult to track changes in EV uptake and emissions impact over time. There is a lack of transparency with data, and not all manufacturers and importers are included in this dataset. The Australian Government can greatly assist the EV transition by taking steps to ensure data is collected on FES implementation, EV uptake and emissions reduction.

Climateworks suggests that the government lead data collection, with mandatory, reliable and consistent reporting from manufacturers and importers, with data suppliers providing transparent access to raw data. In addition, the Australian Government can work with state and territory governments to consolidate registration data, verifying accurate sales data, adding more rich data to track total fleet changes beyond new car sales, and allowing planning and investment to address impacts of potential 'clusters' of EV charging on Australia's electricity grid.

Recommendation:

Implement government-led data collection with mandatory reporting from manufacturers and importers on EV uptake and emissions reduction. Pursue opportunities to improve data to assist with infrastructure planning and transitioning the entire vehicle fleet beyond new car sales.

Design of a standard – credits and penalties

Credits and penalties

A FES can include mechanisms to support reaching emissions reduction goals, including credits and penalties. For example, manufacturers who outperform the standard can receive credits to offset penalties in future years, or pool with other manufacturers to meet the limit as a group. These mechanisms can support an effective scheme, providing slow-to-move manufacturers with incentives to shift their offerings to lower-emissions options and support transition. A credit system can provide flexibility for the industry by allowing manufacturers to bank, borrow and sell credits. Accrued credits should have an expiry date in line with review periods. If an Australian FES design includes different standards for multiple classes, credits could be differentiated for each class to support greater emissions savings.

For the standard to function effectively, failure to meet the required standard needs to result in penalties. Avoiding penalties is a major driver for vehicle manufacturers to send efficient and zero-emissions models to countries with mandatory efficiency standards. To ensure Australia does not remain at the back of the queue for global supply, a FES design would favour penalties in Australia being broadly in line with overseas schemes, for example this is currently around AU\$200 in the European Union for each gram of CO₂/km over the limit.

The design of a FES and any of the above mechanisms included, should work together to meet Australia's emissions reduction goals. Both credits and penalties are a critical part of ensuring manufacturers achieve real emissions reductions. Credits provide encouragement to offer low- and zero-emissions technology. On the other hand, the purpose of penalties is not to raise revenue, but ensure real world efficiency improvements are realised. Climateworks sees the key outcome of a FES as enabling real-world emissions reductions, and recommends that this be the core consideration in setting credits and penalties in the scheme.

Recommendation:

Use credits and penalties in the FES scheme to ensure real-world emissions reductions are achieved.

Supercredits

Mechanisms that can obscure the emissions reduction impact of a FES include supercredits and off-cycle credits. To be most effective and transparent, a standard should be designed to meet Australia's emissions reduction goals without the use of supercredits.

Supercredits have been used in schemes in the United States and European Union to incentivise low- or zero-emission vehicle sales, for example a hybrid or electric vehicle sold is weighted more towards calculating the manufacturers CO₂/km fleet average. This type of mechanism can be useful in providing a boost to nascent technologies, by encouraging manufacturers to develop and supply vehicle types not currently produced or produced widely (Transport & Environment, 2021). However, EV technology is maturing rapidly and there is significant supply of EVs across most passenger classes, including supply and vehicle types growing quickly for vehicles such as utes.

Supercredits can also come at a cost to real-world emissions reduction as they overstate the emissions reduction of certain vehicle types – which in turn leads to less emissions reductions than apparently stated – and it therefore makes it difficult to get an accurate picture of emissions reduction

progress. New Zealand's fuel efficiency standard included no supercredits, providing an example of a simple and effective standard.

Some time-bound consideration could be made for supercredits where a strong case can be made that vehicle types are still emerging and vehicle choice is limited. Electric vehicles are now being produced across every segment of the light vehicle market internationally. The introduction of a robust FES will mean Australians gain access more affordable and a greater range of vehicles not yet available to consumers. However, there may be some limited need to support emerging technology. Electric utes are still scaling and becoming more affordable, with some innovation still developing in terms of vehicle range and power. There may not be a need to support this transition further with lower-emissions utes are available now and a FES will encourage uptake of these options (Cheung et al. 2023). Encouraging supply of more efficient, lower and zero emissions utes as part of a FES will ensure drivers save money today, and Australia continues to cut emissions.

The vehicle industry is shifting rapidly to electrify their offerings. Given that manufacturers are increasingly committing to electric fleets, supercredits risk undermining overall fleet emission reductions while also not being needed to encourage technology shifts.

If supercredits are built into a FES, a timeframe for phase out should be clearly established to ensure they serve the purpose of supporting emerging technology. Once that technology is established, supercredits should be removed from the scheme in order to maximise emissions reductions. Additionally, sales reporting by manufacturers should include transparency on the emissions reduction both with and without supercredits to provide public accountability on the actual and reported emissions reduction.

Off-cycle and other credits

Off-cycle and air conditioning credits are designed to capture eco-innovation and fuel saving technologies that are not recorded in the official lab test cycle, such as engine stop-start systems or reduction of aerodynamic drag at high speeds. However, there is limited evidence that these lead to additional emissions reductions, as many of these features are now already in every vehicle. The U.S. system initially included a suite of options based on limited historical data and they were implemented in a way that meant existing technology, rather than improvements, was counted (Cooke 2021). The most recent update to the U.S. standards is moving away from including off-cycle credits, with a proposal to fully phase them out by 2031 (EPA 2023). Climateworks sees no benefit to Australia adopting off-cycle credits.

Recommendation:

Avoid supercredits, off-cycle credits and other similar credits, which have limited benefit in helping reach emissions reduction goals in the current technology context and are not recommended to include in an Australian FES. Some time-bound consideration could be made for these credits only where vehicle or technology is still emerging.

Design of a standard – multiple vehicle classes

Many global FES schemes include tiers for various vehicle classes with different 'g CO₂/km' rates for each class. Countries with such schemes including New Zealand, the United States and the European Union. Generally, these comprise a light passenger vehicle class and a heavy vehicle class (capturing utes, vans and sometimes SUVs). For some, a more lenient rate was set for the larger vehicles due to the less mature technology at the time they were developed. As technology has progressed, the differences in these rates is narrowing, for example, the most recent U.S. proposal reduces the difference between classes.

International experience demonstrates there can be perverse outcomes when standards are set separately for various vehicle classes (IEA 2019). For example, in the United States it encouraged the sale of more SUVs due to their categorisation in the heavier class. This led to an overall vehicle

emissions increase despite manufacturers meeting the standard (Shepardson 2021). This stratification could compound Australia's trend towards energy- and emissions-intensive SUVs, which now represent half of all new car sales (National Transport Commission [NTC] 2022) and contribute to Australia's growing transport emissions. Even if electric, larger vehicles such as SUVs require more energy to operate, produce more emissions to manufacture the vehicle and battery, require more space, and are less safe for pedestrians (Stacey 2022). To make meaningful cuts to Australia's transport emissions, more work is needed to encourage smaller and lighter vehicles across Australia. If the FES includes multiple classes, Climateworks recommends including SUVs within the passenger vehicle class to ensure emissions reduction is optimised.

It is crucial that if standards are set for different vehicle classes, they are progressing to achieve an overall standard of 0g CO₂/km by 2035 across all light vehicle classes. As such, relaxing the rate for any class, including for example larger vehicles, is likely to result in a much steeper trajectory with larger jumps between rates closer to 2035, in order to still achieve this end goal.

Due to these considerations adopting a single standard, which spans all vehicle classes, offers major benefits. A single-standard system provides manufacturers with more flexibility in how they reach this rate, and discourages switching between vehicle segments for more lenient standards (Khan et al. 2022). Even if there are different standards applied to different classes, Climateworks recommends specifying what the overall combined standard is for Australia is, providing clarity about the overall rate of emissions across the fleet.

Should multiple classes be applied, to manage potential risks of perverse outcomes related to encouraging a shift to larger vehicles, complementary measures could include:

- **Financial incentives** that support EV uptake and reduce ICE vehicle demand. These types of financial incentives often include self-funding mechanisms to incentivise EV demand while reducing ICE vehicle demand, particularly larger ICE vehicles. This model raises the price for new ICE vehicles a small amount based on their size and uses the proceeds to subsidise new zero- or low-emissions vehicles purchases. As such it sets two price signals – one encourages EVs and the other discourages high-emissions ICE vehicles, both of which support the purchase of EVs over ICE vehicles. Examples include New Zealand's feebate scheme and France's 'Bonus-Malus' scheme (Yang 2018).
- **Road pricing** will need to be developed alongside the transition to electric vehicles to ensure the costs and externalities of vehicles are accounted for, including infrastructure costs and road wear and tear. The design of a road pricing scheme could also include variation across vehicle classes to reflect different respective costs and externalities related to emissions, including tailpipe and embodied carbon. Higher prices would provide a disincentive for more emissions- and energy-intensive vehicle classes, in line with their higher externalities. A road pricing scheme can provide funding for sustainable options such as public and active transport or incentivising EVs (Badstuber 2018). A particular type of pricing has been successfully implemented in London – originally with the goal to reduce vehicle congestion in the inner city – and now shifting to an emissions-based system, with less polluting vehicles paying less to enter the central city area (Crocchi 2016). The revenue generated through the scheme is then directed into sustainable transport options such as walking, cycling and public transport, providing more efficient transport options for everyone.

Recommendation:

Implement a FES scheme that achieves maximum emissions reduction and ultimately reaches to 0g CO₂/km by 2035 across all passenger vehicle classes. A single standard spanning all vehicle classes offers major benefits. If a multi-classes scheme is used, additional mechanisms will be needed to ensure it does not perversely incentivise larger, higher-emitting vehicles.

Additional EV policy

Fuel efficiency standards are the most effective way to increase supply of EVs to Australia – the first

step in a transition to EVs. Climateworks' report *Accelerating EV uptake (2022)* sets out a comprehensive and ambitious policy package to fully support a smooth and efficient EV transition, addressing several challenges in a timely way. This research identified the following six focus areas needed in such a policy package:

1. Increase the supply of EVs to the Australian market
2. Set EV uptake targets to provide certainty for consumers and the market
3. Stimulate demand for EVs
4. Create a smooth transition environment for EV users, industry and the grid
5. Prioritise a fair EV transition, ensuring there are options for everyone who needs a vehicle
6. Ensure the EV transition results in an efficient transport system

A coordinated approach to policy development will support a stable and growing market and help prevent perverse outcomes across state and territory borders. This is the risk that consumers purchase or register vehicles in places where they can access higher subsidies or avoid costs, which will make state and territory action more difficult. A FES can be complimented by action in the EV market to support consistency, boost EV consumer and manufacturer confidence in the stability of Australia's EV market, and highlight opportunities for market growth. For example:

- **Targeted policies for low-income households** to support EV uptake, including means-tested incentives and guaranteed government fleet turn over to the second-hand market directed to lower-income households.
- **Revisit parallel import restrictions** to support import of second-hand EVs, which will help address EV supply issues and bring more affordable EVs to the Australian market.
- **Develop fleet action plans** that address barriers for EV purchasing by fleet managers, sets targets, and incentivises turning over fleet EVs into the second-hand market. To meet the Australian Public Service's commitment of net zero emissions by 2030, ensure that fleet purchase and leasing to 2025 is in line with a least-cost approach prioritising zero-emission vehicles for a rapid transition wherever technically possible. The Commonwealth fleet transition could specify only vehicles from manufacturers who have set clear plans to meet and exceed FES rates.
- **Explore structural pricing changes** such as a feebate scheme to shift buying behaviour to cars that are both lower emissions and cheaper to buy and run. In the New Zealand scheme, new and used EVs also qualify for financial support which draws on the feebate revenue (New Zealand Government 2021). This approach imposes the cost of EV incentives onto transport users rather than imposing the cost more broadly on the community through the use of tax revenue; the former is generally considered to be more equitable. Further, coordination of financial incentives schemes across jurisdictions should be managed nationally to ensure consistency, supporting a stable growing market, and help prevent perverse outcomes across borders.
- **Support national processes to oversee EV–grid integration issues** and ensure EV roll out supports the grid and the electricity system transition optimally. A FES will be more effective if aligned with the decarbonisation of Australia's grid – the faster the electricity sector decarbonises, the greater the possible emissions reductions from EVs.
- **Support charging rollout with** a nationally consistent approach to regulatory standards and compliance requirements for EV charging infrastructure in Australia, aligned with international best practice charging standards, will be critical for a smooth uptake of EVs.
- **Prepare for the National Construction Code's 2025 review to require all relevant buildings to be fully EV-ready.**

Recommendation:

Consider complementary policies that support the EV transition, including fleet uptake, second-hand vehicles, and structural pricing schemes, as well as a consistent and efficient approach to charging roll out and grid integration.

Looking beyond EVs to keep on track for net zero

Climateworks' *Decarbonisation Futures* modelled emissions reduction scenarios show transport emissions can be reduced by electrifying vehicles, improving vehicle efficiency, mode shifting and

reducing travel needs (ClimateWorks Australia 2020a, 2020b). While a FES is a critical first step to reduce transport emissions in time to meet national emissions reduction targets, a comprehensive national net zero transport strategy that addresses emissions comprehensively, including tackling freight and long-distance transport.

A plan that will decarbonise transport quickly enough will need to look well beyond technology solutions for private cars like EVs and instead diversify solutions. Climateworks Centre is currently updating its transport sector modelling to build on the momentum underway on the transition to EVs (Climateworks 2023). This update will showcase a broader, feasible pathway to decarbonise transport in the timeframe we need.

We support the recent Federal Budget announcement of \$7.8 million to develop a Transport and Infrastructure Net Zero Roadmap and Action Plan as an important first step to developing a comprehensive transport decarbonisation approach. Beyond the implications for national emission reduction, Australia has an opportunity to lead regional approaches to decarbonising transport.

A broad vision for decarbonised transport in Australia is one that ensures all parts of the sector reduce emissions. Mode shift to public and active transport, car share, other forms of shared and micro mobility and demand management all have an important role to play to optimise the transport system and reduce overall emissions. These modes are particularly important in urban areas where most Australians live, as they can move more people more efficiently than EVs alone. The emissions intensity of these modes is less than EVs, given there is lower embodied carbon associated with these modes (Institute for Sensible Transport, 2018).

The EV transition needs to contribute to an efficient transport system – both in terms of emissions and moving people around. Achieving a lower-emissions and space-efficient transport system requires more than just increased EV uptake. Vehicles contribute to overall emissions through congestion, air pollution and requirements for more infrastructure such as roads and parking.

Recommendation:

Develop a comprehensive 'national transport decarbonisation strategy' that goes beyond EVs to consider mode shift and freight, and fully decarbonises transport to contribute to Australia's emissions reduction targets and bring Australia closer to net zero.

Conclusion

A robust fuel efficiency standard has been a long-awaited policy lever for Australia. Its design presents an opportunity to choose a path that will maximise the emissions reduction achieved this decade, as well as provide opportunities for Australian consumers in years to come. If the design does not heed lessons from leading markets, it could lead to a weaker standard that risks leaving Australia at the back of the queue for EVs. Climateworks suggests serious consideration of the benefits that can be gained through a simpler, transparent, goal-oriented FES design.

Thank you for taking the time to consider our submission. We would welcome an opportunity to brief your team if you would like to explore our responses in further detail.

Yours sincerely,



References

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