



4 Mar 2024

Department of Infrastructure, Transport, Regional Development, Communications and the Arts
(DITRDCA)

Submitted electronically.

To whom it may concern,

Climateworks Centre submission on the New Vehicle Efficiency Standard proposed design and implementation

Climateworks Centre supports the Australian Government's commitment to decarbonising the transport sector and appreciates the opportunity to respond to the New Vehicle Efficiency Standard (NVES) consultation paper.

Climateworks bridges the gap between research and climate action, operating as an independent not-for-profit within Monash University. Climateworks develops specialist knowledge to accelerate emissions reduction, in line with the global 1.5 degrees Celsius temperature goal, across Australia, Southeast Asia and the Pacific.

As stated in our previous submissions, introducing a vehicle efficiency standard is a crucial policy for reducing carbon dioxide emissions, accelerating electric vehicle (EV) uptake and meeting the strong demand for low-to-zero emission cars. In addition to reducing emissions, the NVES will improve the efficiency of internal combustion engine (ICE) vehicles, making them cheaper to run.

In our previous submission, we recommended that an ambitious standard be set, which targets reaching 0 gmCO₂/km by 2035 for all new light vehicles. This gives fifteen years for the remaining ICE vehicles to transition out of the fleet, providing adequate time to achieve a fully electrified vehicle fleet that will support reaching a cost-effective net zero by 2050. We also recommended that the design of the standard be simple, transparent, trackable and oriented towards achieving Australia's emissions reduction targets (Climateworks Centre, 2023a). It is encouraging to see the Government agrees with our recommended principles for an effective NVES design.

In this submission, we have evaluated the three options (A, B and C) presented by the Government and compared them against Climateworks' modelling of least-cost decarbonisation pathways for the transport sector (Climateworks Centre, 2023c).

In summary,

- Climateworks' preferred option is C, as this option has the greatest impact on reducing transport emissions.
- According to our analysis, option C provides emissions reduction from new vehicles that is closest to the reduction required in our 1.5 degree-aligned scenario. Options A and B are not on this trajectory and risk Australia missing its emissions reduction targets.
- The effectiveness of the NVES is tied to its design and enforcement. In this submission, we reiterate key principles that will lead to an effective standard, namely:
 - An effective NVES should be aligned with national EV uptake and emissions reduction targets.

- The trajectory of NVES targets should be ambitious and aligned to achieving net zero across the economy before 2050, to limit warming to 1.5°C.
- Sport utility vehicles (SUVs) and four-wheel drives should be categorised under 'passenger vehicle' classification rather than the 'light commercial vehicle' for the NVES to be effective.
- The NVES should include legislated reviews and improve data collection through mandatory, reliable and consistent reporting from manufacturers and importers.
- A system of incentives and penalties should be in place to ensure the NVES effectively reduces emissions. These should be enforced from the commencement of the standard, as any delays in enforcing penalties will make the NVES ineffective in achieving its goals.

Context

The transport sector currently constitutes the third-highest share of Australia's greenhouse gas emissions. Government projections show that the transport sector will be the largest contributor in the baseline emissions scenario by 2030. Emissions from transport are expected to decline principally due to a vehicle efficiency standard for light vehicles and a projected increase in EV uptake (Department of Climate Change, Energy, the Environment and Water, 2023).

A well-designed and mandatory vehicle efficiency standard will increase the supply of low-to-zero emissions vehicles and reduce fleet-average carbon dioxide emissions (Climateworks Centre, 2022; International Council on Clean Transportation [ICCT], 2024). Climateworks has long maintained that such a standard should also be well designed, properly enforced and consistent with meeting Australia's emissions reduction goals (Climateworks Centre, 2014, 2017, 2022, 2023a, 2023b). The lack of vehicle efficiency standards is the main barrier to reducing Australia's growing transport emissions. This makes the NVES an important first step in aligning Australia with global best practices in transport decarbonisation; it also gives Australians a wider choice of electric vehicles that are cleaner and cheaper to run.

We recommend that a vehicle efficiency standard should progress towards 0 gmCO₂/km for all new light vehicles by 2035, providing fifteen years for the remaining ICE vehicles to transition out of the fleet. 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.

Evidence from similar economies, such as New Zealand and the United States, shows that stringent emissions reduction trajectories correlate with higher uptake of EVs (Climateworks Centre, 2023a). Due to the absence of a vehicle efficiency standard, current EV uptake in Australia is not on track to meet existing, aggregated state and territory targets (equivalent to 46 per cent EV uptake by 2030). Current uptake is even further from the 56 per cent and 73 per cent EV uptake by 2030 under Climateworks' modelling of least-cost decarbonisation pathways in line with well below 2°C and 1.5°C limits, respectively (Climateworks Centre, 2023c).

Apart from climate-related impacts, an effective NVES will also positively impact the lives of vulnerable communities in the country – through improved air quality, better health and improved liveability, especially in high-traffic areas (Climate and Health Alliance, 2023).

Climateworks' preferred option

Climateworks' ranking of the proposed options is as follows:

Rank	Option names
Rank 1	Option C
Rank 2	Option B
Rank 3	Option A

Reasons for the ranking

In ranking the three options, the scale of emissions reduction is the prime factor we considered. We have compared the cumulative emissions generated on implementing each of the three proposed options and then compared these to the cumulative emissions in our 1.5°C-aligned decarbonisation scenario¹. Based on this analysis, option C results in emissions reductions closest to our 1.5°C-aligned scenario.

We will extend our analysis of these options as part of our current transport modelling, which will be published later this year. This forthcoming work looks at different pathways for transport decarbonisation, and we would welcome the opportunity to present our findings to you. We would also welcome the opportunity to discuss and understand the Government's assumptions for the NVES to better inform our work on Australia's transport emissions reduction trajectory.

Should the Government progress with option B, we recommend enhancements in the current design and at each review point in its implementation, to shift this to a 'B-plus' design to raise ambition for emissions reduction.

Achieving the highest EV uptake possible is critical for lowering transport emissions in a cost-effective manner. Where uptake falls short of targets, other complementary solutions will be needed to make up for the shortfall of emissions reduction. As part of our current transport decarbonisation work, we model how other actions can unlock solutions to reduce emissions if Australia falls short on EV uptake in passenger and freight vehicles. Australia can stay on track to reach ambitious emissions reduction targets by adopting complementary policies that support a shift to lower emissions modes (including public transport and freight on rail) and support making transport operations more efficient. The Government's decarbonisation plan for the transport sector should reflect both the contribution the NVES can make to achieving emissions targets and the right suite of policies that can keep transport emissions reduction on track. That means building upon the NVES by taking a sector-wide approach.

Above all, in finalising the design, it is critical that the Government implements the many good features proposed under options B and C, including no supercredits, immediate introduction of penalties, classification of SUVs as a passenger vehicle and other measures to limit perverse incentives. Maintaining these design features would ensure better transparency and effectiveness for the NVES.

Feedback on the analysis approach and key assumptions used

The effectiveness of the NVES is tied to its design and enforcement. Therefore, it is worth reiterating some of the key principles of design and implementation, including points we set out in previous submissions:

¹ The analysis was an estimation based on information available in the consultation paper. Note that information on all assumptions was not available to provide a more precise assessment.

- **Align the NVES to national EV uptake and emissions reduction targets:** The Government has indicated the expected emissions reduction for each option. The Government's decarbonisation plan for the transport sector should reflect both the contribution the NVES can make to achieving emissions targets and the right suite of policies that can keep transport emissions reduction on track.
- **Set an ambitious trajectory:** To achieve net zero by 2050, or by 2045 to limit warming to 1.5°C, all new vehicles sold from 2035 should be zero emissions vehicles. It is also important that manufacturers and importers are provided with a clear roadmap towards reaching this target. In this regard, option C is preferred as it is the closest to achieving emissions reductions in line with Climateworks' 1.5°C-aligned decarbonisation scenario.
- **Remove perverse incentives to switch between vehicle classes:** Ideally, a single vehicle class under the NVES would have offered greater flexibility to manufacturers, transparency in terms of the impact of the standard and reduced any perverse incentives for switches to heavier classes of vehicles. However, if multiple standards are used, as proposed in the three options, we recommend that the rate of change for each class ultimately converge to 0 gmCO₂/km by a set date. Further, as done in options B and C, we recommend including all (light and heavy) SUVs and four-wheel drive vehicles within the passenger vehicle class.
- **Set up legislated reviews:** To ensure the NVES is effective and responsive to market opportunities, we recommend that the mandatory standard be complemented by legislated and regular reviews.

With the first review planned for 2026, we further recommend initiating work to ensure that fit-for-purpose monitoring data is available. We recommend that the Government lead data collection, with mandatory, reliable and consistent reporting from manufacturers and importers. Access to robust and transparent data on the sales and emissions data of both passenger and light commercial vehicles is needed.

We agree with the Government's plans to test under the Worldwide Harmonised Light Vehicles Test Procedure (WLTP) in line with the transition to Euro 6d standards. We also recommend mandating on-board fuel consumption monitoring and real-world testing of emissions variance, given that emissions from light-duty vehicles in Australia are significantly worse than major markets in the United States, European Union, China and Japan (ICCT, 2024).

- **Credits and penalties:** The effectiveness of the NVES is greatly improved if it has a system of incentives and penalties that are directly linked to emissions reductions. These should be enforced from the commencement of the standard. Any delays in enforcing the penalties will make the NVES less effective in achieving its goals.

Further, the inclusion of supercredits, off-cycle credits and air-conditioning credits reduces the emissions reduction impact of a vehicle efficiency standard. We therefore support the approach in options B and C, to exclude these supercredits. Adding back any of these will greatly risk the efficacy and transparency of the NVES.

- **Other comments:** The scope of NVES is currently limited to new and imported passenger vehicles and light commercial vehicles. We recommend developing vehicle efficiency standards for heavy-duty vehicles or policies with comparable impact.

The NVES is one of a suite of policies that will be needed to reduce emissions from the transport sector in line with Australia's emissions reduction targets. Decarbonising transport cost-effectively also requires policies that enable shifting to low-carbon-intensity modes of transport (such as rail, public transport, walking and cycling) and policies that support transport demand management, greater efficiency in transport networks and operations, and environmentally sustainable fuels and technologies in the transition period.

Given the limitations of the publicly available data, we recognise that our analysis of the impact of the NVES in reducing emissions may differ from the Department's analysis. We would welcome the opportunity to discuss this analysis further, and note we will have further analysis available as we develop our forthcoming report on new pathways for Australia's transport sector decarbonisation.

Thank you for taking the time to consider our submission.

Yours sincerely,

[Redacted signature area containing three sets of blacked-out text]

References

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Organisation questionnaire response

Privacy Setting: I agree for my response to be published with my name and position withheld.

What organisation do you represent? (required)	Climateworks Centre
Please rank the proposed options in order of preference. (optional)	Option A - 3rd, Option B - 2nd, Option C - 1st
Briefly, what are your reasons for your choice? (optional, 3000 character limit)	<p>In ranking the three options, the scale of emissions reduction is the prime factor we considered. We have compared the cumulative emissions generated on implementing each of the three proposed options and then compared these to the cumulative emissions in our 1.5°C-aligned decarbonisation scenario. Based on this analysis, option C results in emissions reductions closest to our 1.5°C-aligned scenario. We will extend our analysis of these options as part of our current transport modelling, which will be published later this year. This forthcoming work looks at different pathways for transport decarbonisation, and we would welcome the opportunity to present our findings to you. We would also welcome the opportunity to discuss and understand the Government's assumptions for the NVES to better inform our work on Australia's transport emissions reduction trajectory. Should the Government progress with option B, we recommend enhancements in the current design and at each review point in its implementation, to shift this to a 'B-plus' design to raise ambition for emissions reduction.</p> <p>Achieving the highest EV uptake possible is critical for lowering transport emissions in a cost-effective manner. Where uptake falls short of targets, other complementary solutions will be needed to make up for the shortfall of emissions reduction. As part of our current transport decarbonisation work, we model how other actions can unlock solutions to reduce emissions if Australia falls short on EV uptake in passenger and freight vehicles. Australia can stay on track to reach ambitious emissions reduction targets by adopting complementary policies that support a shift to lower emissions modes (including public transport and freight on rail) and support making transport operations more efficient.</p> <p>The Government's decarbonisation plan for the transport sector should reflect both the contribution the NVES can make to achieving emissions targets and the right suite of policies that can keep transport emissions reduction on track. That means building upon the NVES by taking a sector-wide approach.</p>



	Above all, in finalising the design, it is critical that the Government implements the many good features proposed under options B and C, including no supercredits, immediate introduction of penalties, classification of SUVs as a passenger vehicle and other measures to limit perverse incentives. Maintaining these design features would ensure better transparency and effectiveness for the NVES.
Do you support the Government's preferred option (Option B)? (optional)	NULL
Do you have any feedback on the analysis approach and key assumptions used? (optional, 3000 character limit)	See attachment for details where we have highlighted the key principles of design and implementation of the NVES, including points we set out in previous submissions. These points relate to: Aligning the NVES to national EV uptake and emissions reduction targets, setting an ambitious trajectory, removing perverse incentives to switch between vehicle classes, setting up legislated reviews, excluding supercredits, off-cycle and airconditioning credits as well as recommendations for future work to develop vehicle efficiency standards for heavy-duty vehicles or policies with comparable impact .
Briefly, describe how the NVES might impact your organisation (optional, 3000 character limit)	NULL
Who should the regulated entity be? (optional, 3000 character limit)	NULL