



HEAVY VEHICLE EMISSION STANDARDS FOR CLEANER AIR EURO VI DRAFT REGULATION IMPACT STATEMENT

DEPARTMENT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT AND COMMUNICATIONS

AUSTRALIAN TRUCKING ASSOCIATION SUBMISSION 25 FEBRUARY 2021

1. About the Australian Trucking Association

The Australian Trucking Association and its member associations collectively represent 50,000 businesses and 200,000 people in the Australian trucking industry. Together we are committed to safety, professionalism and viability.

2. Summary of recommendations

Recommendation 1

The Australian Government should mandate Euro VI emissions standards at Stage C and equivalent US and Japan standards for new heavy vehicle models from 1 January 2024 and all new heavy vehicles from 1 January 2025, conditional on offsets to mitigate the cost to industry.

Recommendation 2

The Australian Government should not proceed with the proposal to mandate stage D of Euro VI emission standards for heavy vehicles.

Recommendation 3

The Australian Government should maintain all heavy vehicle categories on the same introduction timeline for implementing Euro VI emission standards.

Recommendation 4

The Australian Government should ensure that the final regulatory impact statement for mandating Euro VI emission standards for heavy vehicles complies with the Guide to Regulatory Impact Analysis, and actively include offsets for the additional proposed regulatory cost burden on industry.

Recommendation 5

The Australian, state and territory governments should deliver vehicle standard offsets for Euro VI heavy vehicles, including an additional 500kg axle mass for steer trucks, an additional 1000kg axle mass for twin steer trucks and increasing heavy vehicle width.

Recommendation 6

The Australian Government should ensure that the vehicle standard offsets for Euro VI heavy vehicles are delivered well in advance of the implementation of Euro VI as a mandatory standard.

Recommendation 7

The Australian Government should extend the vehicle standard offsets delivered for Euro VI heavy vehicles to hydrogen fuel cell and battery electric heavy vehicles.

Recommendation 8

The Australian Government should implement Japan pPNLT-2017 and USA EPA 2013 as equivalent international standards to Euro VI Stage C.

Recommendation 9

The Australian Government should, in conjunction with states and territories, initiate reform to regulate off-road engine emissions.

3. Introduction

In October 2020, the Australian Government released the draft Regulation Impact Statement (RIS) Heavy Vehicle Emission Standards for Cleaner Air.

As set out in the draft RIS, Australia has noxious emissions standards in place for heavy diesel road vehicles to mitigate the impact of noxious emissions as a harmful source of pollution. Emission standards have been in-place since the mid-1990s, with the current Euro V standard applying for newly approved models first manufactured from 1 January 2010, and for all heavy vehicles manufactured from 1 January 2011.¹

The draft RIS proposes mandating Euro VI emission standards for all newly approved heavy vehicle models manufactured from 1 July 2027 and for all new heavy vehicles manufactured from 1 July 2028.²

This submission focuses on the proposal to improve air quality by mandating Euro VI emissions standards for heavy vehicles. It does not represent the full context of the ATA's policy on emissions (for both urban air quality and greenhouse emissions), which in addition to this proposal to mandate Euro VI to improve urban air quality also includes the need to improve productivity and use of high productivity freight vehicles, zero emission heavy vehicle technologies, congestion and infrastructure policy, and tax reform to incentivise the purchase of newer, greener heavy vehicles.

¹ Australian Government, October 2020. [Heavy Vehicle Emission Standards for Cleaner Air: Draft Regulation Impact Statement](#). 8.

² Australian Government, October 2020. 6.

4. Draft RIS assessment of options

The draft RIS considers three options:

- **Option 1: Business as usual** – allow the existing Euro V noxious emissions standards and market forces to provide a solution.
- **Option 2: Voluntary standard** – maintain Euro V noxious emissions standards as the minimum legal requirement, but encourage vehicle manufacturers, through peak industry groups, to enter into an agreement with the Government to meet increased noxious emissions performance requirements.
- **Option 3: Mandate Euro VI emissions standard** (including equivalent US and Japanese standards).³

Option 1

The draft RIS highlights that existing noxious emissions standards have already delivered air quality benefits and will continue to do so as new vehicles meeting the Euro V standard replace older vehicles which do not. Additionally, a growing number of new heavy vehicles already meet the Euro VI emissions standard.⁴

However, the draft RIS calculates that the existing standards are unlikely to continue to deliver reductions in emissions in the longer term. This will result from the differences in emission levels between vehicles entering and exiting the fleet reducing over time, and that it will eventually be outweighed by growth in the number of kilometres travelled by the heavy vehicle fleet. Projections indicate that Australia may have reached this cross over point in 2020, with emissions now likely to steadily increase out to 2050.⁵

Option 2

The draft RIS concludes that this option would result in increased monitoring costs for government. Industry compliance would be dependent on the commercial interests of heavy vehicle manufacturers and their customers. The option is not considered further as the draft RIS concludes it would not be a viable option to reduce emissions.⁶

Option 3

Under the recommended option in the draft RIS, mandating Euro VI emission standards from 2027/28, it is projected that noxious emissions would peak in 2025 and then decline to be 81 per cent lower than they would be under option 1 in 2050.

The draft RIS calculates that the option would involve \$1.5 billion in estimated costs and result in \$6.7 billion in estimated benefits, for a benefit cost ratio of 4.53 (or \$5.2 billion) out to 2050.⁷

³ Australian Government, October 2020. 18.

⁴ Australian Government, October 2020. 19.

⁵ Australian Government, October 2020. 19.

⁶ Australian Government, October 2020. 22, 23.

⁷ Australian Government, October 2020. 36.

A majority of the significant health benefits would be in urban regions, by reducing the impacts of air pollution and reducing pressure on the health system. It is projected that around 89 per cent of the Australian population would potentially benefit from improved air quality.⁸

Likely costs for industry would include:

- \$985 million in additional capital costs for heavy vehicle manufacturers, likely to be passed on to transport operators
- \$279 million in lost productivity as a result of reduced payload for transport operators
- \$196 million in increased maintenance costs on transport operators.⁹

The ATA notes that some of the assumptions underpinning the cost benefit analysis are the subject of debate. However, it is extremely unlikely that amending these assumptions would result in the benefit cost ratio of option 3 dropping below either option 1 or 2.

⁸ Australian Government, October 2020. 27.

⁹ Australian Government, October 2020. 27.

5. ATA recommended option

The ATA supports an amended option 3, mandating Euro VI emission standards at Stage C on an accelerated timeline, for new heavy vehicle models from 1 January 2024 and all new heavy vehicles from 1 January 2025, **conditional on offsets to mitigate the cost to industry**. The ATA's support of mandating Euro VI is contingent on vehicle standard offsets being implemented prior to Euro VI becoming a mandatory standard.

Equivalent US and Japan standards should be included, which is discussed further on page eight of this submission.

Recommendation 1

The Australian Government should mandate Euro VI emissions standards at Stage C and equivalent US and Japan standards for new heavy vehicle models from 1 January 2024 and all new heavy vehicles from 1 January 2025, conditional on offsets to mitigate the cost to industry.

Euro VI stages of implementation

Internationally, Euro VI has been implemented over a number of stages to allow time for the technology to develop.¹⁰

The draft RIS sets out these stages:

- **Stage A:** commenced in the European Union (EU) at the end of 2012, including the Euro VI emissions limits, new test cycle and on-road test, and initial on-board diagnostic system requirements.
- **Stage B:** commenced in the EU in September 2014, with more stringent requirements for on-board diagnostics.
- **Stage C:** commenced in the EU at the end of 2015, with even more stringent requirements for on-board diagnostics.
- **Stage D:** commenced in the EU in September 2018, with more stringent on-road emissions testing requirements to include lower load conditions.
- **Stage E:** commenced in the EU in September 2020, with more stringent on-road emissions testing requirements and a particle number limit.¹¹

The draft RIS proposes mandating Euro VI at Stage D. Stage D would likely require new testing in Australia, with significant costs for truck manufacturers. These costs would likely be passed on to trucking operators and have not been appropriately assessed by the draft RIS.

Stage D also prevents alignment with equivalent international standards from Japan and the United States. The ATA understands that the Truck Industry Council have provided additional information to the department about the impact and cost of implementing stage D.

¹⁰ Australian Government, October 2020. 29.

¹¹ Australian Government, October 2020. 29.

There is no change to the impact on emissions from Stage C to D, meaning it imposes additional costs on industry without providing additional benefits to the wider community.

The ATA recommends Euro VI should be mandated at Stage C. The ATA does not support Euro VI being mandated at Stage D, where the costs have not been appropriately assessed. The ATA understands this is also the position of the Truck Industry Council and represents a combined industry position of both truck manufacturers and trucking operators.

Recommendation 2

The Australian Government should not proceed with the proposal to mandate stage D of Euro VI emission standards for heavy vehicles.

Additionally, the draft RIS seeks feedback on whether Euro VI could be mandated from an earlier date for some heavy vehicle categories such as medium duty trucks.¹² This option is not supported by ATA members and the draft RIS does not demonstrate a sufficient rationale to split up the introduction timeline, with the complexity that it would create. The ATA's conditional support for an accelerated timeline also removes the need to split the introduction timeline.

The Government should ensure that additional work, analysis and reform options are included in the final RIS, but this should not focus on separating the introduction timeline for different categories of vehicles. Instead, the Government must address mitigating the cost to industry of the proposed option to mandate Euro VI.

Recommendation 3

The Australian Government should maintain all heavy vehicle categories on the same introduction timeline for implementing Euro VI emission standards.

Mitigating the cost to industry and incentivising the replacement of older model heavy vehicles

Disappointingly, the draft RIS repeats the error of the 2016 draft RIS in making no attempt to offset the cost burden of new regulation.¹³

The revised Australian Government Guide to Regulatory Impact Analysis clearly states:

Where your proposal leads to higher regulatory compliance burdens, you need to actively investigate opportunities to offset these burdens among the affected sector(s) and summarise the outcome of this in the RIS.¹⁴

¹² Australian Government, October 2020. 28.

¹³ ATA, March 2017. [Submission on the Vehicle Emissions Standards draft RIS](#). 9.

¹⁴ Australian Government, March 2020. [Australian Government Guide to Regulatory Impact Analysis: Second Edition](#). 38.

The draft RIS fails to provide any consideration around offsetting the additional cost to industry, despite the ATA's recommendation to address this in our submission on the previous draft RIS.¹⁵

Recommendation 4

The Australian Government should ensure that the final regulatory impact statement for mandating Euro VI emission standards for heavy vehicles complies with the Guide to Regulatory Impact Analysis, and actively include offsets for the additional proposed regulatory cost burden on industry.

Proposed vehicle standard offsets

The Australian Government should lead amendments to vehicle design standards, which in accordance with the Government's own RIA guidance, should be included and progressed as part of the draft RIS on mandating Euro VI emissions standards.

These should include:

- An additional 500kg axle mass for steer trucks, that can be shared between the front and rear axles (or be applied solely to one axle, or axle set)
- An additional 1000kg axle mass for twin steer trucks with load-share front suspension, to be applied to the steer axles
- Maximum vehicle width to be increased to 2.6m (or if governments do not accept this option, width should be increased to 2.55m with 2.6m for refrigerated vehicles).

The ATA understands that these proposed offsets are largely consistent with proposals by the Truck Industry Council, again representing a combined truck manufacturer and trucking operator industry recommendation.

As outlined in the ATA's 2017 submission, since the emission standards were first introduced there has only been minimal offsets provided. As a result, a substantial catch up is required to maintain the industry's productivity.¹⁶

Additionally, offsets are required to mitigate the projected cost of mandating Euro VI, and there is **a strong need to incentivise the purchase of Euro VI heavy vehicles.**

In Australia, the average age of articulated trucks is 12 years; the average age of heavy rigid trucks is 15.7 years.¹⁷ In contrast, the average age of trucks in Austria is 6.4 years, France is 9.3 years, Germany is 9.5 years and the Netherlands is 9.6 years.¹⁸

The projected benefits of Euro VI emission standards rely on trucking operators investing in new heavy vehicles and replacing older models which are still part of the Australian heavy vehicle fleet. Mandating Euro VI without offsets does not guarantee that operators will invest in new heavy vehicles at the rates projected in the draft RIS. For example, operators may

¹⁵ ATA, March 2017. 9.

¹⁶ ATA, March 2017. 9.

¹⁷ Australian Bureau of Statistics. 2020. [Motor Vehicle Census](#). Table 3.

¹⁸ European Automobile Manufacturers Association, February 2021. [Average age of the EU vehicle fleet, by EU country](#).

choose to extend the life of existing vehicles or purchase recent second hand vehicles if new models do not make commercial sense.

Mandating new emission standards does nothing to improve the air quality from existing, older model heavy vehicles. The Australian Government should incentivise investment in Euro VI heavy vehicles, and the replacement of older trucks, by ensuring a strong policy of vehicle standards offsets is delivered well in advance of Euro VI being implemented as a mandatory standard. Under an accelerated Euro VI timeline commencing in 2024, this would require vehicle standard offsets to be delivered no later than 2023.

Additionally, these proposed offsets should also be applied to zero emission vehicle technologies, including hydrogen fuel cell vehicles (FCEV) and battery electric vehicles (BEV). Whilst the proposal to mandate Euro VI emission standards is primarily an issue of urban air quality, as opposed to greenhouse emissions, zero emission heavy vehicles should not be put at a disadvantage by not receiving the same offsets as Euro VI.

Recommendation 5

The Australian, state and territory governments should deliver vehicle standard offsets for Euro VI heavy vehicles, including an additional 500kg axle mass for steer trucks, an additional 1000kg axle mass for twin steer trucks and increasing heavy vehicle width.

Recommendation 6

The Australian Government should ensure that the vehicle standard offsets for Euro VI heavy vehicles are delivered well in advance of the implementation of Euro VI as a mandatory standard.

Recommendation 7

The Australian Government should extend the vehicle standard offsets delivered for Euro VI heavy vehicles to hydrogen fuel cell and battery electric heavy vehicles.

Equivalent international standards

In 2017, the ATA recommended that the Australian Government should include equivalent US and Japanese standards to the proposed Euro VI emissions standard. The ATA welcomes the consideration of this issue in the 2020 draft RIS.

Japan pPNLT-2017 and USA EPA 2013 are equivalent to Euro VI Stage C.

Recommendation 8

The Australian Government should implement Japan pPNLT-2017 and USA EPA 2013 as equivalent international standards to Euro VI Stage C.

6. Regulating off-road emissions

In the ATA's March 2017 submission it was recommended that the draft RIS should be revised to include an appropriate range of policy options.¹⁹

It is disappointing that four years later, in considering the same issue, the Government has again failed to consider these policy options and has failed to significantly advance them in the interim.

The 2016 draft RIS noted that the absolute amount of emissions reduced has become smaller for each successive ADR.²⁰

With successive changes to the vehicle emission standards only offering smaller improvements, a proper assessment of policy options should include non-vehicle and off-road policy options.

Improvements to urban air quality will be undermined as long as the use of off-road engines remains unregulated.

The NSW Government has reported that the emissions intensity of off-road engines within the NSW greater metropolitan region is approximately six times higher than the on-road diesel fleet.²¹

Meanwhile, *State of the Environment 2016* identified that emissions from off-road spark-ignition engines – including gardening equipment, marine engines and small generators – put pressure on urban air quality because they are high polluters relative to their engine size and use. Even the better performing non-road engines emit disproportionately high levels of air pollutants compared with typical modern car engines, it says.²²

The report also examined the impact of domestic wood heaters on urban air quality. On a winter weekend day, wood smoke from domestic wood heaters in Sydney contributes as much as 48 and 60 per cent of PM₁₀ and PM_{2.5} particle pollution.²³

Off-road diesel engines are another source of pollution. The report identifies that there are no regulations or standards in place to limit emissions from these engines, despite controls in place overseas.

These engines have a wide variety of uses, including rail transport, mining, construction, industrial, shipping and airport services.²⁴ Off-road diesel engines are estimated to emit around 18,000 tonnes of PM₁₀ per year, which is of a similar magnitude to emissions from the on-road sector. In terms of NO_x they are equal to about half of the emissions of the on-road sector.²⁵

¹⁹ ATA, March 2017. 4-6.

²⁰ Australian Government, December 2016. [Vehicle emissions standards for cleaner air: Draft Regulation Impact Statement](#). 66.

²¹ NSW EPA, [Reducing emissions from non-road diesel engines](#), August 2014, 11-12

²² Keywood, M., Hibberd, M., & Emmerson, K. [Australia state of the environment 2016: atmosphere](#). March 2017, 78-79.

²³ Kenwood, 77-78.

²⁴ Kenwood, 79-80.

²⁵ Kenwood, 80.

Considering the goal of improving urban air quality, and the pattern of urban development in Australia, emission standards for off-road engines should not be ignored.

The Australian Government should, in conjunction with the states and territories:

- require marine, locomotive, off road and construction engines to meet the relevant international emission standards (ie: EU Stage III B or US EPA Tier 4).
- continue measures to reduce solid fuel fires and LPG/NG heaters in urban areas.
- curtail emissions from two stroke engines used in motor bikes, motor mowers, chain saws and brush cutters.

Recommendation 9

The Australian Government should, in conjunction with states and territories, initiate reform to regulate off-road engine emissions.

7. ATA contact

The ATA contact for this submission is Samuel Marks, Transport and Infrastructure Adviser, at samuel.marks@truck.net.au or on 02 6253 6900.