



NATIONAL ROAD TRANSPORT ASSOCIATION

**Submission to the Department of Infrastructure,  
Transport, Regional Development and  
Communications**

**Heavy Vehicle Emissions Standards for  
Cleaner Air: Draft Regulation Impact  
Statement**

**24 February 2021**

## Introduction

1. This submission responds to the Draft Regulation Impact Statement entitled *Heavy Vehicle Emission Standards for Cleaner Air*<sup>1</sup> (RIS) In this submission the National Road Transport Association (NatRoad) outlines the basis on which the association would support a move to Euro VI mandated emissions standards for heavy vehicles, after indicating our concerns and opposition to that step on the basis of the matters set out in the RIS.
2. NatRoad is Australia's largest national representative road freight transport operators' association. NatRoad represents road freight operators, from owner-drivers to large fleet operators, general freight, road trains, livestock, tippers, car carriers, as well as tankers and refrigerated freight operators.
3. The majority of NatRoad members operate heavy vehicles. We understand that the Department is separately working on a draft Regulation Impact Statement for light vehicles. Given that there is now a differentiation between the proposed application of emissions standards timing and implementation for heavy and light vehicles, we had anticipated more focused and better data for the heavy vehicle sector in the RIS. In addition, there are some propositions in the RIS which reinforce the concerns we raised in relation to previous proposals in this context.
4. This submission follows on from the March 2017 submission (2017 Submission) made by NatRoad on the *Vehicle Emissions Standards for Cleaner Air* Draft Regulation Impact Statement (Draft RIS) prepared by the then Department of Infrastructure and Regional Development and released for consultation in December 2016. The Draft RIS did not reach finality.
5. Some of the matters of concern raised in the 2017 Submission remain, as will be evident from the discussion in this submission, particularly the concerns about rural and regional operators.
6. In addition, in the submission dated 4 October 2019 NatRoad made to the then Department of Transport, Infrastructure, Cities and Regional Development on the proposed mandating of autonomous or advanced emergency braking (AEB) we indicated that governments should consider requiring all Euro VI vehicles to contain AEB technology without the option of deleting that technology. We noted that this would require the passage of a regulation that precluded the sale of a model Euro VI truck without AEB. We continue that stance in the current context.

## Reduced Emissions

7. NatRoad endorses the aims of improving air quality and reducing the adverse impacts of air pollution on human health. The imposition of higher emissions

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<sup>1</sup> <https://www.infrastructure.gov.au/vehicles/environment/forum/files/heavy-vehicle-emission-standards-for-cleaner-air.pdf>

standards, however, should also be accompanied by measures which assist with energy productivity and the productivity of the heavy vehicle industry, some of which are set out in this submission. The RIS, however, stands as a document which seeks for heavy vehicle operators to subsidise the rest of the community to reach the aims of improving air quality and reducing the impact of air pollution in cities.

8. NatRoad is aware that factors that could impede the industry's productivity and efficiency include the withdrawal of the social licence that is implicit in community acceptance of the industry's operations and transport projects that underpin the industry's access. This is especially the case in many "first and last mile" locations.
9. The maintenance of that social licence involves, amongst other things, reaching lower emissions levels. But we emphasise that this is something that is being achieved currently. The RIS states as follows:

***Particulate emissions produced by heavy diesel vehicles have declined by 52 per cent per kilometre since 2003. This was smaller than the rate of improvement for light petrol and light diesel vehicles, which declined by 88 and 93 per cent per kilometre respectively. This is because improvements in the emissions intensity of heavy duty diesel engines have been partly offset by an increase in the average workload performed by heavy diesel vehicles.***<sup>2</sup>

10. More detail about how these percentages have been derived would assist. In particular, the statement in the last sentence is strongly contested. The source for this proposition (as with the statistics) is cited as a personal communication with the NSW Environmental Protection Authority. Where is the empirical evidence to support that latter proposition? What are the elements of calculation? Do the numbers hold outside of NSW? This is one of many deficiencies in the RIS. Why wouldn't this rate of reduction continue?
11. We also note that, according to the Truck Industry Council, at the end of 2020, 30% of new truck sales comprised Euro VI vehicles.<sup>3</sup> This percentage is often influenced by customer requirements. This voluntary take up of Euro VI is preferred to the mandatory requirements proposed in the RIS.
12. NatRoad also notes that population growth will put greater pressure on congestion on networks that are already under strain, particularly in urban areas where freight and passenger transport share the same road infrastructure. With the majority of economic activity now occurring in our major cities, urban freight will be as critical for our future growth as traditional long-distance freight, a trend accelerated by online ordering and other emerging technologies.
13. There is a need to protect freight facilities from urban encroachment and a need for infrastructure projects to accommodate pick-up and delivery tasks by those who

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<sup>2</sup> Above note 1 at p14 Plus statistic repeated at p 23

<sup>3</sup> Private communication December 2020

move freight; design considerations should enable appropriate access to new infrastructure. Accordingly, now is the time to introduce further incentives for the take up of new trucks and to re-focus regulatory attention on making regulation affecting, for example, PBS vehicles more efficient and streamlined. These must be measures which are introduced at the same time any proposals for mandating Euro VI vehicles were considered per Option 3 in the RIS. If it is to proceed, take up of the Euro VI mandate must be accompanied by greater reform of access and an examination of the constraints on current high performance vehicles.

### **Reliance on Liquid Fuels and Adequacy of Australian Diesel Fuel**

14. The road transport industry is reliant on oil-based fuels. Diesel fuel in particular is currently the lifeblood of the heavy vehicle industry. The freight sector is heavily reliant on diesel fuel. The Australian Alliance for Energy Productivity (AAEP) estimates that diesel fuels 99% of trucks and around 50% of light commercial vehicles.<sup>4</sup>

15. As was noted in the *Interim Report on the Liquid Fuel Security Review*:<sup>5</sup>

*The transport sector is almost entirely reliant on liquid fuel—it sources 98 per cent of its energy from liquid fuels, most of which are used in road transport. This means transport is the sector that is most vulnerable to impacts from liquid fuel disruptions.*<sup>6</sup>

16. Diesel reliance for the heavy vehicle sector is not expected to reduce in the medium term despite investment in alternative fuel technologies.<sup>7</sup> NatRoad estimates that fuel costs are around 20 percent of short-haul operators' costs and around 35 percent of long-haul operators' costs. So, any changes in fuel efficiency that translates to a decrease in the cost of fuel, has a major effect on members' operations.

17. During discussions with members about this subject, NatRoad encountered the assumption that Australian fuel standards, particularly levels of sulphur in diesel, are not appropriate for the uptake of Euro VI. On investigation, this perception is not reflected in the Australian fuel standards set out in the current *Fuel Quality Standards (Automotive Diesel) Determination 2019*<sup>8</sup> and a previous 2009 determination. In NatRoad's understanding, the minimum sulphur requirements and all critical specifications are the same as those which apply under the relevant European standard that is *EN 590 2009 Diesel Fuel Specification*.<sup>9</sup> Accordingly, it appears the perception held by a number of NatRoad members should be the subject of communication by Government.

18. In the RIS there is a prediction in the growth of diesel fuel up to 2040. That growth is predicted at 56 percent.<sup>10</sup> The RIS contends that:

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<sup>4</sup> The Australian Alliance for Energy Productivity *A Roadmap to double energy productivity in Freight Transport by 2030* [https://a2se.org.au/files/2xEP\\_Freight\\_transport\\_roadmap\\_v3\\_0\\_170212.pdf](https://a2se.org.au/files/2xEP_Freight_transport_roadmap_v3_0_170212.pdf)

<sup>5</sup> <https://www.environment.gov.au/energy/liquid-fuel-security-review-consultation>

<sup>6</sup> Id at p 15

<sup>7</sup> This 2017 study outlines the range of alternative fuel sources in an Australian context:

<https://www.rms.nsw.gov.au/documents/about/environment/air/technology-study-alternative-fuels.pdf>

<sup>8</sup> Found here <https://www.environment.gov.au/protection/fuel-quality/standards/diesel>

<sup>9</sup> [https://dieselnet.com/standards/eu/fuel\\_automotive.php](https://dieselnet.com/standards/eu/fuel_automotive.php)

<sup>10</sup> Above note 1 at p 13

*In the absence of more stringent standards, the growth in vehicle activity will start to outweigh reductions in noxious emissions from newer vehicles replacing older vehicles meeting less stringent standards.*<sup>11</sup>

19. This assumption is unsourced and implicitly vague with the use of the word “start”. Where is the related empirical work to substantiate this proposition? The RIS is an inadequate document to found the mandating of Euro VI, particularly in the absence of other Government policies that would give such a move coherence.

### **Increased costs for heavy vehicle transport operators**

20. Since 1996 and the introduction of Euro I, engine complexity and maintenance requirements have greatly increased, as has fuel consumption. As a consequence, newer truck models have become less productive and more expensive to operate.
21. To meet Euro VI, as proposed under Option 3, the RIS shows that the benefits that are sought to be offset against the costs of mandating Euro VI amount to the heavy vehicle sector subsidising the cost of increased health benefits for urban populations:

*The BITRE analysis found that there would be a direct benefit of \$6,672 million by 2050 to the health and wellbeing of the Australian community under this option through reductions in air pollution. This would have an indirect benefit to governments by reducing pressure on the public health system through reductions in the incidence of disease attributable to air pollution. The majority of health benefits will accrue in metropolitan and neighbouring areas, where the number of people and average level of exposure to noxious emissions from road vehicles is greater.*<sup>12</sup>

22. As was the case in the 2016 RIS, in the current context the increased costs are unfairly distributed to rural and remote communities who will not benefit from the improved air quality in the same way as the urban population. Indeed, much of the detail in the RIS is presaged on analysis of urban levels of air pollution. In this context the opening problem statement in the RIS sets out that “an estimated 620 Australians died because of transport related air pollution in 2015, which cost our economy approximately \$9.2 billion.”<sup>13</sup> Yet the source of that statistic relies on pollution levels measured in the City of Melbourne, not overall heavy vehicle emissions in a wider conspectus.
23. The RIS acknowledges that heavy vehicle manufacturers would be required to fit additional technology that adds weight and/or takes up more space when compared with prior model heavy vehicles if the proposal at Option 3 is adopted. This will lead to a loss in productivity for heavy vehicle operators in the form of reduced payload. There will also be higher fuel costs for heavy vehicle operators due to the increased weight for

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<sup>11</sup> Ibid

<sup>12</sup> Id at p27

<sup>13</sup> Id at p 8

Euro VI technology, as well as increased use of Exhaust Gas Recirculation systems, which tend to be less fuel efficient.

24. That latter proposition is contested by some parties. One party consulted informally indicated that they contend that some Euro VI model trucks are 10% more fuel efficient, but there seems to be no definitive data on this issue. Another operator contends that Euro VI trucks are more fuel efficient but that when the liquid exhaust emission additive is taken into account fuel costs increase over prior models. This proposition seems to reinforce the view that fuel costs overall (inclusive of the additive) will be greater for Euro VI models.<sup>14</sup>
25. Maintenance costs are also likely to increase, notably in relation to the exhaust after-treatment system, although again that proposition is contested by some parties. However, the RIS does not appear to include any additional maintenance costs in adopting Euro VI. This may have led to an under-estimation of the total implementation costs.
26. The RIS indicates that the regulatory burden for business from 2027 to 2036 to implement mandating Euro VI for heavy vehicles is \$273.7 million. Unrealistically, the RIS says, "To the extent that market forces allow, the costs to business... may be passed on to consumers."<sup>15</sup>
27. Market forces are against the notion implicit in the statement with the likely perverse outcome that older vehicles will be held on to for longer, given that earlier Euro models provide a better pay load in the shipment of freight. The assumption set out in the last paragraph is an unrealistic assumption at the best of times and one that would be near to impossible in current market conditions which have been adversely affected by the COVID-19 pandemic and where profit margins are lower.
28. To substantiate the issue of lower profit margins, we note that a 2020 survey of the industry found:  
  
*Average net profit (after tax) margins have fallen to around three per cent of revenue, increasing the pressure many fleets face when it comes to modernising their transport equipment.*<sup>16</sup>
29. The latter proposition is substantiated by feedback NatRoad has received from the Truck Industry Council (TIC). TIC has indicated that the effects of the federal

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<sup>14</sup> This ambivalence appears to be reflected in the RIS above note 1 at p37 where it says: *Changes in greenhouse gas emissions were estimated from increased carbon dioxide emissions from the increased fuel consumption. This is considered to be conservative as this does not include possible reductions in black carbon greenhouse gas emissions. It is also possible that fuel consumption may not increase, as many Euro VI engines are also packaged with additional fuel saving technologies*

<sup>15</sup> Id p 28

<sup>16</sup> <https://www.isuzu.com.au/media/1253002/isuzu-future-of-trucking-report-the-road-ahead.pdf> at p 17

Government's new instant asset write-off incentive<sup>17</sup>, announced in the October 2020 Budget, showed impact on December sales results for the medium and heavy truck segments. Quarters 1 and 2 in 2021 should give a clearer picture of the new incentive's effectiveness. But given the global events of 2020, Australian new truck sales have been better than expected, because of the Government's financial stimulus measures. In the absence of those measure, take up of new trucks, particularly Euro VI models, would be expected to be well below the five year average for new truck sales.

### **Time frame for Introduction**

30. The RIS models the costs and benefits of mandating Euro VI for all newly approved heavy vehicle models manufactured from 1 July 2027 and for all new heavy vehicles manufactured from 1 July 2028.

31. The RIS is clear as to why this timeframe was adopted:

*This timeframe was chosen in response to feedback received during preliminary consultation with heavy vehicle industry stakeholders. Several stakeholders argued that this implementation date strikes a balance between managing Australia's air quality and supporting the ongoing viability of Australia's heavy vehicle manufacturers and transport operators. It was also argued that it would provide certainty for investment decisions and allow the necessary lead time required to develop and manufacture heavy vehicles suitable for Australia's unique operating conditions, such as higher vehicle speeds, distances and temperatures.<sup>18</sup>*

32. No earlier date is proffered by NatRoad and the RIS contains no justification for earlier implementation.

33. The RIS also indicates that Euro VI Step D should be implemented. In our understanding whilst the RIS says this step was commenced in 2018 it will not be fully adopted in Europe until 2023. We also understand that equivalent Japanese and USA equivalent standards better align with step C. Hence, we reject the proposition that step D of Euro VI should be introduced; step C is preferred if mandatory requirements proceed.

### **Offsets: Amending vehicle design standards to increase the use of Euro VI vehicles**

34. Throughout 2020, NatRoad consulted extensively with members on the issue of what concessions in design or otherwise should accompany any mandating of Euro VI vehicles to enable their effective operation and to confront some of the problems just discussed. We make it clear that our stance is that Euro VI not be mandated. However, if the Government does proceed the following issues must, we submit, be confronted.

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<sup>17</sup> <https://www.ato.gov.au/Business/Depreciation-and-capital-expenses-and-allowances/Simpler-depreciation-for-small-business/Instant-asset-write-off/>

<sup>18</sup> Above note 1 at p 28

35. First, Euro VI exhaust systems are larger than contemporary systems because they must accommodate both the urea catalyst and diesel particulate filter (DPF) in the system. Members have informed us that the exhaust system on Euro VI vehicles will therefore occupy at least another 300mm of chassis space compared to current Euro V chassis mounted mufflers.

36. In response to this matter one member commented as follows:

*This brings into question the need for length creep for configurations with short wheelbase prime movers to allow enough chassis length to accommodate the bigger mufflers and still be able to carry a minimum usable amount of fuel.*

37. Accordingly, the first concession that NatRoad seeks is for Euro VI vehicles and combinations to be permitted to be at least a half metre longer than existing length requirements as prescribed at section 3(1) Schedule 6 of the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation*.<sup>19</sup>

38. The second issue is that for many heavy vehicle applications Euro VI steer axle weights in particular are inadequate. One member commented as follows:

*With the bigger muffler and most cabovers already struggling or impossible to comply with 6.5 ton steer axle weights, even our twin steers struggle to comply with 11 ton, euro 6 along with ever increasing safety features are going to need at least an increase to 7 ton steer axle weights and twin steers will need an increase to keep our future crane trucks legal (QLD already allow 12 ton under CML). 7 ton steer axle weights has been on the agenda for many years now.*

39. We indicate that the second concession we seek is for at least an additional 500kg on steer axle weights to those currently prescribed by Table 2 in the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation*, Schedule 1 Part 2. There is precedent for this step. Steer axle mass concessions were increased for heavy vehicles with engines complying with ADR 80/01 (Euro IV).

40. In respect to single steer trucks, members have indicated that this weight distribution could be shared between front and rear axles. We would seek a 1000kg mass increase for twin steer load share suspension trucks. This concession is sought because twin steer trucks “missed out on” the additional 500kg mass increase afforded to single steer trucks sold from 2007 onward that were manufactured with FUPS and ADR80/01 (or later) engines and ECE R29 Cab Strength. We are not fixed in the weight distribution requirements. A better approach might be to consult with the manufacturers to determine how the relevant concession as to weight should be applied.

41. We are aware that these weights might require different tyre specifications and we believe this subject could be a matter for further discussion with Departmental officials

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<sup>19</sup> See Heavy Vehicle National Law s101

and/or other industry associations.

### **Financial Incentives to Divest Older Trucks**

42. As stated earlier in this submission, the increased costs of adopting Euro VI will encourage heavy vehicle operators to continue using older trucks, unless the Australian Government explores ways to incentivise operators to modernise their fleets. The aim would be to accelerate the adoption of new diesel trucks and the adoption of new alternatively fuelled and powered trucks into the Australian market.
43. At the least, we **recommend** that State and Territory Governments should waive stamp duty requirements on new registrations of Euro VI vehicles and consider ongoing concessions. This would be a 3% saving. Heavy vehicles are already too expensive in this country and adding another 3% to their cost at the time of registration via the application of stamp duty makes no sense. We ask that the Transport Ministers consider this request when they next convene.
44. NatRoad strongly **recommends** that the policy options should be designed to maintain the productivity of vehicles and improve the incentives to heavy vehicle operators to use Euro VI vehicles, for example by increasing steer axle mass limits and increasing vehicle length as we have set out in this submission. Current considerations to increase heavy vehicle width to 2.55 metres (or potentially up to 2.6 metres) should also form part of the reconsideration of vehicle design. This would make Euro VI vehicles more likely to be purchased and adds to our submission that with these proposed changes mandating Euro VI may not be required.

### **Fuel Tax Credits reform also required**

45. When it came into force, the *Fuel Tax Act 2006* included a powerful incentive for heavy vehicle operators to maintain their vehicles, as it required vehicles manufactured before 1 January 1996 to meet maintenance or testing criteria to be eligible for fuel tax credits. Whilst this originally applied to 61 per cent of the trucks registered in Australia, by 2016 this had fallen to 33 per cent of the trucks in service, meaning a majority of the truck fleet no longer has to meet any maintenance requirement or test to be eligible to receive fuel tax credits.
46. Regular maintenance is the key to ensuring that vehicles continue to meet emission standards and are fuel efficient. NatRoad **recommends** amending the *Fuel Tax Act 2006* to remove the 1 January 1996 threshold so that every on-road truck has to meet maintenance or testing criteria to be eligible for fuel tax credits. This would also distinguish responsible operators from those who do not maintain their vehicles in order to get a competitive advantage in a highly competitive market.
47. NatRoad also **recommends** a comprehensive re-assessment of the fuel tax system as we indicated in responding to the National Transport Commission (NTC) in relation to proposals to increase heavy vehicle charges last year.

48. As we noted in communications to the NTC, the Commonwealth Parliamentary Budget Office (PBO) report *Trends affecting the sustainability of Commonwealth taxes*<sup>20</sup> examines the sustainability of fuel tax. The issues encompassed in the following extract from that report show that there are several factors which point to the need to re-frame this tax regime:

*Continued improvements in the fuel efficiency of the passenger motor vehicle fleet in Australia are likely to contribute to a further slowing of the growth in total fuel consumption, further constraining growth in fuel excise. The uptake of electric vehicles could further accelerate the rising fuel efficiency of the passenger motor vehicle fleet in Australia. Electric vehicles are only a small proportion of the market and are therefore having little effect on fuel excise receipts at the present time. However, under the Australian Energy Market Operator's neutral scenario for electricity consumption, electric vehicles are projected to represent around 19 per cent of the light vehicle fleet in Australia by 2036–37 (AEMO 2018). The impact on fuel consumption of an increasing uptake of electric vehicles would further erode the fuel excise base.*<sup>21</sup>

## Conclusion

49. NatRoad does not support mandating Euro VI for heavy vehicles on the basis that the RIS clearly shows that the industry is being asked to subsidise presumed beneficial outcomes for, in particular, urban environments.
50. If the Government rejects this submission and/or if Government wishes to encourage the voluntary uptake of Euro VI emissions standards then the conditions set out in this submission relating to vehicle modifications should be implemented.
51. We would be appreciative of the opportunity to discuss the recommendations with Departmental officials.

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[https://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Budget\\_Office/Publications/Research\\_reports/Trends\\_affecting\\_the\\_sustainability\\_of\\_Commonwealth\\_taxes](https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Budget_Office/Publications/Research_reports/Trends_affecting_the_sustainability_of_Commonwealth_taxes)

<sup>21</sup> Id at p 10