



## SUBMISSION TO THE NATIONAL EV STRATEGY 31 OCTOBER 2022

### 1. Executive summary

Australia's transition to a net zero economy is underway.

The ATA supports the end to the climate wars and the passage of climate legislation which sets in place Australia's commitment to net zero emissions by 2050 and reducing carbon emissions by 43 per cent by 2030. The development of the National Electric Vehicle Strategy will support Australia to realise this ambition.

Achieving net zero emissions is critical to reducing the impacts of climate change on our people and our economy.

As critical as meeting our climate goals is, net zero emissions are also an economic transition.

The Productivity Commission has stated—

The path of decarbonisation will be one of the most significant structural changes in Australian economic history. How we handle the twin challenges of efficient, low cost abatement at the same time as fostering and adopting emerging (and rapidly evolving) technologies will have major implications for productivity growth and living standards.<sup>1</sup>

Freight and trucking are vital to the Australian economy. We've seen in recent years just how critical trucking is to modern Australia – right down to the accessibility of essentials such as toilet paper.

Growth in truck greenhouse emissions is being driven by growth in the economy. Zero emission trucks – both battery electric vehicles and hydrogen fuel cell electric vehicles – can enable our economy to keep growing whilst we bring down emissions.

#### **Zero emission trucks will deliver lower costs, lower emissions and more choice.**

Without a national electric vehicle strategy trucking operators have been locked into existing vehicle technology, with higher running costs and higher emissions. Existing regulatory, financial and infrastructure barriers are preventing a faster adoption of zero emission trucks.

We know that Australia's trucking industry can reduce emissions whilst driving a growing economy because we have done it before. Australia has achieved a considerable reduction in noxious emissions at the same time as the size of the truck fleet and the kilometres travelled have increased substantially. This has been made possible by the investment decisions of industry – often well ahead of government regulation – to deliver both cleaner air and economic growth.

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<sup>1</sup> Productivity Commission. [5-year Productivity Inquiry: The Key to Prosperity](#). Interim Report. July 2022. 56.

Whilst the trucking industry has now begun the transition to zero emissions – getting the policy framework right will help to realise this transition with the ambition of meeting Australia’s climate goals.

## **2. Summary of recommendations**

### **Recommendation 1**

The National Electric Vehicle Strategy should prioritise the accelerated take up of zero emission trucks.

### **Recommendation 2**

The Australian Government should sign the Global Memorandum of Understanding (MoU) for Zero Emission Medium and Heavy Duty Vehicles to establish clear climate leadership and momentum for the trucking industry.

### **Recommendation 3**

The Australian Government should implement an immediate reform package for zero emission truck vehicle design rules, including increased width and a zero emission heavy vehicle mass concession, and commit to further reform by 2030.

### **Recommendation 4**

The Australian Government should implement a truck purchase price incentive for 50 per cent of the higher price differential for zero emission truck models.

### **Recommendation 5**

The National Electric Vehicle Strategy should prioritise investment in electric truck recharging infrastructure and hydrogen truck refuelling infrastructure and by 2030 ensure that zero emission truck energy infrastructure is accessible across the entire National Land Transport Network.

### **Recommendation 6**

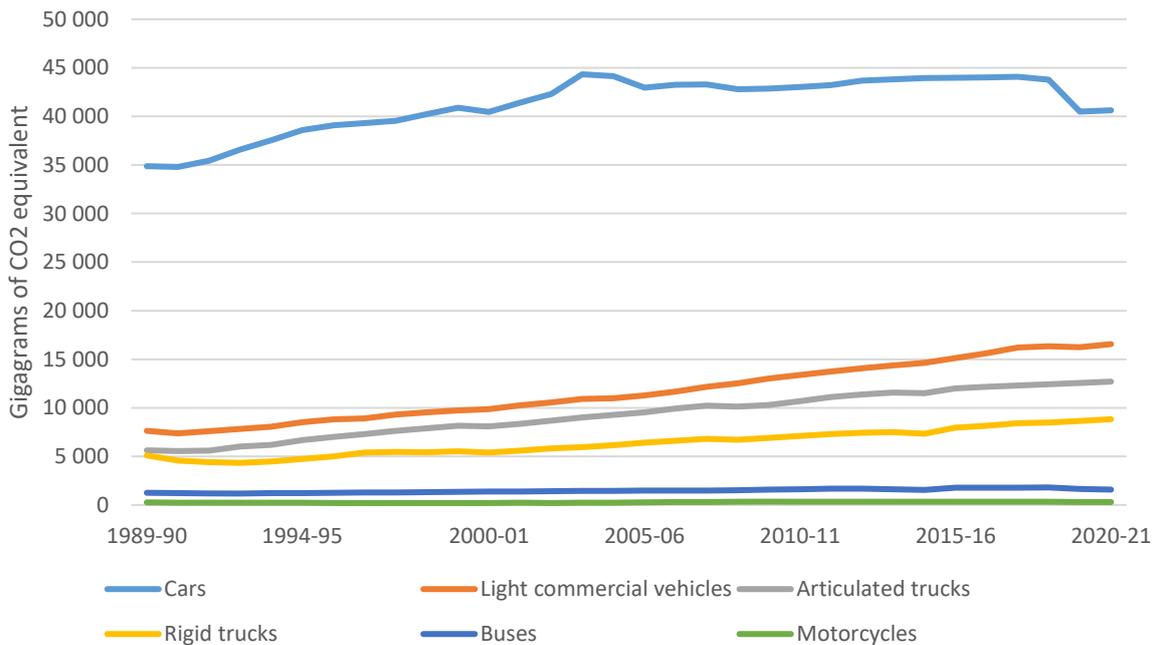
The Australian Government should develop a national road user charging scheme which ensures sustainable and fair funding for the road network as Australia transitions to zero emission vehicles.

### 3. Decarbonising transport

#### Passenger cars and light commercial vehicles

The largest contributors to road transport greenhouse emissions are passenger cars and light commercial vehicles – the two road transport sectors most suited to electric vehicle adoption.

**Figure 1: Road transport greenhouse gas emissions<sup>2</sup>**



The decarbonisation of light vehicles, including light commercial vehicles, should be a clear priority for the National Electric Vehicle Strategy.

Whilst the focus of this submission and the ATA is predominantly on heavy vehicles, trucking and logistics companies do utilise light vehicles, especially for urban last mile deliveries. Accelerating light electric vehicle take up will be vital to achieving net zero transport emissions – and provide industry with vehicles with lower running costs.

Both the Electric Vehicle Council, and the Federal Chamber of Automotive Industries, have supported implementation of fuel efficiency or CO<sub>2</sub> standards for light vehicles.

The ATA supports light vehicle fuel efficiency standards in line with the United States, New Zealand and the European Union.

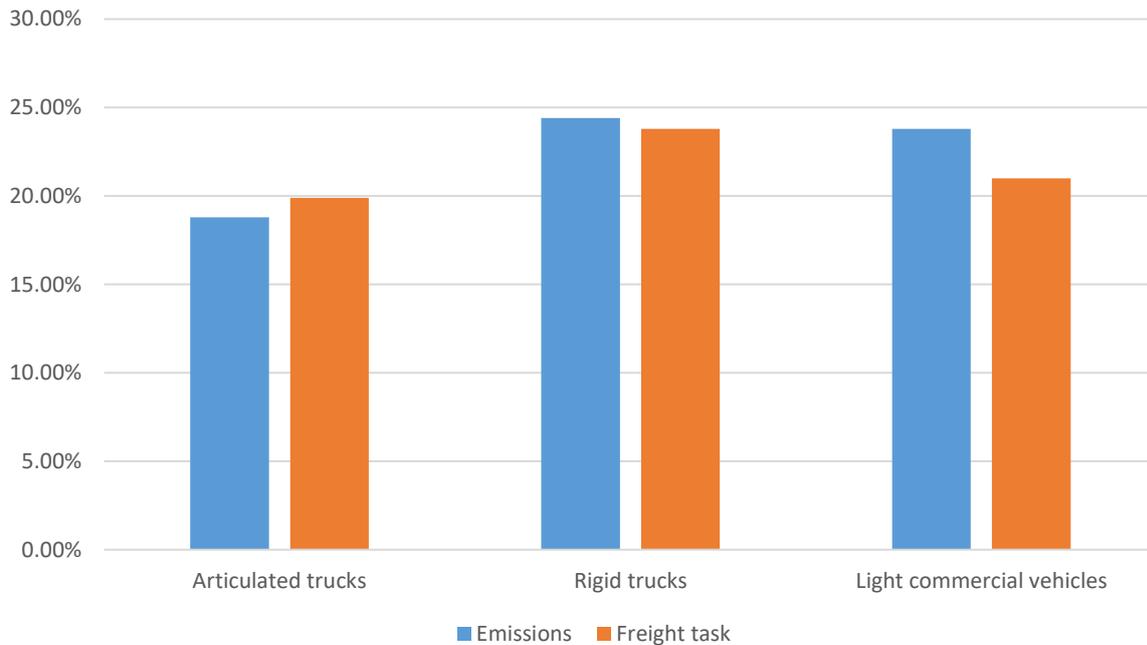
<sup>2</sup> BITRE. [Australian Infrastructure and Transport Statistics: Yearbook 2021](#). December 2021. Table 11.5. 226.

## Heavy vehicles

Whilst there is a clear need to focus on reducing light vehicle emissions – heavy vehicles must not be excluded from the national electric vehicle strategy.

Growth in truck emissions has been driven by growth in the economy and the expanding size of the freight task.

**Figure 2: Percentage growth in commercial vehicle emissions and freight task since 2010<sup>3</sup>**



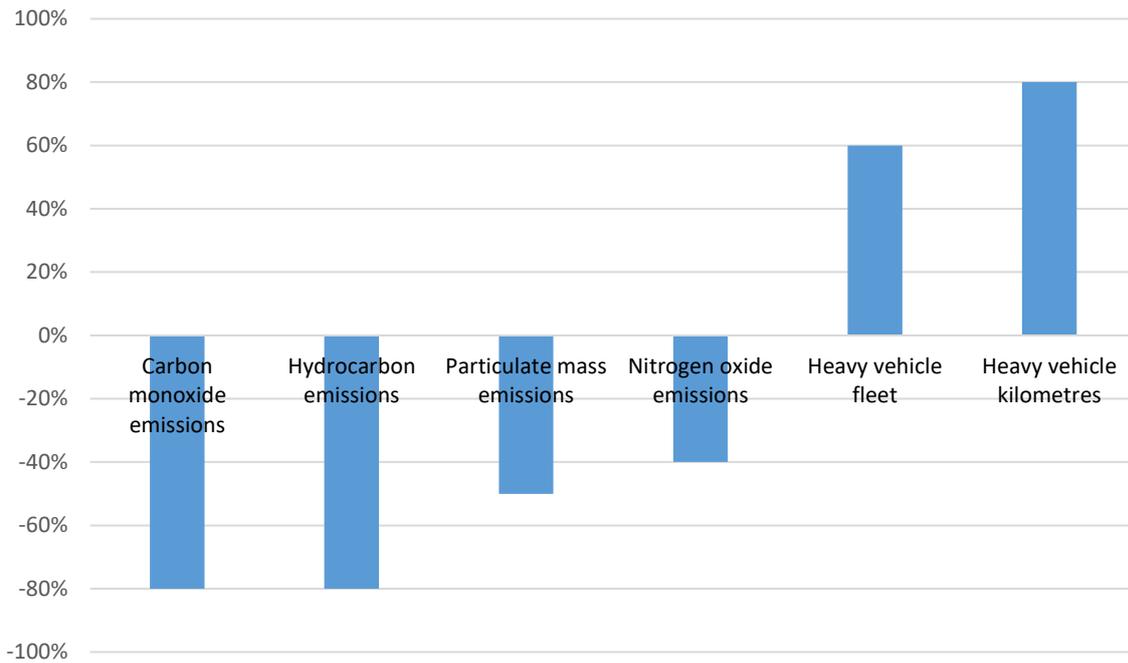
Unlike light commercial and rigid trucks, the growth in articulated truck emissions is slightly **lower** than the increase in the size of the articulated freight task. The carbon intensity of articulated trucks – in terms of the size of the freight task – is improving.

This illustrates that investments by trucking businesses in newer, cleaner trucks and in more productive vehicle combinations – which reduces the number of individual truck trips – have a positive impact.

Governments should further prioritise the upgrading and gazettal of road routes to enable access for high productivity freight vehicles.

Additionally, the investment by industry in cleaner trucks with the latest emission standards has achieved a remarkable reduction in noxious emissions. Over the last 30 years, noxious emissions have been dramatically reduced at the same time as the size of the heavy vehicle fleet and the number of kilometres driven have increased substantially.

<sup>3</sup> ATA assessment of table 6.6 and 11.5 in BITRE. 2021.

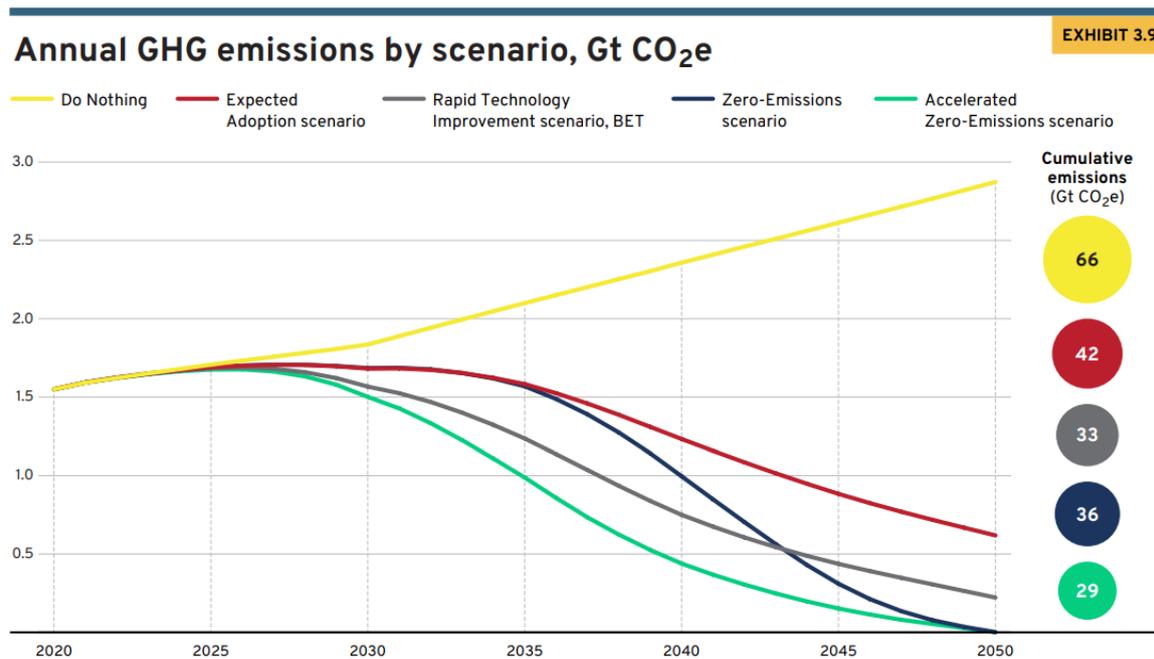
**Figure 3: Percentage change in heavy vehicle noxious emissions and fleet size since 1990<sup>4</sup>**

The Government's recent decision to mandate Euro VI emission standards will enable industry to continue this leadership for cleaner air.

### How electric and zero emission trucks can reduce emissions

Achieving net zero transport will require the link between growth in the freight task with growth in transport emissions to be broken. Zero emission trucks will be critical to enabling this link to be broken. Multiple studies and reports have shown that zero emission trucks can reduce transport greenhouse emissions.

<sup>4</sup> BITRE estimate in Department of Infrastructure, Transport, Regional Development and Communications. [Heavy vehicle emission standards for cleaner air. Final regulation impact statement](#). December 2021. 13.

Figure 4: Greenhouse gas emissions impact by zero emission truck scenario<sup>5</sup>

In the analysis by the Mission Possible Partnership, the expected adoption scenario of zero emission trucks (without policy support) will at a global scale lead to significant emissions reductions. This would be driven by improvements over time to the total cost of ownership of zero emission trucks, leading to take up as a result of market forces. It is also possible that these emissions reductions will be greater, if battery electric truck technology improves faster than projected, as it has in the past (the rapid technology improvement scenario).

However, neither scenario will deliver zero emissions by 2050 without policy support to accelerate the transition.

This is confirmed by recent Australian research, which shows that a widescale increase in zero emission truck sales would enable heavy vehicle greenhouse emissions to begin declining (in contrast to their historical growth trend).<sup>6</sup>

<sup>5</sup> Reproduced from Mission Possible Partnership. [Making Zero-Emissions Trucking Possible](#). July 2022. 42.

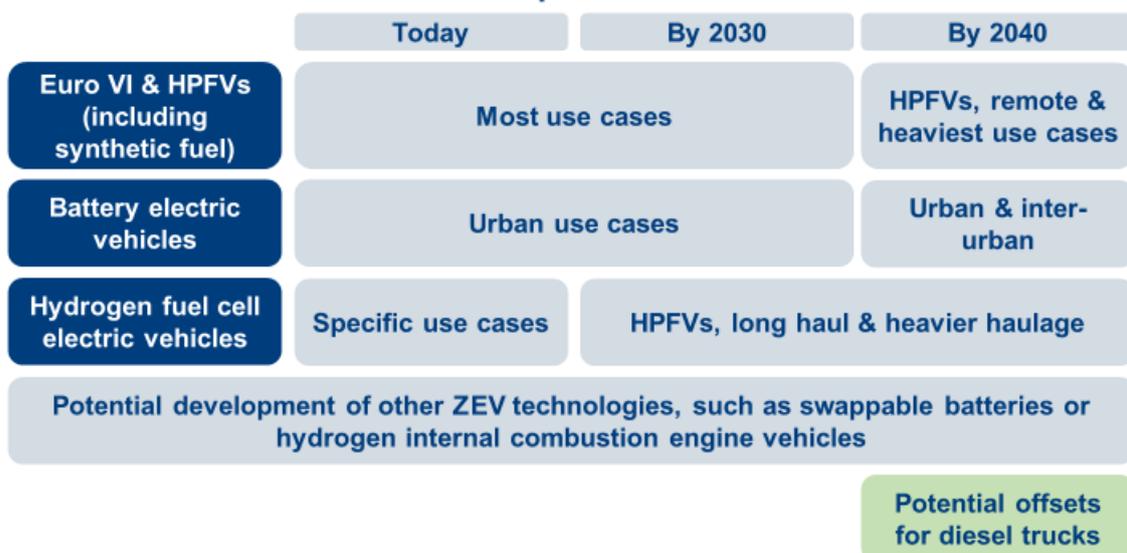
<sup>6</sup> Grattan Institute. [The Grattan truck plan](#). August 2022. 37.

#### 4. Adopting a zero-emissions technology mix for trucking

Neither battery electric or hydrogen fuel cell electric trucks are suitable for every transport use case today. The industry will continue to use diesel trucks for some use cases for many years.

No-one is suggesting that battery electric or hydrogen fuel cell electric trucks should be used where they are not viable. At the same time, both technologies are expected to improve as they are further developed and deployed. Today's limitations should not be assumed to apply to tomorrow's freight task.

##### Indicative development of a zero emissions technology mix – freedom to choose the best truck for the transport task



#### Battery electric trucks

Battery electric trucks will play a significant role in the Australian trucking industry.

In January 2022, the ATA in partnership with the Electric Vehicle Council, released the policy report *Electric trucks: Keeping shelves stocked in a net zero world* (attached). This report was based on a series of industry workshops, including trucking operators, truck manufacturers, and stakeholders involved in delivering electric truck recharging infrastructure.

The report highlighted that—

- there are a range of benefits to deploying electric trucks, including—
  - reducing emissions
  - lowering operating costs
  - improving urban freight
  - improving health and safety outcomes
  - meeting customer sustainability priorities
  - delivering fuel security
- the trucking industry faces a range of barriers to uptake of electric trucks, including—
  - limited model availability

- higher upfront vehicle costs
- restrictive vehicle design rules
- lack of charging infrastructure
- cost of installing charging infrastructure
- limited consumer awareness
- Australia needs a national strategy to accelerate uptake, including regulatory reform, financial incentives, and investment in infrastructure.

Australia's truck fleet is made up of approximately 500,000 rigid trucks and 100,000 articulated trucks. Around two thirds of the freight task for rigid trucks is in urban regions, whilst around two thirds of the freight task for articulated trucks is in non-urban regions. Rigid trucks are smaller, carry less freight, and have a higher utilisation in urban areas, providing an immediate investable opportunity for electrification.<sup>7</sup>

Rigid trucks are also contributing a higher growth to transport emissions, above the increase in the size of the freight task. Electric truck adoption in this sector would be significant.

#### Fact box: electric trucks in Australia



#### Electric trucks being prepared for delivery to Australian trucking operators

(Image credit: Volvo Group Australia)

Despite the barriers to their adoption, electric trucks are being deployed by Australian trucking businesses. Leading truck manufacturers such as Volvo Group Australia (pictured) are bringing electric truck models to the Australian market and working with local operators to successfully deploy them into their fleets.

The National Electric Vehicle Strategy must address these barriers to broaden the electric model range and increase market volume, by reforming Australian Design Rules, implementing a purchase incentive, and investing in recharging infrastructure to give trucking businesses the freedom to choose this leading truck technology.

The barriers identified by the ATA/EVC electric trucks policy report are holding back electric truck model range and volume – restricting the choices available to Australian trucking businesses.

<sup>7</sup> Austroads. [Options for managing the impacts of aged heavy vehicles](#). April 2021. 13, 14.

## **Hydrogen fuel cell electric trucks**

In addition to battery electric trucks, hydrogen fuel cell electric trucks will play a critical role in Australia's trucking industry. These vehicles are expected to have a longer range and shorter refuelling time and be more suitable for heavier transport tasks.

However, for most truck manufacturers hydrogen fuel cell electric truck models are not expected to enter series production until later this decade and the point of price parity between hydrogen and diesel trucks is uncertain, and highly dependent on the cost of producing green hydrogen.

## **What the National Electric Vehicle Strategy should do**

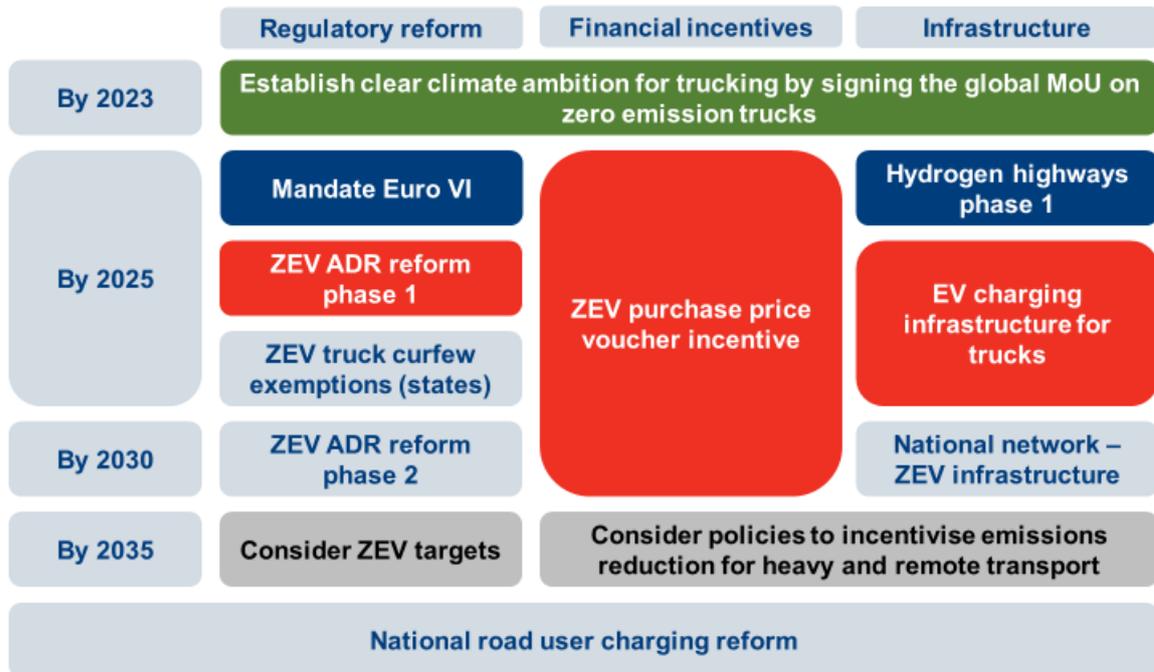
The National Electric Vehicle Strategy should seek to accelerate take up of zero emission trucks – both battery electric and hydrogen fuel cell electric.

The choice of the best zero emissions truck technology is ultimately dependent on the transport use case – including consideration of the route, weight, and flexibility required. Trucking operators are best placed to choose the best truck technology for their freight task.

Sections 5-12 of this submission set out the measures that the ATA considers should be included in the strategy.

## 5. Incorporating trucking into the National Electric Vehicle Strategy

The Australian Government should incorporate trucking into the National Electric Vehicle Strategy. The trucking elements of the strategy should have clear timelines and include the following policy reform elements—



This strategy would build on the existing climate leadership of the Australian Government – including existing commitments to mandate Euro VI and equivalent emission standards and implement funding for hydrogen refuelling infrastructure.

Key priority reforms which need to be addressed by the Australian Government in the strategy include—

- signing the global memorandum of understanding on zero emission trucks (section 6)
- immediate reforms to Australian Design Rules to enable zero emission trucks, including increased width and mass (section 7)
- introducing an upfront purchase price incentive for zero emission trucks (section 8)
- rolling out electric truck charging infrastructure, including support for depots and locations where electric trucks will need to recharge, and investment in public fast charging infrastructure for electric trucks in key urban and freight locations (section 9)
- reforms to road user charging (section 10).

### Recommendation 1

The National Electric Vehicle Strategy should prioritise the accelerated take up of zero emission trucks.

## 6. Climate leadership – the global zero emission truck MoU

The Australian Government should sign the Global Memorandum of Understanding (MoU) for Zero Emission Medium and Heavy Duty Vehicles.

The ATA has formally endorsed the MoU.

The MoU calls for 100 per cent of medium and heavy duty vehicle sales to be zero emissions by 2040, with an interim target of 30 per cent by 2030. The agreement has been signed by 16 nations, including New Zealand, the United Kingdom and Canada.<sup>8</sup> Canada has a transport task with geographical similarities to Australia.

The Global MoU sets a level of ambition and does not represent a regulated cap on vehicle sales. The agreement recognises that the adoption of zero emission trucks might require different approaches and enabling conditions in different parts of the world.

By signing the agreement, the Australian Government would be signing up to work with other leading nations and markets on identifying viable pathways and supportive implementation action.<sup>9</sup> Setting clear and unified targets is a critical step to transform the market. It will lay the foundation for strong policies and accelerate work already underway to build and deploy the first wave of zero-emission trucks, vans and buses.<sup>10</sup>

### Recommendation 2

The Australian Government should sign the Global Memorandum of Understanding (MoU) for Zero Emission Medium and Heavy Duty Vehicles to establish clear climate leadership and momentum for the trucking industry.

## 7. Immediate regulatory reform

The ATA/EVC electric truck report sets out a number of regulatory reform priorities—

- mandating Euro VI emission standards
- reforming Australian Design Rules (ADRs) for zero emission trucks
- exempting zero emission trucks from urban truck curfews.

The Australian Government has made a commitment to mandating Euro VI, or the equivalent US/Japanese standards, and has acknowledged the need for reform to mass limits and truck width to ensure there is no productivity penalty.<sup>11</sup> The ATA supports this commitment.

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<sup>8</sup> Global commercial vehicle drive to zero. 2021. [Global memorandum of understanding on zero-emission medium- and heavy-duty vehicles](#).

<sup>9</sup> [Memorandum of Understanding on Zero Emission Medium and Heavy Duty Vehicles](#). 1-2.

<sup>10</sup> CALSTART. [Global roadmap for reaching 100% zero-emission medium- and heavy-duty vehicles by 2040](#). June 2022. 3.

<sup>11</sup> DITRDC. [Questions and answers on the new ADR 80/04](#).

In addition to the Euro VI ADR reform process, the ATA/EVC report and industry workshops identified a clear need for ADR reforms to accelerate the take up of zero emission trucks. These include—

- aligning width rules with international markets
- implementing a one tonne mass concession for electric and zero emission vehicles.

**These ADR reforms are a high priority and together with mandating Euro VI should be implemented by 2025.**

Australia's 2.5 metre truck width rule is out of step with international markets. The ATA supports increasing truck and trailer width to 2.6 metres to deliver clear benefits for—

- load restraint and work health and safety
- refrigerated vehicle efficiency
- roll stability
- access to the latest international technology and zero emission vehicles
- reducing the cost of redesigning European and North American trucks for the Australian market.<sup>12</sup>

**It is vital that new width rules are applied to both trucks and trailers. Leaving trailers out of the reform would undercut the improvements to productivity.**

With zero emission truck technology still being developed and deployed, it is highly likely that further amendments to ADRs may be needed. The development of hydrogen fuel cell electric vehicles, for example, will be critical to determining how this new technology is integrated into vehicle design and the potential impacts on productivity. The ZEV ADR reform process should include ongoing consultation with industry, with a view to implementing a second phase ZEV ADR reform package dependent on further technology development.

### **Recommendation 3**

The Australian Government should implement an immediate reform package for zero emission truck vehicle design rules, including increased width and a zero emission heavy vehicle mass concession, and commit to further reform by 2030.

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<sup>12</sup> For more information, see the [ATA submission to the Safer Freight Vehicles Discussion Paper](#). June 2021.

## 8. Financial incentives

The ATA/EVC electric truck report and industry workshops identified the upfront higher price of electric trucks as a key barrier preventing their take up.

This aligns with international experience. CALSTART has reported that—

High incremental cost is cited by fleet purchases as the prime barrier preventing clean vehicle purchases. Incentives for the purchase of medium- and heavy-duty commercial vehicles are needed to help create a robust, sustainable market.<sup>13</sup>

Additionally, the Road Freight Zero report found that purchase subsidies would improve the zero emission truck business case by improving the total cost of ownership comparison with diesel trucks.<sup>14</sup>

Globally, a range of purchase price incentives now exist. For example, the CALSTART voucher incentive program (VIP) model has been established in California and some other US locations. Under this model—

Public funds are used to reduce the incremental cost between a conventionally-fueled vehicle and an alternative fuel vehicle. Caps for each category of vehicle may set an upper limit of public funds for each vehicle project. Dealer networks help fleets navigate the VIP process and take on the financial responsibility of completing voucher redemptions. Fleets see a lower purchase cost, while dealers receive full price for the vehicles because public funds make up the difference between the original price and the reduced voucher price.<sup>15</sup>

A voucher incentive scheme has clear benefits—

A VIP is a well-structured, highly transparent tool that government agencies can use to attract industry participants, engage fleets, and distribute public funding efficiently, equitably and directly to clean vehicle projects by reducing technology costs at the point of purchase.<sup>16</sup>

The ATA considers that a zero emission truck purchase incentive should be—

- available at the point of sale
- broadly accessible
- cover at least 50 per cent of the price difference between ZEV and equivalent ICE truck models.

Without a purchase incentive, the higher upfront price burden of zero emission models will need to be met by trucking businesses, whilst the benefits from this investment will be spread between the business and the wider community.

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<sup>13</sup> CALSTART. [Voucher Incentive Programs: A Tool for Clean Commercial Vehicle Deployment](#). July 2019. ES-1.

<sup>14</sup> World Economic Forum. [Road Freight Zero: Pathways to faster adoption of zero-emission trucks](#). October 2021. 17.

<sup>15</sup> CALSTART. 2019. ES-1.

<sup>16</sup> CALSTART. 2019. ES-1.

In light of the public benefit from industry investment in zero emission trucks, and the need to accelerate the reduction in transport emissions, there is a strong case for public investment to accelerate the transition.

A purchase price incentive of 50 per cent of the price difference between ZEV and conventional trucks would be a reasonable, technology-agnostic policy measure which would establish a natural phase out of public subsidy.

Zero emission technology will become more cost effective as the technology develops and production scales up. The International Council on Clean Transportation (ICCT) estimates that—

- the cost of battery electric truck components will fall 40 per cent from 2020 to 2030, including a 78 per cent reduction in motor, inverter and transmission costs and a 50 per cent reduction in battery pack costs
- the cost of hydrogen fuel cell electric truck components will fall 23 per cent from 2025 to 2030, including a 30 per cent reduction in fuel cell propulsion system costs and a 21 per cent reduction in hydrogen storage system costs.<sup>17</sup>

As the higher cost of zero emission truck technology reduces, the cost of a 50 per cent subsidy would also fall.

#### **Recommendation 4**

The Australian Government should implement a truck purchase price incentive of 50 per cent of the higher price differential for zero emission truck models.

## **9. Investing in infrastructure**

The provision of zero emission truck energy infrastructure, including both electric truck recharging and hydrogen electric truck refuelling infrastructure, will be a key enabler for the transition to zero emission trucks.

This was a key finding of the ATA/EVC electric trucks report and industry workshops.

Again, the findings of the ATA/EVC industry workshops align with international experience. The Mission Possible analysis identified that—

Infrastructure availability will be a key enabler of the transition.

The supply chain for diesel – the infrastructure to produce and transport it – is very mature. There is a global system of oil wells, refineries, pipelines, ships, and filling stations for delivering diesel. In comparison, the infrastructure for competing zero-carbon technologies is not well developed.<sup>18</sup>

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<sup>17</sup> ICCT. [A meta-study of purchase costs for zero-emission trucks](#). February 2022. 14, 15.

<sup>18</sup> Mission Possible Partnership. 2022. 25.

The development of zero emission truck energy infrastructure will require—

- electric truck recharging infrastructure
- consideration of and investment in appropriate electricity grid upgrades, as required
- continuing the shift to renewable electricity
- green hydrogen refuelling infrastructure
- green hydrogen production and transport.

The impact of electric trucks on the electricity grid will be dependent on specific use cases, locations and existing grid infrastructure. Whilst fast charging of electric trucks is more likely to require grid enhancements, not every electric truck and not every charge will be with fast chargers. Back to base operations, on a slower charge overnight, will have a smaller impact on the grid. Fast chargers can also be expensive to install for individual businesses.

For hydrogen refuelling, a key consideration must be lowering the cost of hydrogen. Green hydrogen production often uses an electrolyser, requiring renewable electricity and water.<sup>19</sup> Co-locating production and refuelling infrastructure can lower the cost of hydrogen as a fuel. Whilst the cost of electrolysers is likely to come down as production scales up, government support in the early roll out of hydrogen infrastructure will be critical.

The ATA supports and recommends co-location of infrastructure where possible. Truck energy infrastructure should prioritise co-location with driver rest facilities and truck parking. Whilst co-location of hydrogen refuelling and electric recharging infrastructure might be desirable, it is also worth noting that the site considerations may be quite different. For hydrogen in particular, the focus of investment must be on lowering the cost of hydrogen as a fuel.

The ATA recommends that the National Electric Vehicle Strategy should, for trucks—

- scale up support for truck depots, warehouses, truck dealerships and customer sites to invest in electric truck recharging infrastructure
- invest in public electric truck fast recharging infrastructure for trucks. The initial focus should be on key urban and freight locations. These locations are likely to be different to the best locations for car rechargers.
- by 2030, expand the investment in public electric truck recharging infrastructure and for hydrogen highways refuelling infrastructure to ensure zero emission truck energy infrastructure is accessible across the National Land Transport Network.

The ATA welcomes the Government's budget decision to spend \$89.5 million over six years from 2022-23 for its Hydrogen Highways initiative.

### **Recommendation 5**

The National Electric Vehicle Strategy should prioritise investment in electric truck recharging infrastructure and hydrogen truck refuelling infrastructure and by 2030 ensure that zero emission truck energy infrastructure is accessible across the National Land Transport Network.

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<sup>19</sup> Australian Hydrogen Council. [Unlocking Australia's hydrogen opportunity](#). September 2021. 19.

## 10. Road user charging

The consultation paper says—

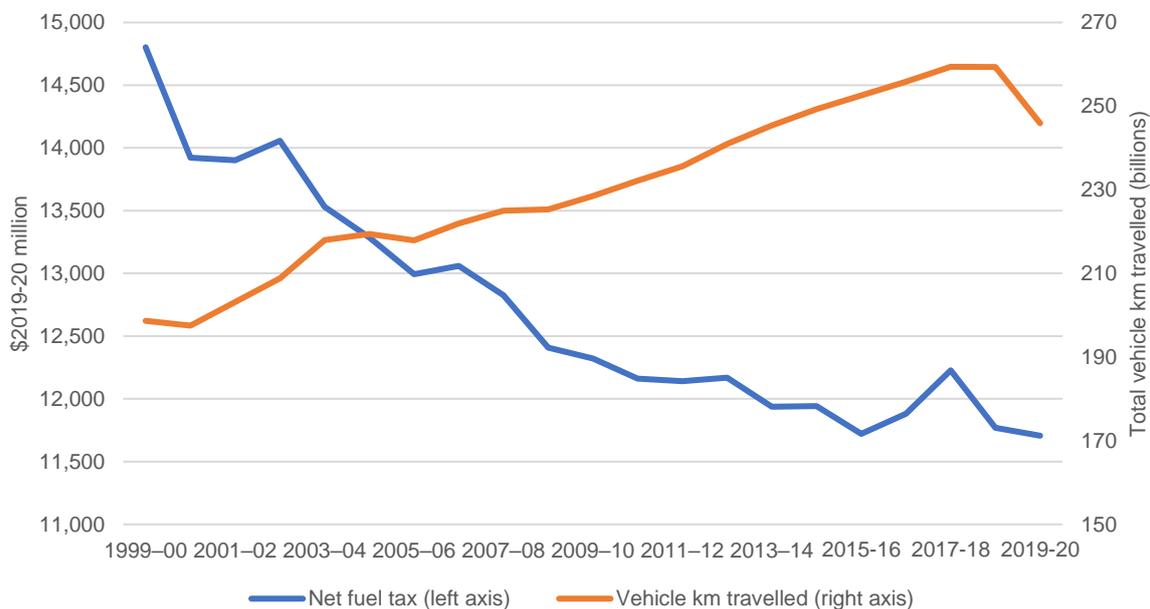
Planning is also required as future fuel excise revenue declines from reduced consumption of petrol and diesel. While this revenue is not currently earmarked for expenditure on roads, it is an important source of funding. In the long run, Australia will need a more sustainable and fair way to pay for roads.

We already have a system for setting nationally consistent charges to recover the cost of road use related to heavy vehicles. That system has been in place since 1996. It is subject to a cross-government reform proposal to improve the way that money is invested ('Heavy Vehicle Road Reform'). Part of that reform is investigating more direct user charging options for heavy vehicles, including electric heavy vehicles.<sup>20</sup>

The lack of action by governments on reforming road user charges over many years – with endless and repeating consultation cycles that go nowhere – means that our road user charging system is broken.

The most important problem is that the Commonwealth's net road related fuel excise revenue is eroding due to improvements in vehicle fuel efficiency, despite the increasing number of kilometres that Australian vehicles travel (figure 5).

**Figure 5: Net road-related fuel excise revenue and vehicle km travelled, 1999-00 to 2019-20<sup>21</sup>**



<sup>20</sup> Department of Climate Change, Energy, the Environment and Water, [National Electric Vehicle Strategy: Consultation paper](#), September 2022, 14.

<sup>21</sup> Sourced from BITRE, 2021, tables 3.3a and 6.3. 'Net road related fuel excise' is gross fuel excise revenue net of fuel tax credits and a small adjustment for the excise paid on off-road fuel use that is not claimed back as credits. See BITRE, 2021, 241, figure A2.

With electric vehicle sales making up 4.4 per cent of the market in August 2022, the erosion in net fuel tax revenue can only be expected to continue.<sup>22</sup>

For heavy vehicles, the existing PAYGO cost base for determining road user charges is now meaningless. The cost base uses state governments' road expenditure figures without audit or appraisal, despite the industry's long held concerns.<sup>23</sup> It requires trucking operators to pay for the cost of road investments which are not freight priorities, and there is no funding certainty for road authorities to make optimal lifecycle decisions.<sup>24</sup>

### State-based road user charging for EVs

In the absence of national road user charges reform, the proliferation of state-based road user charges for electric vehicles will further undermine the goal of having a transparent, sustainable and fair system for funding Australia's road network.

Victoria has become the first state to establish a road user charge scheme for light vehicles. The scheme imposes a per kilometre charge on non-excluded electric, hydrogen and plug-in hybrid electric vehicles registered in Victoria with a gross vehicle mass (GVM) of 4.5 tonnes or less, including cargo vans and light rigid trucks.<sup>25</sup>

Whilst the Victorian scheme only applies to Victorian registered vehicles, it applies to all their travel on 'specified roads' – including highways outside Victoria.<sup>26</sup> This imposes an inconsistent tax burden on businesses operating identical vehicles on the same route, even if those vehicles are not travelling in Victoria.

The ATA is concerned that these state-based schemes will be extended to heavy vehicles. This is due to the public policy and revenue arguments that the state of Victoria has put forward,<sup>27</sup> and the precedent set by New Zealand. Electric vehicles are exempt from the NZ road user charging system, but the exemption for electric light vehicles will only last until 31 March 2024.<sup>28</sup> The exemption for electric heavy vehicles will end on 31 December 2025.<sup>29</sup>

The complexity and compliance burden will only increase as other states pass similar charging legislation or their legislation comes into effect.

For example, road user charges under the *Electric Vehicles (Revenue Arrangements) Act 2021* (NSW) will become payable on the earlier of 1 July 2027 or when battery electric vehicles amount to 30 per cent of new vehicle sales in NSW.<sup>30</sup>

This state-led policy confusion for business is not limited to Victoria and NSW. South Australia legislated to introduce an electric vehicle road user charge from 2027, but following

<sup>22</sup> Federal Chamber of Automotive Industries, [FCAI releases new car sales figures for August 2022](#). Media release, 5 September 2022.

<sup>23</sup> NTC, [Heavy vehicle charges determination: consultation regulation impact statement](#). June 2021, 32.

<sup>24</sup> Deloitte Access Economics. [Economic analysis of potential end-states for the heavy vehicle road reform](#). June 2017. vii-viii.

<sup>25</sup> Zero and Low Emission Vehicle Distance-based Charge Act 2021 (Vic). s 3 (definition of 'ZLEV').

<sup>26</sup> s 3 (definition of 'specified road' para (d)).

<sup>27</sup> State of Victoria, 'Affidavit of Chris Barrett, Deputy Secretary of Department of Treasury and Finance.' Affidavit in *Vanderstock & Anor v State of Victoria*, 14 January 2022. Special case book, Annexure SC-4. 141-146.

<sup>28</sup> *Road User Charges (Exemption Period for Light Electric RUC Vehicles) Order 2012* (NZ) SR 2012/140.

<sup>29</sup> *Road User Charges (Exemption Period for Heavy Electric RUC Vehicles) Order 2017* (NZ) LI 2017/172.

<sup>30</sup> *Electric Vehicles (Revenue Arrangements) Act 2021* (NSW) sch 1 (definition of 'relevant date').

a change of government, the South Australian Government is now seeking to repeal this scheme.<sup>31</sup> In contrast, Western Australia has recently committed to introduce an electric vehicle road user charge from 2027.<sup>32</sup> In yet another potential variation, the Victorian opposition has committed to pausing the Victorian scheme should they form government at the upcoming state election.<sup>33</sup>

With state-based road user charges, a business with EVs registered in more than one state would have to submit distance evidence and pay invoices to each state government. There is no guarantee that the states with electric vehicle charging schemes would accept the same distance evidence or have the same arrangements for deducting distances travelled on private roads.

There is also no guarantee that the per kilometre rates would be the same. The Victorian and NSW schemes were legislated with the same per kilometre rates for 2020-21: 2.5 cents per kilometre for electric and hydrogen vehicles and 2.0 cents per kilometre for plug-in hybrid electric vehicles.<sup>34</sup>

Even though the Victorian and NSW schemes started with the same rates, they have already started and will continue diverging. This is because—

- the respective state parliaments may of course choose to set different rates
- the Victorian minister could, before the start of a financial year, determine not to index the Victorian ZLEV charge rates for that year.<sup>35</sup> The NSW minister does not have this power
- the Victorian and NSW rates are calculated and indexed using different formulas, inputs and rounding. The Victorian rates for each financial year are indexed to the change in the Melbourne All Groups CPI for the previous December quarter and rounded to one decimal place.<sup>36</sup> The NSW electric vehicle rate for each financial year is indexed to the change in the Sydney All Groups CPI for the previous March quarter and rounded to three decimal places.<sup>37</sup> The NSW plug-in hybrid electric vehicle rate is then calculated as 80 per cent of the electric vehicle rate, rounded to three decimal places.<sup>38</sup> Due to these differences, the per kilometre rates for both electric and plug-in hybrid electric vehicles would already be different, if the NSW charges were payable.

<sup>31</sup> [South Australian Government seeking to repeal electric vehicle tax plans](#). 24 May 2022. Published by Whichcar?

<sup>32</sup> [WA Government announced \\$60 million EV package, road user charge from 2027](#). 10 May 2022. Published by Wheels.

<sup>33</sup> Bloch, Michael. [VIC Libs pledge to pause electric vehicle tax](#). 25 October 2022.

<sup>34</sup> *Zero and Low Emission Vehicle Distance-based Charge Act 2021* (Vic), s 8; *Electric Vehicles (Revenue Arrangements) Act 2021* (NSW), s 12(1). Under the NSW Act, plug-in hybrid electric vehicles are charged at 80 per cent of the electric vehicle rate. In 2020-21, this was equivalent to the Victorian plug-in hybrid rate, 2.0 cents per litre.

<sup>35</sup> s 9(5).

<sup>36</sup> s 9(2).

<sup>37</sup> *Electric Vehicles (Revenue Arrangements) Act 2021* (NSW), s 12. Section 12(4) references the Sydney All Groups CPI 'for the most recent quarter, published before the start of the financial year by the Australian Bureau of Statistics.' In practice, this is the March quarter.

<sup>38</sup> *ibid*, s 13.

Instead of wishing and hoping and thinking that state legislation will deliver consistent and compatible results, the best way to establish a uniform road user charging system is for the Australian Government to legislate to establish one.

In its January 2022 report on road pricing, the House of Commons Transport Committee noted that—

The taxes imposed by fuel duty and vehicle excise duty are increasingly duplicated by local schemes that charge motorists for entering congestion zones and clean air zones. The growing patchwork of devolved schemes may make it impossible to deliver a national road pricing scheme, because the simultaneous operation of local and national road pricing schemes would create confusion and unfair double taxation.<sup>39</sup>

Additionally, local replacements for a declining national tax risk being unworkable and inequitable—

The devolution of road pricing could lead to the introduction of clunky, unconnected schemes that charge users the same price for driving one mile into the zone as those who drive across it for hours in a day. The more regional schemes that are created, the harder it will eventually be for the Government to implement a functional national system. Fuel duty and vehicle excise duty are Treasury taxes that require a national-level replacement rather than a patchwork of incongruous local schemes. Indeed, the introduction of a range of more-or-less-generous local road pricing schemes would risk engendering regional inequality and driving economic disadvantage.<sup>40</sup>

The same is true of state schemes in Australia's federal system.

### **Recommendation 6**

The Australian Government should develop a national road user charging scheme which ensures sustainable and fair funding for the road network as Australia transitions to zero emission vehicles.

## **11. Regulatory schemes**

The consultation paper seeks feedback on the possibility of implementing fuel efficiency standards for heavy vehicles and references the Californian Advanced Clean Trucks regulation that regulates minimum sales levels for zero emission heavy vehicles.

Additionally, low emission zones have been part of the national conversation recently.

This form of regulatory schemes can be used to bring zero emission truck models into the market. At the same time, these schemes vary by location and need to be calibrated to the market and industry they are being applied to.

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<sup>39</sup> House of Commons Transport Committee, [Road pricing](#) (House of Commons Paper No 789, Session 2021-22), 3.

<sup>40</sup> *Ibid*, 10.

As set out in this submission, the ATA considers that the immediate priority for zero emission truck policy must be—

- regulatory reform to Australian Design Rules
- implementing a zero emission truck purchase incentive
- investment in zero emission truck energy infrastructure.

Proposals for regulatory schemes are complex. If proposed and implemented before addressing the immediate priorities identified by the ATA, they would risk dominating the public policy agenda and not achieving the progress which is required on ADRs, purchase incentives, and zero emissions energy infrastructure.

At the same time, if the ATA's immediate priorities are not addressed then regulatory measures would risk increasing the price of Euro VI trucks to achieve zero emission sales. For transport use cases which do not yet have a zero emission vehicle option, this would put up the cost of cleaner vehicles with no alternative.

Ideally, the transition to zero emission trucks should be accelerated right now to ensure the transition after 2035 is not steep. Governments must address the barriers to zero emission trucks which have been identified by the ATA and industry. Australia will then be better placed to consider if heavy vehicle zero emission mandates will be needed by 2035.<sup>41</sup>

Low emission zones are a decision for state and territory governments in consultation with their local trucking industry and ATA member associations.

## **12. Manufacturing**

The consultation paper raises questions around expanding our existing domestic heavy vehicle manufacturing and assembly capability.

Australia has a proud history of manufacturing trucks and trailers – which continues to this day.

Major truck manufacturers operate in a global marketplace – and most leading truck manufacturers now have clear commitments to reducing carbon and increasing zero emission truck sales.

Domestic manufacturing of zero emission trucks will require a domestic market. Implementing the strategy set out in this submission would assist in strongly establishing a domestic zero emission truck market. Reforms to ADRs are particularly important.

Additionally, consideration will need to be given to establishing a local battery supply chain. Batteries are both expensive and difficult to transport to Australia due to the size, weight and materials of an electric vehicle battery. This means that batteries are often not allowed to be shipped as air freight, meaning any domestic electric vehicle manufacturer would be reliant on long, expensive shipping supply chains.

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<sup>41</sup> The MPP analysis modelled a pathway with a required sales trajectory for zero emission trucks commencing from 2035. 2022. 35.

### **13.ATA contact**

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