

# Transport and Infrastructure Net Zero Consultation Roadmap

## Take the survey

Department of Climate Change, Energy, Environment and Water

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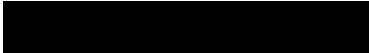
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- 1 Confirm that you have read and understand this privacy notice.  
Yes
- 2 Please indicate how and if you want your submission published.  
Public
- 3 Published name  
Heavy Vehicle Industry Australia
- 4 Confirm that you have read and understand this declaration.  
Yes
- 5 First name  
Adele
- 6 Last name  
Lausberg
- 7 Email  


- 8** Phone  
Not answered
- 9** Who are you answering on behalf of?  
Organisation
- 10** Organisation name  
Not answered
- 11** What best describes you or your organisation?  
Not answered
- 12** What sector do you represent?  
Not answered
- 13** What state or territory do you live in?  
Queensland
- 14** Postcode  
4073
- 15** What area best describes where you live?  
City
- 16** 1. Do you support the proposed guiding principles?  
Not answered
- 17** 1.1 Please add details to your response.  
Not answered
- 18** 2. Do you support the use of the avoid-shift-improve framework as a tool to identify opportunities for abatement?  
Not answered

- 19** 2.1 Please add details to your response.  
Not answered
- 20** 3. Do you agree the development of a national policy framework for active and public transport will support emissions reduction?  
Not answered
- 21** 3.1 Please add details to your response.  
Not answered
- 22** 4. What should be included in a national policy framework for active and public transport and how should it be developed?  
Not answered
- 23** 5. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the movement of people contributes to transport emissions reduction?  
Not answered
- 24** 6.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure that the movement of goods contributes to transport emissions reduction?  
Not answered
- 25** 6.2. How would these actions address the identified challenges and opportunities for emissions reduction in the movement of goods?  
Not answered
- 26** 7. Do you agree with the proposed net zero pathway for light road vehicles?  
Not answered

- 27 7.1 Please add details to your response.  
Not answered
- 28 8. The Australian Government is currently developing an Australian New Vehicle Efficiency Standard and has already begun to implement actions in the National Electric Vehicle Strategy.8.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce light vehicle emissions?  
Not answered
- 29 8.2 How would these actions address the identified challenges and opportunities to reduce light vehicle emissions?  
Not answered
- 30 9. Do you agree with the proposed net zero pathway for heavy road vehicles?  
Not answered
- 31 9.1 Please add details to your response  
Not answered
- 32 10. The proposed pathway for heavy road vehicles relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels.Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.  
Not answered
- 33 10.1 Please add details to your response. Why did you rank them in that order?  
Not answered
- 34 11. What role should low carbon liquid fuels play in the heavy vehicle

## decarbonisation?

HVIA provided feedback to the recent LCLF Consultation Paper from DoITRDCA.

Electrification and the use

of hydrogen may not be immediately viable for some sectors including heavy road freight transport which

opens up opportunities for LCLFs to play a role in reducing heavy vehicle emissions.

Renewable diesel already largely has available infrastructure in place to distribute the fuels either through

adding dedicated bowsers in existing service stations or through incorporating it in blended fuels. This

provides a potential advantage over BEVs and hydrogen in remote locations.

However, the impact of renewable diesel on CO2 emissions will be determined by its cost and availability.

HVIA notes DoITRDCA's estimation that renewable diesel may be twice the cost of conventional diesel. The

only operators likely to be willing to use pure renewable diesel at these costs are likely to be a limited

number of operators that have strong net zero targets or whose customers have strong net zero targets.

Importantly, blends containing small percentages of renewable diesel are only marginally more expensive

that conventional diesel.

HVIA strongly supports policy to encourage the development of local LCLF feedstock production and

refining industries, noting the CSIRO findings that highlight Australia's natural geographic and other existing

advantages. In that context, it would be a considerable missed opportunity if Australia were to remain a

limited LCLF feedstock producer and exporter, only to continue to import both conventional fuels and LCLFs

in the future.

Consistent with the government's science-aligned approach, it is imperative that investment in LCLFs be

directed to sectors capable of delivering the largest and fastest emissions cuts. This is not aviation. The

complete decarbonisation of air travel would deliver a less emissions reduction than decarbonised road

freight could deliver. Aviation may be an obvious source of emissions and a hard-to-abate sector, but it is

not capable of achieving the level of contribution required under current targets. In contrast, renewable diesel that is both affordable and readily available could immediately reduce the 22 per cent share of transport emissions attributable to trucks, plus a portion of light vehicle emissions as well. In-line with the above comments regarding availability and cost, HVIA strongly encourages policy and incentives that support directing local feedstocks to the production of renewable diesel for the road freight transport sector if feedstock availability is low.

35 **12. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce heavy vehicle emissions?**

There is an urgent need for the creation of infrastructure to encourage the take-up of battery electric vehicles. This is an area which will require Government support and leadership. HVIA notes the efforts of Department of Climate Change, Energy, the Environment and Water (DCCEEW) in looking at developing Minimum operating standards for Government supported public electric vehicle charging infrastructure, and provided comment to the discussion papers related to that issue expressing our disappointment that Heavy Vehicle Issues were not included in the initial draft standard. If the Government wants to support the staged roll out of electric heavy vehicles we need a plan for the progressive development of the required charging infrastructure. This plan needs to be clearly articulated and funded and supported by appropriate legislation. This will allow operators confidence that they can reliably access the energy required to conduct their business.

Government supports the heavy vehicle sector in the operation and trial of hydrogen heavy vehicles.

How:

- Funding be made available by the Federal Government through a joint effort from DITRCA and

DCCEEW to plan for and support projects aiming to create hydrogen corridors on major freight routes.

- Government provide transparency on status of hydrogen refuelling projects.
- Explore fleet packages to encourage larger fleet adoption.
- Recognise H2 ICE as a zero-emission technology.
- Ensure that any government supported projects for H2 truck refuelling supports 700bar.

In the trucking sector, fuel efficiency must be part of the transition to net zero. Encouraging more efficient operation of the ICE fleet has the capacity to reduce emissions in the short term. Practical information and real-world case studies can help time-poor truck operators understand the benefits to their business in driving down emissions and saving fuel, while the industry transitions to EVs and FCEVs.

36 13. Do you agree with the proposed net zero pathway for rail?

Not answered

37 13.1 Please add details to your response.

Not answered

38 14. The proposed pathway for rail relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels. Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.

Not answered

39 14.1 Please add details to your response. Why did you rank them in that order?

Not answered

40 15. What role should low carbon liquid fuels play in rail decarbonisation?

Not answered

- 41 16. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce rail emissions?  
Not answered
- 42 16.1 How would these actions address the identified challenges and opportunities to reduce rail emissions?  
Not answered
- 43 17. Do you agree with the proposed net zero pathway for maritime?  
Not answered
- 44 17.1 Please add details to your response.  
Not answered
- 45 18. The Australian Government is engaging in consultation as part of the development of the Maritime Emissions Reduction National Action Plan and those consultations will also inform the final Roadmap and Action Plan. 18.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce maritime emissions?  
Not answered
- 46 18.2 How would these actions address the identified challenges and opportunities to reduce maritime emissions?  
Not answered
- 47 19. Do you agree with the proposed net zero pathway for aviation?  
Not answered
- 48 19.1 Please add details to your response.  
Not answered

- 49 20. The Australian Government has already engaged in consultation on aviation decarbonisation through the development of the Aviation White Paper and those consultations will also inform final Roadmap and Action Plan.  
Not answered
- 50 20.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce aviation emissions?  
Not answered
- 51 21. Do you agree with the proposed net zero pathway for transport infrastructure?  
Not answered
- 52 21.1 Please add details to your response.  
Not answered
- 53 22. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce transport infrastructure emissions and ensure that transport infrastructure is ready for and enables low-emission transport modes?  
Not answered
- 54 22.1 How would these actions address the identified challenges and opportunities to reduce transport infrastructure emissions?  
Not answered
- 55 23. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the energy mix is ready to support transport emissions reduction?  
Not answered

56 24. How should the use of low carbon liquid fuels (LCLFs) be prioritised across different transport modes over time to achieve maximum abatement?

Prioritise road freight

Consistent with the government's science-aligned approach, it is imperative that investment in LCLFs be

directed to sectors capable of delivering the largest and fastest emissions cuts. This is not aviation. The

complete decarbonisation of air travel would deliver a less emissions reduction than decarbonised road

freight could deliver. Aviation may be an obvious source of emissions and a hard-to-abate sector, but it is

not capable of achieving the level of contribution required under current targets.

In contrast, renewable diesel that is both affordable and readily available could immediately reduce the 22

per cent share of transport emissions attributable to trucks, plus a portion of light vehicle emissions as well.

In-line with the above comments regarding availability and cost, HVIA strongly encourages policy and

incentives that support directing local feedstocks to the production of renewable diesel for the road freight

transport sector if feedstock availability is low.

57 25. What are the best ways for the Australian Government to work collaboratively with industry, business, governments and communities to implement the proposed pathways?

Education is required, not just for tradespeople, but also for the broader industry on what will be required

for the net zero transition. Different rules across the states and territories have led to different approaches

from the OEMs (original equipment manufacturers), meaning there is a lack of consistency.

We acknowledge the announcement of funding for the Canberra Institute of Technology's Electric Vehicle

Centre of Excellence as well as the extension and expansion of the New Energy Apprentice scheme. These

are measures which will support the net zero transition in transport.

58 25.1 What are good domestic or international examples of partnership and collaboration on transport and transport infrastructure emissions reduction that could inform the final Roadmap and Action Plan?

Not answered

59 25.2 What opportunities can Government leverage to show leadership in Australia and internationally?

Government has an important role in providing leadership and coordination in relation to a range of

activities critical to the transition. It is also important that these initiatives are consistently implemented as part of a broader plan.

National Roadmap

DITRCA's Roadmap will be important in providing national leadership on the transition.

As previously

mentioned, harmonisation is needed across Australia to ensure that the state, territory, local and federal

government are all working together. This will also need to include prioritisation across different market segments.

Mass and access changes

Ministers have agreed to provide axles mass concessions for LZEHVs but HVIA is concerned that there is a

lack of consistency in approaches from the states and territories.

60 26. What measures and metrics should be used to evaluate the final Transport and Infrastructure Net Zero Roadmap and Action Plan?

Not answered

61 26.1 What other data and evidence could governments use and how could this offer further insights on the pace, scale and location of transport emissions reduction pathways?

At present, reliable and regular reporting of data related to LZEHVs is limited. The Bureau of Infrastructure

and Transport Research Economics (BITRE) Road Vehicle Entry and Recall monthly statistics of vehicles do

not currently include motive type (i.e. LPG, electric, fuel-cell).

It is also vital that studies completed by government (all levels, but particularly state and local) into

pavement wear and various infrastructure and transport related assets are shared with industry to improve

general knowledge across the sector. This will allow for faster innovation and targeting of problem areas.

62 27. Do you have any feedback on the proposed review process?

Not answered

63 28. Do you have any further feedback on the Consultation Roadmap and proposed pathways?

Not answered

64 28.1 Is there anything missing? Are the sections appropriately integrated? Is the Roadmap appropriately ambitious?

Not answered

65 29. Is there any further information or documentation that you wish to be considered with your submission?

Not answered

66 Would you like to upload a document?

Yes

67 Have you removed any identifying information from your submission?

Yes

68 Upload a submission

HVIA\_Net\_Zero\_Roadmap\_Submission.eb7c13e6\_Redacted.pdf

69 Upload a submission

Not answered

70 Upload supporting file  
Not answered

71 Upload supporting file  
Not answered



**HEAVY VEHICLE**  
INDUSTRY AUSTRALIA

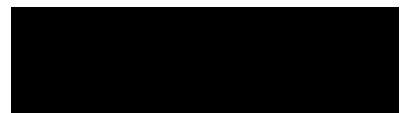


## HVIA Submission

Net Zero Roadmap

**26 July 2024**

Contact:



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## 1. Background

Heavy Vehicle Industry Australia (HVIA) is the peak industry association for Australian manufacturers of trucks and trailers (collectively referred to as heavy vehicles), as well as the dealerships, repairers, suppliers, and service providers that support the entire industry. We represent almost every major truck manufacturer/importer, all of Australia's major trailer manufacturers, and an ever-growing list of their component, equipment and technology providers.

A heavy vehicle is defined in the Heavy Vehicle National Law (HVNL) as a vehicle that has a Gross Vehicle Mass (GVM) or Aggregate Trailer Mass (ATM) of more than 4.5 tonnes. The GVM/ATM of a vehicle is the maximum it can weigh when fully loaded, as specified by the manufacturer.<sup>1</sup> VE

Our 300-plus corporate members collectively employ a local workforce of over 70,000 staff. Our member's interests cover an extensive range of vehicles, starting with 3.5-tonne light commercial trucks, and extending all the way up to Australia's unique 50-metre long, 100-tonne road trains.

Our industry provides some of the world's most efficient, safe, innovative, and technologically advanced vehicles. HVIA seeks to work with government and stakeholders to promote an innovative and prosperous industry that supports a safe and productive heavy vehicle fleet operating for the benefit of all Australians.

## 2. The challenges of the transition to net zero

HVIA is aware that the transport sector is responsible for a significant proportion of Australia's emissions and the road freight in turn makes of a substantial proportion of transport emissions, and that as a result our industry needs to play an important part if government is to meet its emission targets.

HVIA recognises that the transition to net zero is complicated for the heavy vehicle industry due to the unique nature of Australia's heavy vehicles, the age of our fleet, as well as the extreme weather fluctuations we face, and the hard to abate nature of many freight tasks. We also face challenges from the expected growth in the freight task in coming decades, complicated international supply chains, and widespread shortages of skilled workers.

Because of our unique situation Australia does not have an international precedent for many aspects of the transition, particularly for long distances over harsh terrain. We also acknowledge that the average age of the heavy vehicle fleet is 15 years.

To transition as quickly as possible, we need to encourage a broad range of approaches. We will need increased numbers of low and zero emission heavy vehicles (LZEHVs) on our roads, adequate public refuelling and recharging infrastructure, reliable energy supply, increased efficiency in the existing fleet, and readily available and affordable low carbon liquid fuels (LCLF). Even with high rates of uptake of LZEHVs the transition will take time.

Implementing LZEHVs in Australia will require a huge transition, one comparable to when the industry transitioned from horse drawn carriages to ICE vehicles. HVIA wants to ensure that all stakeholders work with our industry on its decarbonisation journey and is harnessing the experience and innovation of our members to resolve issues across regulation, policy, skills and training, and infrastructure.

We support the Department of Infrastructure, Transport, Regional Development, Communications, and the Arts (DITRCA) in developing a Transport and Infrastructure Net Zero Roadmap and Action Plan (hereafter, the Roadmap). HVIA provided preliminary verbal advocacy related to the Net Zero Unit, and we are pleased

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<sup>1</sup> Whilst the definition includes 4.5 tonnes, we also represent vehicles starting from 3.5 tonnes.

to see that some of this has been included in the first draft. We welcome continued consultation with the Net Zero team.

### 3. General Comments

In preparing the below feedback, HVIA consulted with members who are actively working on LZE heavy vehicles (LZEHVs), their necessary infrastructure, and other related initiatives. We have also made submissions to a significant number of relevant consultations, see Appendix 1 for a list.

Our industry's transition to net zero will take time, but more than anything it will take a coordinated and determined effort across industry, all levels of government, and relevant stakeholders. Our industry requires a viable business case to support the transition, suitable infrastructure and a consistent policy and regulatory environment to allow us to make the required investments

In terms of the business case barriers facing truck operators in switching to LZEHVs, they are:

- Low margin businesses
- LZE vehicles cost considerably more than ICE vehicles
- They need a network of charging/refuelling infrastructure
- LZEHVs have less guaranteed access (weight limits differ across states, territories, and local roads)
- LZEHVs have a technical pay-load penalty due to the weight of batteries or fuel cells
- Range anxiety
  - Electric vehicle charging stations/hydrogen refuelling stations often only cater to passenger vehicles, or are not optimally located to support existing high-volume freight routes
  - Aligning charging with statutory driving hours – drivers must manage fatigue, safety, and logbook requirements

We need assistance from Government to address the business case barriers, address the infrastructure issues, and provide a consistent approach to policy and regulation from the states and territories, supported by national leadership. It is also vital that local government be included in the decision-making process as they too have responsibility for roads and bridges.

Consistent policy will also demonstrate to the international community (including OEMs and investors) that Australia is a market open to LZEHVs, thereby increasing options for trucking operators, and potentially bringing the cost of LZEHVs down.

The remainder of HVIA's submission addresses themes drawn from the questions posed in the Roadmap, and offers recommendations. As our membership encompasses a wide range of LZE technologies, we have included references to the broad net zero ecosystem, including (but not limited to) battery electric, hydrogen, and low carbon liquid fuels, all of which have a role to play. HVIA looks forward to working cooperatively with the government to assist the transition of the heavy vehicle industry to a net zero future.

### 4. Electric Heavy Vehicles

There is an urgent need for the creation of infrastructure to encourage the take-up of battery electric vehicles. This is an area which will require Government support and leadership.

HVIA notes the efforts of Department of Climate Change, Energy, the Environment and Water (DCCEEW) in looking at developing *Minimum operating standards for Government supported public electric vehicle*

charging infrastructure, and provided comment to the discussion papers related to that issue expressing our disappointment that Heavy Vehicle Issues were not included in the initial draft standard.

If the Government wants to support the staged roll out of electric heavy vehicles we need a plan for the progressive development of the required charging infrastructure. This plan needs to be clearly articulated and funded and supported by appropriate legislation. This will allow operators confidence that they can reliably access the energy required to conduct their business.

#### HVIA RECOMMENDS

Government develop a comprehensive plan for the roll out of a network of charging infrastructure to support public charging of heavy vehicles.

*How:*

- This plan needs to be funded to support the staged roll out of charging infrastructure to support strategic freight corridors.
- HVIA has provided a summary of the key issues it believes need to be addressed by this plan. This summary is attached as appendix 2 to this submission.
- This plan needs to integrate with DCCEEW standards work and its implementation should be funded by DITRCA and DCCEEW.

## 5. Hydrogen

Our members are currently operating and trialling trucks with a variety of different hydrogen formats (e.g. liquid H<sub>2</sub>, gaseous, H<sub>2</sub> ICE). It is important that H<sub>2</sub> ICE be recognised as a zero-emission technology as it is by the European Union (EU). This technology promises a 99.5% CO<sub>2</sub> reduction and is a potential transition technology to fuel cell.

In 2024 there will be a number of hydrogen fuel cell electric vehicles (FCEV) in commercial operation on Australian roads. Initial trials suggest that FCEV heavy vehicles have some advantages in certain fleet operations (including reduced refuelling times, cyclic battery recharging, and weight advantages).

However, the high cost of vehicles, the limited refuelling infrastructure, and the high price of green hydrogen are significant barriers to the uptake of FCEVs. If Government wishes to improve the uptake of FCEVs it has role to play in encouraging adoption and reducing risk for operations wanting to transition. HVIA notes there is a Hydrogen Highway project underway but understands little about the practical roll-out and current status. Without transparent government support it will be difficult for an Australian hydrogen industry to thrive.

As is the case with electric vehicle charging infrastructure, we need a plan for the progressive rollout of hydrogen refuelling infrastructure. We point to the recent opening of a green hydrogen network on the north island of New Zealand, servicing the major freight routes. This enables hydrogen projects that support the freight task.

In terms of the business case, HVIA recommends that packages encouraging larger fleet adoption will put pressure on retailers to speed up H<sub>2</sub> refuelling roll-out in Australia is a better option than individual vehicle subsidies.

## HVIA RECOMMENDS

Government supports the heavy vehicle sector in the operation and trial of hydrogen heavy vehicles.

### *How:*

- Funding be made available by the Federal Government through a joint effort from DITRCA and DCCEEW to plan for and support projects aiming to create hydrogen corridors on major freight routes.
- Government provide transparency on status of hydrogen refuelling projects.
- Explore fleet packages to encourage larger fleet adoption.
- Recognise H2 ICE as a zero-emission technology.
- Ensure that any government supported projects for H2 truck refuelling supports 700bar.

## 6. Low Carbon Liquid Fuels

HVIA provided feedback to the recent LCLF Consultation Paper from DoITRDCA. Electrification and the use of hydrogen may not be immediately viable for some sectors including heavy road freight transport which opens up opportunities for LCLFs to play a role in reducing heavy vehicle emissions.

Renewable diesel already largely has available infrastructure in place to distribute the fuels either through adding dedicated bowsers in existing service stations or through incorporating it in blended fuels. This provides a potential advantage over BEVs and hydrogen in remote locations.

However, the impact of renewable diesel on CO2 emissions will be determined by its cost and availability.

HVIA notes DoITRDCA's estimation that renewable diesel may be twice the cost of conventional diesel. The only operators likely to be willing to use pure renewable diesel at these costs are likely to be a limited number of operators that have strong net zero targets or whose customers have strong net zero targets. Importantly, blends containing small percentages of renewable diesel are only marginally more expensive than conventional diesel.

HVIA strongly supports policy to encourage the development of local LCLF feedstock production and refining industries, noting the CSIRO findings that highlight Australia's natural geographic and other existing advantages. In that context, it would be a considerable missed opportunity if Australia were to remain a limited LCLF feedstock producer and exporter, only to continue to import both conventional fuels and LCLFs in the future.

Of the various policy options available to government to accelerate the development of a local LCLF feedstock and refining industry, HVIA is open to a wide range of supply and demand side mechanisms, including production/supply incentives and rebates, non-binding targets, and standards such as a low carbon fuel standards.

Notwithstanding, HVIA recommends that any standard expressly consider availability and cost. A standard enacted while supply remains low, and cost is high, will simply add undue operational and financial pressures to the sector. Setting targets that are impractical and/or unachievable will undermine confidence. Additionally, standards enacted whilst supply is limited reduces the flexibility of the industry to offer tailored solutions.

HVIA supports the introduction of a guarantee of origin scheme and certification arrangements to provide the end user with certainty on how the fuel will contribute to their reduction targets.

## Prioritise road freight

Consistent with the government's science-aligned approach, it is imperative that investment in LCLFs be directed to sectors capable of delivering the largest and fastest emissions cuts. This is not aviation. The complete decarbonisation of air travel would deliver a less emissions reduction than decarbonised road freight could deliver. Aviation may be an obvious source of emissions and a hard-to-abate sector, but it is not capable of achieving the level of contribution required under current targets.

In contrast, renewable diesel that is both affordable and readily available could immediately reduce the 22 per cent share of transport emissions attributable to trucks, plus a portion of light vehicle emissions as well. In-line with the above comments regarding availability and cost, HVIA strongly encourages policy and incentives that support directing local feedstocks to the production of renewable diesel for the road freight transport sector if feedstock availability is low.

### HVIA RECOMMENDS

Specific policies focused on incentivising and accelerating local supply of LCLF feedstocks, and renewable diesel refining and supply capabilities.

#### *How:*

- Competitive grant-based production incentives such as Contract for Difference (CfDs), and fixed amounts per production unit.
- Production tax incentives per production unit.
- An appropriate and achievable low carbon liquid fuels standard.
- Existing targeted grant and incentive schemes, including ARENA and the *Future Made in Australia Innovation Fund*.
- Further direct investment in LCLF R&D and commercialisation.

## 7. Fuel efficiency information and technology

In the trucking sector, fuel efficiency must be part of the transition to net zero. Encouraging more efficient operation of the ICE fleet has the capacity to reduce emissions in the short term.

Practical information and real-world case studies can help time-poor truck operators understand the benefits to their business in driving down emissions *and* saving fuel, while the industry transitions to EVs and FCEVs.

Overseas, governments have co-funded programs to encourage improved aerodynamic technologies, low rolling resistance tyres, and eco-driving training. These are proven, readily available technologies that have been widely adopted in the US but lag here in Australia. Wider adoption could also support manufacturing and employment in the local truck industry.

## HVIA RECOMMENDS

Government supports efforts to reduce emissions of the on-road vehicle fleet.

### *How:*

- Standalone funding program supporting fuel efficiency education and technology adoption, in line with the Government's commitment to double energy efficiency.
- Improve data collection on truck/freight sector CO<sub>2</sub> or energy efficiency.
- Regulatory amendments to allow use of powered trailer axles.
- NRF and IGP funding be directed to fuel efficiency measures.

## 8. Performance Based Standards and High Productivity Combinations

Performance-Based Standards (PBS) vehicles have been at the forefront of innovation, providing incentives for operators to adopt higher productivity combinations that move more with less. PBS vehicle typically have a greater ratio of payload to total vehicle mass which improves safety, increased freight productivity, fewer impacts on road infrastructure, and reduce emissions.

For example, in NHVR's *Heavy Vehicle Productivity Plan 2020-2025*, they state that from 2007 to 2019, PBS vehicles reduced CO<sub>2</sub> emissions by over 2.2 billion kilograms

Using electric powered axles and batteries in PBS combinations has the potential to assist in the decarbonisation of freight transport sectors that are not able to make best use of current low and zero emission technologies. They may also offer an easier pathway to decarbonisation, as their capital and operating costs may be lower than others.

By harnessing locally produced electric trailers and hybrid diesel-electric powertrains, PBS vehicles can potentially de-risk and speed up the introduction of low-emission high-productivity vehicles. Coupled with renewable diesel, this approach provides a promising, low-risk transition pathway for Australia's bulk transport industries, particularly in mining, agriculture, and construction.

HVIA is happy to discuss recommendations to increase the uptake of PBS vehicles in further detail if required, but the key elements include improving access regimes and refining the PBS approval framework.

## HVIA RECOMMENDS

Strengthening the PBS Vehicle Approval and Access Framework.

### *How:*

- Consult with HVIA and NHVR on mechanisms to improve uptake of PBS combinations
- Regulatory amendments to allow use of powered trailer axles.
- National Reconstruction Fund and Industry Growth Program funding be directed to powered trailer projects.

## 9. Resources

Addressing the business case issues facing organisations that want to be part of the Net Zero transition is an important role for Government. This could include a well-designed package of financial incentives, or reducing costs/charges/taxes, to encourage the use of net zero vehicles.

Potential strategies for heavy vehicles include:

- Instant asset write-off for LZA heavy vehicles
- Discount debt facility (e.g. through a bank) or aggregated facility/co-financing options through the Clean Energy Finance Corporation (CEFC)
- Rebate / Cash-back at point-of-sale on purchase of LZEHV
  - Government to cover gap between ICE and LZEHV
- Waive Fringe Benefits Tax for LZEHV
- Waive curfew for LZEHV
- Reduce toll / port access fees for LZEHV
- Reduce registration costs
- Stamp duty changes at state government level

Trucks generally have long life cycles and Australia's ageing fleet is one of the oldest in the developed world. Because of their typically fine margins, truck operators need a compelling business case to justify investment in new vehicles, particularly as next-gen vehicles are significantly more expensive and may require additional units given the technical pay-load penalty. Importantly, newer Euro VI trucks also help reduce pollutants emitted by diesel and petrol engines.

We also recommend that support for research and development and commercialisation of projects be provided. We acknowledge that ARENA has already provided significant funding towards decarbonisation in transport, and we would like to see the National Reconstruction Fund (NRF) and the Industry Growth Program (IGP) also support projects in our sector.

Further compounding the difficulties for investment in LZEHV are depreciation concerns, which provide yet another barrier to operators making the switch.

#### HVIA RECOMMENDS

Create a compelling business case to justify investment in LZEHV through funding, incentives, R&D support, and investment.

*How:*

- Bring in exclusive depreciation incentives for LZEHV.
- Repurpose the Instant Asset Write-off to have a separate LZEHV element and provide certainty by setting it in place for five years.
- Create a separate funding pool for rebates on the purchase of LZEHV.
- Create a specialised debt facility through the CEFC.
- Run an awareness campaign on the total cost of ownership benefits of LZEHV.
- Invest in charging / refuelling infrastructure to quash range anxiety.
- Provide support for OEMs seeking to manufacture LZEHV in Australia.
- Encourage the purchasing of new Euro VI vehicles through incentives, which also helps reduce emissions.
- Ensure approved projects under the renewables stream for the NRF and IGP include a minimum of 20% transport decarbonisation projects, to reflect the broader industry's emissions output.
- Guarantee a 2024 funding round for transport within ARENA, with a minimum 22% of the funding dedicated to all types of heavy vehicles, to reflect their emissions output within Australia's total transport emissions.

## 10. Data

At present, reliable and regular reporting of data related to LZEHV is limited. The Bureau of Infrastructure and Transport Research Economics (BITRE) Road Vehicle Entry and Recall monthly statistics of vehicles do not currently include motive type (i.e. LPG, electric, fuel-cell).

It is also vital that studies completed by government (all levels, but particularly state and local) into pavement wear and various infrastructure and transport related assets are shared with industry to improve general knowledge across the sector. This will allow for faster innovation and targeting of problem areas.

### HVIA RECOMMENDS

Make data available to better understand LZE vehicles in Australia.

*How:*

- Include “vehicle motive power source” in the BITRE RAV data.
- State and local governments to share results of any studies related to public infrastructure as it relates to transport.

## 11. Manufacturing and Circularity

### Electric Vehicle and subsystem manufacturing

To promote retention of local heavy vehicle manufacturing it is important to consider the ecosystem and support structures in place. Australian has in-country manufacturing capability, and there is an opportunity to increase production. This could be done through incentivising heavy vehicle OEMs to manufacture LZEHV in Australia.

### Battery Recycling

Batteries have the potential to be repaired, placed into alternative uses such as stationary or portable power sources for non-vehicle related applications, or for recycling to recover valuable materials.

To encourage recycling, we need ‘sensible’ legislation that is harmonised across states and territories around the writing-off of or decommissioning of vehicles and their batteries for correct salvage of these batteries for re-use. This will require recognition of the difference in construction methods between light and heavy vehicles, suitable training for both service staff and emergency service operators, and amendments to written off vehicle register schemes. This needs to be done on a consistent basis nationally.

Our industry is already handling the removal of bus batteries from accident vehicles and repurposing them into a second life as a portable power unit (replacing diesel generators). It is vital that industry is supported in initiatives like this and is consulted on the necessary parameters for a minimum accreditation scheme to ensure quality and safety are uniformly maintained in these processes.

Funding for further research into the longevity and residual value of LZEHV batteries is needed as battery circularity plays an important part in the residual value of a LZEHV and in keeping emissions down. With an average life of a truck being 15 years, we are yet to understand what the financial value of batteries in a LZEHV are after 5, 10 or 15 years. Total cost of ownership is being estimated for these vehicles and this is having an impact on take up due to the high initial capex investment when the overall total cost of ownership (TCO) is unproven. Second life opportunities for LZEHV batteries will also be more far reaching

than for light vehicle batteries. Further intensive research will assist the industry to understand the longer-term financials.

#### **HVIA RECOMMENDS**

Establish a sensible scheme on minimum accreditation to determine how to handle the decommissioning or repurposing of LZEHV, particularly as it relates to EV batteries.

*How:*

- Complete an industry consultation around the definition of both statutory write-offs and economic write-offs for LZEHVs.
- Provide funding for research into the longevity and residual value of LZEHV batteries.

## **12. Role for Government**

Government has an important role in providing leadership and coordination in relation to a range of activities critical to the transition. It is also important that these initiatives are consistently implemented as part of a broader plan.

### **National Roadmap**

DITRCA's Roadmap will be important in providing national leadership on the transition. As previously mentioned, harmonisation is needed across Australia to ensure that the state, territory, local and federal government are all working together. This will also need to include prioritisation across different market segments.

### **Mass and access changes**

Ministers have agreed to provide axles mass concessions for LZEHVs but HVIA is concerned that there is a lack of consistency in approaches from the states and territories.

Consistency in approach and in weight allowances is needed to encourage operators to transition to LZEHVs. This importantly includes local governments in managing heavy vehicle permits related to higher mass for roads and bridges under their jurisdictional control. HVIA acknowledges the work of Transport for NSW in adopting a risk-based approach in managing their road network, and encourages other state road managers to follow suit.

Relatedly, payload and productivity of LZEHVs is often a barrier to overcome when operators are considering a transition away from fossil fuels. This is particularly critical for urban delivery vehicles operating close to the 4.5t gross vehicle mass (GVM) class of truck which can be driven on a car license and are critical for home and local delivery activity across Australia. This cohort is also the most likely to transition quickly and addressing mass concessions for these vehicles will be critical for enhancing uptake.

HVIA acknowledges the work of the NTC in seeking to validate increases to the steer axle mass to 7 tonnes, but government will need to look toward aligning mass limits for vehicle to align them with European standards as part of the transition plan. Australia imports a significant portion of its heavy vehicle fleet, and those vehicles are continuing to increase in weight with the adoption of new technologies. HVIA acknowledges that this may require investment in road infrastructure but argues that this need to be considered in the transition plan.

#### HVIA RECOMMENDS

Government adopt a coordinated approach across Australia to the transition to net zero.

*How:*

- Facilitate implementation of mass concessions to offset the payload impact of the LZEHVs heavier powertrain and to commit to the ongoing review of mass concessions over time.
- Work with state, territory, and local government road managers on ways to coordinate and increase weight limits for LZEHVs.

### 13. Supply of Energy

Recent concerns over the ability of the Australian electricity grid to cope with the existing level of intermittent renewable energy raises concerns over the ability of the grid to cope with large scale transition of the freight task to electric vehicles. It is important for these fleets to be able to reliably charge overnight because they are frequently on the road during the day.

We have heard anecdotal reports of overseas EV owners being asked to not charge their cars at night due to capacity concerns. If EV trucks roll out in large numbers at a rapid pace, the energy demand will be significant.

It is critical that the heavy vehicle industry has a guaranteed supply of energy to ensure supply chains remain robust.

#### HVIA RECOMMENDS

All levels of government develop plans to ensure there is adequate energy supply to support the nations supply chains.

### 14. Training and skills

Education is required, not just for tradespeople, but also for the broader industry on what will be required for the net zero transition. Different rules across the states and territories have led to different approaches from the OEMs (original equipment manufacturers), meaning there is a lack of consistency.

We acknowledge the announcement of funding for the Canberra Institute of Technology's Electric Vehicle Centre of Excellence as well as the extension and expansion of the New Energy Apprentice scheme. These are measures which will support the net zero transition in transport.

## HVIA RECOMMENDS

Develop skills within the workforce to support LZEHV's.

*How:*

- Place courses related to the Certificate 3 in Automotive Electric Vehicle Technology on the subsidy list for priority skills, and more generally promote skills development related to maintenance and production of EVs.
- Develop and promote a corresponding set of courses to cover skills related to hydrogen fuel cell technologies.
- Provide funding to RTOs that deliver heavy vehicle training to cover capital investment in training products to support the delivery of electric and hybrid vehicle training.

## 15. Appendices

### Appendix 1

HVIA has contributed submissions to the following consultations related to broader net zero efforts:

- *House of Representatives Standing Committee on Climate Change, Energy, Environment and Water inquiry on the transition to electric vehicles*
- *Renewable Diesel*, DCCEEW, Fuel Quality Section
- *Minimum operating standards for government-supported public electric vehicle charging infrastructure*, DCCEEW and Climate Ministerial Council
- *2024 Issues paper: Targets, Pathways and Progress*, Climate Change Authority
- *Low Carbon Liquid Fuels*, DITRCA

### Appendix 2

Key issues to be considered in developing a plan for Electric Vehicle Charging Stations:

- Initial focus should be on developing charging stations in key transport nodes which have the greatest potential for back to base operations of vehicles using existing technology (e.g. ports or major industrial areas)
- Progressively expand the network to additional nodes which will allow the range of vehicles and the number of tasks they can undertake to be expanded and extend the scope of back to base operations
  - The focus of the expansion should be on key freight routes
- Include planning for the charging sites covering:
  - Minimum numbers of charging points based on the likely volume of usage (road capacity multiplied by the projected initial percentage of uptake of electric vehicle)
  - The charging stations need to have sufficient space to meet projected growth in the number and types (rigid and articulated) of vehicles accessing the site
  - Where space is limited, identify alternative sites to meet the projected growth
  - Facility design needs to allow for bays large enough to accommodate heavy vehicles and trailers and include consideration of turning circles, queueing issues (both inside the charging station and in the surrounding roads), and pavements need to accommodate the required axle loads and shear forces when manoeuvring these vehicles at low speeds
  - Capacity of the electricity grid and on-site energy generating and storage capacity to reliably provide the required energy