



Australian Government
Productivity Commission

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Impacts of heavy vehicle reform

Study report

Overview



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The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long-term interest of the Australian community.

The PC's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

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Overview

Key points

- ✳ **Heavy vehicle transport plays an important role in the Australian economy, but productivity growth in the road freight sector has stalled for over a decade.**
 - Advances in technology and vehicle design provide opportunities to re-start productivity growth and improve emissions outcomes.
 - The recent fuel supply disruption has only strengthened the case for reform to unlock higher productivity and lower emissions vehicles.
- ✳ **High productivity vehicles, heavy zero emissions vehicles (HZEVs) and automated permits can support productivity uplift if deployed well. These opportunities will only be realised if all tiers of government collaborate to remove regulatory and other barriers to innovation and investment.**
 - Governments are working together on new national approaches, while individual jurisdictions are pursuing reforms that demonstrate how new technologies can improve vehicle access and how regulations can be updated to recognise electric vehicle charging as an emerging form of land use.
 - However, more can be done to accelerate this work.
- ✳ **The largest potential productivity benefits will arise from reforms that increase access to Australia's road network for high productivity vehicles.**
 - Increasing General Mass Limits (indicative of general increases to road access) would boost long-run GDP by about 0.03-0.10% (\$900 million to \$2.7 billion based on 2024-25 GDP), depending on the level of ambition.
 - Implementing the National Automated Access System (NAAS) would boost long-run GDP by about 0.02-0.05% (\$600 million to \$1.3 billion based on 2024-25 GDP).
 - Reforms that work towards 'as-of-right' access – reducing the time and costs associated with applying for a permit for pre-approved vehicles driving on pre-approved networks – should be prioritised, as should reforms that make it easier to get high productivity and low emissions vehicles on the road.
 - Additional funding for the road infrastructure assessments needed to support informed decision-making about access and a focus on building local government capacity will help ensure that the NAAS roll-out does not fall further behind.
- ✳ **Adjusting noise-based curfews to exempt HZEVs, ensuring planning rules are suited to HZEV charging, facilitating private investment in HZEV charging in heavy vehicle rest areas and improving information to guide charging site selection will assist uptake of HZEVs.**
- ✳ **National driver competency reforms to improve safety have been agreed, though implementation across jurisdictions will largely occur between 2026 and 2028.**
 - Implementing the National Heavy Vehicle Driver Competency Framework would boost long-run GDP by about 0.004-0.015% (\$100 to \$400 million based on 2024-25 GDP).

Road freight productivity growth has stalled

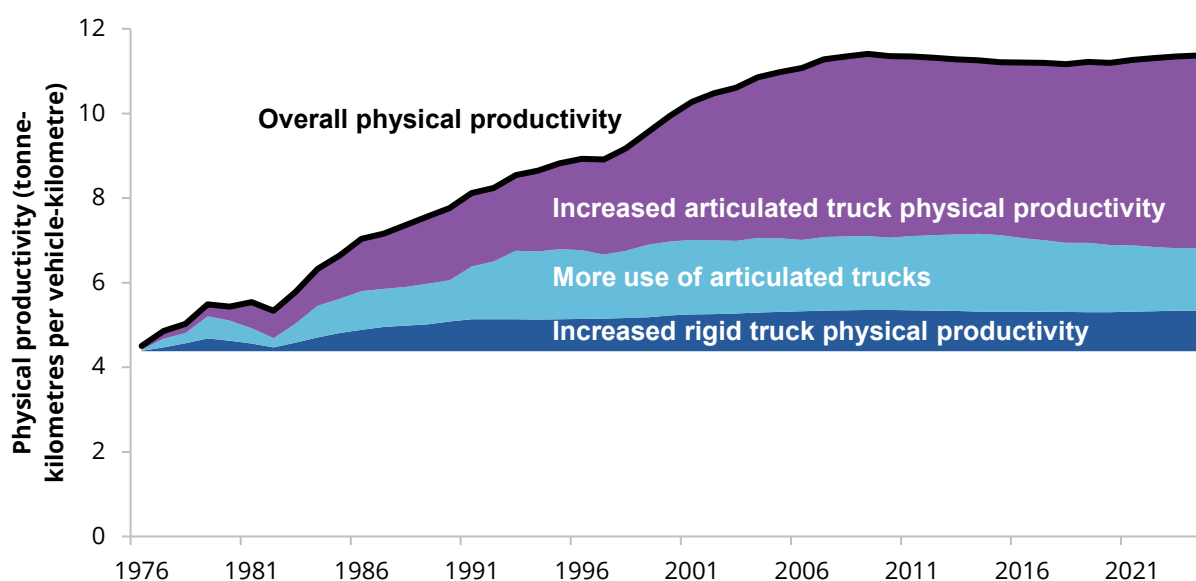
Heavy vehicle transport is central to the day-to-day functioning of our economy. Almost all goods have been moved by heavy vehicles at least once, and often several times – from ports, farms and factories to distribution centres, shops and homes. Overall, the road transport sector and in-house road transport activity represent around 5% of Australian GDP. The road transport sector alone employs 273,000 people.

Productivity growth in road freight transport reduces transport costs and, ultimately, the costs of goods and services across the economy that depend on it. Productivity growth used to be the norm – truck productivity (proxied by average payload size, also known as ‘physical productivity’) grew steadily from at least the 1970s to the mid-2000s (figure 1). But it has flatlined since then, as the increases in articulated truck physical productivity that drove much of the earlier productivity growth stopped.

Some slowing in the growth of articulated truck physical productivity may have been inevitable as technical limits to increasing truck size and weight are approached. The move from rigid to articulated trucks has also slowed, reflecting changes in logistics systems and consumer demand.

Figure 1 – Truck productivity growth has stalled

Decomposition of growth in rigid and articulated truck physical productivity



The decomposition shows the cumulative effect of changes in each factor on rigid and articulated physical truck productivity since 1976. Each year, the change in overall physical productivity is decomposed into changes in articulated truck physical productivity and rigid truck physical productivity, each weighted by their share of utilisation in the previous period, plus a contribution due to changes in utilisation weighted by current period differences in articulated versus rigid truck physical productivity.

Future productivity gains are likely to depend on smarter vehicle design – including adoption of the latest truck technologies – and improved network access, complemented by investments to optimise transport and logistics systems.

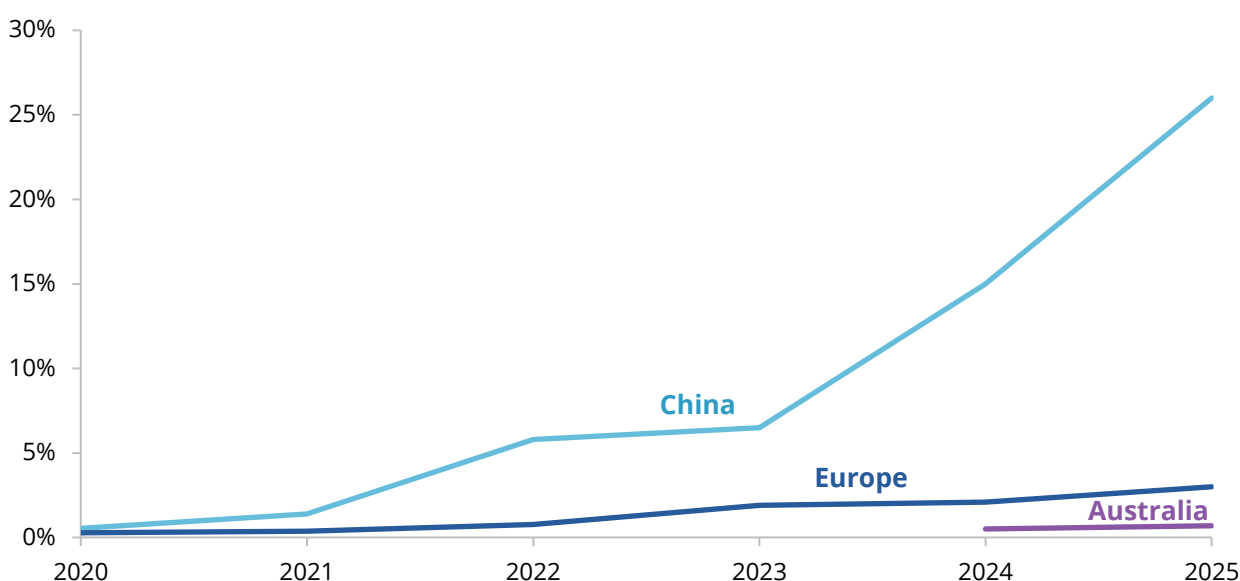
Increasing productivity can reduce emissions

Decreasing the fuel usage of the freight fleet via increased productivity and use of electric vehicles could support the Australian Government's commitment to achieve net zero emissions by 2050. It could also increase resilience in the face of supply chain disruption, such as the diesel fuel shortage generated by the 2026 conflict in Iran and closure of the Strait of Hormuz.

Some countries have adopted electric trucks more rapidly than Australia (figure 2). Sales of electric trucks in Australia increased following onset of the conflict, but from a low base.

Figure 2 – Some countries are ahead of Australia in electric truck adoption

Share of new truck sales that are electric



Data for Australia is for battery electric vehicles exceeding 3.5 tonnes, while data for China and Europe is for electric commercial freight vehicles exceeding 3.5 tonnes.

Heavy transport decarbonisation has not been an early priority in the drive towards net zero in Australia, but this may change if diesel fuel disruptions continue in some form, or if perceptions about ongoing fuel security change in response to this year's crisis. Modelling from prior to the conflict indicated the lowest-cost path to net zero would involve transport sector emissions declining by about two-thirds by 2050, with most of the reduction occurring between 2035 and 2050. While large-scale heavy zero emissions vehicle (HZEV) adoption is probably still some years off, higher or more uncertain diesel prices would boost the case for take-up of decarbonisation technologies.

Deploying new technologies can re-start productivity growth

High productivity vehicles, HZEVs, automated permits and telematics can all enable a productivity uplift if deployed well. But these opportunities will only be realised if governments collaborate to remove regulatory and other barriers to innovation and investment.

More needs to be done to ensure that regulatory settings and frameworks support optimal decision-making by both governments and heavy vehicle operators. Heavy vehicles represent significant, long-lived investments for freight operators, and fleet turnover occurs gradually. Australia's

truck fleet has a median age of 15 years, which is significantly older than in other OECD countries. Road access and design rules also limit fleet transition. Right now, the safest, most productive and lowest emission heavy vehicles face more barriers to get on the road than a standard 'prescriptive' heavy vehicle. As a result, potential productivity gains, safety improvements and decarbonisation opportunities are not being fully realised.

Governments are working together on new national approaches. For example, the National Automated Access System (NAAS) seeks to make it easier for operators to apply for permits and reduce the number of permits needed to access roads. This could increase productivity by reducing regulatory and administrative burden. Governments are also looking to introduce national consistency and higher standards of training and licensing through reforms to the National Heavy Vehicle Driver Competency Framework, which are expected to improve the supply of safe and competent heavy vehicle drivers.

Individual jurisdictions are also pursuing reforms that demonstrate new technologies and regulatory approaches and create useful reference cases for national reforms. The Tasmanian Government developed its Heavy Vehicle Access Management System in 2016, and it is now the foundation for the NAAS. Earlier this year, the Victorian Government rolled out its Heavy Vehicle Structural Assessment Permit System, which allows manufacturers and operators to quickly assess whether their vehicles can safely operate over Victorian state bridges. And several state and territory governments have amended the definitions used for their service centres to include electric vehicle charging.

The PC has examined 5 heavy vehicle reform areas

The PC was asked to provide analysis and modelling across 5 reform areas:

- increasing heavy vehicle road access to reduce emissions and increase productivity
- accelerating the establishment of a NAAS to streamline road access decision-making for all heavy vehicles
- removing administrative and regulatory barriers to improve the availability of heavy zero emissions vehicle charging infrastructure
- reducing or removing curfews for heavy zero emissions vehicles
- accelerating implementation of the National Heavy Vehicle Driver Competency Framework.

The request for advice asks the PC to provide a detailed assessment of the economic and revenue impacts of each reform area – nationally and disaggregated by distributional groups, industries and levels of government. In undertaking analysis and modelling, it has become clear that there are interlinkages and shared challenges and opportunities across most reform areas, and not all have the same potential to boost productivity.

The largest potential productivity benefits will arise from reforms that increase access to Australia's road network for high productivity vehicles. Two reform areas – increasing heavy vehicle road access and the establishment of the NAAS – can enable this. However, the size of their potential impact will depend on the scope and ambition of their design and implementation.

Reforms that work towards 'as-of-right' access – reducing the time and costs associated with applying for a permit for pre-approved vehicles driving on pre-approved roads – should be prioritised. Achieving 'as-of-right' access will depend on:

- improvements in the accuracy and comprehensiveness of information – about road quality, and culvert and bridge tolerances and conditions
- support from local road managers to allow greater access, while still managing risk

- addressing the misaligned incentives between those who would benefit from expanding access to heavier vehicles or to more parts of the road network (mostly operators) and those who bear the costs of additional road damage and upgrades (mostly road managers).

There are also a number of reforms that can be sensibly considered ‘without regret’. These include simplifying vehicle approval processes and reducing jurisdictional variation that does not serve a clear purpose. For example, the Australian Government could assist with coordinating the introduction of additional mass allowances for electric HZEVs across the country, with the potential for jurisdiction-level trials to provide an evidence base for a nationally consistent framework.

Road access settings need to better balance costs and benefits

Heavy vehicle road access regulation plays an important role in ensuring that the costs associated with road use (including pavement wear and tear and impacts on congestion, amenity and safety) are managed. But the current settings do not support road managers to make optimal trade-offs between the benefits and costs of increasing access. As a result, business and industry face unnecessary costs (via permit processing times and restricted access), and governments, including local governments, are missing opportunities to reduce their administrative load.

Reforms are in train to expand general mass and dimension limits

Access reforms could improve productivity and reduce heavy vehicle-related road crashes and emissions by allowing larger, safer trucks on more roads.

Some improvements to general access are already underway. For example, the National Heavy Vehicle Regulator (NHVR) is progressing work to explore incorporating the Euro VI mass concession – which provides an extra 0.5 tonnes of mass for compliant vehicles – into notices. Increases to baseline mass limits, length and height allowances will take effect in mid-2026.

Increased heavy vehicle access to the road network can generate productivity and emissions reduction benefits. The Bureau of Infrastructure and Transport Research Economics (BITRE) has estimated that increasing heavy vehicle General Mass Limits, which serves as a proxy for increasing heavy vehicle network access generally, would increase road freight sector productivity by 1.0% to 3.2%, depending on how much the limits are raised. On BITRE’s modelling, these benefits would significantly outweigh the costs of additional road damage.

BITRE’s work focusses on direct benefits and costs but increasing heavy vehicle network access would also have flow-on effects for the rest of the economy. Road transport services are an input into many other industries while road maintenance draws resources away from other uses. The PC commissioned modelling that gauges the broader economy-wide effect of increasing General Mass Limits, taking into consideration both the productivity benefits and road damage costs. This modelling found that long-run GDP would increase by about 0.03–0.10% (\$900 million to \$2.7 billion based on 2024–25 GDP), depending on the size of the General Mass Limit increase.

Access should be expanded for high productivity vehicles

Expanding access for Performance-Based Standards (PBS) vehicles is another way to support a productivity uplift. PBS vehicles are designed to achieve higher productivity than their non-PBS equivalents and have experienced strong uptake since the scheme was introduced in 2007, representing 21% of the road freight task in 2022. However, PBS vehicles often face greater barriers to

access than non-PBS equivalents, despite meeting or exceeding the same safety requirements. Governments should streamline access and design approvals for common PBS vehicle configurations to further promote the uptake of these high productivity vehicles.

Road managers should be encouraged to support as-of-right access for PBS vehicles where it is safe to do so. Governments should enable eligible PBS vehicles to be added to existing gazetted authorisation notices for equivalent non-PBS vehicles without requiring a new notice.

The NAAS roll-out can improve access decisions

There is also an opportunity through the planned roll-out of the NAAS to deliver faster, more consistent and more risk-based access decisions by automating approvals and, ideally, providing network-based access maps rather than case-by-case route permits.

The NAAS is an important reform – BITRE has estimated that its adoption would boost road freight sector productivity by 0.8% to 1.6%. The PC commissioned modelling to analyse how this targeted productivity boost would propagate to the broader economy, which found that implementing the NAAS would boost GDP by about 0.02–0.05% (\$600 million to \$1.3 billion based on 2024–25 GDP).

The NAAS rollout is behind the original agreed targets. While some states have begun to implement automatic access systems, it may be difficult to accelerate given the scale and coordination required – particularly the need for local governments to assess and digitise road and bridge asset data.

Given these constraints, getting NAAS design and national alignment right is critical to realising benefits in the long term. The benefits of the system would be maximised if:

- the NAAS adopted network-based access to give operators additional flexibility and support productivity
- states and territories adopted consistent front-end access systems to reduce the burden on operators undertaking interstate trips
- the design of the NAAS maximised the consistency and quality of local government decision-making on access and increased the information available to inform decisions, with additional support provided to local governments to facilitate this.

To build on the progress made so far, governments should prioritise filling remaining information gaps and supporting local government participation, including through funding future phases of the Strategic Local Government Asset Assessment Project.

More national consistency would facilitate fleet transition

The uptake of HZEVs will be vital for Australia to benefit from technological change and deliver significant transport emissions reductions. But electric HZEVs are typically heavier than their diesel equivalents due to the additional weight of battery systems. While technological improvements and innovation may reduce battery weight over time, operators currently face a payload penalty – that is, reduced freight capacity within existing mass limits – which can limit uptake.

The technology and transport operations underpinning these vehicles are evolving, particularly in relation to electric batteries, charging infrastructure and vehicle design. In light of this, there is a case for allowing a degree of transitional tolerance in regulations to support early deployment. Some support for the initial uptake can help accelerate the development of supporting infrastructure and industry practices – including to accommodate charging requirements – that may otherwise not develop in a timely manner.

State and territory governments have introduced some additional mass allowances for HZEVs, but these arrangements differ across jurisdictions. The Australian Government can help play a coordinating role and, along with state and territory governments, work to embed a consistent concessional mass limit to ensure electric HZEVs can operate across jurisdictions without significant payload disadvantages. The infrastructure impacts of a concessional mass limit for electric HZEVs are likely to be small in the immediate term, reflecting both the slow pace of fleet turnover and that these vehicles account for a small share of the heavy vehicle fleet.

These arrangements should be reassessed over time as batteries get lighter or are able to travel further with technological change. An option is to schedule 5-yearly reviews to ensure the concession is set to keep pace with decreasing payload gaps.

Other regulation has not caught up with HZEVs

The road access regulatory framework is not the only regulatory framework that has not yet caught up with the move towards HZEVs. Administrative and regulatory settings affecting charging infrastructure and curfews also need to change so that widespread heavy vehicle decarbonisation is not held back once the technology improves and costs fall.

Administrative and regulatory barriers to HZEV charging infrastructure should be reduced

To be commercially successful, HZEVs are likely to require:

- chargers located in freight centres (depots, distribution hubs and major warehouses), freight nodes (airports, ports and intermodal terminals) and heavy vehicle rest stops (rest areas and service centres along highways)
- different charging infrastructure from passenger electric vehicles – in particular, more powerful chargers and layouts that accommodate their size.

The most significant challenge for the rollout of this charging infrastructure is establishing connections to electricity networks, as high-powered charging can require network augmentation. But the administrative and regulatory barriers (the focus of this study) are important to address so that they do not create hold-ups once broader policy, market and technological developments are in place to drive the rollout forwards.

One such administrative barrier is that information to inform site selection is not always easily accessible. Data to support HZEV charging infrastructure investment should be made available in a single location and in an exportable format. This could either be through an update to the Electric Vehicle Charging Infrastructure Mapping Tool or a new HZEV-specific mapping tool.

Land use regulation is a potential regulatory barrier to charging infrastructure. Not all planning schemes have been updated to reflect this new type of infrastructure, which can create uncertainty and needlessly bespoke processes. State and territory governments should:

- alter the definitions of land uses that cover bus depots, freight centres, freight nodes and heavy vehicle rest stops to explicitly allow for electric vehicle charging on land used in this way
- exempt the installation of charging infrastructure from requiring planning permission where it is consistent with existing land use provisions. To the extent that jurisdictions apply conditions to

manage any public impact, these should be balanced against potential impacts on innovation and investment. The PC estimates that this would save about \$5,000–\$15,000 per site.

Looking further ahead, an emerging gap is the lack of policy to facilitate commercial installation of HZEV charging infrastructure in state and territory government-provided heavy vehicle rest areas. While only a minority of rest areas will need charging infrastructure, the lack of clear policy creates risks of future public works locking out charging and road authorities defaulting to risk-aversion when charging infrastructure owners enquire about investment opportunities. Austroads should update its Guidelines for the Provision of Heavy Vehicle Rest Area Facilities to reflect future HZEV charging infrastructure needs, and the Australian, state and territory governments should reflect these changes in policy. State and territory governments should also develop policies and guidance for contracting with charging infrastructure owners, including standard contractual terms and pricing principles.

Curfew burdens on HZEVs should be removed

In addition to regulatory barriers to charging infrastructure, other regulations, originally designed for internal combustion vehicles, can also limit HZEV operation. Two main sets of instruments (commonly referred to as curfews), prohibit the activity of heavy vehicles at certain times, with the aim of preserving neighbourhood amenity:

- local traffic controls restricting the movement of through traffic on a particular road. These are administered by state or local governments (or both), depending on the road, and apply to all heavy vehicles above a specified weight limit (including General Access Vehicles)
- local government planning restrictions set out in planning permits, such as restrictions on overnight truck deliveries to supermarkets.

Presently, no type of curfew distinguishes between internal combustion engine vehicles and HZEVs.

There is a strong case for reducing the burden of curfews on HVEVs in some form. While regulation should continue to aim to mitigate the impacts of heavy vehicle noise and protect community safety, HZEVs are significantly quieter.

State, territory and local governments should exempt HZEVs from time-related restrictions on activity (that is, deliveries). Governments should use existing outcomes-based regulations (like environmental or noise-management laws) to manage noise concerns.

Current reforms will improve driver capability

Current heavy vehicle driver training, assessment and licensing processes are poorly calibrated to the risks and priorities of the sector. Industry has reported that time-based licence progression has prevented drivers from entering the occupation and progressing to higher productivity heavy vehicles at a time of significant driver shortage. Industry also suggests that poor training and assessment requirements fail to deliver competent drivers and safe outcomes. Inconsistency across states and territories also adds costs for operators and training providers working across jurisdictions.

National Heavy Vehicle Driver Competency Framework reforms, endorsed in 2023, are set to expand driver competency and training minimums, create new licensing pathways based on experience and supervision, and support best-practice training and assessment. The reforms aim to improve safety and national consistency. Modelling by BITRE suggests they could also boost road freight productivity

by 0.1–0.3% by allowing faster progression through licence classes. PC modelling suggests this would boost long-run GDP by about 0.004–0.015% (\$100 to \$400 million based on 2024–25 GDP).

Implementation is underway, with most jurisdictions expected to roll out reforms between 2026 and 2028, but regulatory, IT, funding and capacity constraints mean faster acceleration is unlikely. Some jurisdictions will implement sooner while others are being delayed by ongoing decision-making. Certainty about reform details and funding, expected around mid-2026, should progress decision-making. There are already funding mechanisms in place through the National Competition Policy framework for the Australian Government to support state and territory governments to implement the reforms, with specific funding amounts to be determined. Implementation aimed towards full completion by the 2028 timeline should continue as planned and would be supported by confirmation of funding amounts to state and territories.

Other licensing issues warrant attention to better align the driver competency reforms with policy priorities, including ways to better manage the payload penalties associated with the battery weight in electric vehicles. Countries like the United Kingdom and New Zealand have adopted licence mass concessions for electric vehicles. Governments in Australia should work together to explore similar opportunities and better understand potential risks. There are multiple options to manage risks, such as committing to monitoring and evaluation, and appropriately targeting the licence concession so that it is conditional on various safety requirements.

Findings and recommendations

Access for high productivity and heavy zero emissions vehicles



Finding 2.1

Access reforms can unlock the benefits of a modern fleet

Growth in heavy vehicle productivity can be constrained by factors that restrict access, including:

- the reliance on permit-based access, limited flexibility in the application of access rules and inconsistency across jurisdictions
- a lack of harmonisation between domestic standards and international standards, which can limit the importation and use of modern technologies.

Modelling undertaken by BITRE indicates that there would be net benefits to increasing heavy vehicle General Mass Limits, suggesting net benefits to increasing heavy vehicle network access more generally. The benefits of higher freight productivity exceed the costs of additional road wear. Whole-of-economy modelling undertaken for this inquiry, using BITRE's modelling as inputs, indicates that increases in heavy vehicle General Mass Limits would boost GDP.

- Modelling commissioned from the Centre of Policy Studies at Victoria University found that increasing General Mass Limits would raise GDP by 0.03–0.10% by 2040, depending on the extent of the increase.
- Modelling undertaken by the PC found that that increasing General Mass Limits would raise GDP by 0.03–0.15% in the long run, again depending on the extent of the increase. Unlike the Centre of Policy Studies' modelling, this modelling does not incorporate the costs of additional road wear.

Increasing access for Performance-Based Standards vehicles would likely yield higher freight productivity benefits relative to additional road wear costs than increasing access more generally. This is because Performance-Based Standards vehicles often carry larger payloads than non-Performance-Based Standards vehicles that cause equivalent levels of pavement damage.



Recommendation 2.1

Allow greater as-of-right access and simpler vehicle approvals for Performance-Based Standards (PBS) vehicles

State, territory and local governments should support greater as-of-right access for PBS vehicles. Road managers should provide in-principle consent for as-of-right access for PBS vehicles (which have met safety and infrastructure requirements) that is at least equal to access for equivalent non-PBS vehicles. Governments should enable eligible PBS vehicles to be added to existing gazetted access notices without requiring a new notice.

The National Heavy Vehicle Regulator should be empowered to coordinate reforms that ensure PBS vehicles are awarded the same level of access to the road system as their prescriptive counterparts.

In addition, the National Transport Commission should amend the Heavy Vehicle National Law so the National Heavy Vehicle Regulator can approve applications directly, removing the requirement to refer all PBS design approval applications to the PBS Review Panel for advice.



Recommendation 2.2

A nationally consistent additional mass limit for electric heavy zero emissions vehicles (HZEVs)

The Australian, state and territory governments should – through the National Transport Commission – work to embed a consistent additional mass limit in the Heavy Vehicle (Mass, Dimension and Loading) National Regulation so that electric HZEVs can operate across jurisdictions without significant payload disadvantages arising from battery weights.

The National Heavy Vehicle Regulator, together with Austroads, should monitor the development of electric HZEVs and the interaction with road wear over the 5 years after the introduction of an additional mass limit. If after 5 years the monitoring program shows the mass limit is not set appropriately, there should be a review on mass limit settings and the impact on new HZEVs. The review's scope should include, but not be limited to, consideration of whether:

- road access policy settings have materially changed, including the road user charge for electric HZEVs
- the payload gap between comparable diesel heavy vehicles and electric HZEVs
- how international jurisdictions are setting concessional mass limits for electric HZEVs.

The additional mass limit should sunset following a positive review determination that the payload gap between comparable diesel and electric HZEVs has materially closed.

Accelerating a National Automated Access System



Finding 3.1

The permit system for heavy vehicle access is costly

The heavy vehicle permit system imposes significant costs and uncertainty on operators, as well as administrative burden on road managers and the National Heavy Vehicle Regulator. There is a need to reform the system to promote flexibility, timeliness, consistency and quality of access decisions – this will support broader productivity.



Recommendation 3.1

Funding for the Strategic Local Government Asset Assessment Project

The Australian Government should fund future phases of the Strategic Local Government Asset Assessment Project, starting with Phase 4 in the 2027–28 Budget. Expansions or amendments to the scope should be considered if they would support the National Automated Access System.



Recommendation 3.2

Automated access systems should incorporate network-based access

As much as possible, automated heavy vehicle access systems should be designed to provide network-based access rather than automating access for prescriptive routes. This will maximise the benefits of the system for operators and the community.

Administrative and regulatory barriers to charging infrastructure



Recommendation 4.1

Create a heavy zero emissions vehicle (HZEV) charging infrastructure mapping tool

The Department of Climate Change, Energy, the Environment and Water should create a HZEV charging infrastructure mapping tool, either by making the existing Electric Vehicle Charging Infrastructure Mapping Tool more suited to HZEV charging infrastructure or creating a new HZEV-focussed tool. To populate the tool, it should:

- work with electricity distribution network service providers and the Australian Energy Regulator to incorporate more granular (distribution substation-level) distribution network capacity information
- work with the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts and the National Heavy Vehicle Regulator to incorporate information on freight locations and movements
- work with state and territory governments to incorporate information on where charging is an allowed land use (with and without planning permission)
- allow this data to be exported, where possible.



Recommendation 4.2

Adapt land use regulation to heavy zero emissions vehicle charging infrastructure

State and territory governments should alter the definitions of land uses that cover bus depots, freight centres, freight nodes and heavy vehicle rest stops to explicitly allow for electric vehicle charging on land used in this way.

State and territory governments should exempt the installation of charging infrastructure from requiring planning permission where it is consistent with existing land use provisions. To the extent that jurisdictions apply conditions to manage any public impact, these should be balanced against potential impacts on innovation and investment.



Recommendation 4.3

Facilitate private investment in HZEV charging infrastructure in heavy vehicle rest areas

Austroads should update its *Guidelines for the Provision of Heavy Vehicle Rest Area Facilities* to include HZEV charging infrastructure considerations, such as by adding charging bay design considerations and proximity to electricity networks as a site selection criterion.

State and territory governments should reflect these changes in their guidance, and the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts should require applicants to demonstrate that they have considered the HZEV charging infrastructure aspects of the guidelines as a condition of receiving funding under the Heavy Vehicle Rest Area initiative.

State and territory governments should also develop policies and guidance, such as standard contractual terms, that allow charging infrastructure owners to install and operate HZEV charging infrastructure in heavy vehicle rest areas on commercial terms.

Heavy vehicle curfews



Finding 5.1

There is a strong case for reducing curfew burdens on heavy zero emission vehicles

Heavy vehicle curfews largely arise from two sources – local traffic controls that restrict truck traffic through particular streets and conditions imposed on local government planning permits that restrict delivery hours to and from businesses. Local traffic controls are almost exclusively found in Victoria, while planning restrictions appear more widespread.

Many curfews were designed for conventional diesel vehicles and do not recognise the quieter noise profile of heavy zero emission vehicles. As a result, some curfews are no longer fit for purpose, and there is a strong case for reducing curfew burdens on heavy zero emission vehicles.



Recommendation 5.1

Exempt heavy zero emissions vehicles (HZEVs) from curfews

State, territory and local governments should exempt HZEVs from time-related restrictions on activity (i.e. deliveries). Governments should use existing outcomes-based regulations (like environmental or noise-management laws) to manage noise concerns.

The National Heavy Vehicle Driver Competency Framework



Finding 6.1

Driver competency reforms are progressing

Reforms to the National Heavy Vehicle Driver Competency Framework appear on track to be implemented by most states and territories by 2028. Some state and territory governments may be able to deliver earlier under current arrangements. Others are not expecting to implement the reforms within the 2028 timeframe, with some still uncertain if they will be implemented in full. Support to implement changes, including to undertake regulatory reform, policy work and IT systems updates, may aid implementation.



Finding 6.2

There may be benefits from licence mass concessions for electric vehicles

Other countries, such as New Zealand and the United Kingdom, have adopted licence mass concessions for electric vehicles. A mass concession would bring environmental benefits but could have safety implications. Were governments to introduce a mass concession, the most promising design would target the C class licence, be based on reasonable payload penalties, and mandate safety features for eligible vehicles. Safety effects could be better understood via evaluations and continued monitoring of developments abroad.