

28 June 2019

National Transport Regulatory Reform

Productivity Commission

LB2, Collins Street East

Melbourne Vic 8003

Submitted via online portal

Dear Sir/Madam

Pacific National welcomes the opportunity to provide a submission to the Productivity Commission's National Transport Regulatory Reform review. As Australia's largest private rail freight operator, Pacific National supports maximising freight productivity through risk based regulatory arrangements applied equally across rail and road.

Road freight incurs 14 times greater accident costs and 16 times more carbon pollution than rail freight per tonne kilometre and does not contribute to road maintenance costs. However, despite rail freight transport imposing far fewer costs to the community in terms of accidents, congestion and emissions than road, these costs are not factored into transport infrastructure prices – rail is charged up to double that of road. Hence the freight playing field is far from level despite the obvious benefits to the economy and community.

COAG's transport regulatory reforms has created three disparate transport regulators (National Maritime Safety Regulator, National Heavy Vehicle Regulator and the Office of the National Rail Safety Regulator (ONRSR)), each with a different focus and outcomes contributing to a lack of a level playing field which goes against economic efficiency in freight transport. In the case of rail, jurisdictions continue to maintain their own laws, rules and standards versus what could be achieved by a national regime. This results in captive locomotive and rollingstock assets which cannot be operated in other jurisdictions without costly and inefficient modifications or administrative waivers – this 'red tape' makes deployment of innovative technology next to impossible, and limits productivity gains.

In comparison, road freight operators can move freely (and cheaply) on the road network both intra and interstate and deploy technology as required. This is because the National Heavy Vehicle Regulator in comparison to ONRSR has productivity and efficiency enshrined its legislative objectives – i.e. to remove red tape. The best safety improvement would result from reducing rail red tape while significantly reducing rail access charges across all rail networks to encourage modal shift to this far safer, cleaner and community accepted form of freight transport. Accordingly, Pacific National makes the case that the Commission should:

- Recommend the reform of the ONRSR to include a productivity and efficiency mandate similar to the National Heavy Vehicle Regulator.
- Investigate the status and implementation of the Competition and Infrastructure Reform Agreement (CIRA) and the impact on economic benefits currently foregone.
- Promote industry productivity, efficiency and competitive modal neutrality in the infrastructure pricing of land freight transport.

Yours faithfully

Robert Millar
Regulation and Policy Manager

Pacific National Submission

Productivity Commission National Transport Regulatory Reform

June 2019

Public

Executive Summary

Pacific National welcomes the opportunity to provide a submission on the Productivity Commission's (the Commission) National Transport Regulatory Reform review. As Australia's largest private rail freight operator, Pacific National supports maximising freight productivity through risk based regulatory arrangements applied equally across rail and road.

Rail freight transport has significant inherent benefits for the economy and community relative to road. A 2017 Deloitte Access Economics report¹ found:

- Rail imposes far fewer costs to the community in terms of accidents, congestion and emissions than road. These costs are not factored into transport prices.
- Each passenger journey made by rail instead of road generates benefits for society of between \$3.88 and \$10.64 by reducing congestion, accident and carbon costs.
- There are also health, social inclusion and amenity benefits from using rail.
- Road freight incurs 14 times greater accident costs than rail freight per tonne kilometre and 16 times as much carbon pollution as rail freight per tonne kilometre.
- Moving freight by rail instead of road generates benefits for society of around 1.45 cents per tonne kilometre. This means that, if all road freight moving between Sydney and Melbourne travelled by rail, this would generate social benefits of \$111 million a year.
- A single train is estimated to be able to replace up to 800 cars during peak hour or around 110 trucks moving freight.

The Commission's review into the economic benefits of COAG's transport regulatory reform is premised on Australian Governments having worked collaboratively towards safer and integrated transport arrangements and improved outcomes in freight and passenger transport markets. Unfortunately, this has not occurred. Not only has the reform led to three disparate transport regulators (National Maritime Safety Regulator, National Heavy Vehicle Regulator and the ONRSR) each with a different focus and outcomes contributing to a lack of a level playing field which goes against economic efficiency in freight transport. It has also not prevented States and Territories from maintaining their own laws and standards.

The Commonwealth Government's, Office of the National Rail Safety Regulator (ONRSR) has not encouraged rail infrastructure managers to pursue productivity or efficiency reforms to harmonise rail safety requirements, interoperability of systems or greater technological innovation. This is because unlike its heavy vehicle counter-part, it does not have productivity and efficiency enshrined in its legislative objectives.

Disappointingly, State based derogations remain on important policy issues including fatigue management and drug and alcohol testing. Prescriptive engineering standards vary between different jurisdictions leading to captive locomotive and rollingstock assets which cannot be operated in other jurisdictions without costly and inefficient modifications or administrative waivers. Further, innovations in technology such as the Advanced Train Management System (ATMS) risk being stifled through prescription and red tape.

¹ Value of Rail. The contribution of rail in Australia. A report commissioned by the Australasian Railway Association (ARA). Deloitte Access Economics. November 2017.

ATMS will provide significantly upgraded capabilities to the rail industry through improving rail network capacity, operational flexibility, train service availability, transit times, rail safety and system reliability.

In comparison, road freight operators can move freely (and cheaply) on the road network both intra and interstate. Rail freight operators do not enjoy this flexibility due to disparate network rule requirements. For example, on the north-south rail corridor, operators may need to negotiate up to six access agreements with network owners. As a result of this red tape, the potential economic benefits of ten years of COAG reforms have not been realised and rail share relative to road on some freight corridors is as low as three percent – in particular, on the largest market (Sydney – Melbourne).

Overall, Pacific National's experience is there has been no meaningful integration in freight transport markets to create a level playing field between road and rail policy. The best safety improvement would result from reducing rail red tape while significantly reducing rail access charges across all rail networks to encourage modal shift to this far safer, cleaner and community accepted form of freight transport.

Accordingly, Pacific National makes the case that the Commission should:

- Recommend the reform of the ONRSR to include a productivity and efficiency mandate similar to the National Heavy Vehicle Regulator.
- Investigate the status and implementation of the Competition and Infrastructure Reform Agreement (CIRA) and the impact on economic benefits currently forgone.
- Promote industry productivity, efficiency and competitive modal neutrality in the infrastructure pricing of land freight transport.

At a time when government policies are increasingly focused on rolling-out heavier and longer trucks, it is worth reflecting - Australians want safer roads, less traffic congestion and lower carbon emissions. Rail has inherent characteristics which already meet these outcomes – it needs to be given the efficiency mandate to go further and a chance to compete with road with substantially reduced rail access pricing, and removal of outdated and inefficient jurisdictional regulations.

Overview

Pacific National welcomes the opportunity to provide a submission on the Productivity Commission's (the Commission) National Transport Regulatory Reform review. As Australia's largest private rail freight operator, Pacific National supports maximising freight productivity through risk based regulatory arrangements applied equally across rail and road. Pacific National's experience is there has been no meaningful integration in freight transport markets to create a level playing field between road and rail policy.

The key recommendation of this submission is for the Commission to recommend reform of the ONRSR to include a productivity and efficiency mandate similar to the National Heavy Vehicle Regulator. Additionally, the Commission should promote industry productivity, efficiency and competitive modal neutrality in the pricing of land freight transport.

COAG's transport regulatory reforms have not led to significant economic benefits in rail

Pacific National asserts the long-run benefits of COAG's transport regulatory reforms have not been realised because there is no productivity or efficiency mandate for rail.

Under the Rail Safety National Law (RSNL), the ONRSR works in a co-regulatory regime focussed on safety only. It does not set the network rules it enforces as this responsibility lies with the rail infrastructure manager (RIM) – usually the network owner. RIMs are supposed to assess the risk associated with their network and then establish a safety management system to manage those risks.

Appropriately, rail freight operators also need to have safety systems to operate on the network. The ONRSR needs to be satisfied the network rules/system meets the objectives of the RSNL and rail freight operators are to comply with these rules (which vary across networks).

The RSNL does not envisage a role for the ONRSR to maximise productivity through efficiency reforms, as such it takes a hands-off approach to efficiency. As a result, we have different systems and rules which not only vary across different networks but on different sections of the same network despite having the one RIM. As we detail below, the Commission can recommend the re-shaping of the RSNL and the role of the ONRSR to focus on productivity and efficiency.

Unless it is expressively provided for in the economic regulatory access regime and associated access agreements (which sit outside the RSNL), there is limited opportunity for rail freight operators to affect changes on the networks, even though it materially impacts their operations. This is most apparent when rail freight operators traverse intrastate segments and interstate boundaries with the network rule differences discussed above. However, there is very little reason for differences in standards/rules (i.e. red tape) when the rail freight task is essentially the same. In comparison, heavy vehicle operators are free to traverse across different road networks without regulatory prescription and complex network rules.

As an example, a NSW freight train driver with more than 25-years' experience can be subjected to up to 18-months of extra training to operate on a similarly configured rail corridor in another state or territory. In contrast, a NSW truck driver can move from operating a semi-trailer for a year to handling a B-Double or Road Train in less than two days at minimal cost with immediate access to thousands of kilometres of road across every jurisdiction in the country.

State-derogations and redtape frustrate reforms and technology deployment

Pacific National notes there are numerous examples of state-based derogations from the RSNL which impose prescriptive regulations in relation to fatigue, drug and alcohol management as well as state based asset bodies which impose additional overlay on network design and standards. Unfortunately, with a lack of a productivity mandate, the ONRSR has not been successful in addressing this issue even when it has tried.

For example, the ONRSR's Drug and Alcohol Management Review identified six recommendations for a nationally consistent approach to drug and alcohol management in the rail industry². However, not all recommendations were supported by the Ministerial Council, resulting in the continuation of jurisdictional variances in relation to drug and alcohol testing.

The table below highlights differences in operating requirements (systems, processes and technologies)³.

	East-west corridor	North-south corridor	Central corridor
Number of RIMs	Up to four  Operators may need to negotiate up to four access agreements for journeys through this corridor.	Up to six  Operators may need to negotiate up to six access agreements for journeys through this corridor.	Two or three  Operators may need to negotiate two or three access agreements for journeys through this corridor.
Track gauge	Broad, narrow and standard  Operators cannot use the same train on different track gauges, unless it is dual gauge. This occurs in particular when moving from the ARTC interstate network to the V/Line and/or MTM networks.	Broad, narrow and standard  Operators cannot use the same train on different track gauges, unless it is dual gauge. This occurs in particular when moving from the ARTC interstate network in Acacia Ridge to the Queensland network up to Cairns.	Broad and standard  Operators usually use the ARTC interstate network and the Taroona-Darwin line, which are both standard gauge.
Speed, axle load and other restrictions	There is one segment of the ARTC network that has a lower maximum speed and axle load limit than the others. The NSW, Victorian and WA networks have a range of limits for axle load and speed, with the metro networks generally having lower speed limits. The NSW metro networks also have limits on the number of axes and gross weight. The Melbourne metro network also has train length limits.  Operators are bound by the lowest weight, wagon or axle limit on the corridor. Travelling through metro networks can also increase transit time.	There is one segment of the ARTC interstate network that has a significantly lower maximum speed than the others. See left for NSW and Victorian networks. Some lines on Queensland Rail's networks have significantly lower speed and axle load limits. They also have maximum gross weights.  Operators are bound by the lowest weight, wagon or axle limit on the corridor. Travelling through metro networks can also increase transit time.	There are different axle load and speed limits between Adelaide – Taroona (ARTC), Northgate – Alice Springs and Alice Springs – Darwin (GWA). The ARTC segment also has wagon, locomotive weight and train length limits.  Operators are bound by the lowest weight or wagon limit on the corridor. However, this corridor has the least variation.
Safeworking systems	These are line-specific. However, WA, SA, NSW and VIC all have TOW for the regional network. For the urban networks, WA, SA and Vic have CTC and NSW has RVD.  There are not many significant differences in safeworking systems on the East-West corridor. Victoria has some safeworking systems that are onerous for operators.	These are line-specific. However, NSW and VIC have TOW for the regional network, while QLD has DTC. For the urban networks, QLD has RCS, NSW has RVD and VIC has CTC.  There are some significant differences in safeworking systems on the North-South corridor.	These are line-specific. However, SA has TOW for the regional network and CTC for the urban network.  There are not many interoperability issues with safeworking systems on the Central corridor.
Communications systems	UTRS* on Melbourne metro network NTCS on V/Line and Interstate network UHF/VHF radio on WA networks  Operators need to install multiple systems for journeys through this corridor.	UTRS* on Melbourne metro network NTCS on V/Line, some NSW and Interstate network Metronet*, WB comms, VCS on other NSW networks  Operators need to install multiple systems for journeys through this corridor.	NTCS on Interstate network Radio on Taroona-Darwin line  Operators need to install multiple systems for journeys through this corridor.
Train management and control procedures	Operators apply for access to mandatory train paths in negotiation process, but ad hoc train paths can be requested outside the access agreement (the procedure for booking these is in the access agreement). Late trains and underutilised train paths are managed in different ways. Operators are responsible for booking their train paths such that they align across different RIMs. NSW and Victorian shared freight/passenger networks have passenger priority, although Victoria's is stricter.  MTM requires operators to notify their arrival 48 hours in advance, which is difficult for operators. Passenger priority also results in few train paths for operators and is particularly difficult in Sydney and Melbourne.	See left. Queensland's shared networks also have passenger priority.  It is difficult to meet RIM's windows for on-time arrival, particularly on the Sydney metro network.	See left. GWA has very little public information about its train and network management principles.  Many operators have not had success gaining access to this railway line, predominantly operated by the RIM, GWA.
Environmental requirements	The ARTC and NSW RIMs have an environmental management system manual and environmental licence. For all RIMs, operator must develop an environmental management plan (and/or system). These reflect state/territory environmental regulations.  Operators will have to comply with specific environmental legislation in WA, SA, VIC and NSW.	See left for ARTC, NSW and Victorian networks. Queensland Rail also has an environmental management system manual. Operators must develop an emergency management plan and an interface risk management plan, which contain environmental risks.  Operators will have to comply with specific environmental legislation QLD, VIC and NSW.	See left for ARTC. For the Taroona-Darwin line, GWA has an environmental protection licence.  Operators will have to comply with specific environmental legislation SA and NT.

New South Wales

The NSW Asset Standards Authority (ASA) imposes different technical standards on rail freight operators compared to the rest of the country; these standards are not always based on risk management or transparent outcomes and can result in NSW rail freight operators experiencing operational delays. For example, Train Operator Conditions (TOC) waivers in other jurisdictions are approved within a week, ASA often takes months to approve with little or no explanation for the delay.

² ONRSR (2017) Drug and Alcohol Management Review, Consultation Paper, July 2017

³ Department of Infrastructure, Regional Development and Cities. *Review of rail access regimes* May 2018

The ASA adopts a highly prescriptive approach to rail regulation and has no other state or territory equivalent. It largely sits outside the RNSL and to our knowledge has no heavy vehicle equivalent.

The ASA acts as a disincentive to the use of new technologies and methods of operation. It leads to captive locomotive and rollingstock assets, useable only in the state it operates (without modification or application of a waiver). In short, it is body for the generation of unnecessary red tape.

Queensland

Under the RSNL, rail freight operators need to demonstrate to the regulator and the RIM it adopts a risk based approach to manage fatigue related risks. This approach has worked well across the jurisdictions. However, additional state specific legislation exists in QLD (and NSW) which prescribes different “outer limits” of work hours for train drivers in these jurisdictions. Outer limits prescribe additional maximum limits including the number of shifts and hours in any 14-day period. As a result, it is inconsistent with the rest of Australia and undermines what could be achieved by a national risk based regulatory approach.

Rail freight operators are also subject to systemic speed restrictions which do not impact on road to the same degree. As an example, one of the key corridors for bulk freight is the Mt Isa line. This line generates good volumes and its revenues far exceed variable costs. However, the line has been gradually deteriorating with the growing burden of temporary speed restrictions and increasing rail access charges. This erodes rail competitiveness relative to road.

Additionally, prescription does not allow for innovation. We note new technologies such as ATMS will provide significantly upgraded capabilities to the rail industry through improving rail network capacity, operational flexibility, train service availability, transit times, rail safety and system reliability. For example, the system will replace trackside signalling with in-locomotive displays and provide the precise location of trains both front and in rear⁴. The improved safety outcomes and operating efficiencies from the use of these technologies and innovations is lost when regulations (red tape) require or prescribe additional mitigation measures.

Victoria

Pacific National notes the RIMs for both of the Victorian rail networks are conservative engineering gate keepers. For example, Pacific National has been operating 9'6" containers for a number of years on these networks. However, recently the RIM stated these are now deemed over-height.

As a result, and due to an impasse in negotiating with the RIM, Pacific National engaged Freight Victoria to liaise with the RIM to conduct measurements on tunnels, wagons and containers to empirically determine the risks. Pacific National is having to apply for waivers to operate while these studies are conducted.

Western Australia

When Pacific National traverses across the interstate network (standard gauge) it is required to meet different operating standards once it reaches the border of Parkeston WA. ARTC operates AC and DC traction, however arc Infrastructure (as the rail infrastructure manager) does not allow the use of AC traction. The basis for this decision needs to be reviewed as it severely impacts on operational efficiency. Ideally there should be one intermodal standard gauge network owner from Perth to Brisbane, but at least the RIMs should operate consistent standards to improve efficiency.

⁴ ARTC website, accessed 25 June 2019.

South Australia

The RIM on the Tarcoola to Darwin interstate line requires Pacific National to set up a new agreement each time it enters a contract to perform hook and pull of inspection cars on behalf of the RIM – an overly bureaucratic and time consuming process.

Rail imposes far fewer costs on the community in terms of accidents, congestion and emissions than road

Rail freight transport has significant inherent benefits for the economy and community relative to road. A 2017 Deloitte Access Economics report⁵ found:

- Rail imposes far fewer costs on the community in terms of accidents, congestion and emissions than road. These costs are not factored into transport prices.
- Each passenger journey made by rail instead of road generates benefits for society of between \$3.88 and \$10.64 by reducing congestion, accident and carbon costs.
- There are also health, social inclusion and amenity benefits from using rail.
- Road freight produces 14 times greater accident costs than rail freight per tonne kilometre and 16 times as much carbon pollution as rail freight per tonne kilometre.
- Moving freight by rail instead of road generates benefits for society of around 1.45 cents per tonne kilometre. This means that, if all road freight moving between Sydney and Melbourne travelled by rail, this would generate social benefits of \$111 million a year.
- A single train is estimated to be able to replace up to 800 cars during peak hour or around 110 trucks moving freight.

Rail needs to be given the efficiency mandate to go further and a chance to compete with road with substantially reduced rail access pricing.

A first principles approach needs to be adopted

Pacific National notes the National Transport Commission (NTC) is currently adopting a first principles review of the Heavy Vehicle National Law (HVNL) to achieve a more performance-based and outcomes-focused approach to regulation. This is to address industry concerns it is not national in practice and overly prescriptive and complicated.

We believe the ability and incentive of the National Heavy Vehicle Regulator and the NTC to pursue these reforms is because one of the key objectives of the HVHL is that it 'promotes industry productivity and efficiency in the road transport of goods and passengers by heavy vehicles'. The RSNL does not contain this provision and is poorer for it.

Rail freight operators are not necessarily in the best position to influence prescriptive network rules. Rail networks are natural monopolies and there are often significant information asymmetries in negotiating with RIMs to affect network changes, much less coordinate standardisation across networks.

⁵ Value of Rail. The contribution of rail in Australia. A report commissioned by the Australasian Railway Association (ARA). Deloitte Access Economics. November 2017.

Moreover, without an efficiency driven national rail safety regulator, it is unlikely industry would be able to present a set of national rules for the ONRSR to approve.

Recommendation: The Commission should recommend the reform of the ONRSR to include a productivity and efficiency mandate similar to the National Heavy Vehicle Regulator.

Pacific National believes if the ONRSR is subject to a productivity and efficiency mandate (with outcomes reported to Government and industry) it could confidently:

- Promote positive technological innovations in the rail industry to achieve both safety and productivity improvements. The attached Appendix details the type of technological improvements possible.
- Risk assess the effectiveness of existing regulations and the ONRSR's compliance activities.
- Develop harmonised network rules and agitate for the removal of State derogations from the NRSL.
- Educate the community about the positive externalities of rail for safety, lower emissions and less congestion on roads.
- Subsume the safety responsibilities of the individual RIMs as a longer-term goal.

Land freight transport pricing

The rail industry has strongly advocated for land transport pricing and investment reform. Road freight produces 14 times greater accident costs and 16 times more carbon pollution than rail freight per tonne kilometre and does not contribute to road maintenance costs. However, despite rail freight transport imposing far fewer costs on the community in terms of accidents, congestion and emissions than road, these costs are not factored into transport prices – rail is charged up to double that of road. Hence the freight playing field is far from level despite the obvious benefits to the economy and community.

In 2006, all Governments agreed to the Competition and Infrastructure Reform Agreement (CIRA) to require significant interstate routes to be open for regulation by the ACCC on the basis of the ARTC interstate undertaking. Unfortunately, this has not occurred, and jurisdictional access regimes remain in force on the interstate network. These jurisdictional regimes often have the highest rail prices.

In particular, Pacific National requires the SA and WA access regimes to align with the economic regulation of the interstate network due to the material deficiencies in these regimes.

WA and SA rail access regimes

Under the current approach, the access pricing and contracting of a freight train from Melbourne to Perth (interstate) is regulated via an indicative tariff and a regulator approved access agreement. However, once a freight train traverses the standard gauge Arc Infrastructure network (regulated only by a negotiate-arbitrate approach), it is subject to a pricing increase of up to 25 percent.

It is therefore cheaper to haul by rail a twenty-foot equivalent (TEU) container from Kalgoorlie to Port of Adelaide (>2,000 kilometres), than from Kalgoorlie to Perth (<600 kilometres).

Pacific National's experience negotiating for rail access in SA does not compare favourably to other jurisdictions. For example, Pacific National applied for access as recently as 2017 on the GWA vertically integrated Tarcoola to Darwin railway. The process and outcome were inconsistent with a commercial negotiation between two equal parties.

For example, during negotiations, GWA delayed the application process by requesting small parcels of information instead of being upfront on the information required (and its relevance to the access request).

Despite the level of information provided by Pacific National, the access offer was substantially higher than equivalent long distance routes even though no infrastructure upgrades were required for the services proposed.

Recommendation: The Commission should investigate the status and implementation of CIRA and the impact on economic benefits currently foregone.

The need for competitive neutrality between land transport modes

Governments should commit to ensuring that all policy settings and regulation relating to freight transport and supply chain infrastructure and operations are based on competitive neutrality between the different freight transport modes, and that they provide a framework that allows the freight industry to innovate and adopt technological advances without Government pre-empting market outcomes.

Despite Governments consistently advocating for a shift of freight from road to rail, other policies often act against this outcome. The primary problem in this regard has been the structure of the provision of and charging for access to roads for heavy vehicles. Road investments are often driven by political considerations rather than in response to objectively determined investment needs.

Current heavy vehicle charges are determined through an administrative process that has a semblance of economic principle but which in practice is deeply flawed and can be subject to political influence. Governments continue to grant the heavy vehicle industry increases in vehicle length and weight without any corresponding adjustments to their road access charges. This has left rail at a significant disadvantage.

The current road access charging system (PAYGO) is effectively a subsidy for heavy road vehicles. In contrast, rail access charging is determined on a full cost recovery principle. Rail freight operators can spend up to 40 per cent of their operating costs on rail access charges while heavy vehicle operators spend about 5 per cent on road charges⁶.

The rail industry has strongly and persistently argued for market-based reform of road charging and investment, particularly since the release of the Productivity Commission report into Road-Rail Competitive Neutrality in 2006. While it is acknowledged that Governments are now firming in their commitment to reform (through public statements at the COAG Transport and Infrastructure Council), progress has been slow and the current timeframe for meaningful change remains lengthy.

Recent documents suggest that despite statements that the intention is to build on Australia's existing highly effective economic regulation system, there is still a tendency to treat roads as different to other asset classes and public utilities.

To be clear, Government policies today act in direct conflict with the Commonwealth Government's professed desire to increase rail's share of the inter-capital freight market. Fundamentally, this is because Governments have chosen to directly make decisions around road projects and charges rather than creating an environment where these pricing and investment decisions are based on market signals.

Importantly, the different pricing frameworks applicable to heavy vehicles compared to rail freight operators carrying intermodal and general freight impedes the efficiency of the land freight transport network.

The Commission's review provides the opportunity to make a clear statement on competitive modal neutrality in the pricing of land freight transport. A set of principles should guide the acceleration of this reform agenda:

⁶ Australasian Railway Association, The Future of Freight

- Promoting improved productivity and enabling greater efficiency in the provision and use of freight transport infrastructure; and
- enabling a consistent pricing and investment framework for both road and rail freight and, therefore, a more efficient land freight supply chain utilising both road and rail infrastructure networks.

Recommendation: The Commission should promote industry productivity, efficiency and competitive modal neutrality in the infrastructure pricing of land freight transport.

Appendix Operational Technology

Rail freight operators have made significant investments to improve train operating performance and safety. However, the jurisdictional approach to network access often results in dramatically extended implementation timeframes and often less than optimal results, delaying or negating delivery of real improvements. For example:

Alternating Current (AC) Traction and Control Systems

AC traction offers significant performance benefits (up to 25 percent improvement over DC traction). However, many RIMs either do not allow, or significantly restrict the use of AC traction freight locomotives. High performance AC traction has been used in Queensland for decades, with no discernible issues regarding RIM infrastructure damage - yet many RIMs use this reason for continued restriction. In conjunction with modern AC traction control systems, AC traction has been shown to reduce instances of rail damage ("rail burn" and "squats") to minimal levels. RIMs continue to impede the effective implementation of this significant train efficiency improvement without justification.

Distributed Power (DP) Solutions

DP substantially reduces the forces that are generated within a train - reducing the potential for train separations. A significant safety improvement. Further, DP also reduces wheel and rail wear, fuel consumption (and emissions), improves train handling characteristics, and reduces braking distance - all of which either enhance performance and/or improve safety margins. Unfortunately, RIMs intolerance for minor variances in the positioning of locomotives in a DP train restricts its wider deployment.

Electrically Controlled Pneumatic (ECP) Train Brakes

The United States Department of Transport has published reports indicating that ECP brake controlled trains improve efficiency and operations over traditional pneumatically braked trains. Further, and more importantly, they have clearly shown ECP braked trains respond faster, brake harder, and manage heavy braking applications better than normally braked trains - a significant safety improvement. Unfortunately, RIMs adopt an unnecessarily conservative, piece-meal, and inconsistent approach to the use of technology, leading rail freight operators being impacted by differing regional restrictions based on engine technology, or engine size, or type of transmission, or braking system.

Operational Data

Rail freight operators are increasingly looking to access and capture operational data that is collected by trackside equipment.

This data offers the ability to monitor train performance in real-time which can allow the detection of issues well before causing significant disruption, or complete failure. Most trackside equipment is operated by RIMs and used to ensure a train is operating in a safe condition and to protect network infrastructure. It is usual that more data is collected than needed for these purposes and is useful to rail freight operators to improve maintenance action, reduce disruption and/or failure of trains. This data offers a step forward in the safe operation of trains, and is rarely commercially sensitive, yet RIMs are often reluctant to provide these datasets, in a fit-for-purpose state.

Pacific National believes the open dissemination of non-commercially sensitive safety data is key to continued improvement in rail safety outcomes. However, RIMs have not embraced interoperability of data collection, and frustrate rail freight operators from the installation of their own operational equipment.

Automatic Train Protection (ATP) and Train Driving

A number of RIMs are considering or implementing ATP systems within their networks. While these systems provide additional safety benefits, it is unfortunate there is no uniform agreement on the type of system to be deployed. This will require locomotives to be able to deal with numerous ATP solutions, using different design philosophies, communications technologies, braking curves, safety margins, operating rules for each of the jurisdictions it travels across.

The difficulties outlined in ATP are compounded when operators seek to invest in automated train driving solutions. The integration of an automated train driving solution with the ATP solutions are unclear, numerous, unnecessarily complex, and not actively supported by the RIMs. In contrast to road where a set of "Guidelines for Trials of Automated Vehicles in Australia" has already been produced by Austroads and the NTC.