Rail Safety National Law
Draft Regulatory Impact Statement
July 2011

NTC AUSTRALIA
National Transport Commission

National Transport Commission

Rail Safety National Law: Draft Regulatory Impact Statement

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Report outline

Title:	Rail Safety National Law
Type of report:	Draft Regulatory Impact Statement
Purpose:	Public consultation
Abstract:	In December 2009 the Council of Australian Governments agreed to implement a national single rail safety regulator. It was also agreed that a rail safety national law be developed, which the regulator will administer, and that the law would be based on the National Transport Commission Model Rail Safety Bill (2007) and Regulations. The national law was also to address areas where states and territories had varied from the model bill and regulations.
Submission details:	Submissions will be accepted until Friday, 12 August 2011 online at www.ntc.gov.au, or by mail to: Chief Executive Officer National Transport Commission L15/628 Bourke Street MELBOURNE VIC 3000
Key milestones:	Submission of this draft regulatory impact statement for public consultation for the period from 18 July to 12 August 2011. Submission of the final regulatory impact statement to the Standing Council of Transport and Infrastructure in November 2011.
Key words:	Rail safety, rail safety worker, rail transport operator, rail infrastructure manager, regulatory impact statement
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Foreword

The National Transport Commission (NTC) is an independent organisation established under the *National Transport Commission Act 2003* (Commonwealth) and an Inter-Governmental Agreement for Regulatory and Operational Reform in Road, Rail and Intermodal Transport. The NTC is responsible for developing nationally consistent reforms in road, rail and intermodal transport and to evaluate, monitor, review and maintain those reforms.

In 2008, the Australian Transport Council (ATC) endorsed the National Transport Policy Framework, developed by the NTC, and agreed to a program of national reform to address significant national challenges across all transport modes. The National Transport Policy Framework outlined a 'new thinking' approach to transport policy which reflected changing industry and operating environments with the objective of developing a seamless, coordinated transport system.

To this end, ATC requested that regulatory impact statements be prepared for a national maritime safety regulator, a national heavy vehicle regulator, and a single, national rail regulatory and investigation framework.

In May 2009 the Australian Transport Council considered the establishment of a Single National Rail Safety Regulator, that decision being endorsed by the Council of Australian Governments in December 2009. The NTC was tasked with developing Rail Safety National Law (National Law), based on the National Transport Commission Model Rail Safety Bill (2007) and Model Regulations (Model Law).

Following previous initiatives to develop more nationally uniform arrangements, this reform is an historic moment and unique opportunity to achieve a truly national system of rail safety regulation. It comes at a time when rail transport has been increasingly identified as a key means of servicing the growing nation-wide demand for safer, more productive and environmentally-friendly transport services and infrastructure.

This draft regulatory impact statement assesses the cost impacts and benefits of the transition from Model Law to National Law.

I acknowledge the efforts of NTC staff who have contributed to the regulatory impact statement, including Julian Del Beato, Kate Pearce, Monica Kishore and Vinh Trinh, and also the National Rail Safety Regulator Project Office and Advisory Committee.

The regulatory impact statement is now published to invite public comment on the proposals described in the impact analysis. Feedback will be considered in determining whether to further amend the draft proposals and National Law, and further policy development may be required. It should be noted that proposals relating to alcohol and drug management and fatigue risk management are currently under consideration and subject to further policy development. In commenting on this regulatory impact statement, stakeholders should be mindful that a regulatory impact statement will be developed to specifically to address the development of a risk-based model for defining working hours for rail safety workers. Following this process, the final regulatory impact statement and draft National Law will be submitted to the Standing Council of Transport and Infrastructure for voting in November 2011.

Greg Martin
Chairman

Executive summary

The Council of Australian Governments (COAG) and the Australian Transport Council (ATC) directed the National Transport Commission (NTC) to consolidate the seven state and territory bodies of rail safety law into a Rail Safety National Law (National Law), to support implementation of a Single National Rail Safety Regulator (Regulator).

The National Law has been developed to achieve the best outcomes in rail safety, utilising a co-regulatory approach to risk management between duty holders and the Regulator. The objective is to develop a seamless and coordinated national approach to rail safety regulation.

This is a landmark opportunity to take a significant step forward in achieving national transport objectives. The draft National Law has been estimated to have a benefit to society (net present value) of between $29 and $73 million.

A single, national system of rail regulation would have a number of benefits, both to improving levels of safety, as well as cutting costs and red tape. These include:

- Accrediting rail transport operators on a national basis, alleviating the need for interstate operators to hold multiple accreditations to different standards.
- A national system of regulating compliance with the law, cutting duplication between states and territories in the auditing, monitoring and inspecting of interstate rail transport operators.
- Making available a larger, national pool of resources and specialist knowledge for the Regulator to draw on in making technical decisions and judgments, and investigating safety incidents.
- Strengthening the capability of policy makers and the Regulator to make more evidence-based decisions, through the introduction of a national standard for the recording, sharing and management of rail safety data.
- Reduced compliance costs for rail transport operators and enhanced confidence in the regulatory regime through nationally consistent application and interpretation of rail safety laws.
- By reducing duplication in compliance tasks, freeing up resources of both rail transport operators and the Regulator to concentrate more on measures to improve safety.

The NTC had previously submitted a proposal to move from the existing state and territory-based system of rail safety law and regulation, to one under a single national law, regulator and investigation framework. The proposal and accompanying regulatory impact statement was approved by COAG in 2009, who directed the NTC to develop a National Law that would take effect under a national Regulator in January 2013.[1]

[1] Single, National Rail Safety Regulatory and Investigation Framework Regulatory impact Statement (July 2009), available at http://www.ntc.gov.au/viewpage.aspx?documentid=1927.

In approving the proposal, COAG agreed for the National Law to be based on the NTC Model Rail Safety Bill and Model Regulations (Model Law[2]).

All states and territories have implemented the Model Law; however, they have varied certain provisions in their applying law to support local policy objectives. In other cases, they have implemented their own provisions where a national position was not reached in the process of developing the Model Law, allowing instead for local variations.

In supporting the transition from Model Law to a National Law and Regulator, to resolve these variations, a number of amendments to the Model Law have been proposed. The purpose of this regulatory impact statement is to assess those amendments and therefore, the impact of the proposed National Law. This regulatory impact statement does not seek to redress governance arrangements for the Regulator, a principal element of COAG's standing direction to establish a national system of rail safety regulation.

The amendments were developed to maintain or improve rail safety management, and in many cases streamline or simplify the compliance process. Proposed requirements for the management of drug and alcohol use by, and fatigue of rail safety workers are designed to support best practice management principles being developed by rail transport operators. The requirements would help best practice being achieved at minimum necessary cost, by providing operators with the flexibility to tailor their management to the individual circumstances of their railway operations and the associated risks.

Some amendments, such as for assessing rail safety worker health and fitness, and competence, were developed to simplify or clarify compliance standards, where those standards are justifiably able to be applied in a uniform manner across the rail industry. Other amendments, representing the majority, comprise minor rewording to clarify existing requirements, or propose mechanical changes to accommodate their being administered under a national Regulator.

In the process of developing the National Law, the NTC and National Rail Safety Regulator Project Office released a number of discussion papers and convened stakeholder workshops. Stakeholders consulted during this process included state and territory government policy makers, rail safety regulators, rail industry members, rail industry associations and unions. Feedback from these stakeholder forums was considered by the Jurisdictional Rail Safety Advisory Group, comprising policy makers from the Commonwealth, state and territory governments. Where matters were unresolved from this group, policy decisions were elevated to the Rail Safety Regulation Reform Project Board or ATC for deliberation.

A number of amendments to the Model Law, which have a measurable regulatory impact, are proposed.

- Scope and objectives, addressing objectives of the National Law, as well as clarifying its scope of applicability. Proposals are:
    - to add a number of objectives to the Act (National Law)
    - to further define railways to which the Act (National Law) will not apply
    - to amend the accreditation exemption provisions for private sidings, to apply to registration of the siding managers rather than the infrastructure itself

[2] Rail Safety Reform Bill - Draft Regulatory Impact Statement for Consultation (October 2005) & Model Rail Safety (Reform) Regulations: Draft Regulatory Impact Statement (July 2006), available at http://ntc.gov.au/viewpage.aspx?documentid=1667.

- to provide a framework by which the Regulator may exempt certain railways from defined provisions of the Act (National Law)
- to authorise the Regulator to direct parties when performing works on or near rail infrastructure, when that work affects rail safety and is not otherwise subject to the National Law
- to impose specific duties on parties loading and unloading rolling stock to manage safety risks.

- Various requirements for how rail transport operators must plan and manage risks, including proposals:
  - to specify additional matters that a safety management system must address
  - requiring full compliance with the National Standard for Health Assessment of Rail Safety Workers
  - setting out requirements for how operators must managed the risks to safety associated with drug and alcohol use, including requiring that known, key elements are addressed
  - setting out requirements for how operators must manage risks to safety arising from rail safety worker fatigue, prescribing similar key elements (in a similar manner as for the management drug and alcohol use) and a framework for managing maximum hours of work[3]
  - clarifying the requirements for assessment of rail safety worker competence
  - clarifying the requirement for communication between train drivers and network control officers
  - imposing a requirement for rail infrastructure managers to consult with affected parties before making changes to network rules.

- Specific authorities and responsibilities of the Regulator, which govern elements of how the Regulator shall ensure compliance with the National Law, including proposals:
  - to authorise the Regulator to direct rail transport operators to fit safety or protective devices, in order to implement recommendations of prescribed types of safety investigations
  - requiring the Regulator to conduct a cost-benefit analysis on certain types of directions issued to rail transport operators
  - appointing the Regulator as the person required to give direction to parties who fail to agree on arrangements for coordinating prescribed types of interfaces with railways.

[3] A framework for managing rail safety worker maximum hours of work is proposed in the draft National Law and this regulatory impact statement. A supplementary proposal and regulatory impact statement, providing more policy detail under the framework, is scheduled to be submitted for voting by ATC at a later date.

- Harmonisation of the National Law with Model Work Health and Safety Legislation for provisions that may be incompatible, in order to avoid inconsistencies between the two overlapping areas of law.
    - This includes the development of a national penalty framework to align with penalties in the Model Work Health and Safety Bill.

The overall, incremental impact of the proposed amendments to the Model Law is estimated as having a net present value, as measured over a ten year period, of between $29 and $73 million (i.e. a net benefit). Estimates for each proposal are shown in Table 1. (figures are presented as high and low range estimates).

Table 1. Net present value of National Law proposals[4]

	Net present value ($ Million)	
	High	**Low**
Scope and objectives		
Railways to which the Act does not apply	0.42	0.17
	-0.74	-0.87
Private sidings exemption from accreditation	7.60	-0.20
Exemption framework	3.35	0.02
Powers with respect to the interface with parties whose operations may impact rail safety	2.05	0.0
Duty for loading and unloading rolling stock	7.60	3.80
Operator safety management		
Safety management system	0.20	0.28
Health and fitness management program	0.82	0.94
Drug and alcohol management program	30.46	14.96
Fatigue risk management program	4.16	2.14
Testing for drugs or alcohol	8.41	6.90
Fatigue management hours of work/rest	2.01	1.68
Specific Regulator authorities and responsibilities		
Network rules	7.80	0.28
Regulator to conduct CBA for mandatory safety decisions	-1.40	-0.70
Total	**72.71**	**29.39**

Significant benefits have been estimated for a proposal to introduce a duty under the National Law for safe loading and unloading of rolling stock, a provision that would authorise the Regulator to help prevent unsafe practices that have previously led to train derailments. More robust requirements for how rail transport operators must manage drug and alcohol use by rail safety workers are also estimated to result in significant benefits, by reducing the number of rail safety incidents caused by impaired workers.

Aggregated net present values of the proposals, as incurred by each major industry segment, are shown in Table 2.

[4] Positive figures indicate a net benefit; negative figures indicate a net cost.

Table 2. Net present value of National Law proposals to industry segments[5]

	Initial (implementation) ($ Million)		Ongoing ($ Million per annum)		Net present value ($ Million)	
	High	Low	High	Low	High	Low
National Regulator	-1.80	-1.13	-0.21	-0.01	-3.27	-1.23
Rail transport operators (freight and passenger)	-7.42	-3.04	-0.64	0.11	-11.93	-2.28
Rail transport operators (tourist and heritage)	-3.17	-1.75	-1.29	-0.76	-12.22	-7.12
Society	0.0	0.0	14.26	5.7	100.13	40.02
Total	**-12.39**	**-5.92**	**12.12**	**5.03**	**72.71**	**29.39**

It is estimated that implementing the draft National Law would impose some costs on rail industry members and the Regulator. However, these marginal costs would in practice be absorbed within the broader cost savings of between $36 and $67 million that were previously assessed as resulting from establishing a single national model of rail safety regulation and law.[6]

Additionally, the proposed amendments are estimated to support benefits of between $29 and $73 million, measured in terms of reduced costs to society resulting from improved levels of rail safety.

COAG directed that the National Law be developed in a manner that:

- supports a seamless national rail transport system
- does not reduce existing levels of rail safety
- streamlines regulatory arrangements and reduces the compliance burden for business
- improves national productivity and reduces transport costs generally.

It is considered the draft National Law would serve each of these objectives. It has been assessed that implementing the proposed National Law would have substantial benefits to society, both in terms of improved levels of safety, as well as enhanced productivity resulting from a more streamlined and seamless national regulatory regime that would result in significant transport cost savings.

This reform represents an historic opportunity for broader national transport and more specifically, rail safety regulatory reform. It would more strongly position the rail industry to more effectively and efficiently meet the challenges it is likely to face in the coming decades, including demand for strong growth, downward pressure on costs resulting from more intense competition between rail and other transport modes, and an expectation of the public that safety standards would continue to improve.

[5] Positive figures indicate a net benefit; negative figures indicate a net cost.

[6] As detailed in the 2009 Single National Rail Safety Regulatory and Investigation Framework Regulatory Impact Statement, available at http://www.ntc.gov.au/viewpage.aspx?documentid=1927.

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1. Introduction

1.1 Council of Australian Governments Reform Agenda

The Council of Australian Governments (COAG) has committed to regulatory and red tape reduction under the National Reform Agenda announced in February 2006.[7] COAG identified rail safety regulation as a cross-jurisdictional 'regulatory hotspot' where overlapping and inconsistent regulatory regimes were impeding economic activity.

In February 2006, COAG noted that:

> *"the dispersed nature of Australia's population and markets underlines the importance of efficient transport infrastructure to improving productivity. Transport already generates approximately five per cent of GDP and Australia's freight task is expected to almost double over the next 20 years. COAG has agreed to improve the efficiency, adequacy and safety of Australia's transport infrastructure by committing to high priority national transport market reforms."*

1.2 Australian Transport Council National Transport Policy Framework

In February 2008, the Australian Transport Council (ATC) agreed that there is a need for a national approach to transport policy and endorsed the National Transport Policy Framework.[8] The ATC's vision for Australia's transport future stated:

> *"Australia requires a safe, secure, efficient, reliable and integrated national transport system that supports and enhances our nation's economic development and social and environmental well-being."*

To achieve this vision, ATC committed to a number of policy objectives.

- **Economic**: To promote the efficient movement of people and goods in order to support sustainable economic development and prosperity.
- **Safety**: To provide a safe transport system that meets Australia's mobility, social and economic objectives with maximum safety for its users.
- **Social**: To promote social inclusion by connecting remote and disadvantaged communities and increasing accessibility to the transport network for all Australians.
- **Environmental**: Protect our environment and improve health by building and investing in transport systems that minimise emissions and consumption of resources and energy.

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[7] Council of Australian Governments' Meeting: Communiqué, 10 February 2006, http://www.coag.gov.au/coag_meeting_outcomes/2006-02-10/docs/coag100206.pdf, last checked 20 October 2010.

[8] Australian Transport Council, 2008, *Communiqué* from ATC meeting on 2 May 2008, Canberra.

- **Integration**: Promote effective and efficient integration and linkage of Australia's transport system with urban and regional planning at every level of government and with international transport systems.
- **Transparency**: Transparency in funding and charging to provide equitable access to the transport system, through clearly identified means where full cost recovery is not applied.

Following on from these objectives, ATC agreed that it would consider the options of establishing national frameworks for regulation of heavy vehicles, marine safety and rail safety to establish a genuine national market and a seamless regulatory framework.

1.3 The National Transport Commission

COAG and ATC directed the National Transport Commission (NTC) to develop a body of rail safety national law (National Law) to support implementation of a Single National Rail Safety Regulator (the Regulator).

The National Law has been developed to achieve the best outcomes in rail safety, utilising a co-regulatory approach to risk management between rail transport operators and the Regulator. The objective is to develop a seamless and coordinated national approach to rail safety regulation.

COAG directed that the National Law be developed using the NTC Model Rail Safety Bill and Model Regulations (Model Law) as the basis.[9] This regulatory impact statement has assessed the impact and benefits of proposed amendments to the Model Law, which are necessary to form a body of National Law that would be administered by the Regulator. Previous regulatory impact statements have assessed the impact of the Model Law[10] and that of establishing a National Law and Regulator.[11]

The proposed amendments are necessary to support the transition from Model Law to a National Law to be administered by the Regulator. Additionally, some amendments are proposed to resolve policy issues where states and the territories have varied from the Model Law, or where a national position was not previously formed.

[9] Available at http://ntc.gov.au/viewpage.aspx?documentid=1667.

[10] Rail Safety Reform Bill - Draft Regulatory Impact Statement for Consultation (October 2005) & Model Rail Safety (Reform) Regulations: Draft Regulatory Impact Statement (July 2006), available at http://ntc.gov.au/viewpage.aspx?documentid=1667.

[11] Single, National Rail Safety Regulatory and Investigation Framework Regulatory impact Statement (July 2009), available at http://www.ntc.gov.au/viewpage.aspx?documentid=1927.

2. Background

2.1 The current rail safety regulatory framework

Rail safety regulation is relatively new to Australia, having only been in place for 17 years. Prior to this, railways were government-owned and vertically integrated, rendering them directly accountable to governments.[12]

In 1996 the Commonwealth, states and territories signed an Inter-Governmental Agreement on Rail Safety. The agreement was to establish a cost effective, nationally consistent approach to rail safety, developed to lower barriers for entry of third party operators. In accordance with the Inter-Governmental Agreement, all parties undertook to legislate for rail safety, and more specifically, to include provisions in state and territory legislation sufficient to meet the terms and conditions of the agreement.

Australia's rail safety legislation is co-regulatory, involving a process by which rail safety operators assess the risks associated with their railway operations and then establish a safety management system to manage them. This provides flexibility that supports operators in aligning their risk management with the scope and nature of their operations and risk profile. It is neither prescriptive, nor self-regulatory. It relies on regulatory oversight, unlike other forms of regulation where rules and standards are prescribed by governments.

Australia currently has seven rail safety regulators across the eight states and territories, all with their own rail safety laws. The regulators oversee a co-regulatory rail safety regime to enable and promote safe railway operations. The overall objective is to consult, collaborate and cooperate with industry to improve safety. It is essential to develop a common understanding of the risks to safety between the regulator and regulated, and to mitigate those risks jointly.

Rail transport operators must comply with both rail safety and work health and safety laws. A number of duties under these bodies of law overlap, most notably the overarching duty to ensure the safety of rail operations (or workplaces more broadly under work health and safety law). The draft National Law imposes a number of additional requirements developed to address the management of safety risks that apply specifically to railway operations.

Similar to rail safety laws under existing arrangements, work health and safety laws are implemented at the state and territory level. They also are subject to national model law: the Workplace Relations Ministers Council endorsed the Model Work Health and Safety Act on 11 December 2009. Each state and territory and the Commonwealth will be required to enact laws that reflect the Model Work Health and Safety Act by the end of 2011, with commencement on 1 January 2012.

2.2 The Model Rail Safety Bill and Regulations (Model Law)

The Model Law was developed by the NTC with the objective of further supporting nationally uniform and best practice rail safety law.[13] It was approved by the ATC in 2006, making it available to states and territories for implementation.

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[12] The management of rail infrastructure, rolling stock operating on it and the provision of support services was undertaken by the same entity (government). This is unlike how much of the rail industry in Australia is structured today.

[13] Available at http://ntc.gov.au/viewpage.aspx?documentid=1667.

All states and territories, with the exception of the Australian Capital Territory, which does not regulate rail safety, have implemented rail safety law that is based on the Model Law, although some transitional arrangements mean that not all provisions have commenced as yet.

Approval and progressive implementation of the Model Law represents an important step towards a nationally uniform system of rail regulation. However, this arrangement has preserved some key limitations. These include variations in how states and territories have implemented the Model Law, as well as the need for rail transport operators to be separately accredited in each state or territory in which they operate.

2.3 The Single National Rail Safety Regulator

Following the release of a regulatory impact statement in July 2009, COAG agreed in December 2009 to proceed with establishing the Regulator and National Law.[14] The total incremental benefit (that is, against the current regulatory environment) of establishing a single national model of rail safety regulation and law was assessed at between $36 and $67 million.

The Regulator will be established as an independent statutory agency under legislation of the South Australian Parliament as a Commission structure managed by the Regulator/Chief Executive Officer supported by two Assistant Commissioners.

The Regulator will administer the National Law proposed in this regulatory impact statement.

2.4 Rail industry overview

In 2008, the rail industry contributed $6.47 billion to the Australia's GDP, employing approximately 10 per cent of the transport and storage workforce.[15] The national rail network services a population of almost 22.5 million and runs on approximately 39,000 kilometres of track.

At present, a third of the rail industry operates in more than one state or territory. The need to comply with varying state and territory rail safety laws increases the regulatory burden and operating costs to the rail industry, as well as the cost to policy makers and rail safety regulators. This adversely impacts on the competitive position and efficiency of interstate rail operations in particular. This inefficiency also diverts resources from achieving best practice safety outcomes.

Australia's rail industry is a mix of urban, regional and interstate or national operations, as shown in Figure 1. Railways tend to be situated in, or operate within, defined areas (metropolitan cities or regional areas such as the Hunter Valley, the Queensland coal fields or the Western Australian Pilbara mining region) or between capital cities and strategically important intermodal terminals. Australia's rail operations are largely confined to areas stretching from the east to the west coast along the south coast, vertically through the country's centre and along the east coast.

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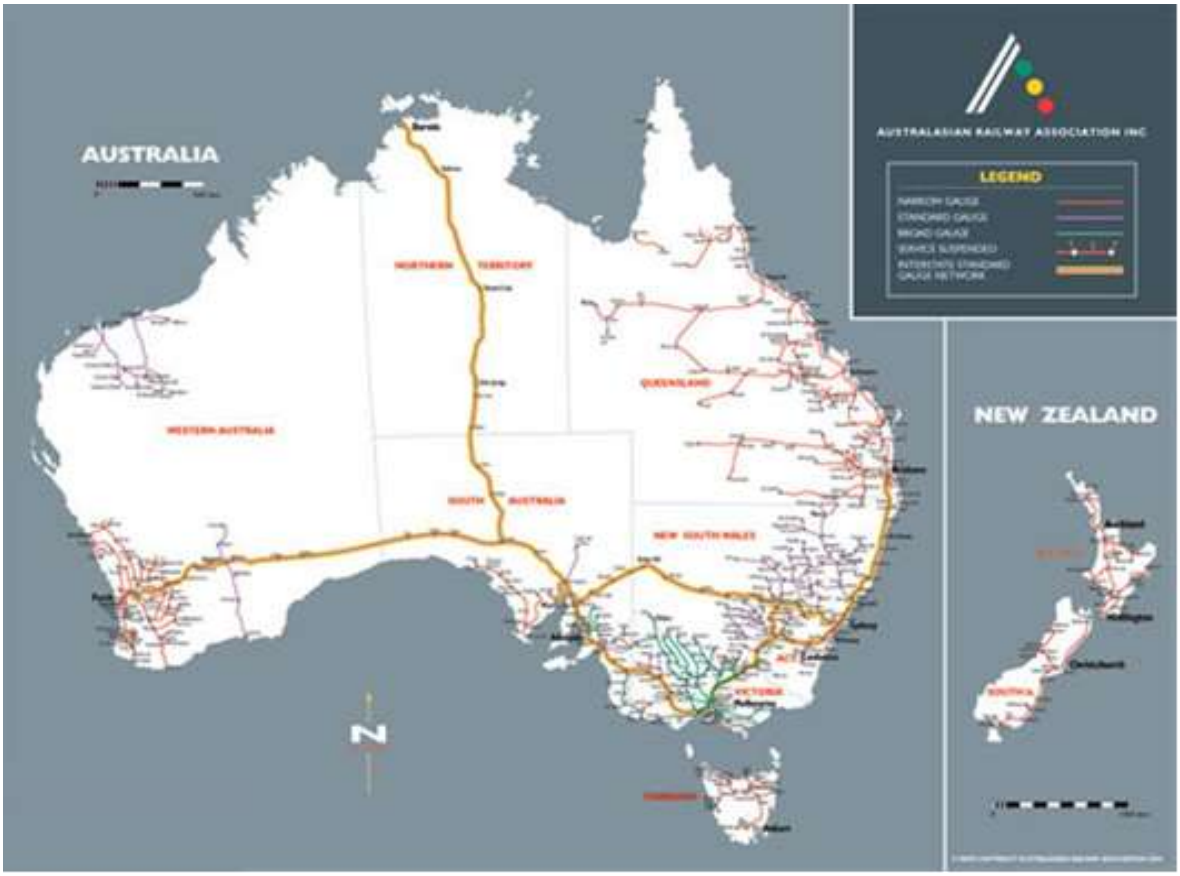
[14] Single, National Rail Safety Regulatory and Investigation Framework Regulatory impact Statement (July 2009), available at http://www.ntc.gov.au/viewpage.aspx?documentid=1927.

[15] Bureau of Infrastructure, Transport and Regional Economics, 2009, *Australian transport statistics yearbook 2009*, BITRE, Canberra, ACT (Page 11).

Figure 1. Map of Australia's rail network[16]

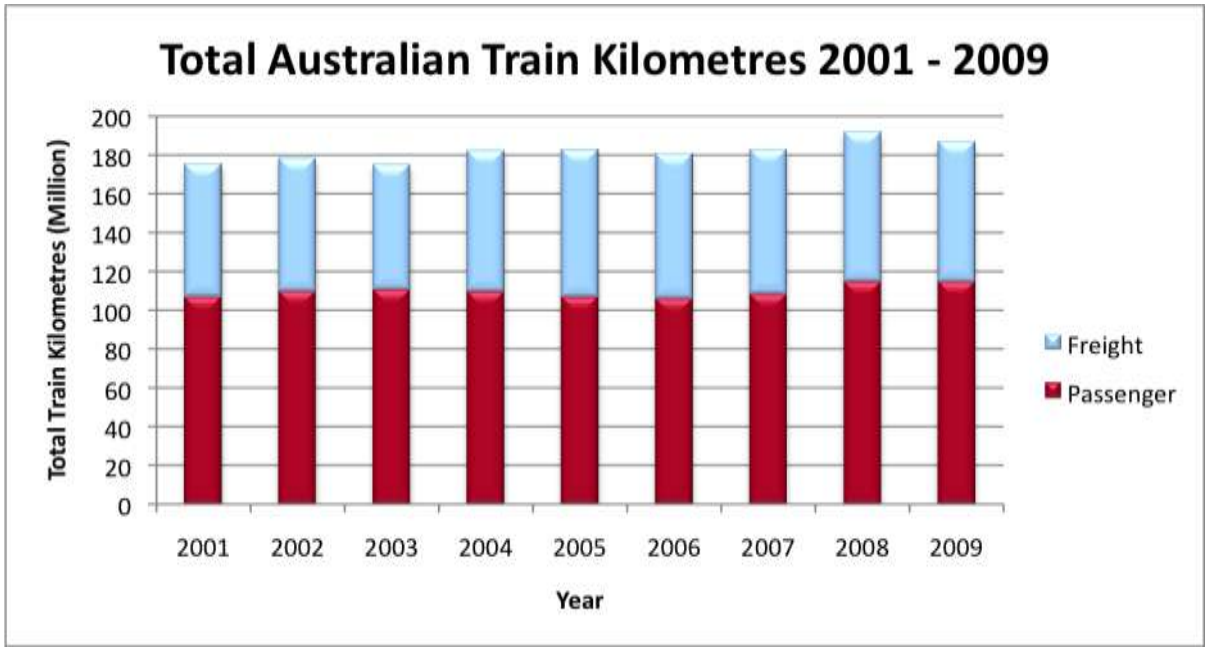


Nationally, the proportion of freight and passenger train movements has remained relatively constant at approximately 40 and 60 per cent respectively of total train kilometres as shown in Figure 2.[17]

[16] Source: Australasian Railways Association

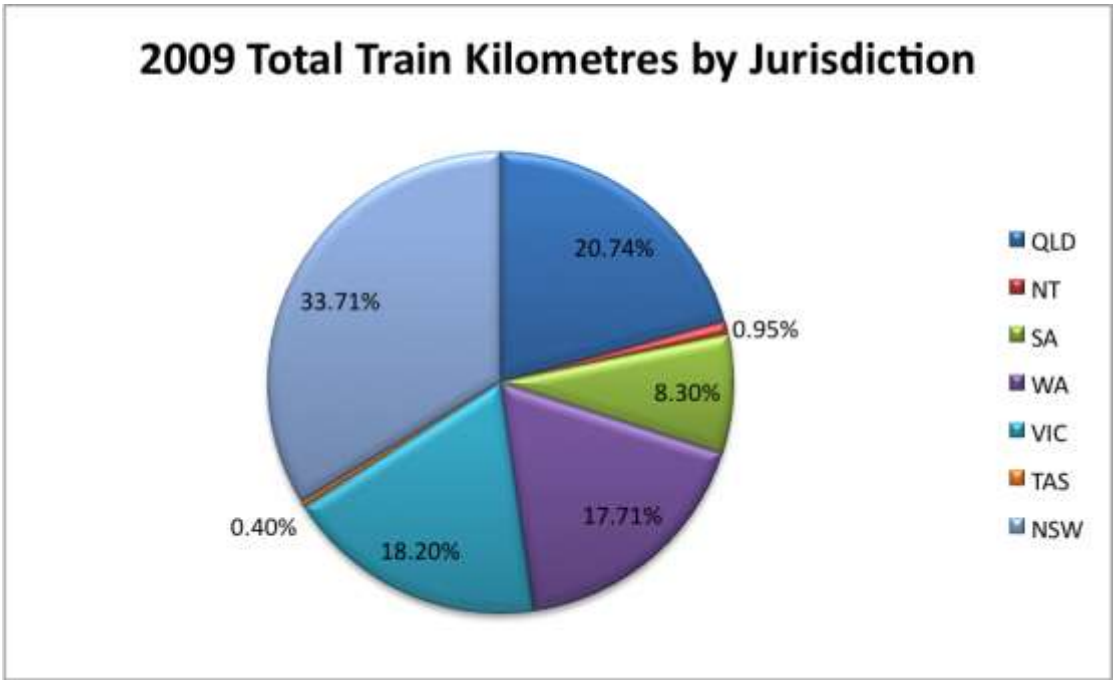
[17] Australian Transport Safety Bureau, ATSB Transport Safety Report, Australian Rail Safety Occurrence Data 1 January 2001 to 31 December 2009 (Page 15).

Figure 2. Total Australian train kilometres 2001 - 2009[18]



The train kilometres for each state and territory in 2009 are proportional to the population of each state and territory. New South Wales is Australia's most populated state and had the highest percentage (34 per cent) of train kilometres in 2009 whilst Tasmania and the Northern Territory had the lowest, as shown in Figure 3.

Figure 3. Total train kilometres by state and territory[19]



[18] Source: ATSB Transport Safety Report

[19] Source: ATSB Transport Safety Report

2.5 Rail safety trends

Rail safety is as important in cities as it is in regional areas or on railways between cities and intermodal terminals. Some of the most serious and expensive crashes in recent years have occurred in regional areas and recent multiple-fatality crashes have occurred outside metropolitan areas.

Due to the nature of rail crashes, in which multiple fatalities may result from a single crash, in combination with the overall low number of crashes, it is difficult to draw reliable conclusions on any trends from the accident data alone. Despite this, Figure 4 shows what appears to be a gradual reduction in rail fatalities in New South Wales (which hosts the most rail movements of all states and territories and therefore represents arguably the most statistically significant data) between 2001 and 2009.

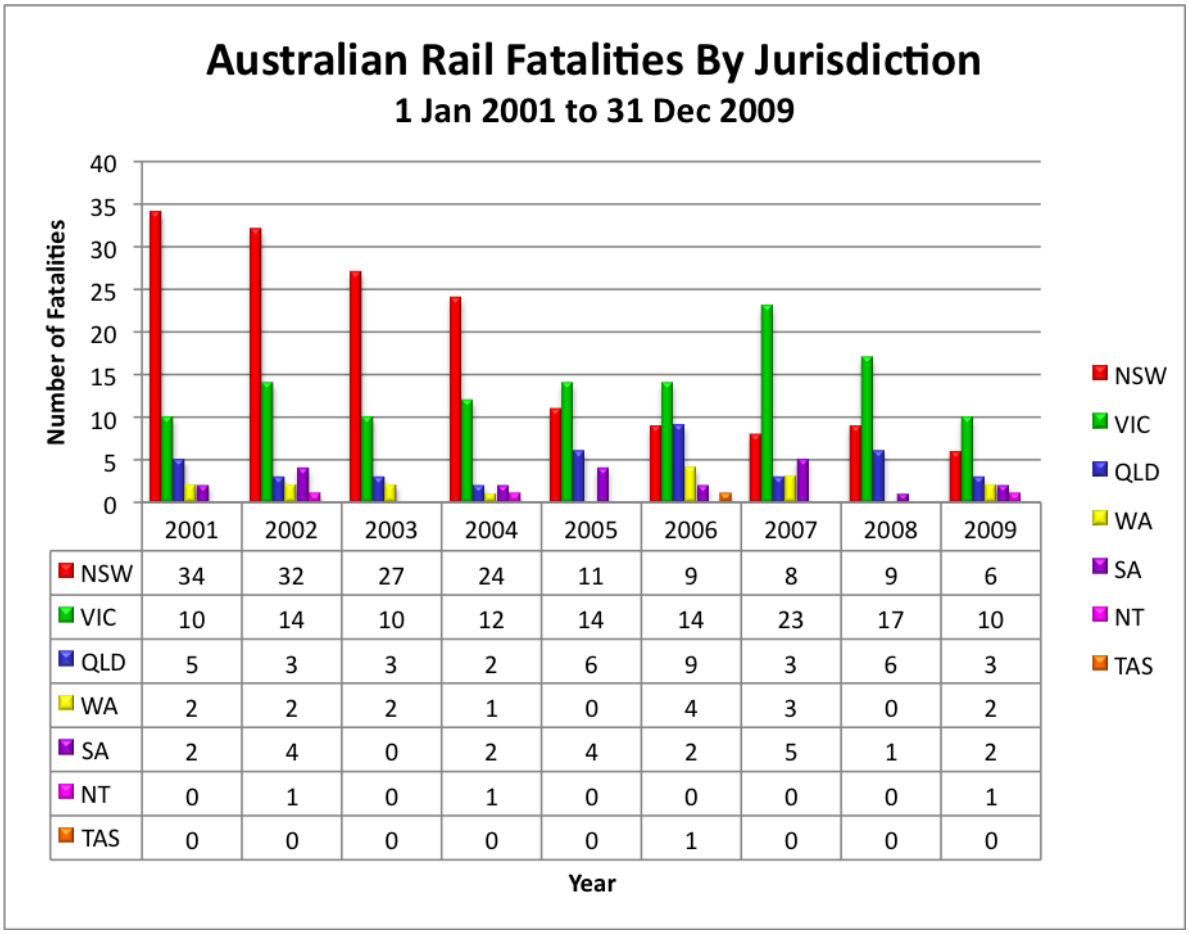
In January 2003, seven people were killed as a result of a train being derailed near Waterfall in New South Wales. The inquiry that followed led to a number of measures for improving rail safety being implemented in New South Wales.

The sudden increase in Victorian fatalities in 2007 can be attributed substantially to a single grade level crossing collision in Kerang, which resulted in 11 fatalities.

With implementation of the Model Law in states and territories commencing in the past few years, it is too early to draw reliable conclusions on the level of impact it has had on rail safety. Figure 5 shows a general reduction in rail industry serious personal injuries.[20]

[20] The sharp increase in Victorian reporting of serious personal injuries is attributed to the broader definition for serious personal injuries between 1 August 2006 and 29 February 2008. Effective March 1, 2008, the definition of a serious personal injury in Victoria was aligned with that included in the Guideline for the Reporting of Notifiable Occurrences (ON-S1) and as a result the number of incidents reported reduced in that State.

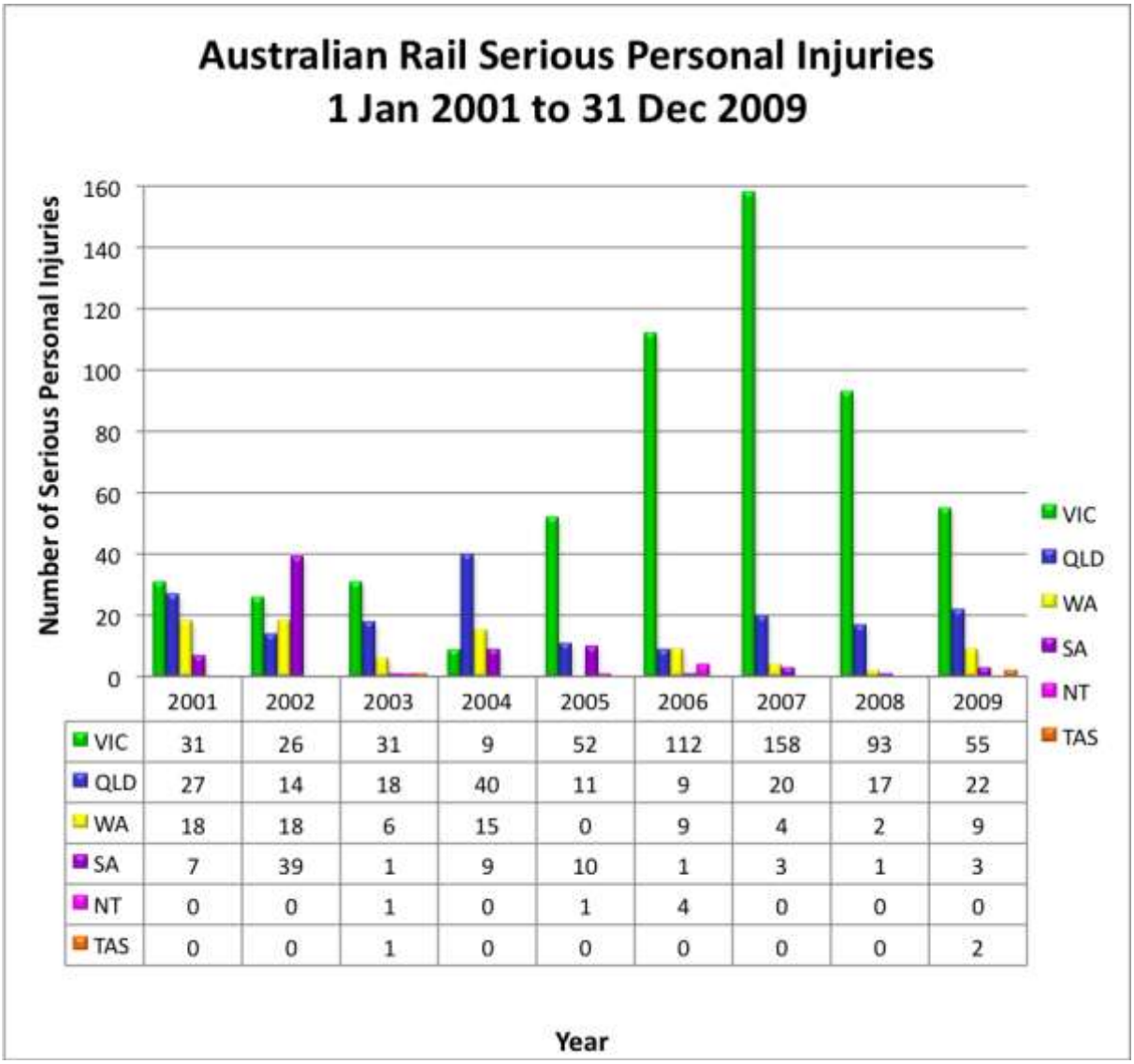
Figure 4. Australian rail fatalities by jurisdiction[21]



	2001	2002	2003	2004	2005	2006	2007	2008	2009
NSW	34	32	27	24	11	9	8	9	6
VIC	10	14	10	12	14	14	23	17	10
QLD	5	3	3	2	6	9	3	6	3
WA	2	2	2	1	0	4	3	0	2
SA	2	4	0	2	4	2	5	1	2
NT	0	1	0	1	0	0	0	0	1
TAS	0	0	0	0	0	1	0	0	0

[21] Source: ATSB Transport Safety Report.

Figure 5. Australian rail serious personal injuries by state and territory[22]



	2001	2002	2003	2004	2005	2006	2007	2008	2009
VIC	31	26	31	9	52	112	158	93	55
QLD	27	14	18	40	11	9	20	17	22
WA	18	18	6	15	0	9	4	2	9
SA	7	39	1	9	10	1	3	1	3
NT	0	0	1	0	1	4	0	0	0
TAS	0	0	1	0	0	0	0	0	2

[22] Source: ATSB Transport Safety Report. Rail transport operators in New South Wales are unable to access the information required to grade injury according to the criteria of Occurrence Notification - Standard One (ON-S1 2008). Injury statistics for NSW are based on a broader (more inclusive) definition than ON-S1 and are not comparable with other states and territories.

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3. Nature of the problem

In establishing a Regulator, it is necessary to migrate from the current circumstance in which rail safety law has been developed and implemented at the individual state and territory level, to one at the national level. Since the Model Law was approved by ATC in 2006, all states and territories have implemented it; however, they have included a number of variations to the model provisions. In agreeing on a body of National Law, these variations must be resolved.

Variations refer to matters addressed in the Model Law, but from which states and territories have varied in their implementation. While some variations are inconsequential and mere matters of drafting style or convention, others have resulted from ongoing concern or disagreement over the underpinning policy principles.

Variations also include matters that the Model Law did not address, explicitly providing for local variations (that is, where states and territories were to develop their own provisions). These include:

- the management of drug and alcohol use by rail safety workers
- the management of rail safety worker fatigue
- who an appointed person would be, for the purpose of resolving any disagreements over rail interface coordination arrangements
- penalties for breaches of rail safety law.

Additionally, even where provisions of the Model Law have been adopted by states and territories, amendments are nevertheless required where those provisions were developed specifically for the state and territory regulatory environment. For instance, the provision for granting reciprocal powers to rail safety officers of one state or territory to operate in that capacity in another state or territory would become redundant in a national regulatory environment.

At the policy level, a challenge for developing uniform National Law is to allow for adequate flexibility in accommodating genuine differences in the operating environments of states and territories. A key principle in meeting that challenge is the co-regulatory nature of rail regulation, which would provide the Regulator with sufficient latitude to account for such differences.

In resolving these matters, several amendments to the Model Law have been proposed. Each of these addresses a specific ‘problem’ relevant to that provision. A description of those problems is included in the relevant sections of this document (refer Section 6, Impact analysis).

In summary, despite substantial steps having previously been taken towards achieving uniform, rail safety national law (in the form of the Model Law), there remains a number of issues to be resolved in delivering a body of uniform National Law.

4. Scope and objectives of national reform

In July 2009, COAG agreed to establish a single national rail safety regulator, resolving that:

> "*These national arrangements will remove inefficiencies arising from inconsistent jurisdictional requirements, streamline the regulatory arrangements and thus reduce the compliance burden for business, and reduce transport costs more generally. Importantly, the efficiencies to be gained in moving to national transport safety regimes will not compromise safety. In fact, the better assessment of risk and more efficient allocation of resources through a national scheme will improve the safety of these key transport sectors.*"

The COAG determination endorsed a proposal that included the single rail safety national law being based on the existing Model Law.

In December 2009, COAG reiterated the need for "*a truly national transport system that will reduce transport costs and help lift national productivity without compromising safety"*.

Accordingly, the objectives of this reform are to develop a body of uniform rail safety national law that:

- supports a seamless national rail transport system
- does not reduce existing levels of rail safety
- streamlines regulatory arrangements and reduces the compliance burden for business
- improves national productivity and reduces transport costs generally.

Some additional matters to be resolved in establishing a Regulator include governance, institutional and funding arrangements. These are being addressed separately by the National Rail Safety Regulator Project Office and are not addressed in this regulatory impact statement.

5. Basis and structure of the regulatory impact statement

As the National Law is to be based on the existing Model Law, it is not the objective of this regulatory impact statement to assess the National Law in its entirety (as doing so would double-count costs or benefits assessed in previous regulatory impact statements), but rather focus on those elements of the National Law that vary with, or were not addressed, by the Model Law.

Neither does this regulatory impact statement seek to redress governance arrangements for the Regulator, a principal element of COAG's standing direction to establish a national system of rail safety regulation. A previous regulatory impact statement assessed the impact of establishing a Single National Rail Regulator administering uniform national law.[23]

This regulatory impact statement has assessed the proposed amendments against the corresponding provisions of the NTC Model Rail Safety Bill (Model Bill),[24] rather than rail safety law as implemented (in varied manner) by individual states and territories. Despite such variations, the Model Bill represents approved rail safety national law and is available to be applied by each state and territory.

In total, approximately 100 amendments have been proposed to the Model Law. The majority are for drafting changes only and propose no change in policy; therefore, they have no measurable impact. These have been listed in Appendix A: Amendments to the Model Bill and Regulations with no measurable impact and have not been assessed in this document.

Fewer proposals have been assessed as having a measurable impact. These proposals have been assessed individually in Section 6: Impact analysis, to a level commensurate with their degree of impact. Where amendments include more straightforward clarifications or minor amendments to existing policy, such proposals have been assessed relative to the status quo (existing Model Law provision) only. A more detailed assessment of their economic impact is included in Appendix D: Economic cost benefit analysis.

The proposals assessed in Section 6: Impact analysis have been grouped by the following themes:

- scope and objectives of the National Law
- rail transport operator safety management
- specific authorities and responsibilities of the Regulator
- alignment with the Model Work Health and Safety Bill.

The preparation of this regulatory impact statement has included significant preliminary analysis and consultation, including with a Rail Safety Advisory Committee comprising representatives of the NTC, the National Rail Safety Regulator Project Office, Commonwealth, state and territory government policy makers, rail industry members,

[23] Single, National Rail Safety Regulatory and Investigation Framework Regulatory impact Statement (July 2009), available at http://www.ntc.gov.au/viewpage.aspx?documentid=1927.

[24] Except where the Model Bill specifically allowed for local variations, in which case amendments have been assessed against existing state and territory rail safety law.

regulators and unions. The Advisory Committee participated in a number of workshops to discuss the proposals, alternative options and their impact during 2010 and 2011.

This draft regulatory impact statement invites public comment on the proposals. Feedback will be considered in determining whether to further amend the proposals and draft National Law, prior to preparing a final regulatory impact statement and draft National Law for submission to the Standing Council of Transport and Infrastructure for voting in November 2011.

6. Impact analysis

6.1 Overview of proposals and their impact

Included in this analysis are several proposals deemed to have a measurable regulatory impact. An overarching principle of the National Law is to require that rail transport operators manage safety risks arising from their rail operations. Additionally, it clarifies the role of the Regulator in ensuring compliance with that requirement. These would not change as a result of adopting the proposed National Law. Rather, the proposals would better clarify:

- the scope and objectives, addressing objectives of the National Law, as well as clarifying its scope of applicability to the rail industry as a whole, including some specific requirements
- various requirements for how rail transport operators must plan and manage risks, including:
    - the management of risks associated with drug and alcohol use by rail safety workers
    - the management of risks associated with rail safety worker fatigue.
- specific authorities and responsibilities of the Regulator, which govern elements of how the Regulator shall ensure compliance with the National Law
- harmonisation of the National Law with Model Work Health and Safety Legislation for provisions that may be incompatible, in order to avoid inconsistencies between the two overlapping areas of law.

A list of National Law provisions assessed as not having a measurable impact is included in Appendix A: Amendments to the Model Bill and Regulations with no measurable impact. Key assumptions made in undertaking these assessments are addressed in Appendix B: Impact assessment assumptions.

6.2 Regulatory model

As for the Model Law, the proposed National Law is based on an overarching principle of co-regulation, in which responsibility for regulation is shared between industry and the Regulator. This form of regulation requires operators to develop a safety management system that documents how safety risks arising from their operations would be (or are being) addressed. Accreditation is granted by the Regulator to an operator who has demonstrated, including through presentation of a written safety management system, that it is competent to manage such risks.

Australian rail safety law (both existing and proposed) also imposes a responsibility on the Regulator to oversee and support operators' compliance management, including by providing advice, information, education and/or training to clarify the standard to which compliance would be held. The Regulator must also review an operator's safety management system and its implementation, and work with them towards making any necessary improvements.

Due to the diverse nature of rail operations across Australia and the risks arising from them, the co-regulatory approach is broadly agreed to represent best practice and was endorsed by COAG in a recent regulatory impact statement.[25]

In theory it is possible to structure rail safety law on the basis of a single overarching requirement for operators to manage (so far as is reasonably practicable) all safety risks. However in practice, rail safety legislation across Australia has long included elements of prescription, defined as "focus[ing] on input standards and specify[ing] precisely what actions must be taken to achieve compliance".[26]

In practice, there are degrees of prescription. Rail safety law does not tend to specify requirements with a high degree of precision; rather, it prescribes parameters around the process in which an operator must develop a safety management system. In this way, while reducing the degree of flexibility for operators in determining how safety shall be managed, the co-regulatory process is predominantly maintained.

6.3 Overview of proposed risk management requirements

A number of the National Law proposals are for changes to a rail transport operator's safety management requirements. As there is a degree of consistency in the circumstances and principles under which those amendments were developed, as well as their impacts, those have been summarised in this section and further assessed individually in Section 6.5: Operator Safety Management.

The proposals that include more specific requirements than in the Model Law are:

- to prescribe additional mandatory risk management principles of a safety management system (Section 6.5.1, Safety Management System)
- to change compliance with the *National Standard for Health Assessment of Rail Safety Workers* from being only 'so far as is reasonably practicable', to mandatory (Section 6.5.2, Health and fitness management program)
- to prescribe mandatory elements of a drug and alcohol management program and of a fatigue risk management program (Section 6.5.3, Drug and alcohol and fatigue risk management)
- to prescribe a performance standard for communication between train drivers and network control officers (Section 6.5.7, Train communication systems)
- to prescribe that rail infrastructure managers undertake consultation prior to amending rail network rules under their control (Section 6.5.8, Network rules).

[25] National Transport Commission, *Single, National Rail Safety Regulatory and Investigation Framework: Regulatory Impact Statement (Volume 1)*, July 2009, available at http://www.ntc.gov.au/viewpage.aspx?documentid=1927.

[26] National Transport Commission/ Jaguar Consulting, Identification and Examination of Best Practice Principles for Rail Regulation: Working Paper, p.3, January 2004, available at http://www.ntc.gov.au/filemedia/Reports/IdentExamBestPractRailJan2004.pdf.

6.3.1 Overview of the impact of risk management proposals

Problem Statement

A primary objective of the National Law is to provide for safe railway operations. As it is impractical to define safety in objectively measurable terms, the co-regulatory nature of rail safety law imposes a responsibility on rail transport operators, with support and oversight of the Regulator, to develop and implement a safety management system that is adequate to account for what is understood to be best practice in risk management, as well as the operator's circumstances.

As discussed in Section 6.2 (Regulatory model), it is theoretically possible to develop rail safety law on the basis of a single, overarching requirement for operators to manage safety risks. However, in practice, capabilities and standards of risk management vary between rail transport operators. While many operators manage risks to a rigorous standard, some have access to a lesser degree of relevant skills, knowledge and resources. For this reason, overseeing and assisting rail transport operators is an important role of the Regulator.

Such assistance and oversight is an integral part of co-regulation. However, in some circumstances, rail safety regulators have reported that the process of negotiating with rail transport operators on how to achieve compliance has proven to be protracted, inefficient and even unfruitful. Additionally, with finite resources, there is the risk that the Regulator may be unable to identify and address all cases of non-compliance.

A weakness of the co-regulatory approach is also the limited authority of the Regulator to enforce undefined standards of safety management. Where an operator disagrees on certain types of decisions by the Regulator (which include those relating to safety management systems), they may apply for a review and subsequently appeal to a court. Although in practice this has proven unusual, in such circumstances the court would determine the standard to which the operator's safety management system would be held. It is conceivable that the court may arrive at a different conclusion to that of the Regulator.

The co-regulatory approach is most effective when there is a strong degree of capability and willingness amongst industry members to comply. This is predominantly, but not uniformly the case with rail safety regulation.

Co-regulation is also most appropriate for industries that undertake complex tasks, which vary between industry members in their scope and nature. This is certainly the case for rail. However, where a given requirement may be applied uniformly, without restricting best practice in safety management or continuous improvement, prescribing it may overcome some of the limitations of the co-regulatory approach, as well as clarify what constitutes 'safe railway operations' in more objective terms.

The problem lies not so much in the risk of a court contradicting the judgement of the Regulator, as it does in the protracted and resource-intensive process of resolving the dispute. Also, a disadvantage of purely performance-based regulation is that there is a greater potential for operators to exploit such a measure as *de facto* deregulation, either knowingly, being recalcitrant operators, or unwittingly, due to a lack of understanding of the risk being managed. In practice, some regulators have stated that this leads to the risk of compromise on how standards of safety management are upheld.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Proposal

For the reasons stated above, the draft National Law has included more specific requirements in circumstances where it has been assessed that:

- the requirements do not prescribe precisely what actions a rail transport operator must take to manage a given risk,[27] but represent what are considered to be the basic elements of best practice in managing the risk, apply uniformly across the rail industry and do not restrict continuous improvement in safety management
- elements of subjectivity in more general provisions (that is, the General Safety Duties), sometimes in combination with a lack of risk management capability on the part of a rail transport operator, have led to confusion and/or disagreement with regulators over what constitutes compliant risk management
- the additional prescription contained in a given proposal contributes to clarifying best practice (compliant) risk management, is uniform across the rail industry and does not restrict continuous improvement
- such cases have required existing regulators to allocate disproportionate resources to assisting an operator(s) to comply, and/or
- it has proven impractical to successfully prosecute a rail transport operator for refusing to adopt identified best practice risk management principles (that is, due to the subjectivity in what constitutes compliance with General Safety Duties and other non-prescriptive provisions of the Model Law).

Other options

The major alternative to prescribing elements of safety management in law is the status quo. Under existing Model Law arrangements, rail transport operators are required to develop a safety management system that articulates how they address safety risks arising from their rail operations.

In fulfilling existing requirements (that is, in the absence of the proposed requirements), some operators have developed safety management systems that may already effectively comply with all of the new, proposed requirements. Where that is not the case, under existing arrangements the Regulator is authorised to review an operator's system and assess that either:

- it is sufficient to comply with the General Safety Duties (that is, that a given operator's circumstances were such that they did not need to enhance their safety management system to address any of the matters contained in the proposed requirements), or
- it is necessary to make improvements to its safety management system to address one or more of the matters contained in the proposed requirements (that is, by assessing it against the General Safety Duties and arriving at a similar conclusion to what would be required by the proposals).

In the first circumstance above, this may be assessed as a desirable outcome (that is, that the operator was managing safety to a sufficient standard), or it may reflect the Regulator

[27] A partial exception is the requirement to comply with the *National Standard for Health Assessment of Rail Safety Workers*. However, the proposed amendment is primarily a matter of clarification, rather than a new or additional, prescriptive requirement.

being resigned to the fact that requiring operators to manage safety to a standard equivalent to the proposals is impractical, in the absence of them being prescribed in law (as described in the problem statement above).

The drawbacks of the second circumstance are also discussed throughout this section.

Impact assessment

Impacts of the proposals have been assessed in terms of how they would be expected to change behaviour, processes and safety outcomes. The proposals do not amend the National Law objective to provide for safe railway operations. Rather, they were developed to better support achieving it, in a cost-effective manner.

The proposals have been assessed as supporting improvements to rail safety. In theory, rail safety may be viewed as a minimum standard to which all rail transport operations would be held by the Regulator. In other words, the Regulator may seek to ensure a similar outcome to those specified in the National Law proposals using other methods, such as (where necessary) collaboration/negotiation. However, as outlined in the problem statement, there are practical limitations to this approach.

Improved levels of rail safety are assessed as resulting from two factors.

- *Better clarifying safety management standards for rail transport operators* (simplifying the task of complying). As it is impractical to objectively define (in an absolute sense) minimum standards of safety management, operators are unavoidably required to make their own interpretations and judgments. In some circumstances, particularly those where an operator has lacked the necessary resources, this has resulted in inadequate levels of safety management. Prescribing clearer standards of safety management, where this may be done without unduly restricting operator flexibility and scope for continuous improvement, is expected to encourage operators to develop improved safety management systems.

- *Equipping the Regulator to more effectively support operators to comply with their safety management obligations and duties*. Improvements in rail safety would only be attributable to the proposed amendments, where they were not practically achievable by existing alternative means (that is, by the Regulator working with an operator to achieve a similar outcome). While in many cases, the latter remains a practical option, in some cases it has proven difficult for the Regulator to enforce a minimum standard of safety management without specified legislative precedents. In others, there is the risk of sub-standard safety management remaining undetected, at least for a period of time.

Rail safety impacts on all those who are exposed to railways. This includes rail passengers, road users and rail safety workers. A number of the proposals directly impact on rail safety workers, who are affected by fatigue risk management practices, and subjected to drug and alcohol testing as well as health and fitness assessments. By strengthening these arrangements, the proposals would improve safety for rail safety workers, and by extension, all rail patrons who rely on them for their own safety.

The process for a rail transport operator to comply with safety management requirements can be divided into three categories:

1. a rail transport operator developing amendments to its safety management system

2. a rail transport operator implementing any changes to its operations that result from such amendments

3. the Regulator working with operators to assist them in complying, as well as reviewing operator safety management systems and their implementation to ensure compliance.

To the extent that an operator is already complying with a given proposal, it is not expected that there would be any resulting regulatory impact. However, for others, the proposals would require rail transport operators to amend their safety management systems. Such amendments would incur costs, both initial and ongoing, as operators must periodically review their safety management systems to account for evolving best practice in risk management and operational changes.

The proposals would have an impact on the Regulator, in its role of working with operators to achieve compliance. To the extent that the proposals would better clarify what constitutes compliance, the Regulator would:

- benefit from the task in clarifying to operators the necessary steps towards meeting an adequate level of safety management being simplified, but
- incur higher costs where those steps represented a higher or more complex standard of safety management than the operator had previously achieved and where the Regulator needed to work with it to meet the higher standard.

The major risks of this approach are those generally associated with prescriptive regulation.[28] These include:

- imposing an unnecessary/excessive regulatory burden on rail transport operators with a relatively low degree of exposure to a restricted range of risks
- prescribing overly restrictive methods of managing safety that inhibit operators from developing more effective means
- the risk of prescriptive requirements lagging subsequent developments in best practice safety management, that is, continuing to require obsolete methods until a suitable amendment to the law is implemented and the additional resources required for that task, and
- the risk of encouraging operators to adopt a 'minimal' approach to managing safety that addresses only the prescribed matters, rather than one based on taking the initiative to account for a broader range of risks (that is, any not captured by prescriptive requirements).

By prescribing only broad elements and principles of safety management, rather than specific risk controls, these risks have been significantly reduced. However, of these, it is perhaps the risk of imposing unnecessary/excessive regulatory burden that is greatest. This risk can be categorised in two ways:

- prescribing an excessive degree of safety management, and
- increasing the administrative burden for an operator by requiring it to justify to the Regulator why it need not address a given, additional prescribed requirement.

Rail transport operators with a lower degree and/or a lesser number of risks may require a less comprehensive safety management system than others operating on a larger scale and in a more complex environment. Each proposal has been assessed to determine how it has addressed the risk of imposing excessive regulatory burden.

[28] National Transport Commission / Jaguar Consulting, *op. cit.*, p.4.

In summary, the proposals are expected to improve levels of rail safety that would result from higher standards of rail safety management. Developing and implementing such improvements would, however, impose costs on some rail transport operators. There would also be some costs for the Regulator to work with those operators, although these would be offset (to varying degrees) by savings drawn from clearer requirements and the reduced need to negotiate the same with operators.

More detailed assessments of each proposal are included in Section 6.5: Operator Safety Management and detailed economic assessments in Appendix D: Economic cost benefit analysis.

6.4 Scope and objectives of the National Law

Part 1 of the Model Bill outlines its purpose and objects, and contains commencement and interpretative provisions, including definitions. The objects provide context to the legislation and describe what the laws aim to achieve. Principles are also included, and explain more directly how the law should be administered and understood. The proposed additions aim to strengthen the safety requirements in the National Law and clarify the role of the Regulator. Better alignment with the Model Work Health and Safety Bill was a key objective of reviewing this part of the Model Bill. Both regulatory schemes will be applicable under a variety of circumstances, so there is a need to ensure that any overlapping duties and obligations are consistent.

Another issue for the National Law is how wide the regulatory net should be cast, and which parties should be captured, so as to optimally achieve the desired regulatory and safety outcomes without 'overreach'.

6.4.1 Objects and purpose of the Act

Current provision

Section 3 of the Model Bill prescribes the following objects:

> *Having regard to the importance of rail safety and regulatory efficiency, the objects of this Act are —*
>
> *(a) to provide for improvement of the safe carrying out of railway operations;*
>
> *(b) to provide for the management of risks associated with railway operations;*
>
> *(c) to make special provision for the control of particular risks arising from railway operations;*
>
> *(d) to promote public confidence in the safety of transport of persons or freight by rail.*

The objects govern how the law will be developed and influence how it will be interpreted and applied; they describe what the laws aim to achieve. The objects are included particularly to assist the courts in considering the purposes of statutes when interpreting them, and to guide officials in exercising their powers and performing their functions.

Problem statement

While the model provisions accurately reflect the broad objectives of the National Law, the current objects do not explicitly address some principles of rail safety law, and as a result, may not fully recognise the role of the Regulator. Notably, the principle of ensuring safety of the general public and those parties who interface with rail operations is not clearly articulated. The Regulator's role in compliance, enforcement and provision of advice and training is also not recognised.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity,

reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo; the existing objects in the Model Bill to be retained, unamended.

Option 2

Include additional objects in the National Law:

- to establish the Office of the National Rail Safety Regulator (ONRSR)
- to make provision for the appointment, functions and powers of the Regulator
- to provide for a national system of rail safety, including a scheme for national accreditation of rail transport operators in relation to railway operations
- to provide for continuous improvement of the safe carrying out of railway operations
- to promote the provision of advice, information, education and training for safe railway operations
- to provide through consultation and cooperation, for the effective involvement of relevant stakeholders in improving rail safety.

Include guiding principles for the provision of a national rail safety scheme:

- to assist rail transport operators to achieve productivity by the provision of a national rail safety scheme
- to operate the national rail safety scheme in a timely, transparent, accountable, efficient, effective, consistent and fair way
- that fees paid for the national rail safety scheme are reasonable, having regard to the efficient and effective operation of the scheme.

These additional objects and guiding principles would provide greater detail for the role of the Regulator and other relevant stakeholders in supporting the overarching National Law objective of ensuring the carrying out of safe railway operations. They were developed by reviewing the objects of state and territory rail safety laws, as well as the Model Work Health and Safety Bill.

Impact assessment

Option 1 – Status quo

There would be no impact of maintaining the status quo. The model provisions accurately reflect the broad objectives of the National Law.

Option 2 – Include additional objects and guiding principles

The proposed changes seek to better clarify the operation of the National Law and functions of the Regulator. The additional objects do not materially impact on the role of the Regulator or other stakeholders and in practice, have no regulatory impact beyond better clarifying the objects.

Proposal

Option 2 is proposed, in order to better clarify the objects of the National Law.

Clear articulation of the Regulator's role is important for improved understanding of it across the broader rail industry, as well as assisting in developing policy for other matters that are affected by scope of the Regulator's role. Such clarity also assists with the interpretation and application of the National Law and to strengthen the safety requirements.

The proposal changes are addressed in section 3 (Purpose, objects and guiding principles of law) of the draft National Law.

6.4.2 Railways to which the Act does not apply

Current provision

Section 6 of the Model Bill excludes application of the Bill to certain types (classes) of railways. Such exclusions are granted to railway types that typically operate on a very small scale and in an unsophisticated environment that present a significantly lower degree of risk than other larger scale railways. Amongst others, they include "*a railway that is operated solely within an amusement or theme park, is required to be registered as an amusement device under occupational health and safety legislation and does not operate on or across a road*", as well as any railways prescribed in the Model Regulations.

The exclusions were developed on the basis that for the prescribed railway types, the costs of complying with and enforcing the Model Bill exceeded the benefits, measured in terms of reduced risk to safety. Most of the railways granted exclusions to the Model Bill must still comply with relevant work, health and safety law.

Problem statement

There are several classes of railways of a very small scale, and presenting a low degree of risk to safety, to which the Model Law applies. These include hobby railways, horse-drawn trams and static railway displays. For these types of railways, the compliance burden posed by the Model Law (and draft National Law) is excessive.

The Model Law does not apply to (excludes) prescribed amusement railways. However, a definition of what constitutes a railway operating in an amusement park, or an amusement device, is not addressed in the Model Law. This has led to a degree of subjectivity and confusion in determining whether a railway should be classified as an amusement railway under the Model Law.

Introducing a similar definition presents a risk of its own. In certain circumstances, a degree of subjectivity or discretion in determining which railways the National Law should apply to is desirable. This is because, while the risks to safety posed by certain types of railways may be predominantly low, there may be some railways in a given category that pose a higher risk.

Therefore, there is a balance to be struck between the need to define the scope of the National Law in objective terms (that is, provide certainty to railway operators and the Regulator) and to ensure that all railways posing a risk to safety above a certain threshold are properly regulated.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity,

reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

The options for this section of the National Law have been addressed in two parts, to address two distinct problems with the Model Law.

Part 1: Additional classes to be excluded from the National Law

Option 1.1

Retain the status quo. This would mean that there would be no additions to or omissions from the classes of railways excluded under the Model Law.

Option 1.2

To exclude from the National Law, in addition to those classes of railways already exempted in the Model Bill:

- railways used only by a horse-drawn tram
- railways used only for a static display
- hobby railways that do not operate on or cross, a road or road-related area (within the meaning of the Australian Road Rules).

Include a definition of hobby railways: “railway intended or used as a hobby, is operated on private property and is not operated for hire or reward, commercial operations or public participation by invitation or otherwise.”

Part 2: Amusement railways

Option 2.1

Retain the status quo. Amusement railways are excluded from the Model Law.

Option 2.2

Require amusement railways to comply with the National Law (that is, delete section 6(e) of the Model Bill), but authorise the Regulator to exclude railways or classes of railways (for example, by notice). This authority would permit the Regulator to exclude all types of railways (beyond just amusement railways) and substitute for the existing arrangement under which such exclusions may be granted by prescription in the Model Regulations (that is, by deleting section 6(f) of the Model Bill).

Option 2.3

As for Option 2.2, require amusement railways to comply with the National Law (that is, delete section 6(e) of the Model Bill). In contrast to Option 2.2, exclusions for amusement railways may be granted by the existing process of prescribing them in the National Law (Regulations).

Option 2.4

Retain the exclusion for amusement railways, but:

- amend the scope of the exclusion to railways that are amusement devices, but only those that do not operate on or cross a road or road-related area (within the meaning of the Australian Road Rules)
- define amusement devices as those used solely in an amusement park for hire or reward or in the course of a commercial operation
- define amusement parks as commercially-run enclosed grounds where amusements are situated.

The provision for excluding railways by the making of regulations would be retained. Additionally, a corollary provision for including, by the making of regulations, railways that were otherwise excluded under section 6 of the Model Bill would be introduced.

Impact assessment

Part 1: Additional railways to be excluded from the National Law

Option 1.1 – Status quo

There would be no impact from retaining the status quo.

Option 1.2 – Exclude additional classes of railways from the National Law

Economic assessment

The net benefit of this option is estimated to be between $0.17 and $0.42 million. Refer Appendix D: Economic cost benefit analysis (section 3.2) for detailed analysis.

Impacts

The impact of excluding the additional, prescribed railways would be minimal and has no measurable economic impact. Due to local variations around this matter, it is understood that no horse-drawn trams, static display railways or hobby railways, as defined in the draft National Law, in any state or territory are currently subject to rail safety laws. These types of railways pose a minimal risk to public safety.

Under the Model Bill, however, lacking a class exclusion for such operators, these railways would need to be excluded individually via regulation, a potentially costly process.

Part 2: Amusement railways

Option 2.1 – Status quo

There would be no impact from retaining the status quo.

Option 2.2 – Amusement railways to be included in the National Law unless excluded by notice

Deleting the provision for railways to be excluded from the National Law by the making of regulations (which requires approval of Ministerial Council) and replacing it with a mechanism by which the Regulator could grant exclusions (such as by the publication of a notice on its website) would have implications for exclusions granted to all types of railways.

A concern with this option is the reduced degree of oversight for decisions about excluding railways from the National Law. A general principle of regulation is that the degree of oversight for regulatory decisions be in proportion to the importance (impact) of the decision. As excluding a railway from the National Law in its entirety is a decision that has a greater impact than many of the other more administrative decisions of the Regulator, it arguably merits a greater degree of oversight than would be provided by this option. As such this option has not been subject to an economic assessment.

Option 2.3 – Amusement railways to be included in the National Law unless excluded by regulation

Economic assessment

The net cost of this option is estimated to be between $1.38 and $1.76 million. Refer Appendix D: Economic cost benefit analysis (section 3.2) for detailed analysis.

Impacts

Granting such exclusions by the making of regulations would require undertaking broad consultation and approval by Ministerial Council. This option would overcome the shortfall identified with Option 2.2, namely the lack of oversight for decisions to exclude (amusement) railways.

However, this would introduce a separate problem. As the definition of a railway would encompass, depending on their track gauge, roller coasters and other similar fairground amusement rides, it is likely that the vast majority of amusement railways would be included in the National Law. As a result, the process of individually proposing all such exclusions in regulations would impose a significant (and unnecessary) regulatory burden.

A benefit of this option would be greater assurance of more rigorous analysis of whether excluding a given railway (or railways) was justified.

Option 2.4 – Amusement railways to be excluded with an amendment to the scope and definition of amusement railways

Economic assessment

The net cost of this option is estimated to be between $0.74 and $0.87 million. Refer Appendix D: Economic cost benefit analysis (section 3.2) for detailed analysis.

Impacts

This option is similar to the existing provision (status quo), but would provide a more precise definition of what constitutes an amusement railway. This would remove ambiguity and confusion around whether a given railway should be classified as an amusement railway. It would also impose a reduced administrative burden on the Regulator and/or policy makers in comparison to Options 2.2 and 2.3, that is, to individually assess whether a given railway should qualify for an exclusion and (under Option 2.3) propose a regulation to that effect.

A risk with this option is for amusement railways that, despite qualifying for exclusion under the proposed definition, are of a scale and nature that represent a risk to safety, justifying them being subject to the National Law. In order to alleviate this concern, this option also provides a mechanism by which they may be ‘re-included’. This newly proposed provision for including otherwise excluded (individual) railways would provide a means by which they, if assessed as posing a sufficient risk to safety, may be included within the scope of the National Law. This provision is a corollary of the existing provision by which railways may be excluded (by exception), despite otherwise being included in the National Law.

Rail safety regulators advise that there would be extremely low numbers of such railways that would need to be re-included in this way (perhaps only three across Australia). The process of identifying new railways that are excluded by the definition, but may need to be 're-included' is an issue; this may be addressed via arrangement with the local state or territory Occupational Health and Safety Regulator (although rail safety regulators have also indicated that such railways are reasonably obvious and they would most likely be aware of their existence as higher risk operations). The risk of inadvertently overlooking such a railway is considered minimal.

Proposal

For Part 1, Option 1.2 is proposed. This would exclude, from the scope of the National Law, some additional types of railways assessed as having a risk profile below that considered necessary to be subjected to the degree of regulatory oversight provided by the National Law.

For Part 2, Option 2.4 is proposed. This would provide greater clarity for what constitutes an amusement railway.

By reducing the need for the Regulator to conduct individual assessments of railways to determine appropriate scope of applicability for the National Law, these proposals would support the stated principle of the National Law to "*operate the national rail safety scheme in a[n]...efficient...way*". By reducing the degree of regulation for some lower risk types of railways, the proposals would also "*assist rail transport operators to achieve productivity*".

A core objective of the National Law, to "provide for the effective management of safety risks associated with railway operations", would not be compromised.

This proposal is addressed in section 8 (Railways to which this law does not apply) and definitions in section 4 (Interpretation) of the draft National Law.

6.4.3 Private sidings exemption from accreditation

Current provision

Accreditation of rail transport operators is a prerequisite for undertaking railway operations, as prescribed in Part 4 (Rail Safety), Division 2 (Accreditation) of the Model Bill. It requires operators to demonstrate to the rail safety regulator that they have the competence and capacity to manage risks arising from their proposed operations, prior to commencing them. A major implication of accreditation is the requirement to develop and implement a safety management system, the prescribed duties under which comprise a substantial proportion of an operator's total costs of compliance.

Section 56 of the Model Bill provides for rail infrastructure managers of private sidings to be exempted from having to be accredited.

Problem statement

Private sidings are sections of rail track connected and separately managed to a main running line.[29] Typically short sections of track branching off a main line, private sidings are usually small in size and used for purposes such as the loading and unloading of rolling stock at intermodal terminals. Private sidings are often, but not necessarily, operated as

[29] Definitions of *sidings* and *private sidings* are included in the Model Bill.

independent concerns (that is, private siding managers may or may not operate any other railways).

As such, a private siding manager who is not managing any mainline railways nor operating any rolling stock would face a substantially reduced degree of risk. Exemptions from accreditation are granted to such private siding managers on that basis. Such private siding managers are therefore subjected to a significantly reduced degree of regulatory scrutiny, duties and compliance costs under the Model Bill.

States and territories have varied in how they have addressed providing exemptions from the accreditation requirements for operators of private sidings. This has necessitated revisiting the Model Bill provision to consider whether it may be amended to better reflect relevant practices and stakeholder views.

A number of specific problems were identified with the Model Bill provision.

- The exemption was intended to extend only to the management of rail infrastructure on private sidings. Concern was expressed that the provision risks being interpreted as extending to infrastructure managers also managing rolling stock on the private siding. This was not the original policy intent.

- It was unclear whether and in what circumstances the Regulator had the authority to refuse an application for, or cancel, a private siding registration. This may be necessary when a private siding operator has submitted an unsatisfactory application or has breached National Law in the course of operating a registered private siding.

- Section 56(2)(c) of the Model Bill refers to "*management of the interface with the railway of the accredited person*". This section was considered unnecessarily restrictive in its application, which would appropriately extend to types of interfaces other than just accredited railways (such as roads and road infrastructure, the interfaces with which may present significant risks to safety).

- The provision is insufficiently clear about requiring that the infrastructure manager of a private siding must be registered, rather than the private siding itself. This is an important distinction, as a given infrastructure manager may need to be accredited for other purposes (that is, for management of other railways). In such cases, the infrastructure manager cannot be exempted from accreditation and the accreditation must therefore cover management of the private siding (that is, no exemption applies).

- Model regulation 11 (Maintenance and operational conditions) prescribes the conditions under which an exemption from accreditation may be granted. Some of the risk management principles have been superseded by those proposed for inclusion in section 57 of the Model Bill (safety management system).

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo, which would preserve the Model Bill requirements and not address the identified problems.

Option 2

Amend this section:

- to clarify that exemptions from accreditation apply to the operation of rail infrastructure (on private sidings) only, not rolling stock
- to give the Regulator power to refuse to register a private siding manager if an assessment finds that its operations are of a sufficient complexity to warrant requiring it to be accredited, or to suspend or cancel a registration if the manager is assessed as unwilling or unable to comply with safety duties
- to require that private siding managers comply with section 61 of the Model Bill in relation to the management of all interfaces, generally, rather than just those with accredited railways, as is required by the Model Bill
- to clarify that it is the siding manager who is to be registered, not the physical siding.

Amend Model regulation 11 (Maintenance and operational conditions) to better align with the risk management principles proposed to be included in Model Bill section 57 (Safety management system). Those principles are proposed to be drawn from Schedule 3 (Matters and information to be contained in a SMS of a non-accredited rail operator) of the *Rail Safety Regulations 2006* (Victoria).

Impact assessment

Option 1 – Status quo

There would be no impact from maintaining the status quo.

Option 2 – Clarify provisions relating to exemption from accreditation for private sidings

Economic assessment

The economic assessment of this option is estimated to be between a cost of $0.20 million and a benefit of $7.60 million. Refer Appendix D: Economic cost benefit analysis (section 3.3) for detailed analysis.

Safety

For the most part, the proposals are clarifications of existing policy and would serve National Law objectives by improving compliance levels through improved clarity.

However, the requirement to extend the scope for forming interface coordination agreements would represent a safety improvement. Regulators have advised that interfaces with roads at level crossings, particularly major roads, present risks to safety. Parties have also indicated that, due to increased infrastructure development in remote areas, the number of such interfaces is expected to increase.

Regulator

This option would not impose any major impacts on the Regulator. Due to the large number of private sidings on Australian railways, any substantial change to the number requiring accreditation would represent a saving (or impost) on the administrative resources of the Regulator. However, the option represents clarification of existing policy and is not expected to cause a significant change to the accreditation ‘threshold’.

Whilst some initial costs would be incurred to transition the private siding registrations currently in place to a new system for registration of rail infrastructure managers, the ongoing costs would be offset by the reduction in registration applications.

Rail infrastructure managers often own more than one private siding, and the proposal to register the manager as opposed to the physical siding may significantly reduce the number of registration applications submitted to the Regulator for processing. In New South Wales it is estimated that the number of registration applications would be reduced by 75 per cent; and in Queensland by 50 per cent.

There has been some conjecture over the scope for administrative savings that would result from the Regulator assessing only a single application by a rail infrastructure manager of multiple private sidings, instead of individual applications for each siding. One regulator stated that the savings would be minimal, as under each option there would be a continuing need for the Regulator to assess each private siding.

However, there would likely be a degree of consistency in the safety management measures proposed by a rail infrastructure manager of multiple private sidings. Accordingly, there may be some reduction in administrative burden on the Regulator resulting from only having to assess such measures once (in a consolidated application for registration), rather than individually for each private siding under the control of the infrastructure manager. The option to extend interface agreement requirements for private sidings to include road interfaces may impose an additional burden on the Regulator to audit any additional interface agreements entered into by the rail infrastructure manager. The Regulator may also be required to support and facilitate this process from time to time.

The Model Bill, under section 56(5), provides scope for the Regulator to place additional requirements on the rail infrastructure manager for their application for registration of a private siding. It is understood that this provision is, on occasion, utilised to require rail infrastructure managers and road managers to establish interface agreements. It is therefore considered to be a minor change and cost burden for the Regulator to explicitly extend the interface agreement requirements to road interfaces in the National Law.

Rolling stock operators

There should be minimal, if any, impact on rolling stock operators. Any rolling stock operators on private sidings currently registered for accreditation exemptions would need to be accredited; however, there are not expected to be many.

Rail infrastructure managers

Rail infrastructure managers already accredited for other purposes would need to include in their accreditation matters relating to the operation of any private sidings they also operate (and currently receive an exemption from); however, there are not expected to be many in this category.

The option for rail infrastructure managers to be registered, instead of the physical private siding, is likely to reduce the in administrative burden. The Model Bill requires that rail infrastructure managers individually register their private sidings with the Regulator; this option would require only one registration application for each rail infrastructure manager.

Extending interface agreement requirements of section 61 to interfaces other than just railways (roads, bridges, etc.) may impose some additional burden on rail infrastructure managers, to the extent that they have complied only with the strict requirements of the Model Bill. For instance, where a railway on a private siding formed part of a grade level crossing of a road managed by an independent entity, an interface agreement would need to be formed. Regulators have indicated that infrastructure managers with private sidings

crossing roads of significant size are most likely already entering into informal arrangements for the management of level crossings. The impact of this provision would therefore be minor.

Changing the operational conditions in Model regulation 11 (Maintenance and operational conditions) would be expected to have a minor impact on how rail infrastructure managers of private sidings manage risks. A review and amendment of risk management procedures would be necessary, although under scalable provisions, given the low risk environment of private sidings, this impact is considered minimal.

Rail safety workers

The impact on rail safety workers would broadly align with that for safety and is assessed as low.

Other parties

Any impact on rail infrastructure managers to form an interface agreement with another party would incur a corresponding impact on that party.

Proposal

Option 2 is proposed.

This option would better clarify and otherwise support the original policy intent of the provision and provide a more efficient means of registration, without imposing any substantial, additional regulatory burden. In addition, the proposal may deliver safety benefits in requiring more comprehensive treatment of interface agreements.

The proposal is addressed in Part 3, Division 5 (Registration of rail infrastructure managers of private sidings) of the draft National Law.

6.4.4 Exemption framework

Current provision

There are no provisions for regulators to exempt rail transport operators from any provisions of the Model Bill.[30] Rather, the broad scope of the General (Rail) Safety Duties to manage risks to safety "so far as is reasonably practicable" provides a degree of latitude to operators in how they may develop their safety management systems. It provides the same for regulators in determining whether such systems are compliant and the management of risks is so far as is reasonably practicable.

Problem statement

While the general co-regulatory approach of the Model Law provides latitude in determining what measures are required for an operator to comply, some of the more prescriptive provisions of the Model Bill provide a lesser degree of flexibility. These include the requirements for managing rail safety worker health and fitness (section 64 of the Model Bill), as well as requirements to develop a security management and emergency plan.

[30] Other than section 56 of the Model Bill, which exempts private siding operators from being required to be accredited.

Such prescriptive requirements may impose an excessive regulatory burden, while having only minor or negligible benefits to safety. This may be the case for smaller scale railways operating in a low risk environment.

This problem risks being exacerbated by adopting into the National Law a number of additional, proposed prescriptive provisions; in particular, the prescribed elements of drug and alcohol and fatigue risk management programs.[31]

Another problem lies with the scope of accreditation. Rail transport operators, including infrastructure managers and rolling stock operators, must be accredited. Both are defined as parties who are "in effective management and control" of railway operations. This requirement in the definition of those parties that must be accredited is intended to exclude parties who have a non-operational interest, such as owners of rail track and rolling stock that is leased to third party operators.

However, the distinction between parties who are or are not in effective management and control is sometimes unclear. An example is the Victorian Director of Public Transport, who oversees a public transport system, the operational responsibility for which is mostly contracted out to a consortium of private companies (such as Metro Trains Melbourne). However, the Victorian Director retains some limited responsibilities, such as involvement in developing train timetables and planning for rail network upgrades.

A provision of Victorian rail safety law (not included in the Model Law or draft National Law) clarifies that despite any interpretation of accreditation requirements, the Victorian Director need not be accredited. There is a risk that, should the existing Model Law provisions be retained, the Victorian Director may need to be accredited to continue operating in his current capacity. Due to the very limited impact of his role on rail safety, the costs of accreditation would significantly outweigh the minimal benefits.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Retain the status quo, which would require rail transport operators to comply in full with all applicable provisions of the National Law.

Option 2

Adopt a framework for granting exemptions to rail transport operators from provisions of the National Law. An option is for the exemption framework to provide for both ministerially-granted short-term exemptions and Regulator-granted longer term exemptions.

To account for circumstances in which an exemption is sought under pressing or urgent circumstances, ministerial exemptions may be granted for a maximum applicable period of three months. Other exemptions, that is, those of a less urgent nature and being sought for a

[31] A discussion of the broad impact of the proposed, additional prescriptive requirements is included in Section 6.3 (Overview of proposed risk management requirements) of this regulatory impact statement.

longer period of time, would be subjected to an assessment process administered by the Regulator.

Ministerial exemptions would be granted by the relevant minister (as nominated by individual states and territories in their applying law) to a rail transport operator, for operations undertaken in the home state or territory of the minister. For exemptions sought to operations in multiple states or territories, individual submissions to each relevant minister would be required.

Exemptions considered by the Regulator for longer term situations would be subjected to a more formal process. Such exemptions would be restricted to all or part of the following areas of the draft National Law:

- Accreditation (Part 3, Division 4 of the draft National Law)
- Registration of rail infrastructure managers of private sidings (Part 3, Division 5 of the draft National Law)
- the following elements of a Safety Management System:
    - security management plan (section 113 of the draft National Law)
    - emergency management program (section 114 of the draft National Law)
    - health and fitness management program (section 115 of the draft National Law)
    - drug and alcohol management program and testing (sections 116 of the draft National Law)
    - fatigue risk management program (section 117 of the draft National Law).

Both types of exemptions would be assessed only on application by (and granted to) individual rail transport operators. In both cases, the granting of an exemption may be subject to conditions or restrictions and would include authority for the grantor (Regulator or minister) to vary, revoke or suspend it.

While decisions on exemption applications made by the Regulator would be potentially subject to review (under Part 7 of the draft National Law – Review of Decisions), those made by a Minister would not.

Impact assessment

Option 1 – Status quo

There would be no impact of retaining the status quo.

Option 2 – Include a framework for granting rail transport operators exemptions from certain provisions of the National Law

Economic assessment

The net benefit of this option is estimated to be between $0.02 and $3.35 million. Refer Appendix D: Economic cost benefit analysis (section 3.4) for detailed analysis.

The major impact of introducing an exemption process would be to reduce the regulatory compliance burden on railways being operated in low risk environments. This reduction would be achieved by the granting of exemptions from provisions of the National Law to

operators for whom compliance with those provisions is assessed as not reducing risks to safety by any substantial degree.

The proposed exemption provisions may be viewed as a partial countermeasure to the increased compliance costs for some of the more prescriptive requirements being proposed in the draft National Law, for example drug and alcohol and fatigue risk management. Where compliance with such provisions is assessed as having no or minimal benefits for an operator, it is anticipated that the Regulator would be able to exempt them.

Safety

The provision of an exemption process would not of itself impact on safety. By potentially allowing for a reduced degree of safety management, there is a risk that safety may be reduced. It would be the responsibility of rail transport operators and the Regulator to ensure that exemptions, in conjunction with alternative arrangements (conditions of an exemption), are only approved/enacted in circumstances where it is demonstrated that safety would not be compromised.

Regulator

While the Regulator already has a role in accrediting and periodically auditing operators' safety management systems, assessing exemptions would add to its role. Under the co-regulatory principles of the National Law, it is anticipated that the burden of such assessments would be shared between the Regulator and operators, including:

- operators to conduct risk analyses to support applications for exemptions
- the Regulator to assess such applications, including associated and complementary tasks such as undertaking research on relevant rail safety matters.

Under existing arrangements, primary responsibility for developing a compliant safety management system lies with rail transport operators. The adoption of exemption provisions, including the need for the Regulator to approve alternative arrangements, would represent a transfer of some responsibility from the operator to the Regulator.

However, under the co-regulatory framework of Australian rail safety law, regulators currently invest significant resources in assisting operators with complying; particularly smaller operators. This means that there is no clear dividing line between compliance costs of the Regulator and those of rail transport operators.

State and territory regulators were mixed in their assessments of how an exemption framework would impact on resources of the Regulator. Some feedback indicated that the process of assessing suitable alternative arrangements may require resources comparable or exceeding those necessary to oversee compliance with the exempted provision(s).

An example is the requirement to comply with the National Standard for Health Assessment of Rail Safety Workers, which required significant resources and expertise to develop. If (under Option 2) alternative compliance arrangements were proposed by an operator, requiring (application for) an exemption, significant additional resources of the Regulator may be needed to assess them.

Under Option 1, the Regulator would have no latitude to consider such a proposal. This would arguably increase the need for developing more flexible requirements (e.g. amending the National Law to permit deviation from the National Standard for Health Assessment of Rail Safety Workers). Such an arrangement could result in a similar process and yield a similar result to that under an exemption framework (Option 2).

Rail transport operators

The provision of exemptions to rail transport operators from elements of their safety management duties has the potential to reduce their compliance costs. Experience with similar types of provisions, particularly those in New South Wales rail safety law, is that exemptions would most likely be granted to smaller operators, particularly those in the tourist and heritage sector.

Any reduction in cost to an operator that resulted from an exemption being granted would be mitigated by the need for the operator to develop appropriate alternative arrangements. While it is conceivable that some exemptions may be granted in an 'outright' manner (that is, where the risk to safety was demonstrated to be negligible), in most cases it is likely that only a reduced degree of risk would be demonstrated, which would still need to be managed in some form.

Additionally, this option would allow for greater clarity in determining whether a party was considered to have 'effective management and control' of a railway and needed to be accredited.

Other parties

Applications for exemptions may also be made to state or territory ministers. This would impose some burden on ministers and their staff. As referenced in the draft National Law, it is expected that in deciding on an exemption application, a minister would seek advice from the Regulator. In this way, the major burden would be shouldered by the Regulator, similar to that for an application made directly to the Regulator.

Proposal

Option 2, to introduce an exemption process, is proposed for the National Law.

The need for such a process has increased with the number of prescriptive requirements in the National Law, such as for drug, alcohol and fatigue risk management. Assessments of these proposals have identified a risk that the costs of uniform compliance would exceed the safety benefits for a limited number of operators. This risk would be reduced by granting exemptions, particularly from the more prescriptive provisions that are assessed as imposing greater costs than safety benefits for a given operator.

By reducing the degree of regulation for some railways commensurate to their level of risk, the proposal would support the key objectives of the reform by not reducing existing levels of rail safety, but still streamlining regulatory arrangements and reducing the compliance burden for business.

This proposal is addressed in Part 6 (Exemptions) of the draft National Law.

6.4.5 Powers with respect to interfaces with parties whose operations may impact rail safety

Current provision

The Model Law does not provide any explicit requirements for the regulation of third parties, for example utility companies,[32] or require rail transport operators and third parties to collaborate on the safety of their works in the vicinity of rail infrastructure.

The overarching requirements in the General Safety Duties provisions of Part 4, Division 1 and the Safety Management provisions of Part 4, Division 4 of the Model Bill require rail transport operators to manage such risks and to ensure the safety of railway operations. These requirements do not apply to utility managers or road managers.

Persons who are not subject to rail safety law would still be required to comply with applicable work health and safety law. Such law imposes responsibilities on parties to manage risks to safety, while undertaking any work in the vicinity of rail infrastructure.

Some states and territories have implemented in their rail safety law requirements for third parties to consult with rail transport operators, and vice versa, before undertaking works that may affect the operations of the other party. These include Victoria, South Australia and the Northern Territory.

Problem statement

The Regulator is not authorised to regulate works occurring around or in the vicinity of rail infrastructure, where those works impact on rail safety but do not fall under the definition of rail safety work.

For example, the Model Law currently does not contain provisions to address the interface issues with the activities of utility companies, some of which have been conferred rights of entry under current Commonwealth legislation.

These provisions are required due to the observed practice of entities, often utility companies, undertaking works on or in the vicinity of rail operations, without sufficient consideration of how their actions may impact on the safety of rail operations. This has resulted in a number of rail safety incidents in Victoria, for example:

- a contractor laying fibre optic communications cables without the approval of the rail operator resulting in a near miss
- a gas leak occurring at Southern Cross Station
- a train colliding with a utility company's van which was parked on rail tracks
- utilities which have dug trenches or holes and undermined nearby rail track.

While accredited rail infrastructure managers are accountable for the safety of their networks under the General Safety Duties, it is difficult for them to manage safety when third parties are legally able to undertake activities without the operator's or regulator's permission (or even knowledge), and without regard to its safety management system. Smaller rail transport operators, particularly those in the tourist and heritage sector, have also indicated

[32] Where reference is made in this clause to 'utilities' this is a reference to any entity that provides services and/or infrastructure relating to telecommunications, water, gas, electricity or similar.

that they are often unable to influence large utility companies to consult with them before undertaking such works.

Similarly, rail regulators are also unauthorised to direct rail infrastructure managers where any works they are undertaking may threaten the safety or integrity of utility operations, including the provision of services such as gas, water and electricity. The Model Bill only authorises rail regulators to regulate matters relating to rail safety. Although work, health and safety regulators are authorised to intervene where safety (in all work places, rather than just for rail operations) is a concern, rail regulators are typically better placed to be aware of and to address such matters arising from rail operations.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. This would provide no specific powers or requirements for the management of utility works on or near rail infrastructure premises, beyond the general rail safety duties obligations on rail infrastructure managers and Work Health and Safety obligations on utility companies.

Option 2

An option is to require that a person may not carry out works near a railway that are likely to threaten the safety or integrity of the railway operations, without prior consent of the relevant rail infrastructure manager or the Regulator.

The Regulator may also:

- direct persons, who are undertaking, or have proposed to undertake, works that the Regulator believes is likely to threaten the safety or integrity of railway operations, to cease or alter that work
- direct a rail transport operator who is undertaking, or has proposed to undertake, operations that are likely to threaten the safety of utility infrastructure or works, or safe provision of utility services, to cease or alter the operations.

Impact assessment

Option 1 – Status quo

Although there would be no impact of maintaining the status quo when measured against the Model Bill, some states and the Northern Territory have varied from the Model Bill by implementing duties for parties undertaking works on or near rail infrastructure. In practice, adopting this option would likely be viewed by some as diminishing safety and authority of the Regulator.

Option 2 – Include a power in the National Law for the Regulator to cease or alter works that could potentially threaten the safety or the integrity of the railway operations

Economic assessment

The net benefit of this option is estimated at between $0.00 and $2.05 million. Refer Appendix D: Economic cost benefit analysis (section 3.5) for detailed analysis.

Safety

The requirement to consult before undertaking works is expected to reduce the risk of rail incidents resulting from damaged, or unauthorised access to, rail infrastructure. As indicated in the problem statement, this option could possibly avoid incidents or accidents and has the potential to provide considerable safety benefits.

Regulator

There may be some initial costs associated with the establishment of policies, administrative procedures, training for regulatory staff and education of affected parties, such as utility companies, of their obligations.

It is likely that the Regulator would be required to give directions infrequently; the corollary legislative obligations on the rail transport operator and third party would ensure that the Regulator would only need to become involved when a rail transport operator and third party could not successfully negotiate a suitable arrangement. It is not anticipated that this would impose any substantial burden on resources of the Regulator.

By providing this 'regulatory reach', this option provides the Regulator with a more efficient method to address these risks to safety as, under the Model Bill, such risks could only be addressed by the Regulator via the operator's safety management system.

Rail infrastructure managers

The requirement to collaborate with utility companies may impose some burden, but would be balanced by reduced scope for adverse outcomes from unilateral works on rail corridors. It is understood that many rail infrastructure managers already have systems in place to manage these risks and liaise effectively with utilities and other parties; there may be a greater impact on smaller and medium-sized operators.

The proposed penalty for non-compliance with the proposed provision is assessed as having a minor impact, as it is not envisioned that penalties would be applied frequently.

Other parties

The requirement to collaborate with rail operators may impose some burden on third parties, such as utility companies and road managers. This impact is considered minor given that most third parties are understood to already be adopting this approach as good practice under occupational health and safety legislation. Again, while there is the scope for penalties, their application is foreseen on an infrequent basis only.

Conversely, corollary obligations on rail transport operators to have regard to the safety of utilities' infrastructure and works may provide benefits to the utilities.

In order for the Regulator to issue directions and impart the corollary legislative obligations, it is also noted that amendments may be required to other legislation, for instance addressing the safe management of gas and electricity services, as well as road management Acts in all

states and territories. Such amendments would be the responsibility of individual states and territories if this was deemed necessary.

Proposal

Option 2 is proposed for the National Law.

The proposal would provide a clearer duty for both rail infrastructure managers and third parties to manage risks posed to the other party associated with the interfacing works. It would also authorise the Regulator to intervene when that duty is breached. The impact on the Regulator, rail infrastructure managers and other parties is assessed as only minor.

Given that a number of states and territories have included this provision in their applying legislation, this proposal supports the national reform objective in not reducing existing levels of rail safety. In addition, the extended regulatory reach should streamline regulatory arrangements.

This proposal is addressed in section 201 (Power to require works to stop) of the draft National Law.

The NTC welcomes comment from utility companies and road managers on this proposal.

6.4.6 Duty for loading and unloading rolling stock

Current provision

General Safety Duties provisions of Part 4, Division 1 and the Safety Management provisions of Part 4, Division 4 of the Model Bill apply to rail transport operators with respect to the safety of their operations. These impart a general duty on operators to ensure the safety of rail operations, which would include the loading and unloading of rolling stock.

However, as the loading and unloading of rolling stock does not fall within the Model Bill's definition of rail safety work, there is no corresponding duty on rail safety workers.

The loading and unloading of rolling stock is subject to relevant work health and safety laws, which require them to manage general safety risks arising from their operations in a similar manner to the General Safety Duties provisions of the Model Bill. However, rail safety regulators are not authorised to regulate compliance with work health and safety law, and work health and safety regulators are not authorised to regulate compliance with rail safety law.

Problem statement

The loading or unloading of goods from rolling stock is an activity that impacts on the safety of railway operations. Poorly loaded or unstable goods may injure rail workers or lead to de-stabilised freight carriages (potentially resulting in them being derailed).

A general principle of the Model Bill is for safety management duties to apply to both rail transport operators and rail safety workers. This principle recognises that workers share a responsibility to ensure the safety of railway operations. It also recognises that in practice, the ability of rail transport operators to directly manage the safety performance of rail safety workers can vary with circumstances, such as whether the worker is under the operator's direct employment.

The lack of any safety duty on workers engaged in the loading or unloading of rolling stock does not support that principle. It has made rail transport operators disproportionately

responsible for the safety of these activities. Additionally, it has inhibited rail safety regulators in regulating the safe loading and unloading of rolling stock, beyond any matters that may be addressed with rolling stock operators alone.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. Under this option, a duty on the safe loading and unloading of rolling stock (to the extent these activities were assessed as impacting on safe railway operations) would remain on rail transport operators alone.

Option 2

Extend the definition of rail safety work to cover loading and unloading of rolling stock. This option would provide for the safety of loading and unloading to be managed in a similar manner to the range of other types of rail safety work.

Option 3

Introduce a duty for persons who load or unload goods on or off rolling stock to ensure, so far as is reasonably practicable, that such operations are carried out safely.

Impact assessment

Option 1 – Status quo

There would be no impact from maintaining the status quo.

Option 2 – Extend the definition of rail safety work in the National Law

Economic assessment

The net cost of this option is estimated to be between $92.89 and $185.79 million. Refer Appendix D: Economic cost benefit analysis (section 3.6) for detailed analysis.

Safety

Principally, safety would be improved by empowering the Regulator to more effectively oversee how the safety of loading and unloading rolling stock is being managed. Under existing arrangements, (other than rail transport operators) only the work health and safety regulator is able to intervene in addressing any matters arising from the loading and unloading of rolling stock (by parties not directly controlled by rail transport operators).

In this way, some degree of safety improvement may result from a more specific duty on the loading and unloading of rolling stock in the National Law. However, similar duties effectively already exist under work health and safety law.

Some improvement in safety may also result from expanded coverage of duties on rail transport operators to manage rail safety worker health and fitness, drug and alcohol use, fatigue and competence. However, the magnitude of such a safety benefit is questionable; the degree of risk associated with those matters is reduced for those involved only in loading

and unloading rolling stock, compared with other more safety critical roles such as train driving or signal control.

Regulator

The Regulator would have a role in overseeing and if necessary, intervening in matters relating to the safe loading and unloading rolling stock (that is, beyond the current scope, where such oversight is restricted to engaging only with rail transport operators). This option would necessitate an increased allocation of regulatory resources to undertake audits, inspections and investigations of how rolling stock loaders and unloaders are complying with the proposed duties.

However, it would not increase the number of accredited operators, nor impose any additional administrative tasks (for example, to review additional safety management plans). Safety incidents arising from loading and unloading rolling stock are not believed to occur frequently. Therefore, it is not expected that this option would place any substantial additional pressure on resources of the Regulator.

Overall, the Regulator would be better positioned to address concerns with the management of safety risks associated with the loading and unloading of rolling stock. This would alleviate the current circumstances in which only the relevant work health and safety regulator could directly intervene with the activities of parties other than rail transport operators (i.e. rail workers and contractors). This is expected to improve the effectiveness and efficiency of such regulatory activities.

Rolling stock operators

Rolling stock operators would be required to address, as part of their safety management plan, parties involved in the loading and unloading of rolling stock. This would include being required to manage their health and fitness, drug and alcohol use, fatigue and competence. This would impose additional costs, initially from the need to revise their plans, and ongoing from the expanded scope of their management (for example, the need to assess health and fitness, competency and conduct drug and alcohol testing for a greater number of rail safety workers).

Operators have reported that it is often difficult to effectively manage the safety of parties not directly employed by them. However, this applies to all parties, not just those loading and unloading rolling stock.

Rail infrastructure managers

There would be no impact, assuming rail infrastructure managers would not be involved in the loading or unloading of rolling stock.

Rail safety workers

To the extent that the proposed duty would improve safety associated with the loading and unloading of rolling stock, this would reduce the risk of harm to rail safety workers either involved in any unsafe practices or who may be injured by goods loaded in an unsafe manner by a third party.

There would also be some social benefits to parties engaged in the loading and unloading of rolling stock from requiring rail transport operators to manage their health and fitness, drug and alcohol use and fatigue.

Option 3 – Include a safety duty for persons loading and unloading rolling stock in the National Law

Economic assessment

The net benefit of this option is estimated at between $3.80 and $7.60 million. Refer Appendix D: Economic cost benefit analysis (section 3.6) for detailed analysis.

Safety

Safety would be impacted in a broadly similar manner to Option 2; namely, the proposal would empower the Regulator to better ensure that all relevant parties were conducting their work safely.

However, any additional safety benefits under Option 2, resulting from the expanded coverage of duties on rail transport operators to manage rail safety worker health and fitness, drug and alcohol use, fatigue and competence, would not be realised under this option.

Regulator

The Regulator would be impacted in a manner broadly corresponding to that for Option 2. However, for this option the impact would be less, as the Regulator would not be required to monitor compliance with the range of other duties associated with parties being categorised as rail safety workers (that is, for rail transport operators to manage their health and fitness, drug and alcohol use, fatigue and competence).

As with Option 2, this option increases the regulatory reach and provides the Regulator with a more efficient method to address these risks to safety. Under the Model Bill provisions, such risks could only be addressed via the operator's safety management system.

Rolling stock operators

Rolling stock operators would continue to be bound by their obligations under the General (Rail) Safety Duties, that is, to manage safety risks arising from the loading and unloading of rolling stock. However, by imposing a similar and more direct requirement on parties engaged in the loading and unloading of rolling stock, the responsibility for ensuring safety is more evenly distributed. This may make achieving compliance more practical for rolling stock operators.

Rail infrastructure managers

Nil.

Rail safety workers

To the extent that the proposed duty would improve safety associated with the loading and unloading of rolling stock, this would reduce the risk of harm to rail safety workers either involved in any such unsafe practices or who may be injured by goods loaded in an unsafe manner by a third party.

Other parties

This option would impose a safety duty on persons engaged in the loading or unloading of rolling stock. The impact is assessed as low, due to the fact that a similar duty already exists under work health and safety law. The duty would be imposed only on persons directly engaged in the loading or unloading of rolling stock and would not apply to others more indirectly involved, such as consignors, consignees and packers.

Proposal

Option 3 is proposed for the National Law.

Introducing a specific duty into the National Law for the loading and unloading of rolling stock to be undertaken in a safe manner would resolve the major limitations of existing arrangements, namely the lack of any duty for loaders/unloaders (who are not rail transport operators) under rail safety law and the Regulator not being authorised to regulate such activities.

Option 2 would impose excessive obligations and requirements on rail transport operators, for little apparent benefit beyond that able to be realised under Option 3.

The proposal is seen to support the objectives of the national reform, streamlining regulatory arrangements in providing an appropriate level of regulatory reach, and reducing the unnecessary burden for operators to be disproportionately responsible for the actions of loaders and unloaders.

This proposal is addressed in section 54 (Duties of persons loading or unloading freight) of the draft National Law.

6.5 Operator Safety Management

Rail transport operators are required to be accredited by the Regulator. The purpose of accreditation is to attest that an operator has the competence and capacity to manage the safety risks of their railway operations.

Accreditation is a method by which the Regulator can be assured that a rail transport operator has systematically considered the risks from its operations and has in place a system to eliminate or reduce those risks.

A key consideration in assessing an application for accreditation is the rail transport operator's demonstrated ability to develop and maintain a compliant safety management system. It provides a systematic way to identify hazards and control risks while maintaining assurance that these risk controls are effective. The safety management system, like many other management systems, is founded on a cyclical process of planning, implementation, monitoring and review, and taking action to improve performance in the light of results. This process results in continuous improvement of the system and increasing achievement of the system objectives of safety of railway operations.

6.5.1 Safety Management System

Current provision

Section 57 of the Model Bill and Model regulation 10 require that rail transport operators develop a safety management system for their accredited railway operations. The safety management system must be developed in consultation with various groups including health and safety representatives, persons affected by the safety management system and/or their representing union, other operators where there is an interface agreement and the public, as appropriate.

The safety management system must be evidenced in writing in a form approved by the Regulator and must identify each of the persons responsible for its preparation and implementation.

Section 57 requires rail transport operators to comply with relevant prescribed requirements and the prescribed risk management principles, methods and procedures to identify, assess and control the risks to safety. The operators must also implement procedures for monitoring, reviewing and revising their safety management system.

A safety management system, in accordance with the Model Bill includes:

- identification and assessment of risks to safety that have arisen or may arise from the carrying out of railway operations
- specification of the controls used to manage the risks to safety
- procedures for monitoring, reviewing and revising the adequacy of those controls.

Problem statement

While the Model Regulations prescribe a range of content that must be included in a safety management system, they do not extend to addressing risk management principles (that is, the guiding principles or steps that outline the decision making process or mechanics of how safety risks are to be addressed). Model Regulation 10 is silent on this matter, with a drafting note having reserved this provision for future development.

Under the National Law, all operators must have robust, documented and auditable risk management processes and procedures to substantiate that they are managing risks to safety, so far as is reasonably practicable. These should be in a form that can be used to manage safety risks to a suitable standard and to increase the transparency of risk management decisions.

With no prescribed risk management principles in the National Law, rail transport operators must determine how to identify, assess and manage risks to safety. However, established principles of risk management are widely available, including through the national guideline,[33] which references the Australian Standard (AS/NZS 4360:2004 Risk Management). Therefore, their absence from the National Law does not materially restrict their availability, although consistency of approach is not guaranteed if operators choose a different standard or methodology.

Regulators have reported that standards of risk management vary across the rail industry. Many operators (particularly those better resourced) have adopted best practice principles. However, there is some concern that some operators have adopted sub-standard approaches. Some regulators have reported that their inability to assess a risk management system against prescribed principles set out in legislation has inhibited efforts to convince operators to raise their risk management standards (that is, there is disagreement between a regulator and operator on whether a safety management system is compliant or not). A disadvantage of the performance-based provision is that there is a greater potential for operators to exploit such a measure as *de facto* deregulation, either knowingly, being recalcitrant operators, or unwittingly, due to a lack of understanding of the risk management process or of the risk being managed.

The lack of prescribed principles has also been identified by some regulators as making prosecutions more difficult for matters arising from sub-standard risk management by an operator; some regulators consider a more transparent requirement would help to demonstrate where a breach of rail safety duties has occurred.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. This option would continue the Model Bill arrangement under which rail transport operators would develop a safety management system using self-determined principles.

Option 2

To include risk management principles in the National Law based on three steps:

1. risk identification
2. risk assessment

[33] National Transport Commission, *National Rail Safety Guideline: Preparation of a Rail Safety Management System*, June 2008 http://ntc.gov.au/filemedia/Reports/NRSG_SafetyManagementSystemSMS_J.pdf, last accessed 21 February 2011.

3. risk control.

It is proposed to base the risk management principles for risk identification and assessment on sections 50 and 51 of the *Rail Safety Act 2006* (Victoria) in the National Law, for example:

> *A rail transport operator must, as far as is reasonably practicable, identify safety risks that have arisen or may arise from the carrying out of railway operations on or in relation to the rail transport operator's rail infrastructure or rolling stock.*
>
> *A rail transport operator must conduct a comprehensive and systematic assessment in relation to those risks identified. An assessment must involve an examination and analysis of the hazards and incidents identified including –*
>
> - *the nature of each hazard and incident*
> - *the likelihood of each hazard causing an incident*
> - *in the event of an incident occurring –*
>   - *its magnitude*
>   - *the severity of its consequences*
> - *the range of control measures considered.*
>
> *In conducting an assessment, the rail operator must consider hazards cumulatively as well as individually and use assessment methodologies that are appropriate to the hazards being considered. The risk assessment must be documented showing a consideration of the hazards and incidents, their likelihood and severity of consequences.*

The appropriate risk control method depends on the risk identification and assessment process. The assessment of risk magnitude, according to the likelihood of an incident and the severity of consequences, would determine the level of control required.

It is also proposed to elevate the risk management principles from the regulations to the National Law Act due to risk management being an integral part of the National Law and an important legislative requirement.

Impact assessment

Option 1 – Status quo

There would be no impact from maintaining the status quo. The Regulator may still move to hold operators to the standards as proposed in Option 2. However, without them being prescribed in law, that task is potentially more difficult, as discussed in Section 6.3 (Overview of proposed risk management requirements).

Option 2 – Include risk management principles in the National Law

Economic assessment

The economic benefit of this option is estimated at between $0.20 and $0.28 million. Refer Appendix D: Economic cost benefit analysis (section 3.7) for detailed analysis.

Safety

By prescribing risk management principles for a safety management system, it is anticipated that this would contribute to improving the quality of some safety management systems. In particular, some smaller rail transport operators may lack the in-house knowledge and resources to develop a compliant safety management system (that is, based on best practice principles of risk management). In some cases, the Regulator is able to support such operators in making suitable improvements. In other cases disagreements over the need for, and the cost of, developing and implementing such improvements have led to resistance on the part of the operator.

The safety benefit derived from prescribing principles of risk management would therefore arise from empowering the Regulator to more effectively (or authoritatively) influence operators to make changes to their safety management system.

Regulator

For the Regulator, the burden should be reduced when reviewing a rail transport operator's safety management system. This stems from greater clarity of minimum standards, which regulators expect would simplify the task of working with operators to develop a compliant safety management system. Due to the fundamental role of risk management principles in developing a safety management system, some regulators stated that this option potentially would have a significant impact on streamlining their role in assisting operators to comply.

Rail transport operators

The introduction of prescribed risk management principles will provide greater clarity for rail transport operators of their compliance requirements. It is expected to simplify their compliance obligations, by providing clearer guidance on how to may demonstrate that they have assessed risks and identified appropriate countermeasures according to what is reasonably practicable.

Some rail transport operators, particularly those in the tourist and heritage sector, have reported that they may need to review and update their safety management systems to comply with the proposed risk management principles. This would impose an initial cost.

However, the Model Bill, in section 59 (Review of a Safety Management System), places an obligation on operators to review their safety management system at least once each year (unless otherwise directed by the Regulator). Therefore, the cost of a safety management system review in accordance with the proposal under Option 2 would likely be partially absorbed within the operator's annual review.

Review of safety management systems may result in the identification of additional risks that require control. Additionally, the review may increase the level of severity of previously identified risks which would subsequently require additional controls to be implemented. A rail transport operator may incur costs to implement these higher levels of controls. The impact of these reviews is likely to be greater for smaller operators, as some larger operators have indicated that they already comply with this option.

Rail safety workers

It is anticipated that rail safety workers would benefit from improved levels of safety resulting from this proposal being adopted.

Proposal

Option 2 is proposed. It would prescribe best practice principles of safety management, which are already applied implicitly through the General Safety Duties. The greater clarity

achieved by their prescription is expected to improve regulatory efficiency and simplify the compliance process, with associated cost savings.

This proposal is addressed in section 101 (Conduct of assessments for identified risks) and section 45 (Management of risks) of the draft National Law.

6.5.2 Health and fitness management program

Current provision

Section 64 of the Model Bill and Model regulation 22 require rail transport operators to have and implement a health and fitness program for rail safety workers. The program must comply, so far as is reasonably practicable, with Volumes 1 and 2 of the National Standard for Health Assessment of Rail Safety Workers (the Standard), published by the NTC.[34]

The Standard was developed by the NTC to help rail operators meet their obligations for the health and fitness of rail safety workers. Those obligations include the monitoring of the health of rail safety workers, to prevent or minimise work-related deaths and injury caused by medical conditions particularly where a worker's incapacitation may present a risk to others.

The health and fitness management program is an essential component of the overall rail transport operator's safety management system. It is aimed at minimising risks to all members of the public whose safety may be at risk from a rail safety worker becoming incapacitated, as well as to the health and safety of rail safety workers themselves.

The Standard comprises two volumes.

- Volume 1: Management Systems – provides accredited rail organisations with practical guidance for implementing systems, based on a risk management approach, to monitor rail safety worker health and fitness.
- Volume 2: Assessment Procedures and Medical Criteria – provides authorised health professionals with information outlining the procedures for conducting health assessments and the medical criteria for judging fitness for rail safety duty.

Problem statement

Interpreting the requirement to comply with the Standard, so far as is reasonably practicable, has resulted in some confusion. While the Standard includes some scope for flexibility in its application and interpretation, the objective of the model provision is for rail transport operators to substantially adhere to it. However, some rail transport operators have reportedly interpreted the practicability qualification as latitude to materially deviate from the Standard, or to assess a reduced number or classes of rail safety workers than it requires.

As well as potentially causing confusion amongst rail transport operators in its interpretation, rail safety regulators have stated that the 'so far as is reasonably practicable' qualification also makes enforcement of the policy objective (substantial compliance with the Standard) difficult.

Rail safety regulators indicated that, to assess proposed deviations from the Standard, the Regulator would need the services of medical experts. For this reason, allowing such deviations may cause the Regulator to incur significant costs.

[34] Available at http://www.ntc.gov.au/viewpage.aspx?documentid=1669.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. Under this option, compliance with the Standard would continue to be required so far as is reasonably practicable.

Option 2

An option is to remove the so far as is reasonably practicable qualification from Model regulation 22, requiring strict compliance with the Standard.

Impact assessment

Option 1 – Status quo

As this is the existing Model Bill requirement, there is no impact of maintaining the status quo. However, with the implementation of the Regulator, one regulator reported that it may be necessary to implement a medical panel to assess health and fitness programs of rail transport operators that deviated from the Standard. This was due to the need to consult with medical experts on whether such deviations would support a similar outcome to the Standard.

Assessing the impact of these options hinges on the extent to which the 'so far as is reasonably practicable' qualification permits an operator to deviate from the Standard. In the absence of prescribed requirements, ultimately this may only be authoritatively determined by a court. However, for the purposes of this regulatory impact statement, the advice of regulators has been adopted: that this option would allow operators to deviate from the Standard.

Option 2 – Remove the so far as is reasonably practicable qualification from Model Regulation 22

Economic assessment

The net benefit of this option is estimated at between $0.82 and $0.94 million. Refer Appendix D: Economic cost benefit analysis (section 3.8) for detailed analysis.

Safety

It is expected that requiring strict compliance with the Standard would improve safety, encouraging more stringent management of rail safety worker health and fitness. This would reduce the risk of harm being caused to rail safety workers themselves, as well as others.

An example of a significant rail safety incident, caused in part by inadequate management of rail safety worker health and fitness, is discussed in the McInerney Inquiry into the Waterfall rail accident in New South Wales.[35]

[35] The investigation report is available online at http://www.transport.nsw.gov.au/inquiries/waterfall.html.

Regulator

This option would alleviate a need for the Regulator to procure medical expertise to assess health and fitness programs that deviate from the Standard. An associated saving of between $0 and $2.6 million per annum to the Regulator is estimated.

Rail transport operators

Some rail transport operators stated that strict compliance with the Standard would require them to assess the health and fitness of a higher number of rail safety workers. It would also prohibit the current practice of some operators managing rail safety worker health and fitness by alternative means. Both of these impacts would impose costs.

Rail safety workers

It is anticipated that rail safety workers would benefit from improved levels of rail safety resulting from this proposal being adopted, as well as from any more rigorous assessment of their health and fitness.

Other parties

Nil. Rail transport operators are responsible for ensuring parties contracted by them comply with the National Law. Therefore, it has been assumed that any costs to contractors are accounted for in the estimates provided by rail transport operators.

Proposal

Option 2 is proposed. While it would impose some costs on rail transport operators, these appear to stem at least partly from misinterpretations of the 'so far as is reasonably practicable' qualification (i.e. the extent to which it permits relaxed compliance with the Standard). Specifically, in developing the Model Bill provision, policy makers did not intend that operators would be permitted to materially deviate from the Standard, unless there were pressing matters of practicability. While this is arguably more a question of managing compliance with the existing provision than one of policy, better clarifying the requirement is nevertheless assessed as beneficial.

The proposal is addressed in section 115 (Health and fitness management program) of the draft National Law.

6.5.3 Drug and alcohol and fatigue risk management

This section assesses the following items:

- drug and alcohol management program
- fatigue risk management program

Options for the drug and alcohol management program and fatigue risk management program are described individually; however, due to similarities in their regulatory effects, the impacts for the options have been assessed together.

In addition, as the Model Law allowed for local variations (intended as an interim arrangement until national agreement was reached) in these two areas, there are potential benefits to be gained from adoption of nationally consistent provisions. These benefits are assessed in the section titled Benefits of national consistency below.

Drug and alcohol use in the rail industry

Drug and alcohol use has the potential to impact on performance at work by increasing the risk of an incident resulting in the loss of productivity, asset damage, injury or death. The consequences of an accident or incident in the rail industry resulting from a rail safety worker being affected by drug and alcohols may be severe.

The general public commuting on passenger rail services and interacting with rolling stock at level crossings has an expectation that railway operations are carried out safely. In recent years, there has been a focus on managing the drug and alcohol-related risks in the road environment, and the public expects that this would be translated and applied to the rail industry.

Given the above and evidence to suggest that drug and alcohol use impacts on workplace productivity and incident risk, drug and alcohol management has been a focus of recent policy development. States and territories have varied in their approaches to this risk and, following COAG's directive, resolution of this issue is important for the National Law.

Fatigue in the rail industry

The Australian rail industry is undergoing fundamental changes to its structure, ownership and competitive position in the provision of land transport services. Operators are extending services beyond historical boundaries and integrating them with road and shipping operations. Many of these changes have impacted on traditional work practices including shift lengths and rostering of workers, focusing attention on fatigue as a workplace safety issue.

Fatigue has been linked to degraded operational performance and has been identified as a contributing factor in accidents and incidents in railway systems and in other industries. In addition, simulator studies have indicated that train drivers may unwittingly undertake practices (speed or brake applications) that increase risks, or modify driving behaviour to offset the effects of fatigue by driving less efficiently.[36]

Based on the information available, the number of fatigue-related incidents in Australia appears to be relatively low, suggesting current arrangements are effective. It remains difficult to quantify the extent to which fatigue is a causal factor in most incidents; however, fatigue is frequently implicated in crashes either as a principal cause or as a contributing factor.[37] [38]

A significant amount of research has been undertaken on the effects and management of fatigue in the transport sector. A well-formed platform of knowledge and practical experience in managing fatigue-related risks has developed in the rail industry over the past decade or more. In keeping with research and operational trends in safety regulation, there has been a general (if not universal) shift from purely prescribed approaches focused on working hours to a more systematic approach to managing fatigue-related risk.

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[36] Dorrian, J., Roach, G.D., Fletcher A. and Dawson, D (2006). 'The effects of fatigue on train handling during speed restrictions'. Transportation Research Part F: Traffic Psychology and Behaviour, Volume 9, Issue 4, pp.243-257.

[37] Mitler, M.M., Carskadon, M.A., Czeisler, C.A., Dement, W.C., Dinges, D.F. and Graeber, R.C. (1988). 'Catastrophes, sleep, and public policy: Consensus report'. *Sleep*, *11:1*, pp. 100-109.

[38] Mitler, M.M., Dinges, D.F. and Dement, W.C. (1994). 'Sleep, medicine, public policy, and public health'. in Kryger, M.H., Roth, T. and Dement, W.C. (eds.), *Principles and practice of sleep medicine (2nd ed.)*. Philadelphia: W.B. Saunders, pp. 453-462.

The nature of the rail industry and its working requirements is such that fatigue is a complex risk and its management is important.

Benefits of national consistency

The Model Law allows for local variations in key areas of the management of drug and alcohol use and rail safety worker fatigue risk management. Any option other than maintaining local variations (the status quo) represents nationally consistent arrangements.

A proportion of the rail industry has operations in multiple states and must contend with differing requirements and interpretations in each state for these two areas of the safety management system. Managing these local variations adds to the compliance costs of rail transport operators, duplicating efforts or reworking proposals to suit the differing demands in each state or territory. This creates inefficiency, potentially diverting resources away from business efficiency and operational safety activities.

Regulatory consistency would provide certainty of the regulatory environment, allowing operators to focus on having a single safety management system, rather than either a core safety management system with additional materials for each state and territory of operation, or complying with the most onerous requirements across all operations.

As such, the options proposed present potential benefits, addressing areas where overlapping and inconsistent regulation may impede economic activity.

Drug and alcohol management program

Current provision

The overarching requirements for the management of drug and alcohol-related safety risks are explicitly provided for in the General Safety Duties of rail transport operators contained in the Model Bill (section 28). Under section 28, a duty is placed on rail transport operators to "ensure, so far as is reasonably practicable, that rail safety workers do not carry out rail safety work in relation to the rail transport operator's railway operations, and are not on duty, while more than the relevant concentration of alcohol is present in their blood or breath or while impaired by a drug."

Additionally, under section 57 (Safety Management System) of the Model Bill, rail transport operators are required to include in their safety management system a drug and alcohol management program in accordance with section 65.

Section 65 of the Model Bill requires rail transport operators to prepare and implement a drug and alcohol management program for rail safety workers in accordance with the prescribed requirements specified in the regulations.

However, the Model Regulations are silent on the specific requirements for such a program and allow for local variations (intended as an interim arrangement until national agreement was reached).

With regard to the duties imposed on rail safety workers, section 70(1)(c) requires that a rail safety worker must "co-operate with the rail transport operator with respect to any action taken by the rail transport operator to comply with a requirement imposed by or under this Act or the regulations." This duty on rail safety workers ensures their conformance with the operator's drug and alcohol management program.

All states and territories have adopted a provision in their applying laws in accordance with the Model Bill specifying a mandatory requirement on rail transport operators to prepare and implement a drug and alcohol management program.

States and territories have differing approaches to the prescribed requirements of a drug and alcohol management program in their regulations. Some have retained the principle of pure performance-based co-regulation placing the onus on the rail transport operator to identify what should be included in the drug and alcohol management program, whilst others have prescribed detailed elements for inclusion in the drug and alcohol management program.

Problem statement

This is an area where the Model Bill allowed for local variations until national agreement was reached. COAG required that, amongst other things, the issues surrounding drug and alcohol management in the rail sector are resolved and included in the National Law.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

In drafting the National Law, with the objective of achieving national consistency, an opportunity exists to review the variances in the applying law of each state and territory to develop regulatory requirements that represent a best practice, co-regulatory approach to the management of the drug and alcohol risks to safety in the rail industry.

Options

Option 1

Status quo. This option would retain the existing requirement for operators to develop a drug and alcohol management program, but allow individual states and territories to determine details of what the program must address and include.

Option 2

The drug and alcohol management program would be required as part of a safety management system, but no elements are prescribed in Model Regulations.

This means that the regulations are silent on the requirements for a drug and alcohol management program and the local variations currently provided for in the Model Regulations would no longer apply. Guidance material could be generated to assist rail transport operators with compliance.

Option 3

The drug and alcohol management program would be required as part of a safety management system, with prescribed elements (mandatory inclusions and other matters to be considered) included in Model Regulations.

Under this option, a rail transport operator must mandatorily establish an internal drug and alcohol policy, provide information and education to rail safety workers, address confidentiality measures relating to rail safety workers' personal information and include a drug and alcohol testing regime.

Matters for consideration when developing a drug and alcohol management program include the incorporation of rules relating to alcohol and other drugs for those undertaking rail safety work (including prohibition or restriction), the provision of treatment and rehabilitation for rail safety workers, the provision of information to rail safety workers relating to their obligations

under the Act and the possibility of disciplinary action, fair internal procedures for the management of drug and alcohols and self-reporting obligations for rail safety workers.

The complete list of these factors is included in regulation 31 of the draft National Regulations.

The intent of this option is not to prescribe an exhaustive list of requirements or to detail particular behaviours that must be undertaken by the regulated entity to ensure compliance (that is, prescriptive regulation), but rather specify high-level considerations and inclusions as minimum requirements to assure good practice. This maintains a performance-based and co-regulatory approach by allowing for flexibility in the application of this option to account for the scope and nature of the railway operations.

Option 4

The matters to be mandatorily included in a drug and alcohol management program, as described above, are prescribed in National Regulations. The matters for consideration are not prescribed in National Regulations under this option.

Fatigue Risk Management Program

Current provision

A fatigue risk management program is part of an overall framework for fitness for duty and a safe working environment for rail safety workers, their organisations and the general public. The fatigue risk management program is an integral part of a rail transport operator's safety management system that provides a means of ensuring that employees' (including contractors and subcontractors) alertness and performance is not degraded to an unacceptable level as a result of fatigue.

The overarching requirements for the fatigue risk management program are explicitly provided for in section 28 of the Model Bill (General Safety Duties of the Operator). Under section 28(2)(d) a duty is placed on rail transport operators to "ensure, so far as is reasonably practicable, that rail safety workers who perform rail safety work in relation to the operator's railway operations comply with the operator's fatigue risk management program."

Section 57(1)(f)(vi) of the Model Bill (Safety Management System) explicitly requires that a fatigue risk management program be included in a rail transport operator's safety management system in accordance with section 67.

Section 67 of the Model Bill requires rail transport operators to prepare and implement a fatigue risk management program for rail safety workers, as a mandatory element of the safety management system, in accordance with the prescribed requirements specified in the regulations.

However, the Model Regulations are silent on the specific requirements for such a program and allowed for local variations (intended as an interim arrangement until national agreement was reached).

With regard to the duties imposed on rail safety workers, section 70(1)(c) of the Model Bill requires that a rail safety worker must "co-operate with the rail transport operator with respect to any action taken by the rail transport operator to comply with a requirement imposed by or under this Act or the regulations." This duty on rail safety workers ensures their conformance with the operator's fatigue risk management program.

Problem statement

This is an area where the Model Bill allowed for local variations until national agreement was reached. COAG required that, amongst other things, the issues surrounding fatigue risk management are resolved and included in the National Law.

A comparative analysis of the current regulatory approaches to fatigue risk management programs by the states and territories revealed that, while all states and territories have implemented a provision similar to section 67 of the Model Bill in their respective legislation, each has adopted differing approaches to the prescribed requirements of a fatigue risk management program, with little consistency found.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

In achieving national consistency, an opportunity exists to review the range of state and territory approaches with the aim to develop regulatory requirements that represent best practice and produce improved management of the fatigue risks to safety.

Options

Option 1

Status quo. This option would retain the existing requirement for operators to develop a fatigue risk management program, but allow individual states and territories to determine details of what the program must address and include.

Option 2

A fatigue risk management program to be required as part of a safety management system, but with no elements prescribed in National Regulations.

This option would exclude any specific requirements for a fatigue risk management program. It would differ from Option 1 in that the provision for local variations in the Model Regulations would be removed. Instead, rail transport operators would be required to develop a fatigue risk management program that adequately addressed the types of risks applying to its operations. Guidance material could be developed by the Regulator to assist operators with compliance.

Option 3

A fatigue risk management program to be required as part of a safety management system, with elements (mandatory inclusions and matters to be considered) based on available scientific evidence of contributors to fatigue risks in occupational settings. Operators would be required to assess whether these factors are applicable and assess their impact.

Under this option, rail transport operators must mandatorily establish documented procedures for education of rail safety workers, as well as scheduling and monitoring of rosters to enable an operator and the Regulator to monitor the effectiveness of the fatigue risk management program.

Matters for consideration include scheduling and rostering practices, work and rest environments and other related considerations with respect to their effect on safety, performance and well-being of rail safety workers. Operators would also be required to

account for ongoing developments in research and technology for the management of fatigue risks.

The complete list of these factors is included in regulation 32 of the draft National Regulations.

The intent of this option is not to prescribe an exhaustive list of requirements or to detail particular measures that must be taken by the regulated entity (that is, prescriptive regulation), but rather specify high-level considerations and inclusions as minimum requirements to assure good practice. This maintains a performance-based and co-regulatory approach by allowing for flexibility in the application of this option to account for the scope and nature of the railway operations.

Option 4

The matters to be mandatorily included in a fatigue risk management program, as described above, are prescribed in National Regulations. The matters for consideration are not prescribed in National Regulations under this option.

Impact assessment – drug and alcohol and fatigue risk management programs

The impacts for the drug and alcohol management program and fatigue risk management program have been assessed together due to similarities in their regulatory effects.

Option 1 – Status quo

As the status quo, this option would impose no regulatory impact.

However, by providing for local variations in what is required for the management of drug and alcohol use, as well as fatigue, it would not support the key objective of the reform: to support a national system of rail regulation.

Option 2 – No elements of a fatigue or drug and alcohol management program prescribed in the National Regulations

Economic assessment

The economic benefit for this option for the drug and alcohol management program is estimated at between $0.00 and $27.84 million. Refer Appendix D: Economic cost benefit analysis (section 3.9) for detailed analysis.

The economic benefit of this option for the fatigue risk management program is estimated at between $0.00 and $29.63 million. Refer Appendix D: Economic cost benefit analysis (section 3.10) for detailed analysis.

Rail transport operators have assumed that the cost incurred for Option 2 is zero. However, it should be noted that the impact of the National Regulations being silent on the requirements for a drug and alcohol and fatigue risk management programs will be dependent on how the Regulator interprets the absence of any provisions in the regulations.

The Regulator may take a relatively passive role and only require that a management program be developed and implemented for fatigue and drug and alcohols as set out in the National Law. This would result in no impact, as assumed by rail transport operators. Conversely, the Regulator may impose any requirements on rail transport operators, including those contained in guidelines, in the absence of requirements stipulated in regulations. In this case, the costs could potentially be similar to those estimated under Option 3.

Safety

Compared with the current Model Law provisions, which allow for local variations, Option 2 represents a true performance-based arrangement. This would see a reduction in the level of prescription in most, if not all, states and territories. Remaining silent in the National Law about the requirements for managing the safety risks associated with fatigue and drug and alcohols ensures that regulated parties have the utmost flexibility in determining how they achieve compliance in these key areas of rail safety.

The benefit of performance-based regulation is its ability to emphasise the underlying objective of the regulatory requirement, in this case to manage drug and alcohol and fatigue risks as far as is reasonably practicable, and to require those regulated to address that objective directly. This means that responses can be better tailored to individual circumstances, improving operator efficiency. This may be particularly important over the longer term as, in the absence of prescriptive regulation, future innovations for risk management can be introduced by operators more promptly than by amending legislation. This would extend to advancements and new technologies in the science of fatigue and drug and alcohol management, maximising continuous improvement in the management of risks.

However, a disadvantage of purely performance-based regulation is that there is a greater potential for operators to exploit such a measure as *de facto* deregulation, either knowingly, being recalcitrant operators or unwittingly, due to a lack of understanding of the risk being managed. Some regulators have expressed a potential concern that enforcing the general duty requirements (to manage risk so far as is reasonably practicable) is sometimes difficult in the areas of human factors, and potentially time consuming. There is a potential that this option could introduce a negative safety outcome for a number of operators.

It would be assumed that guidance material (guidelines or codes of practice) would be required to assist operators with compliance if Option 2 was implemented.

Regulator

The Regulator's function is one of compliance oversight in terms of the appropriateness and effectiveness of the drug and alcohol management program and fatigue risk management program, in the context of the operator's risk profile and scope of operations.

This option places a greater requirement on the Regulator to conduct its own research into identifying a suitable reference base against which it will make decisions as to the appropriateness of an operator's drug and alcohol management program and fatigue risk management program, as there would be no legislative precedents in the National Law. This may place the Regulator in a weakened position when challenging an operator's risk management strategies.

Performance-based regulation may also increase the burden on the regulator of monitoring and enforcing compliance. It would require a robust and well-resourced regulator to be able to monitor and assess the varied and possibly innovative risk management programs put in place by operators. Some state and territory regulators have indicated that this option would increase the number of investigations required and necessitate the employment of additional fatigue risk specialists. As a result of the increased number of investigations, it is likely that there would be an increase in prosecutions. With this option, it could be likely that prosecution attempts would be less successful, due to the lack of any specific provisions in the National Law.

As rail transport operators do not have requirements for the drug and alcohol management program and fatigue risk management program established in law, there may be greater reliance on the Regulator to assist, educate and inform operators as to acceptable means of compliance. This is also likely to require additional resources at the Regulator. There may

also be increased interaction between the Regulator and operator during the assessment process, increasing costs.

Rail transport operators

Given the many different types and sizes of rail operations in Australia, flexibility and scalability in the National Law are two important considerations.

This option allows utmost flexibility for rail transport operators to manage the safety risks related to fatigue and drug and alcohols in accordance with the size, scope and risk profile of their organisation. The performance-based approach, emphasising only the underlying objective to manage these risks so far as is reasonably practicable, should mean that actions taken in response are better directed and, therefore, more productive. Being able to tailor the programs to individual circumstances may reduce overall compliance costs and improve operator efficiency, competitiveness and profitability.

Conversely, performance-based regulation may result in uncertainty amongst rail transport operators regarding acceptable means of compliance with the National Law and determining what is reasonably practicable. Accordingly, this may increase costs to the rail transport operator. The outcome could be a varied and inconsistent approach to managing fatigue and drug and alcohol safety risks within the rail industry. Without direction in regulations, some operators may need additional resources, in the form of expert consultancy, in order to produce a drug and alcohol management program or a fatigue risk management program. While larger organisations would most likely already employ such resources, this could potentially be an additional cost for some small or medium operators.

Rail safety workers

Rail safety workers are likely to have less certainty around their obligations under this option. Under Option 2, there would be no explicit requirements for rail transport operators to develop internal policies and procedures detailing their approach to managing the safety risks associated with fatigue and drug and alcohols. This is likely to result in a lack of awareness for rail safety workers regarding an operator's safety culture and their obligations to their employer and under the National Law. Consequently, unintended and inadvertent contravention of the requirements placed upon rail safety workers may ensue.

Dissemination of information and the provision of education and training to rail safety workers is imperative to managing the safety risks related to alcohol, drugs and fatigue. A lack of knowledge and understanding on the part of a rail safety worker is likely to be detrimental to the overall objective of managing the fatigue and drug and alcohol related safety risks.

A rail safety worker has a specific responsibility to ensure they are fit for duty, however this term is subjective in the context of alcohol, drugs and fatigue. The absence of explicit alcohol, drug and fatigue requirements in the National Law and potentially within the workplace may result in uncertainty for rail safety workers as to whether or not they are fit for duty.

Rail safety workers would most likely face differing standards of work between operators. Such inconsistencies, when moving between rail transport operators, may result in uncertainty and unintended breaches of their obligations.

Option 3 – Include mandatory requirements and matters for consideration for fatigue and drug and alcohol management programs in the National Regulations

Economic assessment

The economic benefit for this option for the drug and alcohol management program is estimated at between $14.96 and $30.46 million. Refer Appendix D: Economic cost benefit analysis (section 3.9) for detailed analysis.

The economic benefit of this option for the fatigue risk management program is estimated at between $2.14 and $4.16 million. Refer Appendix D: Economic cost benefit analysis (section 3.10) for detailed analysis.

As with Option 2, the actual cost incurred will be dependent on how the Regulator interprets and enforces the provisions set out in regulations; that is, the extent to which flexibility and scalability is allowed for relevant to the scope and nature of the railway operations.

If the Regulator chooses to administer the law flexibly, in a way that is commensurate with the level of risk of the particular rail transport operator, then the costs of this option would most likely be closer to those stated in Option 2. However, if the Regulator interprets and enforces the provisions rigidly and to a level not necessarily commensurate with the risk, it is plausible that operators may apply for an exemption (as described in Section 6.4.4, Exemption framework). The exemption could mitigate the high cost based on the less favourable interpretation of this option.

Safety

As compared with Option 2, Option 3 represents a performance-based standard supplemented by more prescriptive considerations designed to ensure integrated management of a range of risks whilst remaining scalable and relevant to an operators particular risk assessment. Whilst a more detailed arrangement than may currently be employed in most states and territories, the provisions are drafted to remain in the spirit of co-regulation, allowing an operator the opportunity to consider the appropriate application of the provisions to their particular operations.

In the case of fatigue risk management, the detailed list of considerations embodies the latest in human factors research, included to prompt operators to take into account the variety of risks when developing a fatigue risk management program. Such clauses are not drafted to indicate an exhaustive list, but rather to recognise that such factors would need to be at least considered when considering fatigue risks. The mandatory requirements are few, relating to safe scheduling practices, education for rail safety workers and monitoring of management systems.

Inclusion of mandatory high-level elements for the development of a fatigue risk management program and drug and alcohol management program, without being overly detailed, would support the overall improvement of managing the risks to safety in the rail industry, without being unnecessarily onerous for smaller operators. The elements will also facilitate a more consistent approach towards risk management.

The advantages of including some high-level requirements in regulations are that it provides clear, unambiguous boundaries in which to work and that it is easy for the Regulator, rail transport operators and rail safety workers to understand. There may also be advantages with respect to public perception as it may be viewed that there is an active attempt to address these high-profile risks. This regulatory approach may also have the benefit of reducing, or at least being perceived to place limits on, the potential of regulatory capture (a distortion or softening of a regulator's influence attributable to an undesirably close relationship with the regulated party).

In as far as this option provides for more comprehensive management of risks, it also provides benefits for rail safety workers in the protection of their health and wellbeing in these matters. Clear obligations as required under the drug and alcohol management program and the mandatory provision of education in terms of self-assessment with respect to drug and alcohol and fatigue risks provide improved awareness and safety culture around these risks.

A disadvantage is that the elements as stated may not remain current with the latest innovations in safety, science or technology. The prescriptive approach may only require those regulated to achieve minimum standards and may not encourage continuous improvement or innovation.

Regulator

Benefits to the Regulator are in improving the efficiency of administering and auditing fatigue and drug and alcohol management programs. Provisions in the regulations for mandatory inclusions and considerations would offer greater direction for the Regulator to assess and ensure compliance.

Providing key inclusions and considerations in regulations delivers a solid and readily available reference base by which the Regulator can challenge a fatigue risk management program or drug and alcohol management program if it considers that a rail transport operator is not managing the risks as far as is reasonably practicable.

Moreover, the Regulator would have a higher level of certainty that operators are identifying and addressing risks to a minimum standard, taking into account and assessing the relevance of the 'considerations' as stated. There is also less need for interaction between the regulator and operator during assessment, reducing costs.

In addition, it is likely that fewer investigations would be required and that prosecution attempts would be more successful, having the legislative requirements clearly stated.

Rail transport operators

The major advantage for rail transport operators of more detailed regulation is the certainty of acceptable means of compliance.

This may initially result in an increase to administrative costs whereby rail transport operators will need to justify to the Regulator that they have considered all the requirements listed in regulations, even when assessing the risk factor as not applicable to their operations. Conversely, cost savings may be realised as operators are provided with guidance about some of the factors that the Regulator would expect to form part of the risk assessment when developing the management programs for drug and alcohol and fatigue, potentially minimising the number of iterative loops required for compliance.

It is important to note that the level of knowledge in the rail industry about the safety risks of fatigue and drug and alcohols varies. Generally, larger rail transport operators have comprehensive fatigue and drug and alcohol management programs with resources available to support the ongoing review and implementation for such programs. However, some medium and smaller operations, including some tourist and heritage operators, may not have the same level of risk knowledge or expertise available within their organisations. Providing detail in regulations could produce improved risk management outcomes for operators where safety maturity is low and where there are limited resources to support the development of fatigue and drug and alcohol management programs. Some stakeholders have indicated that the level of maturity and understanding with respect to fatigue risk management is lower than that for drug and alcohol management due to the focus of the latter in road campaigns.

However, some rail transport operators have indicated that they may require specialist consultancy to interpret the new requirements (particularly the 'considerations' for fatigue risk management). It is envisioned that these costs would be minimal as guidance material will be produced through the implementation process to aid in interpretation.

The potential disadvantages of Option 3 are that the elements may be seen as a maximum and not a minimum standard for compliance. It may result in operators considering only the requirements in the National Regulations and prevent innovation and continuous improvement.

High level elements in the National Regulations may also be unnecessarily restrictive and inflexible for industry use, and potentially discouraging to business involvement. They may also place an unnecessary burden on smaller rail transport operators or those with low risk profiles. Appropriate drafting of the provisions will be required to mitigate such risks.

Rail safety workers

Rail safety workers would most likely realise benefits under this option, with rail transport operators required to address a number of aspects, such as rehabilitation, fair reporting practices, the effects of scheduling and other matters, that may prove beneficial to rail safety workers. Rail safety workers, when moving between employers, will have more certainty about the content and consistency of the drug and alcohol and fatigue risk management programs with which they must comply.

More comprehensive management of risks will result in better safety for rail safety workers.

Option 3 clearly sets out the requirements for an operator to prepare and implement a drug and alcohol management program and a fatigue risk management program and provides a more solid foundation for rail safety workers to be informed and educated about their obligations to safety management. This option would reduce the risk of inadvertent and unintended breaches by rail safety workers of an operator's policies and procedures. A rail safety worker would have a clear understanding of what constitutes being 'fit for duty' under this option as the policies would be explicitly communicated through the management programs.

Assistance could also be provided for rail safety workers who have drug and alcohol related health concerns. A rail safety worker may be more likely to seek help under this option knowing if their employer has policies in place to support and rehabilitate their workforce.

Option 4 – Include only mandatory requirements for fatigue and drug and alcohol management programs in the National Law

Economic assessment

Operators and regulators have indicated that the costs associated with this option would be equivalent to those incurred under Option 3.

The economic benefit for this option for the drug and alcohol management program is between $14.96 and $30.46 million. Refer Appendix D: Economic cost benefit analysis (section 3.9) for detailed analysis.

The economic benefit of this option for the fatigue risk management program is between $2.14 and $4.16 million. Refer Appendix D: Economic cost benefit analysis (section 3.10) for detailed analysis.

Safety

As compared with Option 2, Option 4 represents a performance-based standard supplemented by mandatory high-level elements requirements.

Again, inclusion of mandatory high-level elements for the development of a fatigue risk management program and drug and alcohol management program, without being overly detailed, is considered to support the overall improvement of managing the risks to safety, without being unnecessarily onerous for smaller operators. The elements may provide benefits, particularly consistent monitoring of safety management systems, but produce less consistency in the overall approach to these risks than under Option 3.

This option carries with it both the benefits and shortfalls of performance-based regulation (refer to Option 2 impact analysis) and would see a reduction in the level of prescription in most, if not all, states and territories with respect to the matters that must be considered in developing these management programs.

It would be assumed that guidance material (guidelines or codes of practice) would be required to assist operators with compliance if Option 4 was implemented.

Regulator

The Regulator's function is one of compliance oversight in terms of the appropriateness and effectiveness of the drug and alcohol management program and fatigue risk management program in the context of the operator's risk profile and scope of operations.

This option, with both the advantages and disadvantages as detailed in Option 2, provides the Regulator with greater information by which to monitor the effectiveness of an operator's management programs.

Regulators have indicated that there would be minimal cost differences in enforcing Option 4, as opposed to Option 3, due to the flexible and scalable nature of the 'considerations' as included under that option.

Rail transport operators

Again, this option carries with it the same benefits and shortfalls as Option 2; however requires operators to undertake some mandatory actions, which may assist with monitoring and effectiveness of the developed management programs.

Operators have also indicated that there would be minimal cost differences in enforcing Option 4, as opposed to Option 3, due to the flexible and scalable nature of the 'considerations' as included under that option.

Rail safety workers

Rail safety workers would most likely realise some benefits under this option, although not as fully as for Option 3, particularly with respect to fatigue (as the 'consideration' elements address a number of rail safety workers' concerns). To the extent that safety outcomes may be less favourable under this option, rail safety workers may be negatively impacted.

Proposal

Option 3 is proposed for the National Law.

The outcome of all options is that a rail transport operator must develop a risk-based drug and alcohol management program and fatigue risk management program; however, Option 3 is considered to provide overarching legislative requirements requiring considerations of

critical risk factors, but is broad enough to enable rail transport operators flexibility in its application.

A disadvantage of both Options 2 and 4 is that there is a greater potential for operators to exploit such a performance measure as *de facto* deregulation, either knowingly, being recalcitrant operators, or unwittingly, due to a lack of understanding of the risk being managed.

With respect to the economic benefits of the proposals, there is no material difference between Option 3 and Option 4. Since Option 4 is more aligned to Option 2 and has the potential to negatively impact on safety, Option 3 is the preferred approach as it provides greater guidance for operators.

For the Regulator, Option 3 should represent some minor cost savings given that the overarching inclusions and considerations contained in the National Law will assist the task of auditing and reviewing a safety management system. Option 3 provides a solid and readily available resource for the Regulator to assess against, which may improve efficiency and present some minor cost savings. In terms of prosecution attempts, Option 3 is considered to be superior.

Rail transport operators should find the task of compliance more straightforward under Option 3. With clear direction as to the legislative requirements, it is expected that there will be less iteration loops required before compliance is achieved for the fatigue and drug and alcohol management programs. It is recognised that, even with the provisions applied in a flexible and scalable manner, there will be an increased administrative cost due to the need for rail transport operators to justify their considerations, even when discounted as a risk factor.

Flexibility and scalability with respect to a safety management system is currently provided for in regulation 10 of the Model Regulations. It states that:

> *"A safety management system must provide for all of the matters listed in schedule 1 that are relevant to the railway operations for which the rail transport operator is accredited, or seeking to be accredited, and must* ***provide a level of detail with respect to each of those matters that is appropriate having regard to the scope, nature and risks to safety of those operations****, and to the operator's duties under s28 [General Duties] of the Act."*

Given that a drug and alcohol management program and a fatigue risk management program are just two elements of an overall safety management system, regulation 10 allows for a flexible application of the elements detailed under Option 3.

The broad guidance provided for in Option 3 should allow small or medium operators, with limited resources available to devote to the development of such programs or with low safety maturity, to improve management of the risks to safety under this option.

The National Law will also retain regulations 16 and 18 of the Model Regulations which detail the matters that must be included in a security management plan and an emergency management plan respectively. Correspondingly, with the implementation of Option 3, the same broad list of inclusions will apply to the management programs for fatigue and drug and alcohols, aligning the approach adopted for each element required for a safety management system in the National Law.

The overall cost associated with either Options 2, 3 or 4 will be largely dependent on how the National Regulator interprets the National Law. With respect to Option 3, if the National Regulator does not allow for flexibility and scalability in accordance with the scope and nature of the railway operations, then the cost to industry to comply could be high. Similarly,

under Options 2 and 4, the cost of compliance could also be high if the Regulator does not allow flexibility and enforces a set of guidelines or other material in the same way. It is recognised from some stakeholder experience that the probability of this occurring may be more likely under Option 3 and hence the cost of this less favourable interpretation has been included. It should be noted that under this interpretation, if the Regulator chooses to administer the law rigidly and to a level not necessarily commensurate with the risk, it is plausible that operators may apply for an exemption (as described in Section 6.4.4, Exemption framework). Therefore, exemption could mitigate the high cost, based on the less favourable interpretation of Option 3.

Assuming a reasonable approach by the Regulator, recognising the 'considerations' and allowing for scalability, Option 3 is considered to produce the most favourable result in terms of risk management.

This proposal is addressed in regulation 31 (Drug and alcohol management program) and regulation 32 (Fatigue risk management program) of the draft National Regulations.

6.5.4 Testing for drug and alcohols

Roles of the Regulator and rail transport operator in testing

Current provision

Under the General Duty provisions of the Model Bill, rail transport operators must ensure (so far as is reasonably practicable) that rail safety workers are not on duty while the relevant concentration of alcohol is present in their blood or while impaired by alcohol or a drug (section 28(2)(c)). Section 65 of the Model Bill requires a rail safety operator to develop and implement a drug and alcohol management program; such programs are subject to regular audits by the regulators. In addition, section 66 of the Model Bill provides for the testing for drugs or alcohol.

Agreement could not be reached for testing arrangements when the Model Bill was developed and the regulations allowed for local variations (intended as an interim arrangement until national agreement was reached); states and territories have developed independent arrangements.

All states and territories have adopted similar provisions to the Model Bill and included in their applying law a requirement for rail transport operators to prepare and implement a drug and alcohol management program. They have also consistently included a power for the Regulator to undertake its own drug and alcohol testing, as arranged with rail transport operators. Regulator testing is assumed to be for the purposes of measuring the effectiveness of an operator's drug and alcohol management program and for prosecution purposes.

Some states and territories explicitly require that a drug and alcohol testing regime be included in a drug and alcohol management program, whilst others remain silent and do not specify any testing obligations on the rail transport operators.

South Australia does not prescribe a testing regime to be included in the drug and alcohol management program, but does include a separate provision that the regulator may require an operator to undertake drug and alcohol testing.

Unlike other states and territories, New South Wales imposes an additional requirement on operators to undertake evidentiary level drug and alcohol testing and submit reports to the regulator in order to support prosecutions.

Problem statement

This is an area where the Model Bill allowed for local variations until national agreement was reached. COAG required that, amongst other things, the issues surrounding drug and alcohol management in the rail sector are resolved and included in the National Law.

Drug and alcohol testing policy is a complex issue. There are many components and factors that need to be considered, such as the policy objective itself and the roles of the rail transport operator and the Regulator in achieving this objective. The impact of drug and alcohol testing on rail safety workers, and managing public expectations, are other important factors that require consideration.

A fundamental consideration in determining whether the rail transport operator testing requirements should be prescribed in the National Law is to consider what the role of the operator is intended to be under the National Law, and the obligations on the operator under its drug and alcohol management program.

Through its drug and alcohol management program, an operator manages the safety risk, supported by an appropriately resourced and quality alcohol and other drug education program. As proposed above, in developing a drug and alcohol management program, an operator is also required to consider other factors, including the identification and proactive management of drug and alcohol misuse through competency based education, self-identification, support for rehabilitation, and confidentiality arrangements as well as a testing program. The objective of the testing regime included in a drug and alcohol management program is to create a safety culture and to deter rail safety workers from being on duty whilst having alcohol or other drugs in their system. The drug and alcohol management program is a method of communicating to rail safety workers what the company policy is regarding drug and alcohols and a means of managing the related risks to safety.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

In drafting the National Law, with the objective of achieving national consistency, an opportunity exists to review the variances in the applying law of each state and territory to develop regulatory requirements that represent a best-practice, co-regulatory approach for the management of drug and alcohol risks to safety in the rail industry.

Options

Option 1

Status quo; allow states and territories to maintain their individual testing arrangements as per existing local variations.

Option 2

Do not prescribe rail transport operator testing requirements in the National Law (a change for New South Wales and South Australia). In addition, do not place an obligation on the rail transport operator to conduct evidentiary level testing (a change for New South Wales only).

Option 3

Prescribe rail transport operator testing requirements, including evidentiary level testing, in the National Law. This would present a change in all states and territories, other than New South Wales.

Impact assessment

Option 1 – Status quo

As the status quo, this option would impose no regulatory impact.

However, it should be noted that maintaining local variations presents potential inefficiency for compliance and enforcement activities of the Regulator, requiring knowledge of the various testing adopted by states and territories, and for any cross-border operations, which will either comply with the most stringent requirements across all operations or maintain separate systems.

This option would not support the key objective of the reform, to support a national system of rail regulation.

Option 2 – Do not prescribe operator testing requirements in the National Law

Safety

The objective of a rail transport operator's testing regime is to manage the risks to safety so far as is reasonably practicable, to create a safety culture within the workplace and to deter rail safety workers from being unfit for duty. This is in keeping with the objectives of the National Law.

Therefore, it is considered that there will be no diminished safety if a rail transport operator does not conduct drug and alcohol testing to an evidentiary standard. The testing conducted by operators contributes to the operators' commitment to safety and provides deterrence for rail safety workers to be on duty when unfit to perform their rail safety work.

There may be the perception that removing the prescribed testing regime is a lessening of the safety standard in states where prescribed testing currently exists. It is acknowledged that this is a risk as there may be greater potential for operators to exploit such a measure as *de facto* deregulation, either knowingly, being recalcitrant operators, or unwittingly, due to a lack of understanding of the risk being managed. The inadvertent consequences may result in lower levels of testing and therefore detection, a higher level of usage with the resultant impact on incidents or accidents. However, this is considered a minor risk as it is not proposed to remove drug and alcohol testing by operators, but rather to create a stronger link between an operator's risk profile and the testing regime that they undertake.

A rail transport operator must determine the most appropriate way to manage the risks to safety that drug and alcohols present for its railway operations. A flexible approach to how this will be achieved by each operator presents the most appropriate methodology to ensure that an operator develops a testing regime that is appropriate to the scope and nature of its railway operations and to achieve the maximum safety benefit.

Safety could be compromised if the role of the operator was broadened from one of risk management to include a prosecutional element, as the focus of its testing regime would be altered.

Regulator

There may be an additional burden imposed on the Regulator, particularly in New South Wales, as it is likely that the Regulator would increase the amount of drug and alcohol testing it undertakes of rail safety workers.

The level of testing for evidentiary purposes will be determined by the Regulator on a case by case basis. Whilst any increase in testing by the Regulator would impose a significant cost, it could be minimised through an effective auditing process to ensure rail transport operators are adequately managing their risks.

The Regulator will still be required to conduct audits of a rail transport operator's drug and alcohol testing regime required as a component of their drug and alcohol management program.

Rail transport operator

There would be no undesirable impacts on operators. This option:

- meets the principles of a co-regulatory and risk management framework
- is in keeping with the intent that rail transport operators have obligations to manage risks so far as is reasonably practicable
- allows the flexibility to manage the drug and alcohol related risks
- provides a scalable solution by not imposing an unreasonable burden on rail transport operators to comply with drug and alcohol testing requirements that are beyond the scope and nature of their railway operations
- distances operators from enforcement activities thereby enhancing employer–employee relationships.

It is also envisaged a cost saving would be afforded to operators in New South Wales relating to confirmatory testing and reporting processes.

Rail safety workers

It is not envisaged that there would be any change in the status quo for rail safety workers as they would still be required to submit to a test whether it is offered by the Regulator or operator. However, a benefit could well be the improvement of the relationship between the worker and employer, which has a flow-on effect of better productivity.

Option 3 – Prescribe operator testing requirements in the National Law

Safety

The inclusion of a prescriptive testing regime for all rail transport operators would not be in keeping with the objectives of the National Law. Rail transport operators are not required to undertake an enforcement role, and placing this responsibility on them is likely to detract from their primary objective of risk management and ensuring safe railway operations so far as is reasonably practicable.

A 'one size fits all' approach to drug and alcohol testing will serve to introduce costs to the industry where corresponding safety benefits may not be realised. This would specifically include requiring an operator with a relatively low risk profile to undertake a testing regime considered too onerous and costly to achieve improved safety outcomes.

Regulator

This would assist the Regulator in its role of enforcement by increasing its resource pool allowing additional evidentiary tests that otherwise would not have occurred. Although this may be a more cost effective option for the Regulator, it does not lend itself to the principles of risk management upon which the National Law is based.

Rail transport operator

This would impose additional costs on operators in undertaking a prescribed number of tests and some, or all, to an evidentiary standard. Additionally, it would remove the flexibility (and possibly the responsibility) from operators to manage risks as the option presents a 'one-size-fits-all' approach.

Furthermore, smaller operators will be unable to adjust to the risk and size of their operations (scalability) by undertaking only sufficient tests to ensure their drug and alcohol management programs are effective.

It is also likely to negatively impact on the relationship between the employer and the employee and undermine the effectiveness of the drug and alcohol management program in promoting the health and safety of rail safety workers.

Rail safety workers

It is not envisaged there will be any adverse impact on workers, as they are required to undertake a test when requested, whether it is required for evidentiary purposes or not, no matter whether it is requested by the Regulator or operator. However, consideration should also be given to employer and employee relationships that may become stressed when the operator conducts tests for evidentiary purposes which may also impact on productivity.

Proposal

Option 2 is proposed for the National Law.

Under this proposal, the National Law does not prescribe the testing requirements for rail transport operators and does not require operators to provide evidentiary test results to the Regulator.

For the majority of rail transport operators Option 2 does not present any additional compliance or administrative burden. Operators would continue with their current drug and alcohol testing regime as described in their drug and alcohol management program, subject to auditing by the Regulator.

Option 2 also presents considerable savings to those rail transport operators currently operating in New South Wales, who are required to undertake tests to an evidentiary standard currently.

This option also provides flexibility and scalability for rail transport operators to assess the cost of conducting drug and alcohol tests against the potential safety benefits that could be realised, and to manage their risks in accordance with the risk profile of their operations.

Types of drug and alcohol tests and procedures for testing by the Regulator

Current provision

The Model Bill is silent as to the type and procedure for drug and alcohol testing.

Permitting local variations in the Model Bill has resulted in various test types and test methods being utilised amongst the states and territories. The legislation of most states and territories makes reference to their local road laws for the purposes of drug and alcohol testing.

Problem statement

The Regulator, as part of its role in enforcement and compliance of the National Law, may conduct drug and alcohol testing for the purposes of measuring the effectiveness of an operator's drug and alcohol management program or to prosecute offences under the law. For prosecution, a drug or alcohol test must be conducted to an evidentiary level if it is to be submitted as evidence in court. In this instance the court must be satisfied that the chain of evidence has preserved the evidence and that it has not been corrupted. This equally applies to the type of equipment, when and how the sample was taken, sample handling procedures and analysis.

Compared with road laws, the need to define specific testing instruments, procedures and methods for analysis of test samples has been negated in rail safety law. New South Wales is the only state to vary from their roadside methodology; while drug testing requirements for roadside testing employ oral fluid (saliva) testing, rail employs urine testing under New South Wales requirements.

In all states and territories, there is a requirement for an initial screening test to be undertaken to identify if an offence is likely to have occurred. A screening test is usually a fast and cost effective method of determining if a rail safety worker has drugs or alcohol in their system.

The problem relates specifically to the consistency/uniformity in the types of tests and the procedures employed to undertake those tests. However, this has not been evidenced as a problem in rail, or road, to date.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo; do not prescribe drug and alcohol tests and procedures undertaken by the Regulator in the National Law thus retaining local variations.

Option 2

Prescribe national drug and alcohol tests and procedures to be undertaken by the Regulator in the National Law.

Impact assessment

Option 1 – Status quo

As the status quo, this option would impose no regulatory impact.

Under this option, the national Regulator would be required to undertake different types of tests and employ different methods of analysis and reporting in each state and territory. This

would also require different training for authorised officers and the development and maintenance of different enforcement guidelines and forms.

However, it is intended that the national Regulator has officers located in each state and territory for the purposes of ensuring compliance with the National Law. As a result, it is unlikely that the same officers would be required to conduct testing in more than one state, meaning there would be little or no impact on the authorised officers themselves.

Option 2 – Prescribe national drug and alcohol tests and procedures to be undertaken by the Regulator in the National Law

Safety

Whilst Option 2 represents a nationally consistent approach and would meet the objectives of the National Law, it is expected that there would be little or no safety benefit in altering current evidentiary test methodology in each state and territory.

The National Regulator conducts drug and alcohol tests to ensure compliance with the National Law and to prosecute, where applicable, for any breach of the National Law. The primary purpose of Regulator testing to an evidentiary level is to deter rail safety workers from being unfit for duty and unable to perform rail safety work and is usually the last resort in securing compliance.

There would be no measurable improvement in safety to justify the costs that would be incurred to establish a national drug and alcohol testing regime for the rail industry (when it has not yet been achieved in road) and the infrastructure that would be required to support the new scheme. Furthermore, a new testing regime would need to be proven through the court process in each state and territory and may have a detrimental impact on safety if the chain of evidence could not be protected and court proceedings undertaken for breaches of the National Law were ultimately dismissed.

Regulator

This is likely to result in a change in current test practices in all states and territories. This presents a cost burden on the Regulator to accredit additional laboratories and a risk that there may be an insufficient number of laboratories capable of meeting the required standards (the same standard) for analysis of test samples across Australia.

Though most states and territories reference road legislation in their rail safety legislation, there may be subtle differences in the manner in which samples are taken, controlled and analysed. There may also be different evidentiary reporting requirements in each state and territory. Harmonising the different roadside testing methodologies and procedures in order to achieve a national testing regime for rail may be difficult. Furthermore, given that police may conduct drug and alcohol testing of rail safety workers in some circumstances (particularly after an incident or accident) it is unreasonable to expect that they would test in a different manner to that which is currently in place for the road environment.

Whilst a national uniform testing regime would be desirable, altering the current testing regime in each state and territory would impose a significant cost for little or no safety benefit.

Rail transport operators

There would be no impact on operators.

Rail safety workers

There would be no impact on workers as the test practices must have the same veracity whether conducted for rail or road.

Proposal

Option 1 is proposed for the National Law.

Drug and alcohol tests and procedures undertaken by the Regulator should not be prescribed in the National Law. It is proposed that states and territories maintain their existing arrangements for drug and alcohol testing.

Whilst national consistency is the objective of the rail safety reform, it is not possible to have application of a single national testing regime in rail when it has not been established in the road environment. The process in the road environment has been tested and proven through the court process over many years. It is a widely accepted methodology and can adequately support prosecutions under rail safety law.

Given that police may conduct testing under the National Law in certain circumstances, it is unreasonable to expect that they would test in a different manner than their current road procedures.

A change to a nationally uniform testing regime for the national Regulator would impose a significant cost burden. Costs would be incurred to ensure that new procedures could be applied in each state and territory, to require police officers to undertake alternate testing from roadside methodologies; in addition to the potential requirement for investment in the infrastructure (laboratories) and appropriately trained resources. It is likely that the safety benefits realised from undertaking this considerable investment would be minimal.

It is intended that any prosecution under the National Law would be conducted by the relevant state or territory in accordance with its local legislation. In this instance, it therefore seems sensible to have local variations.

Definition of a drug for the purposes of drug testing by the Regulator

Current provision

The definition of a drug and the ministerial powers to declare a substance to be a drug in the Model Bill will be retained in the National Law.

In addition to the general definition of a drug and Ministerial declaration provision, some states and territories have defined “drug” by reference to a prescribed list in regulations (usually cannabis, speed and ecstasy) whilst other jurisdictions make reference to other laws such as their local road transport laws, the *Drugs Misuse and Trafficking Act (1985)* or the *Drugs Poisons and Controlled Substances Act (1981)* that contain lists of substances that are deemed to be drugs.

Problem statement

Analysis of all the drugs referenced in current state and territory legislation showed that there were over 700 different drugs listed. Additionally, there was duplication of certain drugs due to different laws being referenced by states and territories in their applying law. There is little or no consistency in how drugs are referenced and for the purposes of defining offences in the National Law; it is preferable that a nationally consistent definition is adopted.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo; allow individual states and territories to maintain their current references to drugs.

Option 2

Include a schedule of drugs for the purposes of the National Law, making reference to the Commonwealth Government's *Poisons Standard 2010*[39] (as amended) for a nationally consistent schedule of drugs.

Impact assessment

Option 1 – Status quo

As the status quo, this option would impose no regulatory impact.

However, it should be noted that maintaining local variations presents potential inefficiency for compliance and enforcement activities of the Regulator, particularly in terms of prosecutions for drug-related breaches. The Regulator would also be required to prove that a substance found in the system of a rail safety worker is a drug for all court proceedings unless the minister has utilised the power to declare the substance in question to be a drug. This would necessitate the attendance of experts at each court hearing at significant cost.

This option would also not support the key objective of the reform: to support a national system of rail regulation.

Option 2 – Include a national drug schedule in the National Law

Safety

Option 2 would provide clarity to the Regulator, duty holders and rail safety workers about what substances are considered drugs under the National Law. A nationally consistent schedule of drugs is likely to improve safety so far as inadvertent breaches could be avoided, particularly in relation to prescription drugs.

Regulator

This would eliminate the requirement for the Regulator to call an expert to prove that a substance is a drug in court proceedings. A certificate of analysis from an approved laboratory naming the substance would be sufficient to satisfy a prosecution if the substance was on the declared list.

The inclusion of the reference to the Commonwealth *Poisons Standard 2010* in the National Law would automatically define all substances in that standard to be a drug. This would present a significant cost saving in the event of a prosecution, as experts would not be

[39] Available from http://www.comlaw.gov.au/Details/F2010L02386.

required to give evidence that a substance identified in a positive drug test analysis is in fact a drug.

Rail transport operators

There is a negligible impact on the rail transport operator as, based on the previous proposals that operators do not undertake evidentiary testing, operators are not involved in enforcement activities.

Rail safety workers

Rail safety workers will benefit from the provision of clarity about which substances are drugs for the purposes of the National Law, including prescription and over the counter medications that may impact on their capacity to perform rail safety work.

The inclusion of a declared list of drugs would also inform and educate rail safety workers about what is and is not considered to be a drug in the context of the National Law. There are a number of prescription and over the counter medications that have the ability to impair a person. A reference to a standard list of drugs in the National Law would provide a reasonable level of certainty for a rail safety worker to determine what effect, if any, a drug they are prescribed or purchase over the counter may have on their ability to perform rail safety work.

Proposal

Option 2 is proposed for the National Law.

A nationally consistent definition of a drug is required to ensure uniformity in the event of prosecutions of drug related offences. Option 2 would also remove the possibility of inconsistencies and duplication of substances deemed to be drugs.

It is considered that the overall cost impact of all options is low given the infrequency of prosecutions for drug-related breaches of rail safety legislation. To date, there have not been any drug-related prosecutions. However, in the event that a drug-related prosecution were to be undertaken by the Regulator, reference to a national schedule of drugs in the National Law would present a cost benefit by removing the requirement for the prosecution to prove a substance to be a drug.

Requirements for a 'testing officer' or other 'authorised person' to compel and coordinate testing of rail safety workers

Current provision

The Model Bill does not define a 'testing officer' or other 'authorised person' for the purposes of compelling and coordinating drug and alcohol testing of rail safety workers.

Problem statement

It may be necessary to define an 'authorised person' with the power to compel a rail safety worker to undergo a drug and alcohol test, and to coordinate and control the chain of evidence in order to give effect to the offences and penalties contained in the National Law. If the Regulator does not have persons authorised to compel and coordinate drug and alcohol testing, it will be unable to prosecute any party for a breach of the National Law.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo; remain silent in the National Law and do not define a 'testing officer' or other 'authorised person'.

Option 2

Include a definition of a 'testing officer' or other 'authorised person' in the National Law identifying the categories of persons to be included, appropriate certificates and functions.

Impact assessment

Option 1 – Status quo

As the status quo, this option would impose no regulatory impact.

However, it should be noted that maintaining local variations for this matter may be incongruous with other proposals around testing for drugs or alcohol. Without defining an 'authorised person', the Regulator may be unable to prosecute for breach of drug and alcohol offences contained in the draft National Law.

Option 2 – Include a definition of a 'testing officer' in the National Law

Safety

Defining a testing officer or other authorised person in the National Law would offer some safety benefits and clarity, particularly in relation to who is lawfully able to conduct drug and alcohol testing of rail safety workers.

The defined person would be adequately trained to follow procedures established by the National Regulator that would protect the health and wellbeing of all rail safety workers who undergo testing. The testing officer or other authorised person would also be responsible to protect the chain of evidence for all test samples taken and ensure that court proceedings are not jeopardised by insufficient evidence.

Defining a testing officer or other authorised person in the National Law ensures a robust process for prosecution of breaches of the National Law and maximises the effects of the deterrence objective of the Regulator drug and alcohol testing regime.

Regulator

It is envisaged there would be significant cost associated with the requirement for the Regulator to have specific and adequately trained resources to enable them to successfully prosecute for breaches of the drug and alcohol offences in the National Law. It would require upskilling existing staff to undertake the duties of an authorised person or additional staff to meet the testing requirements for the Regulator.

Appropriately trained resources to protect the chain of evidence, from the time the test sample is taken to the analysis of results, are imperative to avoid disputes over the validity and accuracy of the evidence presented in court proceedings.

Rail transport operators

The impact on operators is low. As a result of a previous proposal in this section, rail transport operators would not require the Regulator to authorise resources employed to give effect to the testing regime specified in their drug and alcohol management program.

Rail safety workers

This option may serve to assure rail safety workers that the testing process and sample analysis has been controlled, and that the results are accurate and reliable.

Proposal

Option 2 is proposed for the National Law.

It is necessary to define an authorised person with the power to compel a rail safety worker to undergo a drug and alcohol test, and to coordinate and control the chain of evidence, in order to give effect to the offences and penalties contained in the National Law. It is considered to be the responsibility of the Regulator to have appropriate resources to ensure a rail safety worker is not erroneously charged with a breach of the National Law, or charged with an offence without sufficient evidence to substantiate such charges.

Drug and alcohol offences

Current provision

The Model Bill contains an offence if a rail transport operator fails to prepare and implement a drug and alcohol management program.

As a result of the local variations provided for in the Model Law in relation to drug and alcohol testing, there are no offences for rail safety workers in relation to drug and alcohols.

The Model Bill instead relies on the General Safety Duty provisions requiring a rail safety worker to take reasonable care not to place themselves or others at risk. Workers are also not permitted to wilfully or recklessly place the safety of others at risk.

Problem statement

Although the Model Law does not prescribe specific offences, all states and territories include offences.

For example, all states and territories apply an offence for breaching a prescribed concentration of alcohol (PCA). All jurisdictions specify a PCA of between 0.00 and 0.02 grams of alcohol in 100ml of breath or blood. New South Wales, South Australia and Queensland also have in their existing rail safety legislation an offence for being under the influence of (or impaired by) alcohol. All states and territories have an offence relating to impairment by a drug, albeit with some subtle differences.

There are various other offences used to support the primary offences of exceeding a PCA or impairment and those relate to refusals, interference, tampering, etc.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

In achieving national consistency, an opportunity exists to review the range of state and territory approaches with the aim to develop regulatory requirements that represent best practice and produce improved management of drug and alcohol use.

Options

Option 1

Status quo; remain silent in the National Law and allow local variations for drug and alcohol offences.

Option 2

Include the following drug and alcohol offences in the National Law:

- alcohol:
    - prescribed concentration of alcohol (PCA) > 0.02 grams/100ml of blood.
- drugs:
    - an 'offence of presence of drug' where any individual would be deemed impaired if a specific nominated substance is identified in their sample via appropriate evidentiary forensic analysis. These nominated substances are:
        - Cannabis THC (delta-9-tetrahydrocannabinol)
        - 'speed' (methyl amphetamine)
        - Ecstasy (3,4-Methylenedioxy-N-Methylamphetamine (MDMA)).
    - an "offence by indicia of being impaired by a drug" where observations would have to be collected as to the state of the individual, and with consideration of their ability to work safely. In addition, an appropriate evidentiary forensic analysis of their supplied sample and interpretation of this result (for example, considering therapeutic ranges of specific drugs) would be needed to support the indicia and enable a conclusion to be drawn that they were impaired by a defined drug.
- other:
    - an offence for a rail safety worker, without reasonable excuse, to refuse to undergo a drug and alcohol test
    - an offence for a person to interfere or tamper with test samples
    - an offence for a person to destroy test samples
    - an offence for failure to comply with a 'reasonable direction' from the authorised person described previously.

The above offences mirror those currently existing locally in each state and territory, albeit removing variances due to differing testing regimes.

Impact assessment

Option 1 – Status quo

As the status quo, this option would impose no regulatory impact.

However, it should be noted that maintaining local variations presents potential inefficiency for compliance and enforcement activities of the Regulator. Given the varied nature of offences in each state and territory, needing to determine whether an offence has been committed in a given state or territory results in productivity costs.

This option would also not support the key objective of the reform: to support a national system of rail regulation.

Option 2 – Include drug and alcohol offences in the National Law

Safety

Safety benefits could be realised with a national approach to drug and alcohol offences in the National Law. Prescribing consistent offences across borders will eliminate confusion for rail safety workers and minimise the potential for inadvertent breaches of the National Law. It is likely that alignment of state and territory offences in relation to drug and alcohols would provide clarity to rail safety workers and ensure that they are treated equally under the National Law regardless of the state or territory in which they work.

Regulator

It is envisaged that benefits would be realised from having a nationally consistent approach to offences, with the inefficiencies presented under Option 1 eliminated. It is also considered that, by removing local variations, the cost of administering the law, for example for training or guidelines, should be reduced.

Rail transport operators

As operators are not to be involved with enforcement activities, there is a negligible impact for operators under this option.

Rail safety workers

There would be no adverse impact on rail safety workers, as the offences proposed currently exist in local laws, although varying from state to state.

Rail safety workers would most likely benefit from a nationally consistent approach. Retaining local variations for offences in the National Law, does not create a uniform and consistent approach to drug and alcohol related breaches, resulting in differential treatment of rail safety workers in each state or territory. This would be an unfair practice for rail safety workers and create confusion for those working across borders. As such, cross-border consistency will serve to avoid confusion and unintended breaches.

Proposal

Option 2 is proposed for the National Law.

The cost to prosecute is assumed to be unchanged regardless of the specific offences contained in the National Law. Whilst testing methodology and procedures may be subject to local variations, as previously proposed, it is desirable to have the same overarching offences applicable to all rail safety workers nationally.

National consistency for drug and alcohol offences will ensure efficiency for the Regulator and consistent application of obligations and requirements of all rail safety workers.

Offences in the National Law have the primacy of deterrence; together with an appropriate safety management plan, this should reduce of the impacts of drug and alcohol use in the workplace.

Economic assessment of drug and alcohol testing

The cost impact of creating a national schedule for the definition of a drug and the inclusion of drug and alcohol offences in the National Law is negligible. The total number of successful prosecutions for a drug or alcohol breach since the implementation of the Model Bill is 21. This equates to approximately 3 to 4 prosecutions per year. It is expected that prosecutions will remain infrequent when the National Law is applied.

Additionally, retaining the current regulator test methods and procedures in each state and territory presents no change and therefore no cost impact.

The major cost impact associated with the proposals outlined in this section are related to the prescription of a testing regime for rail transport operators in the National Law and mandating a requirement for operators to conduct drug and alcohol tests to an evidentiary standard.

The cost stems from the need for operators to undertake confirmatory drug and alcohol tests, reporting requirements for evidentiary testing to support potential prosecutions for breaches of the National Law and the need to employ an authorised person to secure the chain of evidence.

To determine the economic impacts of the proposals, given the areas that are most likely to impose costs, three aggregated options may be considered:

Option 1: Status quo (local variations)

There would be no economic impact of retaining the status quo, that is, local variations with respect to drug and alcohol testing.

Option 2: Do not prescribe a rail transport operator testing regime in the National Law and do not mandate evidentiary drug and alcohol testing by operators

The net benefit of this option is between $6.90 and $8.41 million. Refer Appendix D: Economic cost benefit analysis (section 3.11) for detailed analysis.

It should be noted that tourist and heritage operators are currently exempt from complying with drug and alcohol testing requirements in a number of states and territories, resulting in a relatively minor cost to comply with this option. It is expected however, that tourist and heritage operators would continue to be provided with exemptions, reducing the cost impact of drug and alcohol testing on the sector.

Option 3: Prescribe a rail transport operator testing regime in the National Law and mandate evidentiary drug and alcohol testing by operators

The net cost of this option is between $12.79 and $20.72 million. Refer Appendix D: Economic cost benefit analysis (section 3.11) for detailed analysis.

Summary of drug and alcohol testing and offence proposals

Option 2 is proposed for the National Law.

It is therefore proposed that the National Law:

- does not prescribe rail transport operator testing requirements and places no obligation on rail transport operators to conduct evidentiary level testing
- does not prescribe drug and alcohol tests and procedures undertaken by the Regulator in the National Law, and current local variations are to be retained

- references the Commonwealth Government's *Poisons Standard 2010* for a nationally consistent schedule of drugs
- includes the definition as described for an 'authorised person' for the purposes of co-ordinating the Regulator drug and alcohol testing regime to an evidentiary standard
- includes the following drug and alcohol offences in the National Law:
    - prescribed concentration of alcohol (PCA) > 0.02 grams / 100ml
    - an "offence of presence of drug" where any individual would be deemed as being impaired if a specific nominated substance is identified in their sample via appropriate evidentiary forensic analysis. These nominated substances are:
        - Cannabis THC (delta-9-tetrahydrocannabinol)
        - 'speed' (methyl amphetamine)
        - Ecstasy (3,4-Methylenedioxy-N-Methylamphetamine (MDMA)).
    - an 'offence by indicia of being impaired by a drug' where observations would have to be collected as to the state of the individual, and with consideration of their ability to work safely
        - In addition, an appropriate evidentiary forensic analysis of their supplied sample and interpretation of this result (for example, considering therapeutic ranges of specific drugs) would be needed to support the indicia and enable a conclusion to be drawn that they were impaired by a defined drug
    - an offence for a rail safety worker, without reasonable excuse, to refuse to undergo a drug and alcohol test
    - an offence for a person to interfere or tamper with test samples
    - an offence for a person to destroy test samples
    - an offence for failure to comply with a 'reasonable direction' from the authorised person.

The above proposals are in accordance with the objectives of the National Reform, supporting national consistency, streamlining regulatory arrangements and reducing the compliance burden for business.

The National Law is based on the principles of risk management by rail transport operators, the proposals outlined in this section are in keeping with the risk management obligations of operators, in addition to the Regulator assuming a role of ensuring compliance with the National Law. Option 3, however, imposes significant costs on the rail industry and is not aligned with the underlying principles of the National Law.

6.5.5 Fatigue risk management – hours of work and rest

Current provision

Section 67 of the Model Bill requires rail transport operators to prepare and implement a fatigue risk management program for rail safety workers as a mandatory element of the safety management system.

There is no explicit section in the Model Law for the provision of legislated maximum hours of work or minimum periods of rest for rail safety workers (often referred to as a 'safety net'). The absence of the specific requirements for a fatigue risk management program in the Model Law has seen New South Wales vary from the national approach.

While the Model Law does not provide outer limits for hours of work for rail safety workers, by empowering the Regulator to work with operators to develop the detail in their safety management systems, it allows for specific detail to be required of particular operations where the risk profile suggests this is appropriate.

By contrast, New South Wales fatigue risk management provisions, set out mainly in Schedule 2 to the *Rail Safety Act 2008* (NSW), supplement the risk-based approach with prescriptive outer limits on maximum hours of work and rest for train drivers.

Where there are no legislated hours of work, the approach to working time restrictions is through the normal risk management process in all states and territories.

The New South Wales approach

In New South Wales a different approach has been adopted in Schedule 2 of the *Rail Safety Act 2008* (New South Wales) following some major incidents and privatisation of the rail industry, which was resulting in excessive duty times. The Act overlays the fatigue risk management provisions with maximum working hours and minimum rest periods for rail safety workers who drive trains.

The key requirements (which do not apply in the event of an accident, emergency or other unforeseeable circumstance that makes it necessary to contravene the schedule to avoid a serious dislocation of train services if there is no reasonably practicable alternative) are:

2 Working hours for rail safety workers driving freight trains

> *The following conditions of work apply to rail safety workers who drive freight trains:*
>
> *(a) In the case of a 2 person operation (where the second person is a qualified train driver, including a qualified train driver who is learning the route or undergoing an assessment), the maximum shift length to be worked is 12 hours.*
>
> *(b) In the case of any other 2 person operation, the maximum shift length to be worked is 11 hours.*
>
> *(c) In the case of a one person operation, the maximum shift length to be worked is 9 hours.*
>
> *(d) In the case of a one person operation, there is to be a minimum break of not less than 30 minutes taken at some time between the third and fifth hour of each shift.*
>
> *(e) There is to be a break of at least 11 continuous hours between each shift worked by a rail safety worker where the worker ends a shift at the home depot.*
>
> *(f) There is to be a break of at least 7 continuous hours between each shift worked by a rail safety worker where the worker ends a shift away from the home depot and the break is taken away from the home depot.*

(g) A maximum number of 12 shifts is to be worked in any 14-day period but a maximum number of 6 shifts of 12 hours is to be worked in any 14-day period.

3 Working hours for rail safety workers driving single manning passenger trains

(1) The following conditions of work apply to rail safety workers who drive passenger trains in a one person operation:

(a) The maximum shift length to be worked is 10 hours for the driver of an interurban or long distance passenger train or 9 hours for the driver of a suburban train.

(b) There is to be a break of at least 11 continuous hours between each shift worked by a rail safety worker where the worker ends a shift at the home depot.

(c) There is to be a break of at least 7 continuous hours between each shift worked by a rail safety worker where the worker ends a shift away from the home depot and the break is taken away from the home depot.

(d) A maximum number of 12 shifts is to be worked in any 14-day period.

(2) The conditions of work set out in clause 2 (a), (b) and (e)–(g) apply to rail safety workers who drive passenger trains in a 2 person operation.

4 Train drivers who are transported to home depot or rest place

(1) This clause applies to rail safety workers who drive trains and who travel to a home depot, or to a place provided for rest between shifts (a barracks), as passengers in a train or other vehicle provided by the rail transport operator.

(2) The following rules apply in relation to any such worker:

(a) the period between signing on for a shift and reaching the home depot or barracks must not exceed 16 hours,

(b) for the purposes of applying the requirements of clauses 2 and 3 in relation to length and number of shifts (and despite clause 1), time spent travelling to the home depot or barracks is not taken to be part of the shift worked,

(c) for the purposes of applying the requirements of clauses 2 and 3 in relation to breaks between shifts, the break between shifts commences when the worker reaches the home depot or barracks,

(d) any such worker must not undertake any rail safety work or drive any motor vehicle after commencing to travel to the home depot or barracks and before signing off at the home depot or barracks.

(3) Despite subclause (2), any such worker is for any other purpose taken to have been rostered on for a shift ending when the worker signs off at the home depot or the barracks.

An operator can apply for an exemption from all or part of the requirements in Schedule 2 by applying to the regulator pursuant to regulation 14 of the *Rail Safety (General) Regulations 2008* (New South Wales). Regulation 14 sets a number of conditions that must be satisfied

so that the regulator can be assured, in lieu of compliance with the prescriptive alternative, that an operator has thoroughly identified fatigue-related risks, implemented standards that effectively replace those in Schedule 2, has an active monitoring system that is also audited, and met other relevant requirements.

Problem statement

COAG required that, amongst other things, the issues surrounding fatigue risk management in the rail sector are resolved and included in the National Law.

Hours of service restrictions are currently used in New South Wales and a similar system being considered by the Queensland Government. Whilst the general trend in international rail settings and in other transport industries is to move away from traditional prescriptive working time restrictions to a more risk-based approach, hours of service restrictions still play a pivotal role in many industries, including heavy vehicle regulation in Australia. Consideration of such restrictions in the National Law is therefore regarded as necessary.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

In drafting the National Law with the objective of achieving national consistency, an opportunity exists to review the variances in the applying law of each state and territory to develop regulatory requirements that represent a best practice, co-regulatory approach for the management of fatigue risks to safety in the rail industry.

Options

Option 1

Status quo; this option would allow individual states and territories to continue their differing approaches to this matter.

Option 2

No prescribed hours of work/rest are included in the National Law.

This would represent a change to the law as it applies in New South Wales only, with removal of existing legislated hours of work and rest for train drivers.

Option 3

Maximum hours of work/rest are prescribed in the National Law as per the existing New South Wales schedule.

Prescribing maximum hours of work for train drivers would represent a change in all states and territories, other than New South Wales. Any existing operations in those states and territories that regularly extend beyond the prescribed requirements will either need to conform or apply for an exemption (as is provided for by regulation 14 of the New South Wales *Rail Safety (General) Regulations 2008*).

Impact assessment

Option 1 – Status quo

As the status quo, this option would impose no regulatory impact.

However, maintaining local variations for hours of work presents potential inefficiency for compliance and enforcement activities of the Regulator and for any cross-border operations, which will either comply with the most stringent requirements or maintain separate rostering systems.

This option would not support the key objective of the reform, to support a national system of rail regulation.

Option 2 – No prescribed hours of work/rest are included in the National Law

Economic assessment

The net benefit of this option is estimated at between $1.68 and $2.01 million. Refer Appendix D: Economic cost benefit analysis (section 3.12) for detailed analysis.

Safety

The removal of the 'safety net' from New South Wales may result in changes to drivers' hours. Such changes could include a gradual drift towards an increase in driver-only operations, shorter break times and potentially longer driving times. The impacts of such changes in practices may include an increase in fatigue-related errors, incidents or accidents. The risks of these changes, however, should be managed through the established risk management processes in the absence of legislated hours of work or rest.

Under the proposal for the fatigue risk management program, with critical factors considered, a risk management approach should theoretically be sufficient to manage the risks to safety and should allow rail transport operators to effectively manage hours of work under the oversight of the National Regulator.

As such, there is insufficient evidence or research to suggest that removal of the 'safety net' from New South Wales will adversely affect safety.

Notwithstanding the above, the maturity of certain operators or segments of the industry may be insufficient to produce a safety outcome and, for such cases, other tools such as guidelines or codes of practice could be employed to assist operators without specialist expertise in the management of fatigue. Regulatory oversight would be required, as it is for all other classes of rail safety workers in New South Wales and for all classes in other states and territories currently, to ensure that industry sufficiently manages train driver hours and does not allow duty times and safety to be adversely impacted by commercial pressures.

The potential advantage of this option is that New South Wales operators can adapt the limitations to suit their operational requirements, potentially diverting attention away from compliance strategies towards risk management, and thereby possibly improving safety.

Regulator

There is unlikely to be a significant impact on regulators under this proposal.

Removal of the 'safety net' from New South Wales may require a minor increase in regulatory resources to audit and review driver hours under a full risk management approach; this impact would not be significant, as, despite the legislated restriction, an operator's risk assessments currently need to be reviewed for not only drivers, but all rail safety workers.

In contrast, there may be a minor saving in not being required to assess exemption applications for rail transport operators seeking to operate outside the prescribed restrictions.

Rolling stock operators

The removal of the 'safety net' from New South Wales may result in changes to train driver hours. Such changes could include an increase in driver-only operations, shorter break times and potentially longer driving times.

Where the New South Wales 'safety net' may have been overly restrictive, perhaps limiting hours of work without providing a corresponding safety benefit, the above-mentioned changes to driving hours and conditions could provide efficiency benefits to operators. While an exemption provision existed under the New South Wales schedule, given that the operator could demonstrate an equivalent level of safety, the cost of the process and difficulty in gaining the exemption may have served as a deterrent to doing so.

Rail infrastructure managers

There would be no impact to rail infrastructure managers under this proposal as all states and territories allow employers to determine hours of work for rail safety workers other than drivers via a risk-based approach under the fatigue risk management program.

Rail safety workers

The removal of the 'safety net' from New South Wales may result in changes to train driver hours of work over time, as mentioned previously. This may be detrimental for those rail safety workers if safe duty time arrangements are exceeded. Train drivers who have certainty under the New South Wales schedule as to maximum duty times may be subject to more shift variability over the longer term.

In contrast, some train drivers would potentially enjoy some benefits under this option, being afforded greater flexibility in their working arrangements to account for social or family needs.

Option 3 – Maximum hours of work/rest are prescribed in the National Law as per existing New South Wales schedule

Economic assessment

The overall net cost (taking into account the possible exemptions that may be granted) of this option is estimated to be between $369.83 and $613.43 million. Refer Appendix D: Economic cost benefit analysis (section 3.12) for detailed analysis.

Safety

Application of the New South Wales restrictions on train driver hours nationally could act as a 'safety net' to 'catch' extreme rostering situations, allowing risk management to occur within legislated boundaries. This situation may be beneficial where a rail operator's safety culture maturity is low and the operator's commitment to safety is questionable, or where a well-meaning operator's approach to fatigue risk management fails to prevent undesirable hours of work.

Legislating hours of work and rest also creates an enduring barrier against future 'practical drift' towards harsher duty hours, in response to commercial or other pressures and thus may safeguard against excessive fatigue.

However, the proposed framework may not accord with industry best practice or support continuous improvement. This is because operators will not be driven to develop better approaches, focussing on compliance rather than innovation. In addition, amending legislation can be time consuming, and technological advancements, such as vigilance control systems and automatic train protection, and other factors may make the schedule

obsolete over time or more restrictive than necessary (in turn precipitating a high number of exemptions or requiring 'class exemptions to the schedule via a regulation-making process).

There is a risk that prescribed hours may shift focus away from the management of fatigue, under the assumption that compliance with the prescribed limitations is sufficient.[40] Their usage may also shift from guidance to reduce excessive fatigue towards a rostering target, thereby inadvertently increasing fatigue.[41]

Regulator

Application of the New South Wales 'safety net' nationally may ease the regulatory task in monitoring and evaluating operators' proposed train driver hours. The regulator would need only to enforce a single set of prescribed hours, rather than having the resources and expertise to know, and then evaluate, different sets of hours for each operator.

The primary cost area of this proposal for the Regulator is in the need to assess exemption applications in the event that the prescribed hours may be too restrictive for some operators. Over the past six years of such restrictions being in place in New South Wales only three applications have been submitted. It is foreseeable that under a national scheme with differing operating environments, the number of applications would increase, particularly initially. Whilst ongoing compliance and enforcement work would most likely be unchanged under this option after granting an exemption, there may be a possible cost in variations of exemptions.

Over time, with technological advancements, the schedule may become overly restrictive, precipitating a high number of exemptions, which will impose a burden on the Regulator.

Rolling stock operators

The New South Wales driver restrictions could be used by industry to guide and limit rostering practices, providing unambiguous limitations that are easy for operators and workers to understand. This approach may benefit smaller or under-resourced operators who do not have the internal expertise or funding to explore more flexible options. However, the proposed hours may not support continuous improvement, because operators will not be driven to develop better approaches and may be seen as rostering targets as opposed to outer limits.

The major risk of such restrictions is that they may be excessively limiting, impacting significantly on organisational efficiency and productivity. Operators, particularly in the mining sector and more remote areas, have indicated that the restrictions on driver-only operations may impact significantly, requiring additional driver resources in order to comply. Even some of the more seemingly innocent limitations, such as the requirement for a 30-minute break in some circumstances, have raised significant concern and may require the employment of additional drivers for some operators.

Operators, that may be facing significant impacts, may be eligible to apply for an exemption from the prescribed requirements as per regulation 14 of the *Rail Safety (General) Regulations 2008* (New South Wales). This process requires the operator to satisfy the

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[40] Stewart, S., Holmes, A., Jackons, P., & Abboud, R. (2006). An integrated system for managing fatigue risk within a low cost carrier. *Proceedings of the 59th Annual International Air Safety Seminar (IASS)*, Paris, France. Available from: http://www.faidsafe.com/news/easyJet-paper.pdf

[41] Stewart, S., Holmes, A., Jackons, P., & Abboud, R. (2006). An integrated system for managing fatigue risk within a low cost carrier. *Proceedings of the 59th Annual International Air Safety Seminar (IASS)*, Paris, France. Available from: http://www.faidsafe.com/news/easyJet-paper.pdf

regulator via a risk-based process that sufficient controls have been implemented which effectively replace those in Schedule 2. This includes the evidence (scientific justification) to support the alternative provisions proposed in lieu of one or more of the limits. This places the onus on the operator to demonstrate safety, and the regulator assesses the risk management approach. Some operators may require additional resources or expertise in the form of consultancy in order to put forward a robust application.

Rail infrastructure managers

There would be no impact to rail infrastructure managers under this proposal as all states and territories allow employers to determine hours of work for rail safety workers, other than drivers, via a risk-based approach under the fatigue risk management program.

Rail safety workers

The application of the New South Wales 'safety net' will impact train drivers nationally, restricting hours of work for many drivers. Benefits may be realised where duty times are limited, resulting in shorter shifts with longer breaks. Rail safety workers who drive trains will also have greater certainty about their duty time limitations.

However, this option removes flexibility for affected rail safety workers, potentially being limited in their hours of work without a corresponding safety benefit. Rail safety workers often value flexibility for reasons other than safety, to account for social or family commitments.

Proposal

Option 2 is proposed for the National Law, reflecting a nationally consistent approach that is considered preferable to Option 3.

The limitations proposed in Option 3 may not reflect current best practice in fatigue risk management via prescribed hours, potentially providing a regulatory framework that is more stringent than necessary to achieve the desired policy outcome. It is also considered inappropriate to include hours of work boundaries in legislation, as such requirements may date and are onerous to amend.

The rail industry is diverse and fatigue-related issues differ. The nature, levels and types of risks can vary between services – urban passenger, intercity passenger or freight, interstate freight, and tourist and heritage – and between the different categories of rail worker. As Jones et al note, "In a working environment where many people control the safety of a train, it is hard to see why some employees are afforded safety protection by the law, but not others."[42] It is therefore questionable as to why train drivers should be selected for differential treatment as provided by Option 3.

Any employees involved in rail safety work can be affected by fatigue, although the potential consequences – from personal injury to a major accident – will vary according to the work being performed. In considering which rail safety workers to cover, a risk-based approach should be adopted, with risk calculated in terms of the likelihood of occurrence and consequences of a negative outcome. This is provided for under Option 2, with duty time limitations being defined through a risk-based approach under the Fatigue Risk Management Program.

[42] Jones, C.B., Dorrian, J., Rajaratnam, S.M.W., & Dawson, D. (2005). Working hours regulations and fatigue in transportation: A comparative analysis. *Safety Science, 43*: 225-252.

An Expert Panel was established and has proposed a risk-based methodology towards defining hours of service restrictions for rail safety workers. This framework will supplement Option 2, assuring that the already established risk-based approach can operate within suitable boundaries. It is considered that this hybrid approach is the most appropriate medium-term strategy for the rail industry, as the level of safety maturity with respect to fatigue appears to be variable.

The framework will be fully developed by November 2011 and will be the subject of a separate regulatory impact statement.

6.5.6 Assessment of competence

Current provision

The Model Bill imposes a responsibility on rail transport operators to ensure that rail safety workers are competent to carry out work done in the course of their operations. It requires that operators must assess competence by reference to:

- any applicable qualifications and units of competence recognised under the Australian Quality Training Framework (AQTF), or if none apply
- any applicable prescribed provisions of the Model Regulations, and
- the knowledge and skills of the rail safety worker.

Problem statement

The Australian Quality Training Framework is the nationally recognised quality assurance framework for the delivery of training. Reference to the framework was intended to encourage operators to develop rail safety workers' skills to a transportable and nationally recognised standard. In practice, this would mean training rail safety workers to a formal curriculum delivered by (Australian Quality Training Framework accredited) registered training organisations, rather than 'in-house' training developed by unaccredited persons.

A review of the Model Bill provision revealed a lack of clarity in precisely what standard it held rail transport operators to, in assessing rail safety worker competence. This was due to ambiguity in the term "by reference to…the [Australian Quality Training Framework]", which could be interpreted as a requirement merely to use the framework as a benchmark against which to assess competence, or more strictly as requiring formal assessment under it (that is, to enrol rail safety workers in Australian Quality Training Framework sanctioned courses).

Additionally, the Australian Quality Training Framework refers to the framework under which training is delivered, rather than the competency units/standards themselves, which fall under the Australian Qualifications Framework (AQF). Although the two frameworks work hand-in-hand, reference in the Model Bill exclusively to the Australian Quality Training Framework also caused a degree of confusion.

A broader issue with the Model Bill provision is concern by some stakeholders about whether rail transport operators should be required to assess rail safety worker competence under the Australian Qualifications Framework/Australian Quality Training Framework, or whether they should be permitted to develop a competency assessment strategy free of any prescriptive constraints. As this would constitute revisiting a policy agreed in the process of developing the Model Bill, this issue was considered to be beyond the scope of developing a draft National Law.

Operators, particularly small or remote operators, have raised concerns with the explicit requirements to assess competence against the Australian Qualifications Framework/Australian Quality Training Framework, due to cost and access to registered training organisations (which must deliver training modules for recognition under the Australian Qualifications Framework).

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Retain the status quo, adopting the Model Bill provision into the National Law unchanged.

Option 2

Amend the Model Bill provision to clarify that rail safety worker competence must be assessed in accordance with applicable qualifications or units of competence under the Australian Qualifications Framework. Include a provision to allow, if it is not reasonably practicable for a rail transport operator to assess competence in accordance with the Australian Qualifications Framework, that they may assess competence by other means (i.e. other applicable qualifications and sufficient knowledge and skills).

Other requirements of the Model Bill provision would remain unchanged.

Impact assessment

Option 1 – Status quo

There would be no impact of retaining the status quo, although uncertainty over how the existing provision should be interpreted would continue.

Option 2 – Amend provision for clarity in the use of the AQF framework

This option would remove the uncertainty over how the Model Bill provision is interpreted and better ensure that the policy intent was supported by the provision in law. Referencing the Australian Qualifications Framework instead of the Australian Quality Training Framework, would better support the existing policy objective of requiring rail transport operators to assess competence in accordance with Australian Qualifications Framework sanctioned qualifications and units of competence.

Other than clarifying the policy intent of assessing rail safety worker competence, there would be no measurable impact of this option. In practice, rail transport operators and most safety regulators have interpreted it this way.

Proposal

Option 2 is proposed, as it better supports the policy objective of assessing rail safety worker competence and does not impose any additional burden on any parties.

The proposal is addressed in section 118 (Assessment of competence) of the draft National Law.

6.5.7 Train communication systems

Current provision

There is no explicit requirement in the Model Law for rail transport operators to fit and utilise train communication systems. However, it is necessary to satisfy the General Safety Duties provisions of Part 4, Division 1 and the Safety Management provisions of Part 4, Division 4 of the Model Bill.

Problem statement

Effective communication between train drivers and relevant network control officers is an important element of coordinating the safe movement of rolling stock on a rail network. Although arguably implicit in general requirements of the Model Bill for rail transport operators to manage risks to safety, rail regulators have reported instances where insufficient means of communication have been identified.

By definition, properly functioning communication systems must be interoperable. While rolling stock operators are primarily responsible for communication equipment fitted to trains and rail infrastructure managers for the communication equipment of network controllers, they are jointly responsible for their interoperability.

Effective means of communication is imperative during emergencies, when information must be able to be clearly communicated and relayed across a rail network without any undue delay.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. The matter of train communications would continue to be managed through compliance with the General Safety Duties, that is, without being addressed by any specific provisions in law.

Option 2

To prescribe requirements for train communication systems that, so far as is reasonably practicable, support:

- communication between train drivers and relevant network control officers
- the transmitting of emergency communications from network control centres to all trains on the network.

It is proposed that rail infrastructure managers and rolling stock operators be made mutually responsible for complying with these requirements.

It is further intended that a review of train communication systems will be undertaken, with a view to developing mandatory standards for inclusion in the National Law, that is, with more detail than the general standards proposed here. This review and any associated proposed

amendments to the National Law will be progressed after the current proposal for National Law is settled. They do not form part of this proposal.

Option 3

To develop and mandate a performance standard for train communication systems, to support similar objectives to Option 2, that is:

- communication between train drivers and relevant network control officers
- the transmitting of emergency communications from network control centres to all trains on the network.

Such a standard has not yet been developed.

Impact assessment

Option 1 – Status quo

There would be no impact of maintaining the status quo. In practice, rail transport operators and the Regulator would interpret what standard of train communications is necessary to support compliance with the Rail Safety Duties.

Option 2 – Prescribe requirements for train communications systems

Economic assessment

On the understanding that existing communication systems would comply with the proposal, there is no measurable cost impact.

Safety

If the proposal would better clarify the requirement for effective and interoperable train communication systems, a safety improvement may be expected. Rail transport operators advise that there is already broad compliance with the proposal. Therefore, for most operators, there may be no impact on safety.

Regulators

If the proposal would better clarify the requirement for effective and interoperable train communication systems, it may reduce the need for the Regulator to allocate resources to achieving that objective. Under existing arrangements, resources may be needed to review operators' communication systems, issue advice for how they may need to be improved and take other associated measures, for example issuing improvement notices. However, due to reported broad compliance with the proposal, the impact on the Regulator is assessed as minor.

Rail transport operators

Different views were expressed by rail transport operators in assessing the impact of this proposal. It is likely that those differences could be attributed mostly to variations in how the proposal was interpreted; in particular the qualification of so far as is reasonably practicable.

Rail transport operators reported that the cost of implementing train communication systems (in general, rather than specifically as a result of the proposal) varies widely, depending on factors such as the size of an operator and the technology utilised. Costs are understood to vary from a few thousand dollars for a very small operator in a relatively low risk environment, up to hundreds of millions for a major rail infrastructure manager of a complex network utilised by numerous rolling stock operators.

Accordingly, some rail transport operators stated that changes to train communication system requirements had the potential to impose high costs on them as they may require operators to implement new communication systems.

The Association of Tourist and Heritage Rail Australia stated that some tourist and heritage operators not on a main line may need to install upgraded or new communication systems. In one example the quoted cost was $100,000.

Some large rail transport operators also stated that upgrades to their systems would be required. This contrasted with the predominant view of rail safety regulators, who stated that the proposal imposed only a negligible or minimal impact.

Some specific issues highlighted by rail transport operators included communication 'black spots' on a rail network (for example, incomplete radio or general packet radio service (GPRS) network coverage), as well as the implications of a train communication device failing whilst the train was in service. Such circumstances and events may result in a lack of communication capability at a given location and/or point in time.

The proposal includes a qualification of 'so far as is reasonably practicable'. For the purpose of assessing its impact, it has been assumed that this would have a similar meaning to the equivalent qualification in the General Safety Duties provisions. In other words, the extent to which a rail transport operator must address risks arising from matters such as incomplete communications network coverage under the (existing) General Safety Duties provisions would similarly apply to the proposal.

Therefore, it is likely that any rail transport operator not complying with the proposal may be judged to be also not complying with the existing General Safety Duties provisions. For that reason, the impact of the proposal is assessed as minor and there is insufficient evidence that this option would impose any additional costs on rail transport operators.

As there is a mutual responsibility for rolling stock operators and rail infrastructure managers to comply with the proposal, the impact on them has been assessed in a combined manner. It is understood that the distribution of costs between them for any train communication system upgrade is a contractual, rather than a regulatory matter.

Rail safety workers

It is anticipated that rail safety workers would benefit from improved levels of rail safety resulting from this proposal being adopted.

Option 3 – Develop and mandate a performance standard for train communication systems

As a performance standard for train communications has not yet been developed, it is impractical to assess its impact. However, a higher standard has the potential to contribute to higher levels of safety than under Option 2, while also imposing higher costs on rail transport operators.

Proposal

Option 2 is proposed. It would better clarify the requirement for train communications, without being expected to impose any additional costs on rail transport operators.

However, should the Ministerial Council approve the National Law, policy makers plan to develop a performance standard and assess the impact of Option 3, with a view to potentially amending the provision to mandate the standard.

This proposal is included in section 51 (Safety duties of rail transport operators) of the draft National Law.

6.5.8 Network rules

Current provision

Rail infrastructure managers specify network rules for how rolling stock operators, maintainers and rail safety workers may operate on their rail network. Although no explicit provision for network rules exists in the Model Law, in practice they are utilised to comply with the general safety duties and form part of the operator's safety management system.[43]

Section 57(2) of the Model Bill (Safety Management System) requires that rail transport operators to consult with affected parties, prior to establishing or varying their safety management system.

Problem statement

There have been some reported cases of network rules being changed by rail infrastructure managers, without engaging in adequate prior consultation.

This creates two problems for rolling stock operators: firstly, they do not have the opportunity to raise any concerns with the changes and secondly, they may not even be aware of the changes. Such circumstances increase the risk of occurrence of incidents involving network breaches, with implications for safety. Although the Model Law imposes requirements that may be interpreted as requiring consultation, policy makers have supported a more explicit requirement.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. The matter of network rules would continue to be managed through compliance with the General Safety Duties and the safety management system, that is, without being addressed by any specific provisions in law.

Option 2

To strengthen consultation provisions in the National Law for network rules (rail safety rules), to clarify the requirement to consult with affected parties including rail infrastructure managers, rolling stock operators, maintainers and rail safety workers.

[43] Section P, Schedule 1 of the Model Regulations – Content of the Safety Management System, specifies General Engineering and Operational Systems Safety Requirements.

Impact assessment

Option 1 – Status quo

There would be no impact of maintaining the status quo. However, this may contribute to perpetuating the current situation of some rail infrastructure managers neglecting to engage in adequate consultation regarding changes to network rules.

Option 2 – Strengthen consultation provisions in the National Law

Economic assessment

The economic benefit of this proposal is estimated to be between $0.28 and $7.80 million. This is primarily based on the assumption that strengthening the consultation provisions for network rules and making the requirements explicit in the National Law, one rail safety accident may be avoided per annum. Refer Appendix D: Economic cost benefit analysis (section 3.13) for detailed analysis.

Safety

It is expected that there will be a reduced risk of incidents and an improved level of safety by stipulating that parties affected by the introduction of, or changes to, network rules are consulted and informed.

Regulator

The requirement to consult is expected to improve the management of risks to safety, by ensuring that all parties affected are consulted about network rule changes. As any changes to network rules are required to be reported to the Regulator, it is expected to reduce the need for the Regulator to have resources available to intervene when adequate consultation has not been undertaken. This provision also enables the Regulator to prosecute, where penalties apply.

Rolling stock operators

Under the proposal, rolling stock operators will have greater certainty about the current state of network rules which affect their operations. There will also be the opportunity to consult on and provide input to appropriate changes to network rules in the future. In many instances there will be the opportunity for reduced costs given the more efficient use of network rules.

Rail infrastructure managers

Rail infrastructure managers are required to consult on network rules under the safety management system provisions in the Model Bill. This proposal merely clarifies this requirement. Whilst there may be a cost incurred by rail infrastructure managers to specifically require them to consult, provide 28 days for affected parties to make submissions and then to consider all submissions, it is thought that this cost impact would be low.

Rail safety workers

It is anticipated that rail safety workers would benefit from improved levels of rail safety resulting from the introduction of Option 2.

Rail safety workers are required to utilise and adhere to network rules; their safety while operating on railway premises substantially depends on network rules being developed in a manner that accounts for their needs, as well as being made aware of current rules. Proper

consultation with rail safety workers on network rule changes would support these objectives.

Proposal

Option 2 is proposed. It would better clarify the need for proper consultation and the dissemination of information to all affected parties regarding the introduction of, and changes to, network rules, while not imposing a significant burden on the Regulator or operators.

The proposal would improve safety by minimising the risk of incidents, and supports the National Law objectives by improving compliance through better clarity.

The proposal is addressed in Part 4, Division 4 (Railway safety rules) of the draft National Regulations.

6.6 Specific Regulator authorities and responsibilities

While the overarching methodology behind rail safety is co-regulatory, imparting the primary obligation on rail transport operators to identify and manage their risks to safety, it is important that the Regulator is appropriately empowered to make safety decisions and issue directions where necessary. The Regulator's role in compliance and enforcement must also be clearly reflected in the National Law.

Under the Model Bill, regulators have the power to direct amendments of an operator's safety management system within a specified period, and the direction provided by the Regulator must indicate the reasons. Currently regulators are able to issue specific requirements to rail transport operators where they believe the level of safety standards in the Model Bill have not been met.

There exist a number of circumstances in which specific directions can be issued.

- Under section 51 of the Model Bill, the Regulator may direct amendment of a safety management system.
- Under section 61F of the Model Bill, the appointed person may give directions where parties required to enter into an interface agreement have failed to do so in a timely and effective manner, to take specific corrective actions.
- Under sections 44(2)(b) and (c) of the Model Bill (Revocation or suspension of accreditation).

In addition to the existing Model Bill provisions listed above, proposed provisions in the National Law allow the Regulator to direct:

- the installation of a safety or protective device in response to a report (such as a coronial report)
- the amendment of a rail infrastructure manager's railway safety rules, in the case where the manager has failed to agree, under the prescribed process, on establishing or amending a rule with a stakeholder whom the manager is required to consult.

6.6.1 Installation of safety or protective devices

Current provision

The Model Bill requires that rail transport operators comply with the General Safety Duties provisions of Part 4, Division 1. In instances where an operator is not compliant, the Regulator may:

- under Part 5 (Enforcement), Division 1 (Improvement notices), issue an improvement notice, requiring an operator to make suitable improvements to their safety management system (with the improvements to be proposed by the operator)
- under Part 5 (Enforcement), Division 2 (Prohibition notices), issue a prohibition notice, prohibiting the carrying out of specified activities
- under section 51 (Rail Safety Regulator may direct amendment of a safety management system), direct an amendment to the operator's safety management system, in order to improve safety.

Problem statement

In certain circumstances, decisions by rail transport operators on how to manage a given type of risk may have especially high cost and safety impacts. An example is whether to fit safety or protective devices to a fleet of rolling stock, or across rail infrastructure. The operator may face a dilemma in determining whether the high cost would outweigh the projected safety benefit, or whether a lower cost/lower benefit option would be sufficient to comply with the requirement to manage risks so far as is reasonably practicable.

Risk management principles under the Model Bill (and draft National Law) afford a degree of flexibility to an operator in determining the appropriate countermeasure. Where the Regulator is dissatisfied with the proposed approach of an operator, one option is to issue an improvement notice.

However, there may continue to be disagreement over what measures are necessary to achieve a sufficient degree of safety improvement. Regulators are typically reluctant to escalate such disputes by issuing prohibition notices, which may have broader economic and social ramifications. While the Regulator has the authority also to direct an amendment to an operator's safety management system, it is unclear whether that authority extends to directing a specific outcome.

While the available suite of enforcement options are adequate for resolving most compliance issues, some regulators have stated that they are inadequate for those that may have major cost implications for operators, potentially measured in the tens or hundreds of millions of dollars. The installation of safety or protective devices may have such a high cost impact.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. This would retain the enforcement measures available to the Regulator in the Model Bill.

Option 2

Provide the Regulator with the authority to direct rail transport operators to fit specific safety or protective devices, as deemed necessary to comply with the safety management duties and obligations. Such a provision may replace or amend Model Bill section 51 (Rail Safety Regulator may direct amendment of a safety management system).

Any such directions may be subjected to a cost benefit analysis, as discussed in Section 6.6.2 (Regulator to conduct cost benefit analysis for mandatory safety decisions).

Option 3

Introduce a provision empowering the Regulator to require the installation of safety or protective devices. The Regulator could only require the installation of the device upon the suggestion or recommendation made in a coronial inquest or an investigation by the Australian Transport Safety Bureau of a rail incident under *the Transport Safety Investigation Act 2003* (Cth).

Any requirements imposed by the Regulator (as a result of the report) would be subject to a cost benefit analysis, as discussed in Section 6.6.2 (Regulator to conduct cost benefit analysis for mandatory safety decisions).

Impact assessment

Option 1 – Status quo

There would be no impact of maintaining the status quo. Under this option, the Regulator would continue to rely on the existing enforcement provisions as prescribed in the Model Bill.

Option 2 – Provide the Regulator with the authority to direct rail transport operators to fit specific safety or protective devices

Economic assessment

At this time, there is no measurable cost impact associated with this proposal. Instead, any cost impact of directions for an operator to fit safety or protective devices would be assessed by the Regulator.

Safety

Where specified safety or protective devices represent unique value in reducing safety risks, and their fitment is not practicably achievable under existing enforcement provisions of the Model Bill, this option would result in improved safety.

Regulator

The provision to install safety or protective devices will give the Regulator the authority to specify the means by which a rail transport operator must mitigate certain types of risk. This has the potential to reduce the necessary resources required of the regulator to negotiate an equivalent outcome with operators, using only the existing enforcement provisions of the Model Bill.

Rail transport operators

The introduction of a power for the Regulator to require the installation of safety or protective devices has the potential to impose substantial costs on rail transport operators. The proposal to require a cost benefit analysis would enhance accountability of the Regulator in making such a direction.

However, some operators felt that it may reduce the scope for them to determine the most cost effective option for mitigating a given safety risk.

Rail safety workers

There is no measurable impact on rail safety workers of this proposal. However, rail safety workers would benefit from any resulting, general improvements to rail safety.

Option 3 – Provide the Regulator with the authority to direct rail transport operators to fit specific safety or protective devices in response to a coronial inquest report or an Australian Transport Safety Bureau investigation report

The impact of this option is broadly similar to that for Option 2.

However, it would permit the Regulator to direct an operator only as the result of a report by an applicable coroner or investigation held under the *Transport Safety Investigation Act 2003* (Cth). This, in conjunction with retaining the requirement to conduct a cost benefit analysis (in prescribed circumstances), would apply greater scrutiny before any direction was able to

be made. Such additional analysis and scrutiny would reduce the risk of cost-inefficient outcomes. However, it is impractical to measure the degree to which this would be the case.

Proposal

Option 3 is proposed. It is assessed as best balancing the need for the Regulator to specify an outcome in certain circumstances, while preserving the co-regulatory principle of delegating primary responsibility for determining the appropriate means of managing safety to rail transport operators in the majority of circumstances.

The proposal is addressed in section 200 (Response to certain reports) of the draft National Law.

6.6.2 Regulator to conduct cost benefit analysis for mandatory safety decisions

Current provision

As outlined in this section, the Model Bill provides the Regulator authority to make decisions that impact on how rail transport operators manage safety risks.[44] Part 6 of the Model Bill includes provisions by which such decisions may be subject to review.

Problem statement

Although certain decisions of the Regulator are subject to review, a shortcoming of the decision making power of the Regulator, as well as the review process, is the lack of any requirement to subject a decision to rigorous analysis. There is a risk that such decisions may have significant cost impacts on rail transport operators, and may not represent a cost-effective outcome that delivers the desired safety objective.

Victoria is the only state that currently incorporates a provision for a cost benefit analysis to be undertaken in the event that a mandatory safety decision by the Regulator presents a significant cost burden on rail transport operators.[45] The intent of this provision is to introduce rigour into the decision making process and reduce the likelihood of the Regulator imposing equipment or system requirements on rail transport operators that may require a high cost of compliance with little or no resulting safety benefit. The provision was viewed as part of good governance when the independent regulator was established, and was enacted in 2006.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

[44] Additionally, Section 6.6.1 (Installation of safety or protective devices) of this regulatory impact statement includes a proposal for the Regulator to be able to direct rail transport operators to fit specific safety and protective equipment in certain circumstances.

[45] Section 175 of the *Transport Integration Act 2010* (Victoria).

Options

Option 1

Status quo. This would maintain the arrangement under which the Regulator would be authorised to make certain directions, including the proposed authority to require specified safety or protective equipment to be fitted, without undertaking a cost-benefit analysis.

Option 2

The Regulator be required to undertake a cost benefit analysis for mandatory decisions made on behalf of a rail transport operator. The proposal may safeguard against certain decisions of the Regulator resulting in costs being incurred (typically by rail transport operators) that are disproportionate to the safety benefits achieved.

Applicable decisions would include those made under the following provisions of the draft National Law:

- conditions or restrictions placed on a rail transport operator's accreditation (refer section 67 (Determination of application) of the draft National Law)
- directed amendments to a safety management system (refer section 73 (Regulator may direct amendment of safety management system) of the draft National Law)
- the issuing of improvement notices (refer section 177 (Issue of improvement notices) of the draft National Law)
- requiring specified safety or protective equipment to be fitted (refer section 200 (Response to certain reports) of the draft National Law)
- directed amendments to a rail infrastructure manager's railway safety rules (refer Part 4, Division 4 of the draft National Regulations).

It is envisaged that guidelines, policies and procedures would need to be developed in order to support this provision and to provide clarity particularly with regard to what constitutes significant cost.

A requirement to conduct a cost benefit analysis would not directly impact on the decision making power of the Regulator; it would still be possible for a decision to be taken, even if it was not supported by the analysis if there were significant benefits.

A rail transport operator may waive the requirement on the Regulator to undertake a cost benefit analysis if it accepts the Regulator decision.

Impact assessment

Option 1 – Status quo

There would be no impact of maintaining the status quo. However, this option would impact on the proposal for the Regulator to direct specified safety or protective equipment to be fitted. That proposal and its relationship to this one is discussed in Section 6.6.1 (Installation of safety or protective devices) of this regulatory impact statement.

Option 2 – The Regulator be required to undertake a cost benefit analysis for mandatory decisions made on behalf of a rail transport operator

Economic assessment

The net cost of this option is estimated between $0.70 and $1.40 million. Refer Appendix D: Economic cost benefit analysis (section 3.14) for detailed analysis.

Nominally, a cost benefit analysis may be expected to cost between $10,000 and $50,000, depending on its scope. However, regulators have stated that the types of decisions that would cause such an analysis to be undertaken have historically been taken infrequently. There is no reason to believe that would change in the foreseeable future. Therefore, the cost of undertaking cost benefit analyses is assessed as marginal.

A more significant cost impact is likely to be the effect this option would have on the quality (cost-effectiveness) of applicable decisions by the Regulator. With the cost impact of decisions potentially reaching hundreds of millions of dollars (note that such costs are not an impact of this option), any means of supporting more cost-effective outcomes would have a significant benefit (cost saving). Again, it is impractical to measure this benefit.

Safety

Improved safety is not the major objective of this option. Rather, by requiring more rigorous analysis of applicable decisions by the Regulator, a cost-effective outcome for the rail transport operator is more likely. Cost-effectiveness does not directly equate to maximising safety; in some cases it may justify an option with a lesser degree of safety.

For decisions with a major cost impact, cost-effectiveness may have a significant impact on the economic viability of a rail transport operator. This may affect broader safety management performance by allowing the reallocation of resources to manage other risks.

The impact on safety of this option is assessed as neutral. It is possible that a cost benefit analysis may help support a decision by the Regulator that would enhance or reduce safety. The conclusion of a cost benefit analysis would not determine a decision, but would merely serve as a tool for developing evidence to be taken into account.

Regulator

The Regulator would incur additional costs, resulting from being required to undertake a cost benefit analysis for applicable decisions.

However, it is not envisaged that this provision would be utilised frequently, as evidenced by the Victorian experience. The cost benefit provision has been in Victorian legislation since 2006; however, the provision has not yet been utilised as no mandatory rail safety decisions have met the definition of ‘significant cost’.

Due to the expected infrequency of the requirement for the Regulator to undertake a cost benefit analysis, the cost impact is minor.

Rail transport operators

Operators would benefit from any process that would better assure the cost-effectiveness of any applicable decisions by the Regulator. This would reduce the risk of operators having to allocate resources in an inefficient manner; resulting in a cost saving.

A cost benefit analysis may also increase transparency of decision-making and would provide operators with an enhanced framework to review any proposals and where necessary, work with the Regulator to improve the outcome.

Rail safety workers

Rail safety workers would not be significantly impacted by this option. However, a cost benefit analysis would also provide them with an enhanced opportunity to participate in developing the final decision.

Proposal

Option 2 is proposed for the National Law.

Where the Regulator is to make a decision on how a rail transport operator must manage a given aspect of safety, the decision would potentially have a significant cost impact on the operator. It is appropriate that the decision is subject to rigorous analysis to ensure that it represents a cost-effective outcome that delivers the desired safety objective. This proposal supports national reform objectives in safeguarding against excessive compliance costs for operators.

6.6.3 Appointed person may give directions

Current provision

Sections 61, 61A, 61B and 61C of the Model Bill require that agreements be formed between rail infrastructure managers and other rail or road managers where there is an interface between infrastructure under their respective management and control. Interface agreements must address how safety risks arising from those interfaces shall be managed. These sections also authorise an appointed person, where parties required to enter into an interface agreement have unreasonably failed to do so, to take specific corrective actions.

The Model Bill did not specify who the appointed person was to be, allowing local variations. Most states and territories have specified the rail regulator as the appointed person, however, some states have allowed the appointed person to be whom the relevant minister chooses to appoint.

Problem statement

Under a National Law, it is desirable to provide a uniform definition for appointed person. This is complicated by the fact that states and territories have varied in who is nominated, with some enabling an appointment by the relevant minister and others directly nominating the rail safety regulator.

There is broad consensus that the degree of independence of the 'appointed' person from the parties subject to the agreement (or direction) should be a criterion for their selection (or appointment).

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. This would retain the provision for individual states and territories to determine who the appointed person is, for interface agreements in a given state or territory.

Option 2

The Regulator is prescribed as the appointed person. The Regulator is considered to have sufficient expertise in determining appropriate arrangements for managing risks arising from railway interfaces, as well as being sufficiently independent of all relevant parties.

Option 3

The relevant minister in a given state or territory is provided with the power to appoint the appointed person.

Impact assessment

Option 1 – Status quo

There would be no impact of maintaining the status quo. However, retaining the provision for local variations in specifying who the appointed person is, would not support the reform objective of nationally uniform rail safety law.

Option 2 – The Regulator is prescribed as the appointed person

Economic assessment

The overall cost impact of this proposal in monetary terms is considered to be negligible due to the low frequency for the need for intervention by a third party to resolve disputes around interface agreements.

Safety

It is unlikely that safety benefits will be realised under this option. A minor improvement, from dispute resolution, may be achieved where improvements to managing the interface risks to safety could be applied nationally by the Regulator. This effect is considered minor.

Regulator

For the Regulator to counsel and direct parties in disagreement over how to manage interface coordination, there may be some impact. Such a process may be protracted and require the allocation of significant resources. The impact depends primarily on the frequency of disagreements that would require the appointed person (Regulator) to intervene, and these are extremely rare.

States and territories that provide for the Regulator to be the appointed person have indicated that the power to direct parties, if they have not made reasonable efforts to enter into interface agreements, has either not been utilised (due to lack of implementation of this particular provision) or envisage that this power would be exercised infrequently.

In addition, in those states and territories which specify that the minister may select the appointed person, it is envisioned that the minister will appoint the rail regulator in the majority of instances.

Whilst the Regulator may, in certain circumstances, have less influence in directing non-rail organisations to enter into an interface agreement, it is considered by some stakeholders to be a necessary provision in the National Law to promote good faith negotiations between the parties.

Rail transport operators

Due to the infrequent occurrence of such disagreements to date, rail transport operators have reported that the cost impact of this proposal would be negligible. Under any option, rail

transport operators will be required to take direction from a person, whether the Regulator, minister or other; as such, there should be minor impact.

Rail transport operators have indicated that benefits would be realised for national consistency in decision making for rail infrastructure managers who operate interstate. A single national point of contact for dispute resolution would benefit interstate operators saving to compliance and administration costs, in addition to efficiency within their organisations.

Rail safety workers

There is no measurable impact of this proposal on rail safety workers.

Other parties

The proposal has the potential to result in the Regulator giving directions to non-rail entities, in particular, road managers. Some concerns have been expressed by road managers over the implications of being directed by the Regulator (without specific responsibility for or knowledge of road management). However, the impact is nevertheless assessed as minimal, due to the infrequency of such disagreements and a reasonable expectation that in such circumstances, the Regulator would consult with an affected road manager prior to issuing any directions.

Option 3 – The relevant minister in a given state or territory is provided with the power to appoint the appointed person

Economic assessment

The overall cost impact of this proposal in monetary terms is considered to be negligible due to the low frequency for the need for intervention by a third party to resolve disputes around interface agreements.

Regulator

In practice, it is likely that a minister would consult of the Regulator and other relevant parties (for example, road manager), or delegate the task to one these parties. If delegated to the Regulator, the cost impact is the same as Option 2.

An additional administrative cost burden may be imposed on the Regulator to elevate disputes surrounding interface agreements to the state or territory minister. Regulator resources would be required to brief the minister; and resolution of the issue may be prolonged unnecessarily if the dispute between the parties could have been resolved by the Regulator itself.

Rail transport operators

This option would not result in national consistency for rail transport operators operating across borders. A potential for inconsistent decisions in each state and territory would be carried forward from the Model Bill into the National Law reducing the likelihood of administrative and compliance benefits being realised.

Rail safety workers

There is no measurable impact of this proposal on rail safety workers.

Other parties

Elevating the power to direct parties to the state and territory minister may assist in relieving any sensitivities arising from having the Regulator direct non-rail organisations.

In practice, it is likely that a minister would consult with the Regulator and other relevant parties (for example, road manager), or delegate the task to one these parties. This process would require that resources are available for consultation and dispute resolution.

Proposal

Option 2 is proposed for the National Law.

While Option 3 would also be feasible, a common understanding of who the appointed person is under Option 2 is likely to support a more timely resolution of any disagreements over interface management. Furthermore, the Regulator is an independent party with safety as the primary consideration, rather than a minister or person appointed by a minister who may be subject to political and commercial pressures. As it is likely a minister would often delegate the role to the Regulator, Option 2 would also reduce unnecessary administrative burden for the Regulator and the rail transport operator.

A nationally consistent approach towards the resolution of disputes around interface agreements is viewed as preferable. Consistency and predictability in decision-making should assist efficiency and timeliness of issue resolution.

Option 3 is considered to be in contradiction with the national reform objectives to remove inefficiencies arising from inconsistent jurisdictional requirements, streamline the regulatory arrangements and thus reduce the compliance burden for business.

This proposal is addressed in section 111 (Regulator may give directions) of the draft National Law.

The NTC welcomes comments from road managers on this proposal.

6.7 Alignment with the Model Work Health and Safety Bill

6.7.1 General alignment

Current provision

Section 13 of the Model Bill states that work health and safety legislation prevails where it is inconsistent with a provision of the Model Bill. Therefore, model rail safety provisions have no effect in states and territories that have implemented conflicting work health and safety law provisions.

Additionally, Section 15 of the Model Bill states that evidence of a contravention of the Model Bill is admissible in any proceedings for an offence against the work health and safety legislation.

Problem statement

The Model Bill contains provisions which overlap wholly or partially with work health and safety legislation.

Work health and safety legislation aims to ensure the health and safety of workers and workplaces, including rail workers and others exposed to railway operations (for example, rail patrons and road users). The National Law has a broadly similar objective to work health and safety legislation, but focuses on matters of safety management more specific to railway operations. The National Law complements work health and safety legislation.

The Model Work Health and Safety Bill (first approved in 2009) includes a number of provisions that are inconsistent with corresponding provisions of the Model Bill, which was approved in 2006. These inconsistencies render the relevant Model Bill provisions ineffective. They also risk causing confusion for rail industry members, who may falsely interpret the Model Bill provisions as the applicable legal duties and obligations. This increases the risk of work health and safety (and rail safety) law being inadvertently broken.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity, reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Options

Option 1

Status quo. Under this option, inconsistencies between the Model Bill and Model Work Health and Safety Bill would be retained.

Option 2

Amend the Model Bill so that it is consistent with the Model Work Health and Safety Bill. This does not require duplicating the latter in its entirety; it only applies to provisions that are necessary to support a functioning body of rail safety legislation and which correspond to a provision of the Model Work Health and Safety Bill. A list of the draft National Law provisions that have been harmonised with the Model Work Health and Safety Bill is included in Appendix C: Alignment with Model Work Health and Safety Bill.

Impact assessment

Option 1 – Status quo

While there is no impact of maintaining the status quo, this would retain the situation in which a range of Model Bill provisions may have no legal effect and potential mislead rail industry members.

Option 2 – Amend the Model Bill so that it is consistent with the Model Work Health and Safety Bill

Economic assessment

Amendments to the Model Bill to align with the Model Work Health and Safety Bill have been assessed as having no measurable cost impact.

Despite the Workplace Relations Ministers' Council agreement that the Model Work Health and Safety Bill will be uniformly implemented on 1 January 2012, it is nevertheless possible that may not occur. Inconsistencies between the National Law and Model Work Health and Safety Bill would impose cost impacts attributed to a more complex compliance task for rail transport operators (variations in law between states and territories) and any resulting impacts on rail safety.

However, those impacts would be attributed to variations from the Model Work Health and Safety Bill and would need to be assessed by the relevant states and territories in proposing the amendments. They have not been assessed in this regulatory impact statement.

Safety

A safety benefit would result from clearer rail safety law, which would be expected to improve compliance levels. However, such a benefit is unable to be measured.

Regulator

Efficiencies would be realised by the Regulator from a uniform and consistent body of National Law and Model Work Health and Safety Bill. Non-compliance may result from confusion on the part of rail transport operators, attributed to inconsistencies in the two bodies of law (that is, if the status quo was maintained under Option 1). Non-compliance would require the Regulator to allocate resources to work with operators in rectifying their operations. Such an allocation would be unnecessary under this option. However, it is impractical to measure this benefit.

Rail transport operators

Efficiencies would be realised by rail transport operators through better clarifying the compliance task, and by developing a consistent National Law and Model Work Health and Safety Bill. However, it is impractical to measure this benefit.

Efficiencies resulting from uniform bodies of law, through uniform implementation of the Model Work Health and Safety Bill would be a separate and additional benefit. That benefit is beyond the scope of this regulatory impact statement.

Rail safety workers

Rail safety workers would benefit from improved levels of rail safety, as well as clearer duties and obligations under the National Law that would result from it being made consistent with the Model Work Health and Safety Bill. It is impractical to measure these benefits.

Proposal

Option 2 is proposed. It is not the role of this process to review or amend policy determined in the process of developing the Model Work Health and Safety Bill. Rather, the Model Bill (and draft National Law) is structured as a 'taker' of work health and safety policy and law. Harmonising with the Model Work Health and Safety Bill would achieve that objective.

6.7.2 Penalties in the National Law

Current provision

There are 65 offences in the Model Bill that have a provision for a penalty. Maximum penalty amounts have not been specified in the Model Bill, allowing for local variations. States and territories have determined maximum penalty levels to be consistent with their own monetary penalty policy, resulting in significant inconsistency across similar offences.

States and territories also adopted differing approaches towards a corporate multiplier for body corporate offences, the provision for loading for repeat offenders (for example, enabling a 50 per cent higher penalty amount for recidivism) and the inclusion of custodial sentences (jail terms).

Problem statement

Local variations have resulted in a lack of consistency in the maximum penalty amounts applied in rail safety legislation nationally, even when considering comparable offences. Furthermore, states and territories have created additional offences where local variations were provided for in the Model Bill; particularly in the areas of fatigue and drug and alcohol management.

The Parliamentary Counsels Committee's *Protocol on Drafting National Uniform Legislation* states:

> *"Because of differences in current levels of the value of penalty units among jurisdictions and the potential for further variations to occur, national uniform legislation will use dollar amounts to express the amount of monetary fines for offences."*[46]

Policy work was undertaken to create a national penalty framework and remove the disparity in maximum penalty amounts in order to establish a consistent national approach.

Additionally, when considering model work health and safety legislation, as the same cause of action may give rise to breaches under both regulatory schemes, it was deemed necessary to align the penalty framework where similar offences were involved. If alignment is not achieved between model work health and safety and the National Law, an unfavourable situation of 'penalty shopping' between Regulators may develop; that is, where a maximum penalty in rail safety legislation is lower than that of the equivalent offence in model work health and safety law, the rail Regulator may provide evidence to the health and safety Regulator to enable prosecution under the Model Work Health and Safety Bill.

Objective

In addressing the identified problems, the proposal should seek to support the objectives of the national reform; that is, to streamline regulatory arrangements, improve productivity,

[46] Parliamentary Counsel's Committee, Protocol on Drafting National Uniform Legislation, Third Edition: July 2008 (s6.9 – Penalty Units).

reduce the compliance burden for business and support a seamless national rail transport system whilst not reducing existing levels of rail safety.

Development of a National Penalty Framework

Comparative analysis of maximum penalty amounts

In order to ascertain whether alignment for maximum penalty amounts existed amongst the states and territories for a given offence, a comparison of state and territory penalties in rail safety legislation was undertaken. Penalty information according to the applied dollar amounts was mapped against the corresponding provisions carrying penalties in the Model Bill.

The comparative analysis did not reveal consistency in how states and territories assigned a dollar amount to penalties, either for body corporate or individuals. It was found that whilst the highest penalties in each state and territory could be attributed to the same provisions of the Model Bill, the maximum penalty amount imposed was, in some cases, significantly different. For example, a breach of section 28(1) of the Model Bill (general duty on rail transport operators) attracted a penalty of $100,000 in South Australia and $215,000 in Victoria.

Consistency in ranking

Consistency was established for the level of severity of the penalties applied across the states and territories; that is, how each state and territory 'ranked' the offences. For example, even though the penalty amount differed, all states and territories applied the highest possible penalty in their particular state for a breach of a general safety duty (section 28 of the Model Bill) and their lowest possible penalty for applying a brake or emergency device (section 136 of the Model Bill).

Based on this consistency, an approach which ranked the penalties according to their relative severity in each state and territory, and removed the impact of the different dollar amounts was applied.

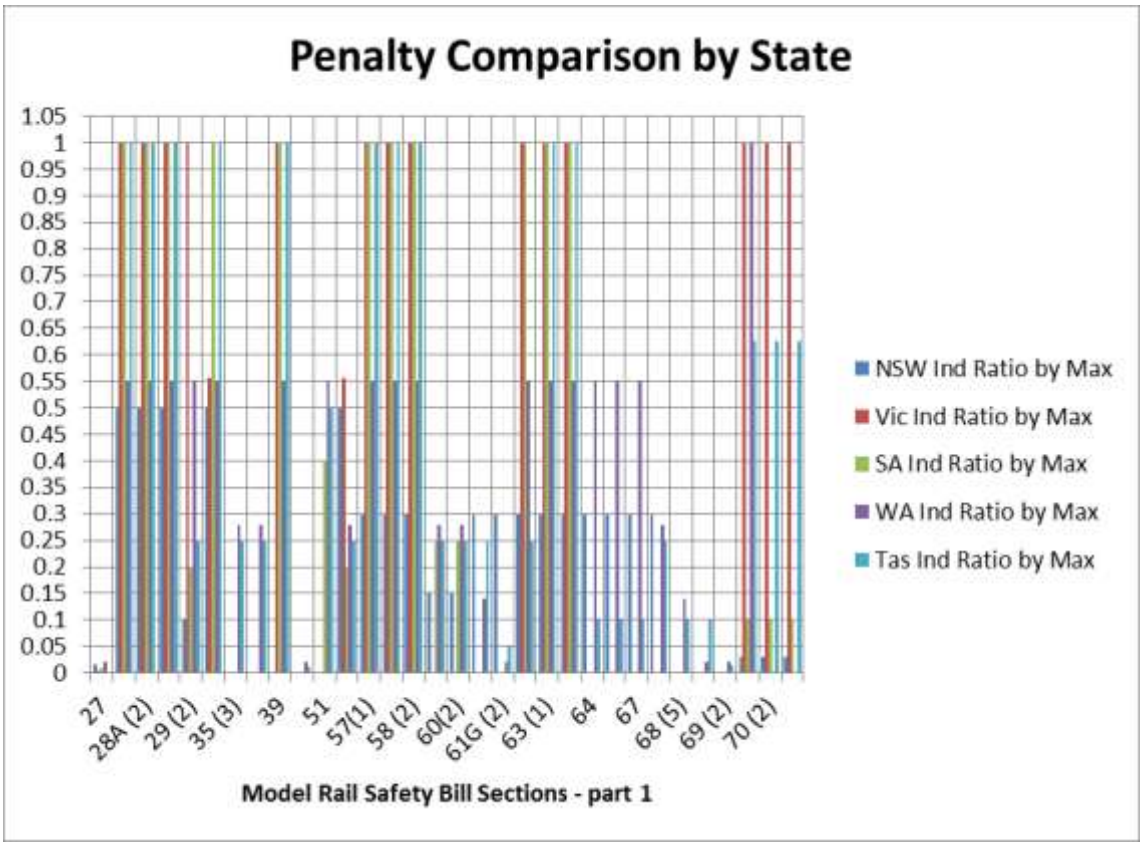
Penalties for each state and territory were calculated according to an ordinal scale, as follows:

> *Example: South Australia*
>
> *The maximum penalty amount applied in South Australia under the Rail Safety Act is $100,000 (for an individual).*
>
> *All penalties in the SA were then converted to be expressed as a proportion of the maximum possible penalty applicable in SA. For example:*
>
> - *s28(1): Breach of general safety duty: SA Penalty (individual) = $100,000*
>
> *Ordinal ranking = $100,000/$100,000 = 1*
>
> - *s101(1): Contravention of an improvement notice: SA Penalty (individual) = $40,000*
>
> *Ordinal ranking = $40,000/$100,000 = 0.4*
>
> - *s97: Failure to give name and address: SA Penalty (individual) = $0*
>
> *Ordinal ranking = $0/$100,000 = 0*

This process resulted in a ranking of the severity of each penalty in SA between 0 and 1, where 1 is the highest severity (maximum penalty) and 0 is the lowest (no penalty applied).

This process was repeated for each state and territory, resulting in a data set that enabled a national comparison of penalties according to the same metric. The result from utilising an ordinal scale to rank the level of severity of each penalty showed a high level of consistency between the states and territories. This consistency is depicted visually in Figure 6.

Figure 6. Sample penalty comparison by ordinal ranking[47]



Categorisation

Analysis of the graph in Figure 6 indicated approximately four groups of penalties, as depicted in Table 3.

Table 3. Penalty groups based on offence severity

Penalty Group	Ordinal Ranking	Meaning of Category
1	>0.75	Severe penalty
2	0.50-0.75	High penalty
3	0.25-0.50	Medium penalty
4	<0.25	Low penalty

[47] Note: Queensland and Northern Territory rail safety legislation does not differentiate between individual and body corporate penalties, as a result the data has not been included in the comparison of individual penalties.

Each offence in the Model Bill was allocated to a penalty group based on the rankings specified in Table 3.

As previously indicated, it was preferable for penalties in the National Law to align with penalties in the model Work Health and Safety Bill for similar offences.

The Model Work Health and Safety Bill includes three categories of penalty for offences relating to breaches of general safety duties. As the Model Bill includes equivalent general safety duties, it seemed logical to employ the same categorisation approach for the National Law. In addition, the requirement for a rail transport operator to develop and implement a safety management system, a fundamental requirement of the Model Bill, was deemed to require similar categorisation.

Finally, by considering both the penalty groups determined through the analysis of the severity of each offence in the Model Bill, together with the policy objective to align the penalties in the National Law with the Model Work Health and Safety Bill, the penalty types as shown in Table 4 were developed.

Table 4. Penalty framework for the National Law

Penalty type	Offence	Sub-type	Definition	Penalty amount (individual)
1	**Breach of a safety duty or safety management system requirement**	**A**	Serious breach for risk of death or serious injury – reckless behaviour	$150,000
		B	Serious breach for risk of death or serious injury	$100,000
		C	Breach with no risk of death or serious injury	$50,000
2	**Serious Breach of the Rail Safety Act**	-	Breach of significant obligation required by the National Law	$20,000
3	**Enforcement**	-	Breach of important operational or procedural requirement which may adversely affect the enforcement of the National Law	$10,000
4	**Operational**	-	Breach of other operational or procedural requirement	$5,000

The penalty amounts for type 1 offences are equivalent to the comparable offences in the Model Work Health and Safety Bill. Penalty amounts for type 2, 3 and 4 offences were determined based on a common practice approach; as the severity of the offence decreased, the penalty amount was decreased by a factor of approximately one half.

Other considerations

Body corporate multiplier

The penalty amounts in Table 4 reflect the maximum penalty amounts for an individual. In aligning the penalty structure to that contained in the Model Work Health and Safety Bill, these penalty amounts are proposed to be subject to a corporate multiplier for offences committed by a body corporate, as follows:

- type 1 offence: a maximum of 10 times the individual penalty amount will be applied

- type 2, 3 or 4 offence: a maximum of 5 times the individual penalty amount will be applied.

Loading for repeat offenders

States and territories have adopted differing approaches towards the provision for 'loading' for repeat offenders, some, for example, enabling a 50 per cent higher maximum penalty amount for recidivism.

In aligning with the Model Work Health and Safety Bill, the maximum penalty amounts for many offences are proposed to be increased for the majority of states and territories. Higher penalties for repeat offenders were therefore not included in this proposal.

Options

Option 1

Status quo; retain local variations.

Option 2

Implement the penalty framework, described in this section.

Impact assessment

Option 1 – Status quo

Although there would be no impact of maintaining the status quo, it would be undesirable to preserve inconsistent penalties under a national scheme. One of the primary objectives of the transport reform project is resolve policy issues where states and territories have varied and to develop a uniform National Law. Retention of different penalties in each state and territory for the same offence is contrary to this objective.

Option 2 – Implement the national penalty framework as described

Most states and territories will be affected by a change in maximum penalty amounts. In some cases the penalty amount will increase significantly; however, a number of penalty amounts will be reduced in accordance with the severity ranking framework.

It should be noted that penalties quoted are the maximum penalty amounts that could be applied; courts will ultimately have the discretion to determine an appropriate penalty amount and will likely take into consideration the offender's history and other relevant matters when handing down a sentence.

Prosecutions since state and territory implementation of the Model Bill have been made infrequently, with most states and territories reporting that they have not prosecuted for any offences under their rail safety legislation. Since 2005, there have been 21 successful prosecutions for drug and alcohol related offences in NSW, whose rail safety officers actively test rail safety workers. The costs of mounting a prosecution for a breach of the National Law will remain unchanged regardless of the applied penalty amount. The impact of any change to maximum penalty amounts in the National Law is therefore considered to be low.

It is not expected that the trend of infrequent prosecutions will change under the National Law; in accordance with widely accepted deterrence theory, prosecutions are often a last resort in supporting compliance.

The inclusion of a corporate multiplier for offences committed by a body corporate represents a change for Queensland and Northern Territory, where such a provision is not a

feature of rail safety legislation. Considering the low number of prosecutions, this is again considered to be of negligible impact.

Excluding loading for repeat offenders represents a removal of this provision for Western Australia and New South Wales. The increase in maximum penalty amounts for repeat offences is considered to offset any impact that this removal may have.

Proposal

Option 2 is proposed as it meets the reform objective of a uniform National Law and resolves an area where states and territories have varied.

Due to the nature of interaction between the model work health and safety legislation and the National Law, harmonisation with model work health and safety legislation is viewed as preferable. Given the infrequency with which prosecutions are currently undertaken by state regulators the impact of implementing the proposed national penalty framework is considered to be negligible.

This proposal is addressed throughout the draft National Law under offence provisions.

The issue of custodial penalties has not yet been addressed in the National Law.

The Model Work Health and Safety Bill contains custodial penalties for a breach of a safety duty with reckless conduct (up to five years imprisonment) and assaulting, threatening or intimidating a health and safety inspector (up to two years imprisonment).

The National Transport Commission welcomes comment on whether custodial penalties should be included in the National Law.

6.8 Impact assessment summary

COAG directed that the National Law be developed in a manner that:

- supports a seamless national rail transport system
- does not reduce existing levels of rail safety
- streamlines regulatory arrangements and reduces the compliance burden for business
- improves national productivity and reduces transport costs generally.

It is considered the draft National Law would serve each of these objectives. It has been assessed that implementing the proposed National Law would have substantial benefits to society, both in terms of improved levels of safety, as well as enhanced productivity resulting from a more streamlined and seamless national regulatory regime that would result in significant transport cost savings.

These benefits would be delivered by implementing a National Law, comprising a number of proposed amendments to the Model Law. This regulatory impact statement has focussed on assessing the impact of those amendments. Most have been assessed as imposing only a negligible impact, but with several assessed as requiring rail transport operators to review and revise significant elements of their safety management systems, some operational changes would be required.

Where requirements for how rail safety risks must be managed have been amended, some rail transport operators have stated that the amendments are in line with industry best practice and are already being complied with. Generally, larger operators stated that they were better positioned to absorb any costs of amending their safety management systems and had greater access to in-house resources. While a number of smaller operators, particularly those in the tourist and heritage sector stated that such amendments represented a cost imposition, others concluded that any necessary changes may be absorbed within existing maintenance processes. It should be noted that the proposed exemption provision for the National Law may serve to mitigate the impact on smaller operators if compliance with more onerous provisions outweighs the safety benefits.

Proposals governing authorities and responsibilities of the Regulator would impose some changes. However, in administrative terms, these were assessed as having a minor impact, due to the infrequent nature with which they have been and would expect to be deployed in the future. The more routine roles and responsibilities of the Regulator, that is, those having the greatest impact on its role and resources, remain substantially unchanged. Again, this excludes the savings resulting from the transition to a single national Regulator.

Consultation has revealed that in general, the largest impacts would result from any requirements to impose substantial changes to how rail transport operators conduct their businesses, or require them to fit new equipment on a large scale (for example, across the rail infrastructure or to all rolling stock under their management).

The majority of proposed amendments in developing the National Law were assessed as having no or an inconsequential impact and were not assessed in this regulatory impact statement. In addition, only some of the proposals addressed in the regulatory impact statement were able to be assessed in a quantitative manner.

A summary of the estimated costs and benefits for each proposal is included Table 5. The overall impact of the proposed National Law amendments has an estimated net present

value of between $29 and $73 million (that is, a net benefit). Refer Appendix D: Economic cost benefit analysis for detailed analysis.

Table 5. Net present value of National Law proposals[48]

	Net present value ($ million)	
	High	Low
Scope and objectives		
Railways to which the Act does not apply	0.42	0.17
	-0.74	-0.87
Private sidings exemption from accreditation	7.60	-0.20
Exemption framework	3.35	0.02
Powers with respect to the interface with parties whose operations may impact rail safety	2.05	0.0
Duty for loading and unloading rolling stock	7.60	3.80
Operator safety management		
Safety management system	0.20	0.28
Health and fitness management program	0.82	0.94
Drug and alcohol management program	30.46	14.96
Fatigue risk management program	4.16	2.14
Testing for drugs or alcohol	8.41	6.90
Fatigue management hours of work/rest	2.01	1.68
Specific Regulator authorities and responsibilities		
Network rules	7.80	0.28
Regulator to conduct CBA for mandatory safety decisions	-1.40	-0.70
Total	**72.71**	**29.39**

Table 6. Net present value of National Law proposals to industry segments[49]

	Initial (implementation) ($ million)		Ongoing ($ million per annum)		Net present value ($ million)	
	High	Low	High	Low	High	Low
National Regulator	-1.80	-1.13	-0.21	-0.01	-3.27	-1.23
Rail transport operators (freight and passenger)	-7.42	-3.04	-0.64	0.11	-11.93	-2.28
Rail transport operators (tourist and heritage)	-3.17	-1.75	-1.29	-0.76	-12.22	-7.12
Society	0.0	0.0	14.26	5.7	100.13	40.02
Total	**-12.39**	**-5.92**	**12.12**	**5.03**	**72.71**	**29.39**

The costs and benefits estimated in this regulatory impact statement effectively form an addendum to those estimated in the previous regulatory impact statement of 2009,[50] which

[48] Positive figures indicate a net benefit; negative figures indicate a net cost.

[49] Positive figures indicate a net benefit; negative figures indicate a net cost.

assessed the impact of establishing a Regulator and National Law. In that case, the net benefits were assessed at between $36 and $67 million.

The next step in that process was to develop a National Law, the net present value of which has been assessed in this regulatory impact statement at between $29 and $73 million. This estimate reflects a number of amended requirements for how rail transport operators must manage safety risks.

These requirements have been proposed by policy makers as representing best practice in rail safety management. While certain proposals may incur additional costs, it has been assessed that these would be fully offset by the savings that would result from substantially improved levels of rail safety, as well as other substantial savings from establishing a National Regulator assessed in a previous regulatory impact statement.

[50] Single, National Rail Safety Regulatory and Investigation Framework Regulatory impact Statement (July 2009), available at http://www.ntc.gov.au/viewpage.aspx?documentid=1927.

7. Consultation

7.1 Policy development

In developing the National Law, the NTC and National Rail Safety Regulator Project Office released a number of discussion papers and convened stakeholder workshops. Stakeholders consulted during this process included state and territory government policy makers, rail safety regulators, rail industry members, rail industry associations and unions. Feedback from these stakeholder forums was considered by the Jurisdictional Rail Safety Advisory Group, comprising policy makers from the Commonwealth, state and territory governments. Where matters were unresolved from this group, policy decisions were elevated to the Rail Safety Regulation Reform Project Board or ATC for deliberation.

The proposals put forward in this regulatory impact statement reflect the majority agreement of these groups.

Additionally, a Rail Safety Expert Panel was formed in 2010 specifically to develop policy proposals for drug and alcohol testing of rail safety workers and consideration of legislated hours of work for rail safety workers, areas where the aforementioned groups were unable to form policy positions. The proposals of the Expert Panel were endorsed by ATC for inclusion in this consultative regulatory impact statement.

7.2 Preparation of the regulatory impact statement

In preparing this regulatory impact statement, the NTC has engaged widely with stakeholders. Members of state and territory rail safety policy departments and regulators have provided ongoing advice and feedback.

A number of workshops were held during 2010 and 2011 with the participation of rail industry members including representatives of the Australasian Railway Association, the Association of Tourist and Heritage Rail Australia, as well as the Rail, Tram and Bus Union. A number of industry members, state and territory regulators and the Rail, Tram and Bus Union have provided written submissions on impacts of the regulatory proposals. In addition, industry and regulators responded to surveys, designed to obtain cost data to inform the economic cost benefit analysis. Detailed feedback (a summary of the key points of which is below) on early drafts of the regulatory impact statement has been provided by these stakeholders.

- There was a need to include more precise assessments for the impacts of each proposal. With rail transport operators and regulators the primary source of data, to support such assessments, the NTC continues to seek further feedback and data from stakeholders, to support more detailed assessments. A quantitative assessment of safety benefits for the proposals has proven difficult, due to the lack of a statistically significant sample of safety data (that is, the infrequency of major rail safety incidents) that inhibits modelling.

- There were mixed views on the need for a greater degree of prescription in the requirements for rail safety management. Regulators are mixed in their support for greater prescription, with industry members predominantly opposed to it.

- There is a need to assess proposed amendments against a defined regulatory structure and principles. The draft National Law is based on the principle of co-regulation yet includes elements of prescription. A justification for how and why these regulatory principles were applied is included in section 6.3 (Overview of proposed risk management requirements).

- There was a range of specific comments on individual proposals. These have been accounted for in developing the regulatory impact statement.

The NTC acknowledges the input and participation of stakeholders.

The regulatory impact statement is now published to invite public comment on the proposals described in the impact analysis. Feedback will be considered in determining whether to further amend the draft proposals and National Law, and further policy development may be required.

It should be noted that proposals relating to alcohol and drug management and fatigue risk management are currently under consideration and subject to further policy development. In commenting on this regulatory impact statement, stakeholders should be mindful that a regulatory impact statement will be developed to specifically to address the development of a risk-based model for defining working hours for rail safety workers.

Following this process, the final regulatory impact statement and draft National Law will be submitted to the Standing Council of Transport and Infrastructure for voting in November 2011.

8. Implementation and Review

8.1 Implementation

Subject to approval by the Ministerial Council, the National Law will be enacted in the South Australian Parliament. The remaining states and territories will then implement applying legislation that will reference the South Australian rail safety legislation (National Law) as their own legislation. Commencement is expected to take place in January 2013.

The current proposal is for the Ministerial Council to make regulations, however this is still under consideration (refer to section 268 of the draft National Law).

The National Law does not include consequential amendments arising out of the Law. Each state and territory adopting the Law is to enact an Act incorporating the consequential amendments, which may be the Act that adopts the Law. Nor does this version of the National Law include transitional provisions providing for the change from the operation of a state or territory's current law to the operation of the National Law. The transitional arrangements are to be developed in tandem with the consequential amendments. It is expected that the National Law that is introduced into the South Australia Parliament will include transitional provisions that can generally apply to all states and territories, and that each state or territory's Act adopting the Law will include the transitional provisions that are specific to that state or territory.

8.2 Transition and funding arrangements

In line with COAG's decision on 7 December 2009 to implement a national regulator, the National Rail Safety Regulator Project Office is to draft a change management plan to ensure implementation is achieved in a professional and inclusive manner, risks and problems are identified and communication and consultation are undertaken to highest of standards. A formal transition plan is to be agreed by 31 December 2011.

A change management strategy will also be developed so that all affected staff currently working in state and territory regulators' offices and their unions are informed of and engaged in transitional arrangements to the National Regulator.

The Cost and Capability Review, being arranged through the Project Office, will identify the outputs and activities of state and territory regulators and the resources, costs and funding required fulfilling their roles.

8.3 Evaluation

Following implementation by states and territories, the NTC will conduct an Evaluation Review. This review will focus on identifying areas in which states and territories may have differed from the National Law (as enacted by South Australian Parliament) in their applying law.

8.4 Maintenance Program

The NTC's general process would include a maintenance program for ongoing review of the National Law and is scheduled to commence in 2011.

Current items to be reviewed in the maintenance program include:

- definitions of rail safety work, rail safety worker, railway operations and rolling stock operator
- train communication systems (review of proposed standard)
- data loggers
- network rules
- train safety systems
- review of Schedule 1 of the National Regulations (Content of the Safety Management System)
- safety duties to extend to contractors.

Any subsequent amendments to the National Law following implementation will be developed for consideration by the Ministerial Council in accordance with the provisions of the COAG *Best Practice Regulation – A Guide for Ministerial Councils and National Standard Setting Bodies*.

In addition to the above, there will be ongoing development of guidance material to accompany the law prior to implementation.

8.5 Review

Formal review of the National Law will occur every five years following implementation. The reviews will be conducted to ensure that the legislation is meeting the objectives as outlined by COAG and as stated in the National Partnership Agreement.

9. Appendix A: Amendments to the Model Bill and Regulations with no measurable impact

This document has assessed the impact of a number of amendments to the Model Bill and Regulations. A number of additional amendments, to sections listed below, have been assessed as having no measurable impact.

9.1 Model Bill Amendments with no measurable impact

Sec.	Short Title	Amendment	Draft National Law	Short title
1	Purpose	This provision has been moved into section 3 of the Draft Bill	3	Purpose, objects and guiding principles of Law
2	Commencement	This provision has been amended to account for the enactment of the National Law	2	Commencement
4	Definitions	Various amendments	4	Interpretation
9	Examples	This provision has been omitted for national consistency	N/A	
10	Notes	This provision has been omitted for national consistency	N/A	
11	Crown to be bound	This provision has been amended for clarity and does not change the policy intent	12	Crown to be bound
23	Reciprocal powers of rail safety officers	This provision has been omitted as it is redundant for the National Law	N/A	
25	Rail safety officer must not exercise functions without identification card	No change	138	Identity cards
26	Display and production of identification card	No change	138	Identity cards
27	Return of identification cards	No change	138	Identity cards
29	Duties of designers, manufacturers, suppliers etc.	This provision has been amended for clarity and does not change the policy intent	53	Duties of designers, manufacturers, suppliers, etc.

Sec.	Short Title	Amendment	Draft National Law	Short title
31	Accreditation required for railway operations	This provision has been amended for clarity and does not change the policy intent	62	Accreditation required for railway operations
32	Purpose for which accreditation may be granted	This provision has been amended to further explain the purpose of accreditation	61	Purpose of accreditation
33	Application for accreditation	This provision has been amended for clarity and does not change the policy intent	64	Application of accreditation
36	Coordination between Rail Safety Regulators	This provision has been omitted as it is redundant for the National Law	N/A	
37	Determination of application	This provision has been amended with the inclusion of Model Regulation 6	67	Determination of application
38	Prescribed conditions and restrictions	This provision has been amended for clarity and does not change the policy intent	70	Prescribed conditions and restrictions
39	Penalty for breach of condition or restriction	No change from Model Bill	79	Penalty for breach of condition or restriction
43	Surrender of accreditation	This provision has been amended with the inclusion of Model Regulation 8	76	Surrender of accreditation
45	Immediate suspension of accreditation	This provision has been amended for clarity and does not change the policy intent	75	Immediate suspension of accreditation
46	Keeping and making available documents for public inspection	No change	82	Keeping and making available records for public inspection
New	Regulator to publish register of documents	This provision has been added	41	National Rail Safety Register
48	Where application relates to cooperative railway operations or operations in another jurisdiction	This provision has been omitted as it is redundant for the National Law	N/A	
53	Rail Safety Regulator may make changes to conditions or restrictions	This provision has been amended with a drafting change and does not change the policy intent	72	Commission may make changes to conditions or restrictions

Sec.	Short Title	Amendment	Draft National Law	Short title
58	Compliance with safety management system	This provision has been amended with a drafting change and does not change the policy intent	102	Compliance with a safety management system
61	Interface coordination - rail transport operators	No change	106	Interface coordination – rail transport operators
61A	Interface coordination - rail infrastructure manager - public roads	This provision has been amended for clarity and does not change the policy intent	107	Interface coordination – rail infrastructure and public roads
61B	Interface coordination - rail infrastructure manager - roads other than public roads	This provision has been amended to include the NT Protocols under section 21 of the *AustralAsia Railway Act of NT*	108	Interface coordination – rail infrastructure and private roads
61G	Register of interface agreements	This provision has been amended to account for national consistency	112	Register of interface agreements
62	Security management plan	This provision has been amended with a drafting change	113	Security management plan
71	Contractors to comply with safety management system	This provision has been amended to be consistent the framework of the Draft National Law	120	Other persons to comply with safety management system
120	Proceedings for offences	This provision has been omitted as it is redundant for the National Law	N/A	
New	Infringement notices	New provision	23	Meaning of infringement penalty provisions
139	Infringement penalty	No change	236	Meaning of infringement penalty provisions
144	Commercial benefits order	No change	233	Commercial benefits order
145	Supervisory intervention order	No change	234	Supervisory intervention order
146	Contravention of supervisory intervention order	No change	238	Supervisory intervention order
147	Exclusion orders	No change	235	Exclusion orders
148	Contravention of exclusion order	No change	235	Exclusion orders

Sec.	Short Title	Amendment	Draft National Law	Short title
152	Immunity for reporting unfit rail safety worker	This provision has been amended for clarity and does not change the policy intent	251	Immunity for reporting unfit rail safety worker
160	Prescribed persons	This provision has been omitted as it is redundant for the National Law	N/A	
New	Extra-territorial operation	This provision has been added for the purposes of national consistency	11	Extra-territorial operation of law

9.2 Governance provisions – Establishment of the National Regulator

Sec.	Short Title	Amendment	Draft National Law	Short title
New		This provision has been added for the National Regulator	13	Establishment
New		This provision has been added for the National Regulator	14	Functions and objectives
New		This provision has been added for the National Regulator	15	Independence of Office of the National Rail Safety Regulator
New		This provision has been added for the National Regulator	16	Powers
New		This provision has been added for the National Regulator	17	Constitution of the Office of the National Rail Safety Regulator
New		This provision has been added for the National Regulator	18	Appointment of Regulator
New		This provision has been added for the National Regulator	19	Acting National Rail Safety Regulator
18	Functions	This provision has been amended for clarity and does not change the policy intent	20	Functions of the Regulator
New		This provision has been added for the National Regulator	21	Power of Regulator to obtain information
New		This provision has been added for the National Regulator	22	Appointment of non-executive members

Sec.	Short Title	Amendment	Draft National Law	Short title
New		This provision has been added for the National Regulator	23	Vacancy in or removal from office
New		This provision has been added for the National Regulator	24	Disclosure of interests
New		This provision has been added for the National Regulator	25	Times and places of meetings
New		This provision has been added for the National Regulator	26	Conduct of meetings
New		This provision has been added for the National Regulator	27	Disclosure of conflict of interest
New		This provision has been added for the National Regulator	28	Defects in appointment of members
New		This provision has been added for the National Regulator	29	Decisions without meetings
New		This provision has been added for the National Regulator	30	Common seal and execution of documents
New		This provision has been added for the National Regulator	31	Establishment of Fund
New		This provision has been added for the National Regulator	32	Payments into Fund
New		This provision has been added for the National Regulator	33	Payments out of Fund
New		This provision has been added for the National Regulator	34	Investment of money in Fund
New		This provision has been added for the National Regulator	35	Financial management duties of Office of the National Rail Safety Regulator
New		This provision has been added for the National Regulator	36	Chief executive
New		This provision has been added for the National Regulator	37	Staff
New		This provision has been added for the National Regulator	38	Secondments to Office of the National Rail Safety Regulator

Sec.	Short Title	Amendment	Draft National Law	Short title
New		This provision has been added for the National Regulator	39	Consultants and contractors
New		This provision has been added for the National Regulator	40	Regulator may be directed to investigate rail safety matter
New		This provision has been added for the National Regulator	41	National Rail Safety Register
19	Information to be included in annual reports	This provision has been amended for clarity and does not change the policy intent	42	Annual report
New		This provision has been added for the National Regulator	43	Other reporting requirements
20	Delegation	This provision has been amended for clarity and does not change the policy intent	44	Delegation

9.3 Model Regulation amendments with no measurable impact

Model Reg.	Short Title	Comment	National Reg.	Short Title
4	Application for accreditation	This Regulation has been amended to include the ability to provide an Australian Business Number in an application	8	Application for accreditation
5	What the applicant must demonstrate	This Regulation has been ommitted	N/A	N/A
6	Prescribed details of accredited person	Regulation has been elevated into the National Law under section 69 Determination of application	N/A	N/A
7	Prescribed conditions of, or restrictions on, accreditation	This regulation has been amended to include more information required by the operator	9	Prescribed conditions of, or restriction on, accreditation

Model Reg.	Short Title	Comment	National Reg.	Short Title
8	Surrender of accreditation	Regulation has been elevated into the National Law under section 76 Surrender of accreditation	N/A	N/A
11	Maintenance and operational conditions	This Regulation has been ommitted	N/A	N/A
12	Meaning of interface agreement	Regulation has been elevated into the National Law under section 105 Requirements for interface agreements	N/A	N/A
13	Obligations on rail transport operators	Regulation has been elevated into the National Law under Section106 Interface coordination – rail transport operators	N/A	N/A
14	Obligations on rail infrastructure managers	Regulation has been elevated into the National Law under section 107 Interface coordination – rail infrastructure and public roads and Section 108 Interface coordination – rail infrastructure and private roads	N/A	N/A
15	Obligations on road authorities	Regulation has been elevated into the National Law under section 107 Interface coordination – rail infrastructure and public roads and Section 108 Interface coordination – rail infrastructure and private roads	N/A	N/A
17	Preparation of an emergency management plan	This Regulation has been amended to include the requirement of consultation	19	Emergency management plan
19	Keeping, maintaining and testing an emergency management plan	This Regulation has been amended for clarity and does not change the policy intent	20	Keeping, maintaining and testing emergency management plan

Model Reg.	Short Title	Comment	National Reg.	Short Title
21	Rail safety work	Regulation has been elevated into the National Law under section 9 Meaning of rail safety work, however this section is still subject to the maintenance process	N/A	N/A
26	Records of competence	Regulation has been elevated into the National Law under section 118 Assessment of Competence	N/A	N/A
27	Periodic information to be supplied	This Regulation has been amended for clarity and does not change the policy intent	41	Periodic information to be supplied
28	Reporting of notifiable occurrences	This Regulation has been amended with drafting changes	42	Reporting of notifiable occurrences
29	Documents to be made available for public inspection	Regulation has been elevated into the National Law under section 82 Keeping and making available records for public inspection	N/A	N/A
30	Annual report of Rail Safety Regulator	Regulation has been elevated into the National Law under section 42 Annual report	N/A	N/A
31	Audits of railway operations	Regulation has been elevated into the National Law under section 135 Audit of railway operations by Commission	N/A	N/A
32	Embargo notices	This Regulation is redundant and has been deleted	N/A	N/A
34	Prescribed persons	This regulation has been deleted to align with the Draft National Bill	N/A	N/A
35	Exemptions from the Act by regulation	This regulation has been taken from the Model Bill	N/A	N/A

Model Reg.	Short Title	Comment	National Reg.	Short Title
New	Application of Commonwealth Privacy Act		40	Application of Privacy Act
New	Application of Commonwealth Freedom of Information Act		38	Application of Freedom of Information Act
New	Application of Commonwealth Ombudsman Act		39	Application of Ombudsman Act

10. Appendix B: Impact assessment assumptions

10.1 Interpretation of the National Law by the Regulator

A key assumption revolves around how the Single National Rail Safety Regulator would regulate compliance with the National Law. The majority of provisions contained in the National Law do not prescribe precise outcomes, requiring instead that rail transport operators "ensure, so far as is reasonably practicable, the safety of the operator's railway operations". Where there are questions, confusion or disagreement over what constitutes minimum compliance standards, it is the Regulator who plays the major role in resolving them. Although Part 7 (Review of decisions) of the National Law provides operators with the ability to challenge decisions of the Regulator, in practice this option has tended to be utilised infrequently.

A significant factor in assessing the impact of establishing the Regulator and National Law is how the Regulator would uphold standards of compliance (that is, interpret the National Law). This type of impact has been divided into two categories.

1. Where no amendment has been proposed to a provision of the Model Bill, no assessment of how the Regulator may interpret it has been made. Such matters are beyond the scope of this regulatory impact statement, which has addressed only proposed amendments to the Model Bill.

2. Where an amendment has been proposed, the impact, where it was assessed as measurable, has been assessed with high and low range values. These values reflect uncertainties in the impact of the amendment, including how the Regulator may interpret the provision.

10.2 Overlap with Work Health and Safety Law

Rail transport operators are required to comply with rail safety, as well as work health and safety law. Due to the significant overlap between these two bodies of law, it may be argued that the regulatory impact of rail safety law (and the National Law specifically, as is being assessed here) is reduced to the extent that any duties are duplicated in work health and safety law.

There is an inherent difficulty in proportionately attributing the impact of rail operations between both bodies of law. Therefore, proposals in this regulatory impact statement have been assessed, as far as possible, by assessing the extent to which they would cause changes to rail operations and its regulation, and measuring the resulting costs and benefits.

10.3 Other assumptions

Other assumptions made in assessing the impact of individual proposals have been addressed within the relevant sections.

11. Appendix C: Alignment with Model Work Health and Safety Bill

Model Bill	National Law	Provision Short Title
7	46	Meaning of reasonably practicable
13	47	Relationship between the Law and occupational health and safety legislation
24	138	Identity cards
New	139	Accountability of rail safety officers
New	140	Suspension and ending of appointment of rail safety officers
New	142	Function and powers
28	51	Safety duties of rail transport operators
28A	52	Duties of rail transport operators extend to contractors
70	56	Duties of rail safety workers
New	145	Powers of entry
117	217	Reviewable decisions
121	220	Period within which proceedings for offences may be commenced
122	222	Authority to take proceedings
123	224	Offences by bodies corporate and employees
124	225	Records and evidence from records
125	226	Certificate evidence
126	227	Proof of appointments and signatures unnecessary
127	221	Multiple contraventions of rail safety duty provision
132	229	Offence to give false or misleading information
133	174	Offence to hinder or obstruct rail safety officer
New	254	Enforceable voluntary undertaking
140	254	Compliance with rail safety undertaking
141	256	When a rail safety undertaking is enforceable
149	247	Confidentiality of information
150	249	Civil liability not affected by Part 3 Division 3 or Division 6
161	265	Contracting out prohibited

12. Appendix D: Economic cost benefit analysis

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This cost benefit analysis has been prepared by Halcrow for the National Transport Commission.

Note: This study uses data provided by third parties. This third party information was used in good faith.

1. Background

The cost benefit analysis has been undertaken in accordance with the Office of Best Practice Regulation (OBPR) *Best Practice Regulation Handbook Appendix E Cost Benefit Analysis* (2010) and Council of Australian Governments (COAG) *Best Practice Regulation Guide* (2007). It documents the methodology and findings of the cost benefit analysis undertaken to evaluate the material impacts of the proposed amendments and additions to the existing Model Bill as part of the introduction of the proposed National Rail Safety National Law. The incremental costs or benefits have been the primary focus of the assessment of these changes. The base case, or status quo, is thus the Model Bill and Regulations.

This appendix contains the following subsections:

- Background – discusses the matters required to be covered in this cost benefit analysis appendix
- Railway industry and survey response statistics – sets out the industry statistics used in the preparation of this appendix and the statistics about the activities submitted by the respondents
- Items with measurable impact – sets out those items for which a cost benefit analysis has been undertaken
- Measurable impact items option summary – provides a summary of the costs and benefits of each of the options assessed.

1.1 Approach

The following section provides an overview of the cost benefit analysis approach, including the survey implemented to determine costs and benefits of the change, and the parameters adopted in the appraisal.

1.1.1 Cost benefit analysis

Cost benefit analysis (CBA) is a tool for estimating the economic value of projects. It measures the change in welfare after allowing for economic costs. This should not be confused with a discounted cash flow, which uses financial costs and benefits to evaluate a proposal from the point of view of the project proponent.

CBA takes into account non-market goods, externalities, opportunity costs and benefits and, if the market is distorted, shadow prices. A non-market good is one which does not have an observed monetary value, such as improvements in safety; externalities are third party effects which are not usually accounted for by private costs but do represent a cost (or benefit) to society; the opportunity cost (or benefit) is the cost of pursuing an alternative course of action; and, shadow prices represent the social value of goods or services. CBA does not take into account to whom the costs or benefits accrue as the analysis is undertaken at the societal level, and it ignores taxes and subsidies as they are monetary transfers.

Any CBA is essentially a comparison between the base case and the proposal. The base case is often the status quo or the 'do minimum' case and is important as it forms the basis of comparison in determining the likely impact of the preferred option or options. In this case,

the base case is the continuation of existing rail safety arrangements under the provisions of the Model Bill.

Business compliance costs

A key issue in regulation is the compliance burden imposed on businesses. While many of the changes to the legislation would have no compliance burden, there are some items which would incur potentially significant compliance costs to rail transport operators.[51] Such costs are likely to include items such as education, expert advisory services, documentation, and approval and enforcement expenses for both the Regulator and the regulated.

These costs, or cost savings, have been estimated for each proposed amendment or addition based on information provided by regulators and rail transport operators and verified through consultation with industry practitioners who are considered to be experts in their field.

Risk analysis

Risk analysis in a regulatory impact statement concerns the "quantitative assessment of the risk magnitudes affected by the proposal".[52] In this case, the proposal is the regulatory solution to an identified problem. OBPR sets out four issues to be addressed by the risk assessment:

1. appraisal of the current level of risk to the exposed population from an identifiable source
2. the reduction in risk that would result from the introduction of the proposed measures
3. consideration of whether the proposed measures are the most effective available to deal with the risk
4. whether there is an alternative use of available resources that would generate greater overall benefit to the community.

Outputs from the risk analysis inform the CBA and identify the costs and benefits to be measured. Safety related benefits have been measured where possible and appropriate, noting that a number of measures are being proposed for reasons other than safety, that is, to improve efficiency and to ensure consistency of approach.

Competitive effects

Regulation can often curtail the competitive environment in an industry. Regulation could deter entry or exit from the industry or effectively grant rights to certain parties or only enable certain parties to compete.

It is considered that moving from the Model Bill to the draft National Law should not have any significant impact on the competitive environment and would not deter entry or exit of rail transport operators to the industry.

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[51] Reference to 'rail transport operators' includes both rolling stock operators and rail infrastructure managers.

[52] COAG Best Practice Regulation, A guide for ministerial councils and national standard setting bodies, October 2007

1.1.2 Cost benefit analysis parameters

The CBA has been undertaken in line with standard industry practice and is consistent with guidelines provided in the *Best Practice Regulation Handbook* (OBPR, 2010).

The following parameter values have been adopted for this appraisal:

- 10 year period of operation, implementation takes place in year 0
- Real discount rate of 7 per cent, including high and low variations at 3per cent and 10 respectively
- 10 year evaluation period[53]
- Price year – 2010.

1.1.3 The survey

Information about the costs and benefits associated with specific items has been gathered from a number of sources including from existing regulators and rail transport operators. This report is predominantly based on the responses to a survey issued to regulators and rail transport operators covered by the proposed National Law and Regulations. The approach involved a postal survey issued to all regulators and a representative group of operators. Industry statistics have been used to scale up the survey responses to reflect the impact on the sector as a whole.

Rail transport operator responses have been categorised into the following three groups: large companies, small to medium companies and tourist and heritage organisations. These groups are defined as follows:

- Large operators are those operators with over 1000 staff.
- Small to medium operators (SME) are all other operators, generally with significantly fewer than 1000 staff.
- Tourist and heritage operators have typically up to 200 staff.

The survey responses have been analysed and critiqued and form the basis of the following assessment of costs and benefits accruing to regulators and operators. A summary of the survey response rates and indicative representation is provided in Section 2.2 of this appendix.

[53] A ten year evaluation period has been adopted to align with the appraisal timeframe used in the assessment of the single, national rail safety regulatory framework. It may seem that this relatively short timeframe unduly limits the period over which the costs and benefits accrue. However at the real discount rate assumed, costs and benefits beyond a ten year timeframe provide diminishing changes in present value terms.

2. Railway industry and survey response statistics

This section contains rail industry statistics that have informed the CBA. The statistics serve to illustrate the scale and scope of the sector.

The total number of accredited rail transport operators in October 2010 was 164. The number principally accredited in each state or territory is set out in Table 1 below.

All rail transport operators must be accredited in every state or territory in which they operate. The place of principal accreditation is the place of their principal regulator, which in turn is the regulator of the jurisdiction in which the rail transport operator is principally based. This is typically taken to be the jurisdiction in which the corporate management of the safety management system is undertaken and/or administered.[54]

Table 1. Accredited rail transport operators by state or territory

	NSW	NT	QLD	SA	TAS	VIC	WA	Total
Principally accredited	49	2	25	31	12	27	18	164
Accredited	14	8	17	18	5	15	7	84

Source: Register of Accredited Railways in Australia. Principal accreditation is in their home state or territory; rail transport operators can also be accredited in other states and territories.

Table 2 shows that most rail transport operators (127 out of 164 or 77 per cent) are accredited in only one state.

Table 2. Accreditation by state or territory

No. of states/territories in which accredited	No. Of accredited railways
accredited in 1 state or territory	127
accredited in 2 states or territories	16
accredited in 3 states or territories	9
accredited in 4 states or territories	2
accredited in 5 states or territories	6
accredited in 6 states or territories	4
Accredited in 7 states or territories	0
Total accredited railways	**164**

Source: Register of Accredited Railways in Australia

Table 3 shows the total train kilometres travelled over the years from 2001 to 2009. The numbers are stable with no demonstrable trend increase or decline, with the exception in Northern Territory and Western Australia. The trend for increasing train kilometres observed in Western Australia is associated with the continued growth of the mining sector. Statistics

[54] For further information see: http://www.rsrp.asn.au/principalregulator_role.cfm

for the Northern Territory reflect the commencement of the operation of the Darwin to Alice Springs railway line, which opened in 2004.

In Tasmania an initial increase in train kilometres travelled was experienced between 2001 and 2005 whilst under private ownership (Australian Transport Network and, from 2004 Pacific National). The decline in train kilometres travelled since 2005 can be largely attributed to a reduction in intermodal and coal traffic and cessation of timber traffic.

Table 3. Total Million Train Kilometres (MTK)

Year	QLD	NT	SA	WA	VIC	TAS	NSW	Total
2001	39.39	0.16	16.42	16.50	36.83	0.92	64.89	175.11
2002	39.10	0.18	17.28	19.47	37.90	0.92	63.13	177.99
2003	38.62	0.18	16.12	20.34	37.79	0.98	60.89	174.93
2004	39.34	1.19	17.14	22.80	37.79	1.10	62.57	181.92
2005	39.78	1.12	17.50	24.22	38.17	1.16	60.47	182.42
2006	38.62	1.26	17.52	24.63	38.17	1.03	59.13	180.37
2007	39.93	1.50	17.05	25.68	37.51	0.92	59.91	182.50
2008	41.68	1.67	17.52	32.94	36.21	0.85	60.79	191.66
2009	38.67	1.77	15.47	33.02	33.93	0.75	62.84	186.45

Source: Australian Transport Safety Bureau, Australian Rail Safety Occurrence Data. Figures are in millions

2.1 Rail safety accident data

To assist in the assessment of potential rail safety benefits generated by the implementation of the National Law, it is necessary to establish and understand the cost of rail safety accidents.

A rail safety accident, as discussed in the analysis, is defined as “a transport accident involving a railway train or other railway vehicle operated on rails, whether in motion or not”.[55] This definition of rail accidents excludes level crossing accidents involving motor vehicles as well as rail related suicides.

Level crossing accidents involving motor vehicles are excluded from the standard definition of rail safety accidents. They have been identified separately in the following analysis since the vast majority of level crossing accidents involving motor vehicles involve factors beyond the control of rail safety regulation and are therefore not impacted by most of the proposed amendments and additions under consideration. Unless clearly stated in the text, this type of accident has been excluded from the assessment of safety benefits.

[55] BTRE, Rail Accident Costs in Australia, 2003.

Rail related suicides have been excluded as it is assumed that changes in rail safety regulation would not change the frequency, causes or results of this type of accident and therefore would not impact on the associated costs.

In the assessment of potential safety benefits this CBA has used an estimate of rail safety accident costs as published in the 2003 Bureau of Transport and Regional Economics[56] (BTRE) *Rail Accident Costs in Australia Report 108* (2003). The report presents the findings of a comprehensive socio-economic assessment of Australian rail accident costs. Whilst the study relies upon 1999 reported rail safety data, it is considered to be the only reliable source of rail safety cost information and is the latest available cost data.

Table 4 below provides a summary of the average rail accident cost data as reported by BTRE (2003) and Table 5 presents the equivalent information for level crossing accidents involving motor vehicles.

Table 4. 1999 rail safety accident data ($million)

Type of Cost	Total Cost	No. of Accidents	Cost per Accident
Human costs	73.00		0.21
Property costs	56.00		0.16
Other costs	4.00		0.01
Total	133.00	351	0.38

Source: *Rail Accident Costs in Australia*; BTRE© Commonwealth of Australia 2002; ISSN 1446-9790; ISBN 1-877081-13-2

Table 5. 1999 level crossing accidents involving motor vehicles ($million)

Type of Cost	Total Cost	No. of Accidents	Cost per Accident
Human costs	9.00		0.03
Property costs	1.00		0.00
Other costs	0		0.00
Total	10.00	89	0.03

Source: *Rail Accident Costs in Australia*; BTRE© Commonwealth of Australia 2002; ISSN 1446-9790; ISBN 1-877081-13-2

Table 4 indicates a total rail accident cost of $133M and an average cost per accident of $0.38M in 1999.

To derive an equivalent 2010 cost estimate, the total cost of all accidents combined ($133M) has been adjusted by CPI[57]. In order to determine an estimate of the total number of accidents in 2010, reference has been made to rail safety *occurrence* time series data in the absence of equivalent historical data for rail safety accidents.

A rail safety occurrence is defined as any reportable safety breach, whether or not that resulted in an economic cost or 'loss'.

Table 6 sets out rail safety occurrence volumes and occurrence rates per million train kilometres (MTK).

[56] Bureau of Transport and Regional Economics (BTRE) is now known as the Bureau of Infrastructure, Transport and Economics (BITRE).

[57] Consumer Price Index as published by the Australian Bureau of Statistics

Table 6. Rail safety occurrence data

Year	Actual Occurrences	Total Million Train Km	Occurrence rate per MTK
2001	468	175.1	2.68
2002	522	178.0	2.94
2003	424	174.9	2.42
2004	442	181.9	2.43
2005	418	182.4	2.29
2006	403	180.4	2.24
2007	382	182.5	2.09
2008	434	191.7	2.26
2009	413	186.4	2.22

Source: Australian Transport Safety Bureau, *Australian Rail Safety Occurrence Data*, from 1 January 2001 to 31 December 2009.

The declining trend in reported rail safety occurrences reflects increasing awareness and emphasis on improving safety, particularly in light of high profile accidents such as the 2003 Waterfall accident in New South Wales. Increased education, sharing of knowledge and engineering solutions, such as Australian Rail Track Corporation's (ARTC) concrete sleepering and track upgrade program, have combined to affect an overall decline in the number of reported occurrences since 2001.

Countering that decline is the anticipated growth in train kilometres travelled as the land freight task is forecast to double by 2020 (from 2000 levels)[58] and passenger numbers are forecast to increase significantly according to state and federal transport authorities. Assuming that the observed incident trend continues into the future and that anticipated growth in train kilometres is realised, then it is expected that incident numbers would decline slightly initially followed by a slow increase as rail traffic continues to grow.

The average rate of decline in rail safety occurrences per million train kilometres (MTK), as presented in Table 5, is 1.55 per cent per annum.

For the purpose of this analysis it has been assumed that rail safety accidents have displayed a similar trend to occurrences over the last decade. In forming this assumption it is noted that regulators and operators alike are arguably more inclined to target a reduced accident rate than occurrence rate given the relative cost implications. Thus the assumption of a similar declining trend may be slightly conservative, however, it is considered appropriate for the purpose of this assessment.

The rail safety accident cost data shown in Tables 4 and 5 have been further adjusted to reflect the currently preferred approach to the value of statistical life (VOSL). The Willingness To Pay approach to estimating value of statistical life now supersedes the Human Capital approach adopted in estimating the 1999 rail accident costs. The value of statistical life is a measure often used to estimate the benefits of reducing the risk of death and is an estimate of the financial value society places on reducing the number of deaths by one (OBPR, 2008). It is currently considered by industry leaders, including the Office of Best Practice Regulation, that value of statistical life is most appropriately measured by estimating how much society is willing to pay to reduce the risk of death, which may be determined in a number of ways including through surveys.

[58] NTC Twice the Task report 2008.

Accordingly, the human cost component of the 1999 rail accident cost estimate ($0.21M) has been scaled up with reference to relevant Willingness To Pay values.[59]

Table 7 presents the derived 2010 rail safety accident cost data and Table 8 presents the derived 2010 cost data for level crossing accidents involving motor vehicles.

Table 7. 2010 Rail safety accidents cost estimate ($million)

Type of Cost	Total Cost	No. of Accidents	Cost per Accident
Human costs	227.28		0.76
Property costs	78.80		0.26
Other costs	5.63		0.02
Total	311.71	300	1.04

Table 8. 2010 rail safety accidents cost estimate – level crossings ($million)

Type of Cost	Total Cost	No. of Accidents	Cost per Accident
Human costs	7.11		0.09
Property costs	0.36		0.00
Other costs	0.00		0.00
Total	7.46	76	0.10

As shown in Table 7, the estimated number of accidents in 2010 is 300, which is expected to remain constant over the 10 year CBA evaluation period. This is considered appropriate given the declining trend in rail safety occurrences, which is likely to be offset by the forecast growth in train kilometres.

Table 9 shows the total train kilometres travelled, passenger train kilometres travelled and freight train kilometres travelled in 2009.

Table 9. Total passenger and freight Million Train Kilometres (MTK)

Year	QLD	NT	SA	WA	VIC	TAS	NSW	Total
Freight	25	1	7	18	4	1	17	72
% of total	64	50	47	55	12	100	27	39
Passenger	14	0	9	15	30	0	46	114
% of total	36	0	60	45	88	0	73	61
Total	39	2	15	33	34	1	63	186

Source: Australian Transport Safety Bureau, *Australian Rail Safety Occurrence Data* Figures are in millions of train kilometres in 2009.

2.2 Survey response statistics

The NTC, in conjunction with Halcrow, undertook a survey to gather economic, operational and financial information that forms the basis of this CBA. Respondents surveyed include

[59] RISSB Costing Model (2010) has been used to determine the ratio of Human Capital to Willingness To Pay values and a factor of 2.21 has been used to update the accident cost estimate used in this analysis.

both regulators and rail transport operators across all states and territories. The statistics from the survey are as follows:

- 33,000 kilometres of track length were managed by the rail infrastructure managers that responded
- 88 million train kilometres were covered by respondents (including maintenance companies who covered more train kilometres than most small rolling stock operators)
- $7.6 billion was the combined turnover of the companies that responded (noting that many organisations declined to answer this question)
- 27,000 people were employed by the respondents
- 4,200 contractors, in addition, were employed by the respondents
- Employee numbers varied from 26 to 12,000 per respondent
- 2,300 was the average number of employees
- 900 was the median number of employees.

2.2.1 Number of rail transport operators

For the purpose of this CBA rail transport operators have been identified and categorised as follows:

- 82 commercial rail transport operators (excluding tourist and heritage operators), comprising:
    - 12 large commercial operators
    - 70 small to medium commercial operators
- 82 tourist and heritage operators.

The term *commercial operator* is in reference to those rail transport operators whose principal purpose is the transport of people and/or goods and a *tourist or heritage operator* is an operator whose principal purpose is the provision of a rail tourist or heritage value service.

2.2.2 Association of Tourist and Heritage Rail Australia response statistics

The key statistics provided by the Association of Tourist and Heritage Rail Australia (ATHRA) are:

- 82 tourist and heritage rail transport operators
- 76 ATHRA members (15 large, 23 medium and 38 small operators)
- 11 use shared track provided by a rail infrastructure manager
- 65 use their own track
- Track length varies from 0.3 km to 77 km

- Annual train kilometres travelled vary from 10 km to 46,000 km.

2.2.3 Survey response rate and consultation summary

The survey response rates are summarised as follows:

Regulators

Five out of six state regulators responded in writing to the survey and verbal comments were received from the remaining state regulator. Discussions were also held with regulators both as a group and individually. Coverage was judged to be 100 per cent.

Commercial rail transport operators

The Australian Railway Association provided advice regarding the most appropriate operators to target as part of the survey. The resulting mix of operators is considered representative of small and medium operators as well as the large operators, and included one large contractor with operations in multiple states. In addition, the operators surveyed adequately mixed rail infrastructure managers and rolling stock operators across the states and territories. Operators associated with sizable truck fleets and intermodal hubs, and operators moving commodities, including coal and iron ore, are also represented. Across all commercial operators, the survey is estimated to include companies whose rolling stock operations comprise around 85 per cent of the reported train kilometres travelled in 2009.

The commercial rail transport operator category also includes those operators servicing the mining industry. These may be subsidiaries of the relevant mining companies or independent freight operators contracted to carry the freight from the mine to its destination. It is estimated that there are approximately 15 operators servicing the mining industry.

Interstate operators are also a distinct group of commercial rail transport operators. These operators run services across greater distances and with longer travel times than other operators. It is estimated that there are approximately 37 operators with interstate services.

Five out of the twelve large commercial operators responded to the survey.

Seven small to medium commercial operators responded to the survey.

Rail safety workers

A rail safety worker is defined in the Model Bill as “a natural person who has carried out, is carrying out or is about to carry out, rail safety work”.

There are estimated to be approximately 24,000 rail safety workers working for accredited rail transport operators in Australia, of which approximately 8,000 rail safety workers are in New South Wales.

This number has been estimated using survey response data. Approximately 21,000 rail safety workers were identified as being employed in companies that responded to the survey, which in turn represents around 85 per cent of the industry.

At just over 85 per cent coverage the total number of rail safety workers is thus approximately 24,000. This is a speculative calculation and the amount is an assumption.

Tourist and heritage rail transport operators

The Association of Tourist and Heritage Rail Australia (ATHRA) responded on behalf of its 76 members. There are estimated to be six tourist and heritage operators without ATHRA membership. Several discussions were held with ATHRA and its response was comprehensive.

2.3 Railway regulator and operator cost estimates

A series of standard cost estimates have been derived in consultation with regulators, operators and other industry professionals and applied within this CBA. They are summarised as follows:

- Amusement and hobby railways costs:
    - $2,000 to $5,000 per annum is the incremental cost to regulate an additional amusement or hobby railway
    - $25,000 to $70,000 is the one-off cost for an amusement or hobby railway to undertake accreditation, with $10,000 per annum in maintenance costs.
- Private siding registration costs:
    - 1350 is the estimated number of private sidings in Australia
    - $1,000 is the cost for a regulator to assess a private siding registration application
    - $10,000 to $20,000 is the cost to the operator to develop a private siding interface agreement.
- Exemption from accreditation costs (small, low risk and tourist and heritage operators):
    - $75,000 is the cost to apply for exemption from accreditation
    - $45,000 is the cost to apply for exemption from the safety management system
    - $20,000 is the cost to apply for exemption from components of the safety management system
    - $10,000 to $25,000 is the cost to the regulator to process an accreditation exemption application at the time of accreditation
    - $6,000 to $12,000 is the cost to the regulator to process an accreditation exemption application after accreditation.
- Safety management system costs:
    - $5,000 to undertake an internal review of the safety management system
    - $15,000 to employ an external consultant to undertake the review.
- Drug and alcohol management program costs:
    - $10,000 is the cost for small to medium operators to prepare a compliant drug and alcohol management program.
- Testing for drugs and alcohol costs:
    - $30 is the cost to the operator of a non-evidentiary standard test
    - $250 is the cost to the operator of an evidentiary standard test.

- Fatigue risk management hours of work and rest costs:
    - $15,000 is the cost to the Regulator to assess an application for exemption from the safety net
    - $50,000 to $100,000 is the cost to the operators to apply for exemption.

2.4 Additional references and data

Information concerning accredited rail transport operators has been taken from the Register of Accredited Railways in Australia (RARA) as at 1 July 2010.[60] There are 164 accredited rail transport operators listed on the RARA list at 1 July 2010.

Of the 164 accredited rail transport operators in Australia, 49 are principally accredited in New South Wales (see Table 1 of this appendix). This leaves 115 principally accredited outside New South Wales. Half of these are assumed to be tourist and heritage operators and five are assumed to be large operators. This leaves 53 small to medium sized rail transport operators. It is estimated that of the small to medium sized rail transport operators approximately 53 reside outside of New South Wales. This is significant in examining the impact of particular options where the current practice in New South Wales differs from that of other states and territories.

The Australian Bureau of Transport Statistics (ABS) data show 12 rail transport operators have over 200 staff.[61] This has been assumed as the number of large rail organisations. The remaining 152 rail organisations, from the same ABS data, are small to medium enterprises based on ABS classifications.

In addition, from the ABS data referred to above, which details entry and exit of organisations in the sector, 11 per cent of the total number of organisations were new entrants to the sector during the year. Those new entrants were all small to medium operators.

ATHRA reports that it has 76 members (2010). Of those, 65 were both rolling stock operators and rail infrastructure managers.

[60] RARA is available from the National Rail Safety Regulators' Panel[60] website http://www.rsrp.asn.au/.

[61] ABS 8165.0 Jun 2003 to Jun 2006 Counts of Australian Businesses, including Entries and Exits

3. Items with measurable impacts

3.1 Introductory comments

This section contains the evaluation of the measurable impact items. In total, approximately one hundred amendments have been proposed to the Model Bill. The majority are for drafting changes only and propose no change in policy; therefore, they are deemed to have no measurable impact.

The items with measurable impacts are:

- Railways to which the Act does not apply
- Private sidings exemption from accreditation
- Exemption framework
- Powers with respect to interfaces with parties whose operations may impact rail safety
- Duty for loading and unloading rolling stock
- Safety management system
- Health and fitness management program
- Drug and alcohol management
- Fatigue risk management
- Network rules
- Regulator to conduct cost-benefit analysis for mandatory safety decisions.

In the following sections each measurable item is discussed in turn and analysed with respect to economic costs and benefits as they accrue to regulators and rail transport operators, including rolling stock operators and rail infrastructure managers. The summary tables that follow the discussion of each measurable item set out the high and low set up costs and the high and low ongoing costs adopted in the analysis.

The CBA has relied largely upon survey responses and additional information provided by regulators and rail transport operators, which have been reviewed by independent rail safety and operations experts.

Throughout the document, and in line with standard industry practice, costs are presented as negative values, indicated by parentheses, and benefits and cost savings are shown as positive values.

3.2 Railways to which the Act does not apply

This item is addressed in Section 6.4.2 of the regulatory impact statement.

Section 6 of the Model Bill excludes application of the Bill to certain classes of railways.

The costs and benefits of the following options are assessed:

Part 1: Additional railways to be excluded from the National Law

Option 1.1

Status quo (no impact).

Option 1.2

To exclude from the National Law, in addition to those types of railways already prescribed in the Model Bill, railways used only by a horse-drawn tram, railways used only for a static display and hobby railways that do not operate on or cross, a road or road-related area within the meaning of the Australian Road Rules. A definition to be included for *hobby railways*, referring to a "*railway intended or used as a hobby, is operated on private property and is not operated for hire or reward, commercial operations or public participation by invitation or otherwise*".

Part 2: Amusement railways

Option 2.1

Status quo (no impact).

Option 2.2

Require amusement railways to comply with the National Law (i.e. delete section 6(e) of the Model Bill), but authorise the Regulator to exclude railways or classes of railways (e.g. by notice). This latter authority would permit the Regulator to exclude any and all types of railways (i.e. beyond just amusement railways) and substitute for the existing arrangement under which such exclusions may be granted by prescription in the Model Regulations (i.e. by deleting section 6(f) of the Model Bill). This option has not been assessed.

Option 2.3

As for Option 2.2, require amusement railways to comply with the National Law (i.e. delete section 6(e) of the Model Bill). However, exclusions for amusement railways may be granted by the existing process of prescribing them in the Model (now National) Regulations.

Option 2.4

Retain the exclusion for amusement railways, but to:

- amend the scope of the exclusion to railways that are amusement devices, but only those that do not operate on or cross a road or road-related area (within the meaning of the Australian Road Rules)
- define amusement devices as those used solely in an amusement park for hire or reward, or in the course of a commercial operation, and
- define amusement parks as commercially run enclosed grounds where amusements are situated.

The provision for excluding railways by the making of regulations would be retained. Additionally, a corollary provision for including, by the making of regulations, railways that were otherwise excluded under section 6 of the Model Bill would be introduced.

Proposal

Options 1.2 and 2.4 are proposed.

3.2.1 Economic costs

Regulator

Regulator survey responses have described a range of existing approaches to the management of amusement devices and hobby railways. This has had a significant impact on the perceived costs of the proposed options and the assessment of those railways to be included or excluded.

Option 1.2, which proposes to exclude additional types of railway (those used only by a horse-drawn tram, railways used only for a static display and hobby railways that do not operate on, or cross, a road), has minimal cost implications since a majority of such railways are already excluded from regulation. However, one survey respondent, currently regulating six operators that would be excluded under Option 1.2, estimated a cost saving of approximately $10,000 per operator per annum. Discussions with industry professionals have determined that the incremental cost saving of having one less operator to regulate is more likely to be in the range of $2,000 to $5,000 per operator per annum. The cost saving varies depending on the relative size and complexity of the operations and includes reduced administrative duties and a reduction in the requirement to undertake site visits. This represents an annual cost saving of between $0.01 and $0.03 million.

For Option 2.3, which requires amusement railways to comply unless an exclusion is prescribed in the regulations, it is estimated that it would cost a state-based regulator between $0.1 million and $0.2 million to assess the operators captured by the amended section and to identify appropriate exclusions. The cost includes hiring and training the additional staff required to undertake the assessments and exclude railways from coverage as appropriate. Ongoing maintenance costs have been assumed to be 10 per cent of the initial set up cost for each state or territory.

For Option 2.4, which proposes to further clarify and define those railways which are currently excluded, it is estimated that an additional cost of between $0.05 million and $0.1 million would be incurred by regulators to assess operators currently excluded and to identify additional inclusions. This cost estimate is lower than that for Option 2.3 since the rail transport operators to be reviewed would be more apparent and less in number.

Rail transport operators

Each of the options would impact only on tourist and heritage railways as detailed below. The proposal would not impact on any commercial operators, as has been confirmed by survey respondents.

Tourist and heritage rail transport operators

For Option 1.2 ATHRA consider that a small number of hobby railways would now be excluded. Moreover, if the hobby railway is currently accredited then the compliance cost of running a small, low risk, accredited railway is estimated at approximately $10,000 per annum (ATHRA). It is noted that this would in all likelihood be a material amount for the small hobby railway concerned.

ATHRA has identified that six tourist and heritage rail transport operators currently operating as amusement devices would be included as per the requirements of Option 2.3. All six operators would be required to undertake the full accreditation process at a high cost of $70,000 per accreditation and a low cost of $25,000. This estimate has been confirmed through consultation with industry experts. The ongoing maintenance cost of accreditation is assumed to be approximately $10,000 per annum, per operator as indicated by ATHRA. This is the time spent in ensuring the railway stays within the Act, including completing and maintaining proper documentation and records that would otherwise not be undertaken.

For Option 2.4, it is estimated that all of the six tourist and heritage rail transport operators mentioned above would need to be included. The total high cost estimate is therefore $0.42 million and the low cost estimate is $0.15 million. The associated high and low ongoing costs have been estimated at $0.06 million and $0.03 million respectively.

It is considered that these tourist and heritage operators could qualify for an exemption from some of the accreditation requirements under the new exemption section, and it has been estimated that the accreditation and ongoing costs would be lowered by roughly two thirds if exemptions were granted.

An application for exemption has been estimated to cost an operator $10,000. A requirement of the application would be the development of a business case detailing the reasons for the exemption. The Regulator would be required to review the business case and make a site visit for inspection and review. The low cost is assumed to be the same as the high cost. It has also been estimated to cost the Regulator a similar amount to assess the application.

3.2.2 Economic benefits

The intent of this amendment is to refine the existing classification of railways excluded by the regulations and to ensure that railways and operators are regulated by the most appropriate body according to the perceived riskiness of the operation.

Workplace Health and Safety Laws currently apply to all railways, including those not currently regulated by the Rail Safety Regulator. The inference is that the impact on safety of any changes such as those proposed above would be largely incremental in nature and it has therefore been estimated that any benefits, given their incremental nature of the proposals and the target group, would be small. Discussions with industry experts have indicated that, whilst factors impacting on the causes of minor incidents are likely to be equally well regulated by both Workplace Health and Safety and the Rail Safety Regulator, factors influencing more serious accidents would be better addressed by the Rail Safety Regulator.

Assuming that the additional six operators to be encompassed by the regulations, as per Options 2.3 and 2.4, each experience one serious accident every twenty years (or 0.5 accidents per operator during the course of the CBA ten year evaluation period), there is a potential saving of three accidents during the CBA evaluation period. The frequency of serious accidents, that is one every twenty years, has been adopted following advice from industry professionals and reflects the rarity of such events. However, it has not been possible to obtain data to support this assumption. It has been arbitrarily assumed for the purpose of this calculation that the revised regulations may prevent half of these accidents, since the proposed regulatory changes are unlikely to avoid all such accidents, at an average rail safety accident cost of $1.04 million the potential (high) safety benefit is $1.56 million or $0.16 million per annum, with a low benefit of zero.

3.2.3 Summary

The tables below provide a summary of the costs and benefits of Options 1.1, 1.2, 2.3 and 2.4. Option 2.2 has not been assessed.

Table 10. Railways to which the Act does not apply, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1.1	0	0	0	0	0	0
Option 1.2	0	0	0.03	0.01	0.21	0.08
Option 2.3	(1.20)	(0.60)	(0.12)	(0.06)	(2.04)	(1.02)
Option 2.4	(0.60)	(0.30)	(0.06)	(0.03)	(1.02)	(0.51)

Table 11. Railways to which the Act does not apply, tourist and heritage, consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1.1	0	0	0	0	0	0
Option1.2	0	0	0.03	0.01	0.21	0.08
Option2.3	(0.42)	(0.15)	(0.06)	(0.03)	(0.84)	(0.36)
Option2.4	(0.42)	(0.15)	(0.06)	(0.03)	(0.84)	(0.36)

Table 12. Railways to which the Act does not apply, economic benefits, $million ($2010)

	Benefit Per Annum		Present Value Cost	
	high	low	high	low
Option 1.1	0	0	0	0
Option 1.2	0	0	0	0
Option 2.3	0.16	0	1.12	0
Option 2.4	0.16	0	1.12	0

3.3 Private sidings exemption from accreditation

This item is addressed in Section 6.4.3 of the regulatory impact statement.

Section 56 of the Model Bill provides for rail infrastructure managers of private sidings to be exempted from having to be accredited.

The costs and benefits of the following options are assessed:

Option 1

Status quo (no impact).

Option 2

Amend section 56 of the Model Bill, as follows:

- Clarify that exemptions from accreditation apply to the operation of rail infrastructure (on private sidings) only, not rolling stock.

- Give the Regulator power to refuse to register a siding, or to suspend or cancel a registration, linked to an assessment that the operator will/does not adequately comply with safety duties.

- Require that private siding managers comply with Section 61 in relation to the management of all interfaces, generally, rather than just those with accredited railways, as is required by the Model Bill.

- Clarify that it is the siding manager who is to be registered, not the physical siding.

Also, amend Model Regulation 11 (Maintenance and operational conditions) to better align with the risk management principles proposed to be included in Section 57 - Safety Management System (SMS). Those principles are proposed to be drawn from Schedule 3 (*Matters and Information to be Contained in a SMS of a Non-Accredited Rail Operator*) of the Victorian Rail Safety Regulations.

Proposal

Option 2 is proposed.

3.3.1 Economic costs

Regulator

Regulator survey responses have indicated that the average cost to assess and review a private siding registration application is approximately $1,000. This setup cost encompasses the initial assessment, documentation, internal training, peer review and time spent on coordination. Furthermore, there is an ongoing cost to the Regulator associated with each registration. The ongoing cost generally comprises items such as, random (desktop) audits, regular reviews and changes of ownership amendments and has been estimated at approximately $500 per registration.

Most regulators indicated that under Option 2, the administrative burden would be vastly reduced. In most states and territories rail infrastructure managers own more than one private siding and this would significantly reduce the number of registration applications submitted to the Regulator for processing. It is estimated that if rail infrastructure managers were required to register the physical infrastructure then the cost burden to assess and review all applications would be approximately $1.35 million. This figure was based on a combination of two factors, being 1) the total estimated number of private sidings across all states and territories, and, 2) the average estimated cost to assess and review a private siding application.

The total number of private sidings is estimated to be approximately 1,350.[62]

Total initial implementation cost under Option 2 was estimated to be approximately $0.46 million. This cost estimate has been based on a combination of two factors, being 1) the estimated number of private siding infrastructure managers across all states and territories, and 2) the average estimated cost to assess and review a private siding application. The difference between the total cost of Option 2 ($0.46 million) and Option 1 ($1.35 million) translates to a cost saving of $0.89 million. A more conservative low estimate of $0.45 million has been assumed.

[62] It has not been possible to obtain full information about the number of private sidings in each state. Missing data have therefore been estimated using statistics for comparable states.

These estimates have been derived largely from regulator survey responses and verified through consultation with industry professionals.

Several regulators noted that there would be an additional ongoing cost saving since they would not be required to process as many activity statements, as fewer activity statements would be lodged each year. Conversely, it is recognised that there would be additional costs associated with ongoing monitoring and auditing as a result of the extension of requirements for interface agreements. The net effect of the two opposing cost streams has been estimated to be an annual cost saving of low $0.17 million and high of $0.33 million. The additional ongoing costs associated with the extension of requirements for interface agreements are substantially lower than the potential savings from not having to register each physical private siding.

Rail transport operators

Under Option 2, and for the purpose of this cost and benefit analysis, it is assumed that every private siding road interface would require the preparation of an interface agreement.

Operator survey responses have indicated that additional costs would be incurred with the implementation of Option 2. Several rail infrastructure managers with private sidings indicated that the cost to enter into an interface agreement with a road manager is between approximately $10,000 and $20,000 depending on the complexity of the site. These costs include site visits, stakeholder correspondence and meetings, and preparation of documentation. For more complex sites the agreement process is likely to involve a greater number of stakeholders and more protracted process to form the agreement. To enable the estimation of the implementation costs for rail infrastructure managers, the following assumptions have been made:

- total number of interface agreements required (226) equals to the total number of cross roads; and
- cost per interface agreement is in the vicinity of $10,000 and $20,000[63]

Taking into account both the cost of an interface agreement and the number of interface agreements required, it has been estimated that the total cost would be in the range of $2.26 million and $4.52 million for all rail infrastructure managers across all states and territories.

Furthermore, for the rail infrastructure managers who own multiple private sidings, it has been estimated that a total saving (in not having to prepare multiple registration applications) would be in the range of $0.45 million and $0.89 million. Given a lack of information to the contrary, the costs of registration for a rail infrastructure manager have been assumed to be the same as for the Regulator. The evidence presented in the surveys and through industry consultation suggests the most likely costs would fall within this range.

Tourist and heritage rail transport operators

ATHRA noted that there is only one heritage rail transport operator known to be currently operating a private siding with a roadway crossing. Variable estimates of the costs to prepare and finalise an interface agreement have been provided including an estimate from ATHRA, which suggested the cost could be in the range of $50,000 to $30,000.For the purpose of the CBA a uniform cost of between $10,000 and $20,000 has been estimated for commercial and tourist and heritage operators.

[63] Amount estimated through industry consultation.

3.3.2 Economic benefits

The intent of the proposed amendment is to provide greater clarity around the management of private siding infrastructure with the principal anticipated benefits being in the extension of the requirement for interface coordination agreements which would represent an improvement in safety.

In particular it was indicated that there are many large private sidings involved in mining operations that have more complex road and bridge crossings, which present additional risks. In such situations, having an interface agreement in place would reduce the risk of an accident occurring and it is considered that the requirement for formal interface agreements would necessarily improve safety by reducing the risk of accidents.

Generally, the extension of the scope for forming interface coordination agreements is likely to improve safety conditions. Whilst survey respondents suggested there would be no or minimal material difference in safety benefits between the options, experience indicates that the existence of such agreements necessitates a more systematic and considered approach to safety.

Although there are no accident data specifically pertaining to private sidings and associated interfaces, rail safety expert advice has indicated that the proposed change could reduce the number of accidents involving private siding interfaces.

Assuming the proposed amendment avoids just one accident per annum, given the average rail safety accident cost including level crossing accidents involving motor vehicles (see Table 8 of this appendix); this is a benefit of $1.14 million per year. The average accident cost applied in this benefit assessment is a simplification but is considered representative of the possible accident savings.

The pessimistic assessment assumes there are no accident savings.

3.3.3 Summary

The tables below provide a summary of the costs and benefits of Option 1 and Option 2.

Table 13. Private sidings exemption from accreditation, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0.89	0.45	0.33	0.17	4.03	1.62

Table 14. Private sidings exemption from accreditation, operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(3.63)	(1.81)	0	0	(3.63)	(1.81)

Table 15. Private sidings exemption from accreditation, tourist and heritage consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.02)	(0.01)	0	0	(0.02)	(0.01)

Table 16. Private sidings exemption from accreditation, economic benefit, $million ($2010)

	Benefit Per Annum		Present Value Benefit	
	high	low	high	low
Option 1	0	0	0	0
Option 2	1.14	0	8.01	0

3.4 Exemption framework

This item is addressed in Section 6.4.4 of the regulatory impact statement.

There are no provisions for regulators to exempt rail transport operators from any provisions of the Model Bill.

The costs and benefits of the following options are assessed:

Option 1

Status quo; rail transport operators would be required to comply in full with all applicable provisions of the draft National Law (no impact).

Option 2

Adopt a framework for granting rail transport operators exemption to provisions of the National Law, including short-term ministerial exemptions from all or part of the draft National Law and Regulator-granted exemptions from all or part of the following provisions upon application:

- Accreditation (Part 3 Division 4)
- Registration of rail infrastructure managers of private sidings (Part 3 Division 5)
- The following elements of a safety management system: fatigue risk management program, drug and alcohol management program, security management plan, health and fitness management program or an emergency management program.

Proposal

Option 2 is proposed.

3.4.1 Economic costs

Option 2 is focussed largely on low risk rail transport operators and in particular tourist and heritage operators.

Regulator

The intention of Option 2 is to reduce the regulatory compliance burden on railways being operated in low risk environments. There are three key factors to be considered:

- the likely number of exemption applicants
- the types of exemption that would be the subject of the applications (i.e. exemption from accreditation, full safety management system exemption, or partial safety management system exemption), and
- the proportion of applicants that are already accredited and are seeking exemption from ongoing compliance, and the proportion of applicants that require accreditation and are seeking exemption from both accreditation (or specific components of accreditation) and the associated ongoing compliance.

Regulators provided a range of estimates of the costs to assess exemption applications. It is expected that the cost to process an application from a tourist and heritage operator would be between $10,000 and $25,000 for an application at the time of accreditation, and between $6,000 and $12,000 for an application after accreditation. The reason the costs differ is that the Regulator would be expected to be more familiar with the safety management system of an operator who is already accredited and may thus incur lower administrative costs in assessing the application. The ongoing savings to the Regulator from the reduced clerical workload have been estimated at 10 per cent of these costs.

Regulators have estimated that the number of applicants would be approximately 20 per cent of accredited organisations in the first year and approximately 10 per cent each year thereafter. The latter includes an allowance for turnover of operators within the industry. Of the anticipated applications, regulators expect roughly half of the applicants to apply for exemption from accreditation, a quarter to apply for exemption from the safety management system and a quarter to apply for exemption from components of the safety management system (e.g. drug and alcohol or fatigue).

It is anticipated that in the first year 75 per cent of operators applying for exemption would already be accredited. In subsequent years it is estimated that the proportion of accredited operators applying for exemption would decline to approximately 40 per cent. These figures have been provided by regulators based on their own understanding and consultations with operators.

Given the estimated cost to process exemption applications and the likely number and type of application applied for it has been estimated that Option 2 would result in a cost to the Regulator of high $0.60 million initially and a recurrent cost of $0.33 million. The equivalent low cost estimate is $0.26 million initial cost and $0.11 million per annum ongoing cost.

Rail transport operators

Small, low risk commercial and tourist and heritage

Survey respondents have alluded to the difficulty in identifying those operators that require and are eligible for exemption. It is expected that some of the smaller low risk operators would apply and be granted exemptions. Based on information provided by ATHRA, and verified through industry consultation, the average saving per small commercial or tourist and heritage**,** low risk operator would be as follows:

- Approximately $0.07 million for exemption from accreditation
- Approximately $0.045 million for exemption from the safety management system, and

- Approximately $0.02 million for exemption from components of the safety management system.

These cost savings are offset against the cost of the application for exemption, which would cost a small, low risk operator about 20 per cent of the expected exemption savings. This covers the additional administrative effort required to complete the application. Ongoing savings from the reduced compliance cost are estimated at 10 per cent of the initial cost.

It is anticipated that operators applying for exemption would be low risk and would have an established alternative risk management arrangements in place if required.

3.4.2 Economic benefits

The economic benefits generated by this amendment have been assessed as zero. The proposal (Option 2) is focused on maintaining safety benefits while reducing compliance costs for approved low risk rail transport operators. Accordingly, the current safety benefits are expected to be maintained at a lower cost.

3.4.3 Summary

The tables below provide a summary of the costs of Option 1 and Option 2. The economic benefits have been assessed as zero.

Table 17. Exemption framework, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.60)	(0.26)	(0.33)	(0.11)	(2.93)	(1.03)

Table 18. Exemptions framework, small, low risk commercial and tourist and heritage operators consolidated cost, $million

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	1.57	0.30	0.67	0.11	6.28	1.05

3.5 Powers for interfaces with parties whose operations may impact rail safety

This item is addressed in Section 6.4.5 of the regulatory impact statement.

The Model Bill does not provide any explicit requirements with respect to the regulation of third parties, or provisions for rail transport operators and third parties to collaborate with respect to the safety of their works in the vicinity of rail infrastructure.

The costs and benefits of the following options have been assessed:

Option 1

Status quo (no impact).

Option 2

Require that a person may not carry out works near a railway that are likely to threaten the safety or integrity of the railway operations, without prior consent of the relevant rail infrastructure manager or the Regulator.

The Regulator may also:

- direct persons who are or have proposed to undertake works that he or she believes are likely to threaten the safety or integrity of railway operations to cease or alter the work
- direct a rail transport operator who is or has proposed to undertake operations that are likely to threaten the safety of utility infrastructure or works, or safe provision of utility services, to cease or alter the operations.

Proposal

Option 2 is proposed.

3.5.1 Economic costs

Regulator

It is assumed that the Regulator would not be required to approve or monitor all rail works near utilities and utility works near rail and would not be required to manage a database of approved contractors or approved personnel, which would require maintenance of appropriate records. This appears to be the responsibility of the given rail infrastructure manager. It assumes that the Regulator would act if necessary on request by a rail transport operator or utility.

A majority of survey responses indicated that additional costs incurred would be minimal. However, one regulator estimated that this could cost approximately $0.20 million in set up costs (or $28,000 per annum for each of the seven states and territories). The $28,000 estimate includes the cost of a training consultant for ten days at $2,000 per day, followed by two training sessions, each lasting two days. The ongoing costs would be $4,000 per regulator per annum for training and education plus staff time at $24,000 to administer the provision. Following a review and consideration of other survey responses, this estimate has been determined to be at the high end of the cost scale. Consultation with other regulators has indicated there would be little or no additional cost in complying with Option 2. A low estimate of zero has therefore been assumed since it is possible the requirement could be met through use of existing resources.

Rail transport operators

The cost impact on rail infrastructure managers, in terms of increased administrative burden, arising from the proposed amendment is likely to be minimal. A majority of rail infrastructure managers already have established systems in place for dealing with third party works and these are actively managed. Operators surveyed thus believed that the cost of this was minimal.

Conversely, operators are also required to consult with utilities before undertaking operations that may interfere with their infrastructure. The additional costs of consultation have been assessed as negligible and are likely to be offset by the resultant safety benefits.

Tourist and heritage rail transport operators

ATHRA expressed that Option 2 was an important addition to the National Law as it was an issue for its members. However, it was considered that the proposed changes would have a negligible impact on the cost of compliance.

3.5.2 Economic benefits

It is assumed that this power would be exercised rarely although it would be exercised in circumstances where there could be a potentially serious accident or delays caused to the rail network. It is assumed that one significant accident every two years could be mitigated, representing a high safety benefit of approximately $0.52 million per annum. The low benefit would be no benefit at all.

3.5.3 Summary

The tables below provide a summary of costs and benefits for Option 1 and Option 2.

Table 19. Powers for interfaces with parties whose operations may impact rail safety, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Costs	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.20)	0	(0.20)	0	(1.60)	0

Table 20. Powers for interfaces with parties whose operations may impact rail safety, economic benefit, $million ($2010)

	Benefit Per Annum		Present Value Benefits	
	high	low	high	low
Option 1	0	0	0	0
Option 2	0.52	0	3.65	0

3.6 Duty for loading and unloading rolling stock

This item is addressed in Section 6.4.6 of the regulatory impact statement.

As the loading and unloading of rolling stock does not fall within the Model Bill's definition of rail safety work, the loading and unloading of rolling stock currently has no rail safety duties applied with respect to this activity.

The costs and benefits of the following options are assessed:

Option 1

Status quo (no impact).

Option 2

Extend the definition of rail safety work to cover loading and unloading of rolling stock.

Option 3

Introduce a duty for parties who load or unload goods on or off rolling stock to ensure, so far as is reasonably practicable, that such operations were carried out safely.

Proposal

Option 3 is proposed.

3.6.1 Economic costs

Regulator

Under Option 2, inclusion of loading and unloading rolling stock within the definition of rail safety work would broaden the field of rail safety workers that the Regulator may need to examine, for example, as part of any enquiry or audit involving the management of rail safety worker issues (e.g. drug and alcohol, fatigue management and competency). Option 2 has the potential to encompass a considerable number of workers and places of loading and unloading. It was noted by industry analysts that the ratio of loaders to rail safety workers at some freight sites could be as high as 100 to one. More frequently the ratio would be in the region of four or five loaders to one rail safety worker.

Survey respondents estimated that Option 2 would impose an additional cost of approximately $1.00 million per annum. This figure, which has been adopted as the high cost estimate, includes components of staff training, regular audits, investigations and ongoing monitoring costs, and has been extrapolated to reflect potential costs nationally. The total high ongoing cost estimate for all states and territories is approximately $7.00 million. A more conservative low estimate of $3.50 million has been assumed.

Option 3, which introduces a new duty for parties loading and unloading rolling stock to ensure that it is carried out safely, would impose a minor additional cost to the Regulator. It is estimated that the additional cost would be approximately $10,000 per annum to provide education, training and guidance to freight operators in relation to the duty of care for workers engaged in loading and unloading of rolling stock. Industry research indicates that there are approximately 18 active freight operators (10 small to medium and 8 large) across all states and territories. Expanding the cost estimate per operator ($10,000) by the number of operators affected (18) gives a total additional cost of approximately $0.18 million per annum under Option 3. The initial setup cost, which includes Regulator staff training in duty of care responsibilities, has been estimated to be between $0.05 million and $0.10 million based on information supplied by survey responses and through industry consultation.

The costs to the Regulator of Option 3 would be lower than that for Option 2 since the Regulator would not be required to monitor compliance with other duties associated with being categorised as rail safety workers.

Rail transport operators

With Option 2, operator survey results indicate that to extend the definition of rail safety work to cover loading and unloading of rolling stock would impose an additional cost of $0.40 million for small to medium rail transport operators and $0.80 million to all large rail transport operators. This additional cost comprises such items as medicals, drug and alcohol testing, fatigue management and in house training. Expanding the cost estimate by the number of freight operators gives an additional total cost of $10.40 million per annum over the evaluation period. The figure is considered to be slightly conservative since the survey respondents were not representative of all freight operators, and excluded some operators that could incur more significant costs due to the volume of loading and unloading activities

undertaken, such as grain companies for example. Allowing for this, a high cost estimate of approximately $20.80 million per annum has been estimated.

For Option 3, operator survey results indicate that the introduction of a duty for loading and unloading of rolling stock to ensure, so far as is reasonably practicable, that such operations are carried out safely, would impose no additional cost. The reason being that under Option 3, the activity would continue to be bound by their obligations under the General (Rail) Safety Duties and is not likely to require amendments to current practices. The impact of Option 3 is thus to more evenly distribute the responsibility for safety by applying a similar requirement on other parties involved in the loading and unloading of rolling stock.

Tourist and heritage rail transport operators

Under Option 2, ATHRA has indicated that roughly half of the 82 tourist and heritage operators would incur additional costs of approximately $3,000 per annum. It is estimated that the total cost would be in the range of $0.05 million and $0.11 million. This estimate includes all costs associated with qualifying and maintaining registration as a rail safety worker, including medical tests, competence checking, coordination and administrative tasks for the operator such as contractor reimbursement and documentation.

ATHRA indicated that there would be no costs associated with the implementation of Option 3.

3.6.2 Economic benefits

It is assumed that the benefits of Options 2 and 3 would be similar.

It has been estimated based on industry consultation that there are approximately 14 train derailments per annum[64] across all states and territories that are directly attributable to the mishandling of loading and unloading of rolling stock. The cost of such accidents has been estimated to be in the range of $0.25 million to $20 million per accident. Due to the large spread, the average rail accident cost of $1.04 million (see Table 7 of this appendix), which allows for a higher frequency of lower cost derailments, has been assumed as the cost per accident. This gives a total cost of derailment accidents directly attributable to the loading and unloading of rolling stock of $14.56 million per annum.

To derive a potential safety benefit it has been estimated that the proposed options would have the effect of reducing those accidents attributable to the mishandling of loading and unloading of rolling stock by between five per cent and ten per cent.

This gives a safety benefit in the range of $0.73 million and $1.46 million per annum.

3.6.3 Summary

The tables below provide a summary of the costs and benefits of Options 1, 2 and 3.

[64] This is the equivalent of approximately ten per cent of total running line derailments based on the published 2010 figures (ATSB, 2011).

Table 21. Duty for loading and unloading rolling stock, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	(7.00)	(3.50)	(49.17)	(24.58)
Option 3	(0.10)	(0.05)	(0.36)	(0.18)	(2.63)	(1.31)

Table 22. Duty for loading and unloading rolling stock, operator consolidated costs, $million

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	(20.80)	(10.40)	(146.09)	(73.05)
Option 3	0	0	0	0	0	0

Table 23. Duty for loading and unloading rolling stock, tourist and heritage consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	(0.11)	(0.05)	(0.76)	(0.38)
Option 3	0	0	0	0	0	0

Table 24. Duty for loading and unloading rolling stock, economic benefit, $million ($2010)

	Benefit Per Annum		Present Value Benefit	
	high	low	high	low
Option 1	0	0	0	0
Option 2	1.46	0.73	10.23	5.11
Option 3	1.46	0.73	10.23	5.11

3.7 Safety management system

This item is addressed in Section 6.5.1 of the regulatory impact statement.

Section 57 of the Model Bill and Model Regulation 10 require that rail transport operators develop a safety management system for their accredited railway operations. While the Model Regulations prescribe a range of content that must be included in a safety management system, they do not extend to addressing risk management principles (i.e. the guiding principles or steps that outline the decision making process or mechanics of how safety risks are to be addressed). Model Regulation 10 is silent on this matter, with a drafting note having reserved this provision for future development.

The costs and benefits of the following options are assessed:

Option 1

Status quo; this option would continue the Model Bill arrangement under which rail transport operators would develop a safety management system using self-determined principles (no impact).

Option 2

Prescribe risk management principles, including:

1. Risk identification

2. Risk assessment

3. Risk control

Proposal

Option 2 is proposed.

3.7.1 Economic costs

Regulator

Option 2 is considered to be cost effective in that it provides small to medium organisations a framework from which to work. These efficiency gains should result in fewer requirements for the Regulator to educate and provide guidance on requirements to small and medium rail transport operators.

However, in order to comply with the new requirements, it is estimated that half of the 152 small to medium rail transport operators could need assistance with reviewing their safety management system. Assumptions have been made that the large rail transport operators would not need assistance with the new requirements. It is estimated that the costs are likely to comprise:

- guidance material at a cost of $30,000
- incremental education and assistance plus evaluation of the reworked Safety management system estimated to be low $1,000 (1 day) and high $2,000 (2 days) per organisation.

This is an implementation cost to the Regulator of between low $0.11 million and high $0.18 million.

Rail transport operators

Large operators

The large rail transport operators consider that Option 2 would result in little or no additional costs. This is because a majority of operators already comply with the Safety Management System requirements of Option 2 under the General Safety Duties provisions of the Model Bill. Accordingly, for large rail transport operators the high and low costs are zero.

Small and Medium Operators

Small and medium sized rail transport operators have been divided into two separate categories. Several respondents indicated that Option 2 could result in the requirement to modify or completely revise their existing safety management system. However, other rail

transport operators indicated that they already comply with the requirements and that Option 2 would not lead to any additional costs. It is therefore assessed that approximately 50 per cent of small and medium operators would incur costs and that those costs would be between $5,000 and $15,000 per operator. The low $5,000 estimate is the approximate cost to undertake an internal review, whereas the high $15,000 estimate is the cost to employ an external consultant for three weeks at a rate of $1,000 per day.

Applying the cost estimates of $15,000 and $5,000 to the number of affected operators gives a total cost of high $0.55 million and low $0.18 million.

Tourist and heritage rail transport operators

ATHRA reported the cost of a review to be approximately $5,000 per organisation and observed that half of their membership of 76 rail transport operators would need to review their safety management system. A cost of $5,000 has been assumed for the review of a safety management system under Option 2.

Following further discussion with ATHRA, it has been estimated that for larger tourist and heritage operators (15 in total) the review cost would be approximately $15,000. This figure has been confirmed through independent review. The $15,000 is the estimated cost of an external consultant for three weeks. ATHRA also revealed that another 23 medium size members would need a review costing $10,000; the cost of an external consultant for two weeks. The resultant estimated high cost is $0.46 million. The ongoing costs are estimated as 10 per cent of the initial review costs.

3.7.2 Economic benefits

The economic benefits have been discussed with a selection of regulators and operators. One regulator noted (from direct experience with the inclusion of risk management principles in their legislation) that there are clear safety benefits as well as savings from having such principles articulated in legislation. It provides a common basis for undertaking compliance/enforcement activities and directing regulatory conversations. The absence of such principles would incur costs in attempting to clarify the principles expected by the Regulator, and work through deviations from these principles by industry.

The potential for safety benefits was supported in part by operator responses, with one such response indicating that the safety impact under Option 2 would be significant due to reduced likelihood of accidents.

There is no evidence on which to base an estimate of the likely decline in probability of an accident. The documents available online on this subject in Australia, UK (RSSB), USA (Federal Rail Administration), EU (ERA) and OECD (OECD and International Transport Forum) have been reviewed. The conclusion from this exercise, and in the absence of additional information, was that a decline in probability of 0.1 per cent is considered adequate.

Given the projected 300 accidents in 2010 (see Table 8 of this appendix), and the assumption that this figure will remain steady over the forecast period, a decline in probability of 0.1 per cent produces a safety benefit of $0.31 million per annum. The low estimate is half of this, being a safety benefit of $0.16 million.

3.7.3 Summary

The tables below provide a summary of the costs and benefits of Options 1 and Option 2.

Table 25. Safety management system, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.18)	(0.11)	(0.02)	(0.01)	(0.31)	(0.18)

Table 26. Safety management system, operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.50)	(0.17)	(0.05)	(0.02)	(0.86)	(0.29)

Table 27. Safety management system, tourist and heritage consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.49)	(0.21)	(0.05)	(0.02)	(0.83)	(0.35)

Table 28. Safety management system, economic benefit, $million ($2010)

	Benefit Per Annum		Present Value Benefit	
	high	low	high	low
Option 1	0	0	0	0
Option 2	0.31	0.16	2.19	1.09

3.8 Health and fitness management program

This item is addressed in Section 6.5.2 of the regulatory impact statement.

Section 64 of the Model Bill and Regulation 22 of the Model Regulations require that a rail transport operator must develop and implement a health and fitness program for rail safety workers. The program must, so far as is reasonably practicable, comply with Volumes 1 and 2 of the National Standard for Health Assessment of Rail Safety Workers, published by the National Transport Commission.

The costs and benefits of the following options are assessed:

Option 1

Status quo (no impact).

Option 2

Remove the 'so far as is reasonably practicable' qualification from Model regulation 22.

Proposal

Option 2 is proposed.

3.8.1 Economic costs

Regulator

It is anticipated that there be no impact of maintaining the status quo (Option 1). However, in implementing a single national rail safety Regulator, one regulator noted that under Option 1 it may be necessary to establish a medical panel, at a cost of $0.33 million per annum, to determine whether alternative health and fitness programs meet the requirements.

Since Option 1 represents the base case situation this cost estimate has been treated as a saving in implementing Option 2.

It has been assessed that there would be no additional costs incurred by adopting Option 2. However, relevant to Option 1 there is a potential saving of approximately $0.33 million per annum should it be necessary to establish a medical panel. Thus savings of high $0.33 million and a low of zero have been applied.

Rail transport operators

Large operators

A majority of large operators already comply with the National Standard, implying no additional cost for these operators. Survey responses demonstrated that some of the largest operators in Australia base their health and fitness program on the National Standard but use an alternative approach in some areas.

In order to fully capture the compliance costs to the large operators it is necessary to capture operator costs and the costs incurred by their contractors or by the operator on behalf of their contractors. From the survey, the large operators estimated an initial cost of $0.15 million to move to full compliance with the National Standard with an additional $0.1 million for their contractors. The ongoing costs have been estimated at 12.5 per cent of the initial move to full compliance. The low cost estimate is zero as these operators are currently judged compliant. Thus the high estimate per operator is $0.25 million, which assumes that each operator would incur initial costs of $0.15 million and they and/or their contractors would incur additional costs of $0.1 million. Ongoing costs have been estimated at approximately $15,000 per annum. The low estimate is zero for both initial and ongoing costs.

Based on survey responses it has been assumed that one third of the 12 large operators would incur the additional costs. Accordingly, high costs would be $1.00 million initially with $0.11 million ongoing. The low estimate is zero for both initial and ongoing costs.

Small and medium operators

Under Option 2 the commercial small to medium operators would also incur costs. They average in employee size up to 20 per cent of the employee size of the large operators. It is assumed the high costs would be 10 per cent of the $0.25 million cost per large operator, which is $25,000 per small to medium operator. The low estimate is zero as these operators are currently judged compliant. It is assumed that the ongoing costs would be 20 per cent of the one off costs. This percentage is higher than the ongoing costs percentage (12.5 per cent) for large operators. However, it is considered that there are economies of scale for the larger operators. It is assumed that only 10 per cent of commercial small to medium operators would need to incur additional costs.

These estimates flow from a consideration that most commercial small to medium operators would follow the standard; most operators (70 per cent) are in states or territories where compliance with the standard is mandatory, and most do have a person responsible for compliance. Moreover, while large operators have the depth, skills and experience to vary from the National Standard, the commercial small to medium operators may not have the requisite skills and may not be granted any leeway by the Regulator.

It is estimated that 10 per cent of commercial small to medium operators may not comply. This leads to a high cost estimate of $0.19 million initially and $0.05 million ongoing, and a low cost estimate of zero for both initial and ongoing costs.

Tourist and heritage rail transport operators

Many tourist and heritage rail transport operators currently use the 'so far as is reasonably practicable' qualification to specifically avoid compliance activity for certain tasks of their rail safety workers, such as fire protection clearing. They schedule such work when the trains are not running. Should the new single national Regulator concur with the tourist and heritage operators' interpretation of the requirements then the compliance costs become zero for both inception and ongoing.

If the new Regulator interprets the requirements differently than ATHRA estimates that extending coverage to all those working around the railway (whether trains are running or not) would cost the average operator approximately $15,000 per operator. ATHRA has indicated that the ongoing costs would be 12.5 per cent of these costs and that these costs would apply to the 65 tourist and heritage operators who own their own infrastructure. It is assumed that any tourist or heritage operator using shared rail infrastructure would already meet the standard required by the relevant rail infrastructure manager. This implies a high cost of $0.98 million, with $0.12 million ongoing, and the low costs have been assumed to be zero.

3.8.2 Economic benefits

The accidents this clause seeks to avoid are infrequent events with significant consequences. As such, it is impractical to robustly demonstrate safety benefits using the accident data available. The documents available on this subject in Australia, UK (RSSB), USA (Federal Rail Administration), EU (ERA) and OECD (OECD and International Transport Forum) have all been considered.

The importance of health and fitness and the use of the National Standard is demonstrated, for example, by the Waterfall (2003, NSW) and Footscray (2001, VIC) accidents where health and fitness were identified as causative factors. The Waterfall Special Commission of Inquiry recommended that rail transport operators have an absolute requirement to comply with The National Standard for Health Assessment for Rail Safety Workers. This accident is evidence of past failure by industry to adequately manage the associated health and fitness risks.

There is no readily available information on the economic cost of the Waterfall accident or of its ramifications. However, based on a statistical value of life approach (see 2.1 of this appendix) the value of life of the seven people who were killed has been used as an estimate of economic cost.

This is conservative as there has been no allowance for injury or the time spent in inquiries, etc. and gives the cost of the accident in 2010 dollars as $27 million. Over the ten year evaluation period, it has been estimated that the legislation could lead to a decline in probability of such accidents of 1 per cent and has a resultant safety benefit of $0.27 million per annum. The low estimate is half of this, being a safety benefit of approximately $0.13 million per annum. The assumption of a 1 per cent reduction has been adopted to reflect the

likelihood that the proposed changes would reduce the frequency of such events and to allow for the fact that other factors, in addition to health and safety, were influential in the Waterfall accident.

An alternative perspective is that if the adoption of Option 2 results in one major rail accident being avoided over the ten year evaluation period then the discounted safety benefit is between $14 million and $27 million.

3.8.3 Summary

The tables below provide a summary of the costs and benefits of Options 1 and Option 2.

Table 29. Health and fitness, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0.33	0	0.33	0	2.65	0

Table 30. Health and fitness, operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(1.18)	0	(0.10)	0	(1.89)	0

Table 31. Health and fitness, tourist and heritage consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.98)	0	(0.12)	0	(1.83)	0

Table 32. Health and fitness, economic benefit, $million ($2010)

	Benefit Per Annum		Present Value Benefit	
	high	low	high	low
Option 1	0	0	0	0
Option 2	0.27	0.13	1.89	0.94

3.9 Drug and alcohol management program

This item is addressed in Section 6.5.3 of the regulatory impact statement.

Section 65 of the Model Bill requires rail transport operators to prepare and implement a drug and alcohol management program for rail safety workers, as a mandatory element of the safety management system. However, the Model Regulations are silent on the specific requirements for such a program and allowed for local variations (intended as an interim arrangement until national agreement was reached).

The costs and benefits of the following options for the requirements of a drug and alcohol management program are assessed:

Option 1

Status quo; maintain local variations (no impact).

Option 2

No elements are prescribed in regulations.

Option 3

Considerations and mandatory elements, as per Regulation 29 of the draft National Regulations, are prescribed in regulations.

Option 4

Only the mandatory elements included in Regulation 29 of the draft National Regulations are prescribed; considerations are not prescribed in regulations.

Proposal

Option 3 is proposed.

3.9.1 Economic costs

Regulator

All operators currently have a compliant drug and alcohol management program under the Model Law (local variations).

For Option 2, which would require a drug and alcohol management program to be developed as part of the safety management system but with no prescribed elements, one regulator estimated that there would be a need to hire an additional resource to cope with the additional work of assessing compliance of a drug and alcohol management program that does not follow a prescription. Combined with the normal corporate overheads, it is estimated that an additional $0.14 million per annum would be required as an ongoing cost. The remaining regulators suggested that any additional costs would be minimal. It is noted, however, that the cost implications will depend upon the interpretation of the law by the Regulator, which may exercise discretion in the implementation of this option. Depending on interpretation, this option may yield the same outcome as Option 3 or Option 4, which have prescribed elements. Thus the high costs have been assumed to be the same as for Option 3 and Option 4, described below, and the low cost is zero.

With Option 3, it was generally perceived by Regulators that prescribing some of the mandatory requirements in the regulations could make the law easier to enforce. However, no indication was given of the potential ongoing savings, and it has been assessed that such savings would be marginal.

The Regulator is likely to incur additional one-off costs to assist in ensuring that operators, excluding New South Wales, have a drug and alcohol management program that is compliant with the prescription.

From survey responses and consultation with the industry is has been estimated that Option 3 could lead to an additional setup cost (education, training, administration systems costs) of between $4,000 and $5,000 per operator. Multiplying the cost estimate by the number of operators, excluding operators in New South Wales where drug and alcohol management program is currently prescribed, derives a total setup cost of low $0.45 million and high

$0.56 million. Consultation with industry and interpretation of the survey responses suggest that the ongoing cost the Regulator would be minimal and accordingly a zero value has been assigned to the recurrent cost.

In general regulators considered that the administrative costs of Option 4 would not be materially different to the costs of Option 3. Accordingly, the costs for Options 3 and 4 have been assumed to be the same.

Rail transport operators

Since Option 2 may be open to interpretation by the Regulator, it is difficult to estimate the particular costs of this option. Consequently, it has been assumed that the high costs may be similar to that of Option 3 and Option 4, described below, and the potential low cost estimate has been assessed as zero.

All large operators expressed the view that the preparation, process and content of the drug and alcohol management program would not change under either Option 2 or Option 3. In fact, most indicated that no additional cost would be incurred by adopting either option. Accordingly, no material incremental costs have been allowed for large rail transport operators for either option.

Survey responses and industry consultation suggest that small to medium sized rail operators would incur an additional cost as a result of the proposed changes under Option 3. The assumptions used to derive the figures are:

- Small to medium sized operators would require $10,000 to prepare a compliant drug and alcohol management program. The figure was estimated through discussions with stakeholders and a rail safety expert.
- It has been estimated that there are 53 small to medium sized rail operators reside outside of New South Wales (see 2.4 of this appendix). Operators in New South Wales are currently following a prescribed approach and have therefore been excluded from the calculation.

By expanding the drug and alcohol management program preparation costs by the number of small to medium rail operators affected (53), it is estimated that total costs up to $0.53 million would be incurred with the adoption of Option 3. The low cost is half this amount $0.27 million. These additional costs relate to the refinement of the drug and alcohol management program, use of a consultant, internal costs and the ongoing communication costs with the Regulator.

Industry consultation and survey responses indicated that the 53 small to medium sized rail operators would need to spend approximately an additional $1,000 per year to comply with the new requirements, which translates into a total annual recurrent cost of $0.05 million. The low cost is 80 per cent of this amount which is a total annual recurrent cost of $0.04 million.

This cost would be for help and advice on the implementation of their drug and alcohol management program.

In general, operators considered that the administrative costs for Option 4 would not be materially different to the cost of Option 3. Accordingly, the cost for Option 3 is also taken as the cost for Option 4.

Tourist and heritage rail transport operators

Since Option 2 may be open to interpretation by the Regulator, it is difficult to estimate the particular costs of this option. Consequently, it has been assumed that the high costs may

be similar to that of Option 3 and Option 4, described below, and the potential low cost estimate has been assessed as zero.

For Option 3, ATHRA has indicated that all of their membership of 76 would be required to review their drug and alcohol management program and train and educate their staff appropriately. ATHRA expect the high cost of any review of a drug and alcohol management program to be in the order of $7,500 for each member plus an additional $50,000 for guidelines to be prepared. The low set up cost takes into consideration that a proportion of the tourist and heritage operators may already have a drug and alcohol management program in place of standard similar to that which is required to be compliant with Option 3.

The low setup cost has been assumed to be half of the high cost. In addition, ATHRA is expected to incur costs of up to $50,000 per annum by establishing a helpdesk to assist its members to comply with the requirements in their drug and alcohol management program. The low ongoing cost is assumed to be half of the high ongoing cost. These costs are necessary as a large number of tourist and heritage organisations are not-for-profit volunteers that would require help and assistance to ensure compliance.

3.9.2 Economic benefits

Due to the related nature and similarities in the regulatory effects, a combined assessment of the economic benefits of the drug and alcohol program and testing is provided below.

The drug and alcohol testing results published by the New South Wales regulator, has been referenced to assist in determining the potential benefits of the options. A number of other studies on the UK (RSSB), USA (Federal Rail Administration), EU (ERA) and OECD (OECD and International Transport Forum) have also been reviewed.

The conclusions from those papers indicate that:

- drugs were a larger more persistent problem than alcohol
- at the onset of testing the reported testing positive rates were at least 4 times higher than after testing
- a drop in personal injury, inappropriate behaviour and a significant drop in accidents following the onset of testing. One USA railroad reported that following three years of testing the human factor train incidents rates had fallen from 22.2 per million train kilometres to 3.77 per million train kilometres. This is a reduction by a factor of almost six. The starting incidence rate was over 10 per cent.

This is not a strict statistical sample and so numbers are not completely comparable between years (e.g. sample sizes change). Information from the New South Wales regulator website indicates that alcohol incidence has dropped by a factor of 4, drugs by a factor of 3, and drugs are a larger problem than alcohol.

Information is not available to determine the exact relationship between drugs and/or alcohol and the number of rail accidents. It is assumed that drugs and alcohol are associated with between 15 per cent and 30 per cent of rail accidents. It is expected that in most cases this would be associated with other contributing factors, especially fatigue. The drug and alcohol testing results published by the New South Wales Regulator has been referenced to assist in determining the potential benefits of the options. A number of other studies on the UK (RSSB), USA (Federal Rail Administration), EU (ERA) and OECD (OECD and International

Transport Forum) have also been reviewed. The US National Transportation Safety Board[65] stated "The most frequently cited accident probable cause was fatigue (a probable cause in 31 per cent of sampled rail accidents in the US) followed by alcohol and other drug use impairment (a probable cause in 29 per cent of sampled rail accidents in the US);" The findings from these studies have been used to derive the estimate, for the purposes of this regulatory impact statement, of 15-30 per cent of rail accidents in Australia having involved a rail safety worker with drugs or alcohol present in their system.

It was estimated that there would be 300 rail safety accidents in Australia in 2010 with monetary impact of approximately $311.71 million (see Table 7 of this appendix). Given the assumption that between 15 per cent and 30 per cent of rail accidents involve drugs and/or alcohol as a key contributing factor, the potential economic cost of these accidents in 2010 is in the range $46.76 million to $93.51 million. However, drugs and/or alcohol would not be the sole factor and it is not clear from the literature what proportion could be attributed to drugs and alcohol ignoring all other factors.

It is estimated that the proposed measures would reduce the incidence of rail related accidents involving drugs and or alcohol by 10 per cent.

The economic cost of drug and alcohol accidents is therefore between $4.68 million and $9.35 million. It is further assumed that the implementation of a drug and alcohol management program, incorporating steps to ensure operators implement appropriate testing regimes, either evidentiary or otherwise, then such accident costs could be reduced by 50 per cent. There is no scientific basis for this assumption; the 50 per cent estimate has been assumed as it is considered that drugs and/or alcohol could never be totally removed as a factor contributing to the incidence of accidents.

This implies that the benefit from introducing a package of measures to address drugs and alcohol, including testing, is likely to be in the range of $2.34 million to $4.68 million.

3.9.3 Summary

The tables below provide a summary of the costs and benefits of Options 1 to 4.

Table 33. Drug and alcohol management program, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	High	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.56)	0	(0.56)	0	(4.49)	0
Option 3	(0.56)	(0.45)	0	0	(0.56)	(0.45)
Option 4	(0.56)	(0.45)	0	0	(0.56)	(0.45)

[65] Safety Study; Adopted: February 5, 1990 ; Fatigue, Alcohol, Other Drugs, And Medical Factors In Fatal-To-The-Driver Heavy Truck Crashes; Volume 1; NTSB Number: SS-90/01; NTIS Number: PB90-917002.

Table 34. Drug and alcohol management program, operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.53)	0	0	0	(0.53)	0
Option 3	(0.53)	(0.27)	(0.05)	(0.04)	(0.88)	(0.55)
Option 4	(0.53)	(0.27)	(0.05)	(0.04)	(0.88)	(0.55)

Table 35. Drug and alcohol management program, tourist and heritage consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	0	0	0	0
Option 3	(0.62)	(0.31)	(0.05)	(0.03)	(0.97)	(0.49)
Option 4	(0.62)	(0.31)	(0.05)	(0.03)	(0.97)	(0.49)

Table 36. Drug and alcohol management program, economic benefit, $million ($2010)

	Benefit Per Annum		Present Value Benefit	
	high	low	high	low
Option 1	0	0	0	0
Option 2	4.68	0	32.87	0
Option 3	4.68	2.34	32.87	16.44
Option 4	4.68	2.34	32.87	16.44

3.10 Fatigue risk management program

This item is addressed in Section 6.5.3 of the regulatory impact statement.

Section 65 of the Model Bill requires rail transport operators to prepare and implement a fatigue risk management program (FMP), as a mandatory element of the safety management system. However, the Model Regulations are silent on the specific requirements for such a program and allowed for local variations (intended as an interim arrangement until national agreement was reached).

The costs and benefits of the following options for the requirements of a fatigue risk management program are assessed:

Option 1

Status quo; maintain local variations (no impact).

Option 2

No elements are prescribed in regulations.

Option 3

Considerations and mandatory elements, as per Regulation 30 of the draft National Regulations, are prescribed in regulations.

Option 4

Only the mandatory elements included in Regulation 30 of the draft National Regulations are prescribed; considerations are not prescribed in regulations.

Proposal

Option 3 is proposed.

3.10.1 Economic cost

It has been noted by survey respondents and other industry professionals that fatigue management differs from drug and alcohol management in that the latter is more mature and fully established within the industry in comparison to fatigue management. Fatigue management is therefore potentially more difficult and expensive for organisations to adopt. This observation has informed the cost assessment given below.

Regulator

For Option 2, the New South Wales regulator suggested that it would need to hire an additional person to cope with the additional workload. This regulator indicated that the expertise in the fatigue area was scarcer and thus more expensive than that for the drug and alcohol management program. The additional staff cost has therefore been estimated at 25 per cent greater than the equivalent costs of staff for the drug and alcohol management program. This would be a cost of $0.18 million. It is noted, however, that the cost implications will depend upon the interpretation of the law by the Regulator, which may exercise discretion in the implementation of this option. Depending on interpretation, this option may yield the same outcome as Option 3 or Option 4, which have prescribed elements. Thus the high costs have been assumed to be the same as for Option 3 and Option 4, described below, and the low cost is zero.

With Option 3, it was generally perceived by regulators that by prescribing some of the mandatory requirements in the regulations could make the law easier to enforce. However, no indication was given of the potential ongoing cost savings and it has been assessed that such cost savings would be marginal.

The Regulator is likely to incur additional one-off costs to assist in ensuring that operators, excluding New South Wales, have a drug and alcohol management program that is compliant with the prescription.

From survey responses and consultation with the industry is has been estimated that Option 3 could lead to an additional setup cost (education, training, administration systems costs) of between $4,000 and $6,000 per operator. Multiplying the cost estimate by the number of operators, excluding operators in New South Wales where drug and alcohol management program is currently prescribed, derives a total setup cost of low $0.35 million and high $0.69 million. It is expected that ongoing costs would be incurred in demonstrating compliance with Option 3. No survey respondents provided ongoing saving data and hence it is assumed that the ongoing savings could be 15 per cent of these costs. Thus costs to the Regulator for education and training range from: low $0.35 million, with ongoing $0.05 million, and high $0.69 million, with ongoing $0.10 million.

In general regulators considered that the administrative costs of Option 4 would not be materially different to the costs of Option 3. Accordingly, the costs for Options 3 and 4 have been assumed to be the same.

Rail transport operators

Since Option 2 may be open to interpretation by the Regulator, it is difficult to estimate the particular costs of this option. Consequently, it has been assumed that the high costs may be similar to that of Option 3 and Option 4, described below, and the potential low cost estimate has been assessed as zero.

Both Options 2 and 3 are considered to result in no incremental costs to large operators. Large operators indicated that minimal amendments would be made to the fatigue risk management programs regardless of the selection of Option 2 or 3.

The small and medium operators surveyed indicated that there may be a significant cost to review and modify, or in some cases rewrite, their fatigue risk management program to meet the requirements of Option 3. These operators would incur costs during set up that would include establishing policies, systems and procedures, databases or equivalent record keeping systems, training programs and initial training for staff, and hiring of staff. The operators would further incur ongoing costs including awareness training, staff replacements during training, administration of their policies, procedures and systems, record keeping, projects to minimise fatigue risk, and costs in responding to Regulator audits and requests for information and work procedures required by Option 3. The ongoing costs are expected to be significantly higher than the initial set up costs. Accordingly, the high costs have been estimated to be $30,000 on average per organisation with $40,000 in ongoing costs, with the low cost being $15,000 for set up with $20,000 ongoing.

Approximately 101, or 62 per cent, of operators are not accredited in New South Wales (see Table 1 of this appendix). Of this number it has been assumed roughly 20, or 20 per cent, are compliant with Option 3. The remainder would be required to review their fatigue risk management program and adapt accordingly. It is estimated that the total costs to these operators of Option 3 would be a high one off cost of $1.29 million with ongoing costs of $1.72 million, and a low one off cost $0.65 million with ongoing costs of $0.86 million.

It considered that the administrative costs for Option 4 would not be materially different to the cost of Option 3. Accordingly, the cost for Option 3 is also taken as the cost for Option 4.

Tourist and heritage rail transport operators

ATHRA considered that there would be no incremental costs incurred with the adoption of Option 2.

In responding to the survey, ATHRA reported that fatigue management would be very expensive for their members. It was pointed out that while many ATHRA members may comply, they would not have the documentation, record keeping and work procedures required by Option 3.

For the high cost of Option 3, ATHRA suggested that any review of a fatigue risk management program could cost around $37,500 for each of the 15 large members, with costs at $30,000 for the medium sized 23 members and $15,000 for the remaining 38 members. The low cost has been estimated as an average of $15,000 for all members. ATHRA notes that all of their membership of 76 would need to review their, and train and educate their staff. There would be economies of scale in adopting a coordinated approach; however, this has not been assessed for the purpose of this CBA.

ATHRA has suggested that maintenance of the fatigue risk management program systems could be a low cost of $15,000 for the medium to larger sized organisations and $6,250 per

annum for all other organisations. The high cost would be for large operators who would need to hire a person at a cost of $37,500 per annum with the medium sized members spending $25,000 and the remaining members spending on average $15,000. This is in addition to the additional Regulator resource requirements detailed above. The low cost would see the smaller tourist and heritage operators incurring additional costs of $6,250. This implies for all tourist and heritage operators that the high costs would be $1.82 million with $1.71 million ongoing and the low costs would be $1.14 million one off and $0.81 million ongoing.

3.10.2 Economic benefits

There is a substantial amount of research in the general area of managing transport worker fatigue, but none that supports the definite conclusions on the relative economic benefits between the options presented in this regulatory impact statement. The documents available online on this subject in Australia, UK (RSSB), USA (Federal Rail Administration, US National Transportation Safety Board), EU (ERA) and OECD (both OECD and International Transport Forum) have been reviewed. The USA National Transport Safety Board discussed the impact of fatigue on train accidents in their report *Evaluation of U.S. Department of Transportation Efforts in the 1990s to Address Operator Fatigue*, Safety Report NTSB/SR-99/01 May 1999 PB99-917002 Notation 7155. The report commented "In summary, although the data are not available to statistically determine the incidence of fatigue, the transportation industry has recognised that fatigue is a major factor in accidents". This report contains indicative information on rail accidents and fatigue. The report quotes the Administrator of the FRA who stated that "about one-third of train accidents and employee injuries and deaths are caused by human factors. We know fatigue underlies many of them."

From this information and the review of the literature, it has been assumed that in Australia between 15 per cent and 30 per cent of train accidents include fatigue as a factor. There will, in most cases, be other contributing factors as well (health, obesity, drugs, alcohol, etc.) and so fatigue cannot be seen as solely responsible for those accidents.

From Table 7 of this appendix, the number of train accidents in 2010 is estimated as $311.71 million for 300 accidents. From the assumption above it can be taken that, accidents with fatigue as a factor had an economic cost of between $46.76 million and $93.51 million. However, fatigue was not the sole factor and it is not clear from the literature the proportion that should be attributable to fatigue ignoring all other factors.

It is estimated that the proposed measures would reduce the incidence of rail related accidents involving drugs and or alcohol by 10 per cent.

The economic cost of fatigue accidents is estimated in the range of $2.34 million and $4.68 million. It is further assumed that if a fatigue risk management program akin to Options 3 and 4 was introduced and steps taken to ensure operators address hours of work and rest either prescribed or otherwise, then costs accidents could be cut by 50 per cent. There is no scientific basis for this assumption; the figure is 50 per cent because it is considered that fatigue could never be totally removed as a factor.

This implies that the benefit from introducing the package of measures to address fatigue would be between $2.34 million and $4.68 million.

3.10.3 Summary

The tables below provide a summary of the costs and benefits for Options 1 to 4.

Table 37. Fatigue risk management program, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.69)	0	(0.18)	0	(1.95)	0
Option 3	(0.69)	(0.35)	(0.10)	(0.05)	(1.42)	(0.71)
Option 4	(0.69)	(0.35)	(0.10)	(0.05)	(1.42)	(0.71)

Table 38. Fatigue risk management program, operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(1.29)	0	0	0	(1.29)	0
Option 3	(1.29)	(0.65)	(1.72)	(0.86)	(13.37)	(6.69)
Option 4	(1.29)	(0.65)	(1.72)	(0.86)	(13.37)	(6.69)

Table 39. Fatigue risk management program, tourist and heritage consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	0	0	0	0
Option 3	(1.94)	(1.23)	(1.71)	(0.81)	(13.93)	(6.90)
Option 4	(1.94)	(1.23)	(1.71)	(0.81)	(13.93)	(6.90)

Table 40. Fatigue risk management program, economics benefit, $million ($2010)

	Ongoing Cost Per Annum		Present Value Benefit	
	high	low	high	low
Option 1	0	0	0	0
Option 2	4.68	0	32.87	0
Option 3	4.68	2.34	32.87	16.44
Option 4	4.68	2.34	32.87	16.44

3.11 Testing for drugs or alcohol

This item is addressed in Section 6.5.4 of the regulatory impact statement.

The Model Bill provides for the testing for drugs or alcohol (section 66). As there was no agreement for testing arrangements when the Model Bill was developed, states and territories developed independent arrangements in accordance with the local variations allowed for in the Model Regulations (Regulation 24).

The costs and benefits of the following options are assessed:

Option 1

Status quo; maintain local variations (no impact).

Option 2

Do not prescribe the details of a rail transport operator testing regime in the National Law and do not mandate evidentiary drug and alcohol testing by operators.

Option 3

Prescribe the details of a rail transport operator testing regime in the National Law and mandate evidentiary drug and alcohol testing by operators.

Proposal

Option 2 is proposed.

3.11.1 Economic costs

Regulator

Regulators do not expect additional costs to be incurred as a result of Option 2, whereby rail transport operators are not required to conduct random testing to an evidentiary standard.

Regulator survey responses have suggested that under Option 3, which requires evidentiary standard testing, the cost per state to the Regulator would be between $50,000 and $100,000 per state or territory. This encompasses costs for systems, processes, education and training to the handling of information from operators regarding evidentiary testing. From this, it is estimated that the setup cost would be in the range $0.30 million to $0.60 million across all states and territories. The methodology is based on a $0.10 million state allocation which has been supplied by survey respondents, and excluding New South Wales, which is already testing to an evidentiary standard.

Further to the initial setup costs, the recurrent costs are made up of two major components:

- training and monitoring
- costs associated with prosecution.

For the purpose of estimating the total prosecution related costs accruing to the Regulator, survey results have been used. In order to derive a national estimate of prosecution costs, figures by the New South Wales regulator have been adopted and extrapolated. The New South Wales regulator revealed costs relating to prosecution activities of approximately $78,000 per annum. Dividing this value by the total number of principally accredited operators in New South Wales (49) produced an estimate of prosecution costs per operator of $1,600 per annum. This value is then multiplied by the 115 principally accredited rail operators (excluding New South Wales) and combined with ongoing training and monitoring costs of $50,000 per state or territory per annum. The resulting additional ongoing Regulator costs under Option 3 would be approximately $0.48 million per annum. This has been adopted as the high cost and the low cost has been estimated to be approximately half of the high cost.

It is important to note that in reality, this figure will vary significantly between operators. The average prosecution cost per operator has been multiplied by the 115 accredited rail operators (excluding New South Wales) and added to the ongoing training and monitoring costs. As a result, the additional ongoing Regulator costs under Option 3 would be

approximately high $0.48 million per annum. The low cost has been estimated to be approximately half of the high cost.

Rail transport operators

Under Option 2, the estimated ongoing cost savings have been estimated to be in the range of $1.02 million to $1.28 million. This has been derived based on the removal of evidentiary standard testing in New South Wales. Research and industry consultation reveals that on a per test basis, the cost for an evidentiary test would be $220 more than a non-evidentiary test. The per unit test cost savings has been applied to the total number rail safety workers (currently required to be tested in New South Wales) to arrive at a final saving as described above.

Industry survey responses have suggested that by migrating from Option 2 (evidentiary standard not mandated) to Option 3 (evidentiary standard and mandated), would generate an initial implementation cost in the range of $4.0 million and $2.0 million. These figures have been derived based on the following:

- estimated average initial implementation cost per accredited rail operator outside of New South Wales of approximately $75,000. The implementation cost includes education, training, external consultancy services, new systems and procedure documentation. This figure has been estimated based on industry consultation
- 53 commercial rail operators.

The product of the two values generates a high estimate of $4.0 million. An equivalent low estimate of $2.0 million has been assumed.

The main recurrent cost associated with the proposed regulatory changes under Option 3 is the cost of the more expensive evidentiary testing programs with which operators must comply. For the states and territories that are not currently testing to an evidentiary standard, there are major recurrent cost implications.

The assumptions used to derive the recurrent costs are summarised as follows[66]:

- there are approximately 24,000 rail safety workers in Australia
- there are approximately 8,000 rail safety workers in New South Wales
- 25 per cent[67] of the total number of rail safety workers outside New South Wales (16,000) are required to be tested under Option 3
- non-evidentiary standard test is estimated to be $30, and
- evidentiary standard test is estimated to be $250

By applying the estimated 25 per cent (the same proportion of tests undertaken in New South Wales) to the total number of rail safety workers outside New South Wales required to be tested, together with the unit cost difference between non-evidentiary tests and evidentiary tests, it is estimated that recurrent costs under Option 3 would be in the range of $1.15 million and $0.92 million.

[66] All assumptions were sourced from survey responses and through industry consultation.

[67] 25 per cent is the current minimum requirement for testing in NSW.

Tourist and heritage rail transport operators

The upfront implementation cost for tourist and heritage operators under Option 2 (evidentiary standard not mandated) would be minimal compared to that of Option 3. There would be a marginal increase in costs for operators under Option 2 as most have a drug and alcohol testing program in place. However, a sum of $0.30 million has been allocated to allow for those operators that do not have an adequate testing regime in place and would require additional resources to bring the testing program to an acceptable standard. The $0.30 million was allowed based on discussions and consultation with rail industry professionals.

ATHRA survey responses indicated that tourist and heritage operators would not be expected to incur any recurrent costs under Option 2.

Industry survey responses suggest that implementation of Option 3 (evidentiary standard is mandated) would incur an initial implementation cost in the range of $1.89 million and $0.95 million would be incurred. These figures have been derived based on the following:

- estimated average initial implementation cost per tourist and heritage operator of $33,800. The implementation costs include education, training, external consultancy services, new systems and procedure documentation. This figure was estimated based on industry consultation
- 56 ATHRA members outside of New South Wales

The product of the two values generates a high estimate of $1.89 million. Based on the information available, the conservative estimate has been estimated at approximately half of that, $0.95 million.

The derivation of recurrent costs has been based on three factors, being 1) total number of estimated tourist and heritage rail safety workers, 2) cost per evidentiary test, and 3) percentage of total number of tourist and heritage rail safety workers required under an evidentiary testing regime. The product of the three factors generates an annual ongoing cost estimate of low $0.20 million and high of $0.40 million.

3.11.2 Economic benefits

It is estimated that there would be no material difference in safety benefits between the options. Given the incremental nature of the proposed change it has been assessed that there would be no economic benefits in addition to those estimated under the drug and alcohol management program above.

3.11.3 Summary

The tables below provide a summary of costs and benefits for Options 1, 2 and 3.

Table 41. Alcohol or drug testing, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	0	0	0	0
Option 3	(0.60)	(0.30)	(0.48)	(0.24)	(3.99)	(2.00)

Table 42. Alcohol or drug testing, operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.29)	(0.15)	1.28	1.02	8.70	7.05
Option 3	(3.98)	(1.99)	(1.15)	(0.92)	(12.05)	(8.45)

Table 43. Alcohol or drug testing, tourist and heritage consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.29)	(0.15)	0	0	(0.29)	(0.15)
Option 3	(1.89)	(0.95)	(0.40)	(0.20)	(4.68)	(2.34)

3.12 Fatigue risk management – hours of work and rest

This item is addressed in Section 6.5.5 of the regulatory impact statement.

There is no explicit section in the Model Bill for the provision of legislated maximum hours of work or minimum periods of rest for rail safety workers (often referred to as a 'safety net'); however, the silence of the Model Regulations with respect to the specific requirements for a fatigue risk management program has seen a particular state, being New South Wales, vary in its approach. New South Wales fatigue management provisions, set out in particular in Schedule 2 to the *Rail Safety Act 2008* (NSW), provide for a more prescriptive system based on maximum hours of work and rest for train drivers.

The cost and benefits of the following options have been assessed:

Option 1

Status quo; maintain local variations (no impact).

Option 2

No prescribed hours of work/rest are included in the National Law.

Option 3

Maximum hours of work/rest for train drivers are prescribed in the National Law as per existing New South Wales schedule.

Operators can apply to the Regulator for exemption from Option 3. The discussion on this exemption aspect is at the end of this section on Fatigue.

Proposal

Option 2 is proposed.

3.12.1 Economic cost

Regulator

Regulators do not expect additional costs to be incurred as a result Option 2 whereby prescribed hours of work/rest are not included in legislation.

Option 2, which does not prescribe hours of work and rest within the National Law, would result in an overall cost saving since New South Wales would not be required to continue their current practice of prescribing and enforcing hours of work and rest. New South Wales is assumed to have staff engaged to audit and monitor compliance, and to undertake education, training and record keeping. This cost saving implied by not having to undertake these activities is estimated to be high $0.30 million per annum and low $0.25 million per annum and has been derived based on survey responses and are the same as the additional costs likely to be incurred by other states and territories in complying with Option 3.

For Option 3, based on the results of the survey and discussions with industry, it is estimated that for all states and territories, excluding New South Wales, the set up costs for the Regulator to recruit, educate, train, develop systems, and work with operators would be approximately $0.10 million per state. This has been adopted as the high cost estimate and a low estimate of $75,000 per state has been applied. The ongoing costs for additional staff to audit and monitor compliance with Option 3 as well as educate, inform and maintain records would be high $0.30 million per state per annum (low estimate $0.25 million). The implementation of Option 3 would represent a step change in terms of work for the Regulator. There would be a considerable amount of record keeping required as well as additional time required to audit and monitor the records kept by operators.

Rail transport operators

The operator responses have fallen largely into the following four groups:

- operators with operations in one state
- operators in New South Wales (who effectively operate under Option 3)
- operators servicing the export mining companies
- operators servicing the interstate domestic market (i.e. with longer train travelling time), except those in New South Wales.

Operators are not expected to incur any additional setup costs or any ongoing costs under Option 2. The survey responses and discussion with industry were clear that operators in New South Wales expected to continue as they were doing now. The New South Wales based interstate operators consulted have already structured their operations to manage the cost impact of maximum hours of work/rest for train drivers and do not plan to change their operations.

Operators within New South Wales are not expected to incur any additional material setup costs under Option 3. They are assumed to already comply with Option 3 as that is currently the law in New South Wales. The survey responses and discussion with industry made it clear that operators in New South Wales expected to continue with their current work schedules and associated shifts.

Two groups of operators outside of New South Wales are expected to incur significant costs.

Based on discussion with operators servicing the export mining sector it is estimated that those operators could incur additional compliance costs of $155 million [68] per annum over the forecast period. The estimates have been derived through the assessment of a series of economic and commercial drivers including, total iron ore exports, total coal exports, average train driver salary and additional drivers required per tonne of export coal or iron ore under the proposal. The $155 million represents the cost of additional train drivers required by the move to Option 3.

Discussions with interstate operators have indicated that they would be likely to incur additional costs on average up to $5.0 million per annum as a direct result of implementing Option 3, which includes the cost of hiring additional staff. There are 37 commercial operators operating long-haul, interstate services, all of whom are expected to incur this cost. The total ongoing cost has therefore been estimated at $185 million. It is considered that shorter-haul operators would be less likely to incur additional costs as they would be better prepared to regulate hours using their existing resource base.

The total additional ongoing costs for all operators are estimated to be approximately: high $340 million and low of $85 million per annum. The low figure is estimated as 25 per cent of the high cost.

Tourist and heritage rail transport operators

In contrast to the commercial operators, ATHRA member responses have suggested that cost impacts for tourist and heritage operators under Option 3 would be considered minimal. Tourist and heritage operators in most cases operate for a limited number of hours in a day and many operate only a few days in each month. The larger tourist and heritage operators also tend to work limited hours. There is no evidence to suggest any additional ongoing cost.

3.12.2 Economic benefits

It has been estimated that there would be no material difference in safety benefits between the options. Only New South Wales has implemented Option 3 and they consider that it delivers for them the maximum safety benefits. Those regulators outside New South Wales consider that their implementation delivers the safety benefits required. The implication from the current systems around Australia is that both Option 2 and Option 3 could deliver the desired results.

The international literature review conducted for this CBA indicated that there are advantages for small operators in having a prescriptive system as they may not have the technical or financial ability to establish their own safety net. However, larger or more complex operators should have the funds and expertise to develop a bespoke safety net that achieves the required safety benefits and drives productivity. Accordingly, Option 2 is appropriate for some operators and Option 3 is appropriate for other operators.

It has been assessed that there would be no economic benefits in addition to those estimated under the fatigue risk management program above.

3.12.3 Summary

The tables below provide a summary of the costs for Options 1, 2 and 3. The benefits have been assessed as zero.

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[68] These costs are specific to those operators servicing the mining sector and are not representative of industry on the whole.

Table 44. Fatigue risk management hours of work/rest, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	(0.10)	(0.08)	0.30	0.25	2.01	1.68
Option 3	(0.60)	(0.45)	(1.80)	(1.50)	(13.24)	(10.99)

Table 45. Fatigue risk management hours of work/rest, Operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high		high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	0	0	0	0
Option 3	0	0	(340.18)	(85.04)	(2,389.27)	(597.32)

3.12.4 Exemption from fatigue risk management hours of work and rest

It is proposed by Option 3 to prescribe the hours of work and rest as part of fatigue risk management, which is the approach currently adopted by New South Wales. This requirement has been in place since 2008 and since this time there have been three applications for exemption.

The New South Wales regulator noted that of the three applications two have been successful. Both successful applicants are considered to be special cases.

It is understood that the rail transport operations of companies in the mining sector and operators serving the mining sector have very sophisticated fatigue management systems, which may be regarded as superior to the proposed options. Survey respondents indicated that such operators may apply for an exemption on the basis that their existing approach, designed specifically to meet their needs, exceeds the requirements of the Law. It is possible that these operators would apply for an exemption. In general, should the costs of complying with the requirement significantly outweigh the costs of demonstrating that a suitable alternative is already or would be provided, as required by the exemption application, it can be assumed that operators may apply for an exemption. For the high case it is assumed that operators servicing the mining sector and interstate operators, travelling long distances over long periods of time, may apply for an exemption.

Based on the experience of New South Wales a comparable exemption application rate (3 out of 49 operators, or 6 per cent) has been assumed to apply nationally as the low case.

It is noted that there would be no guarantee that an applicant would be successful and this will be at the discretion of the Regulator.

Regulator

It is estimated, based on the survey responses, that it would cost the Regulator on average $15,000 to assess an application for exemption from the safety net in Option 3. The *NSW Rail Safety (General) Regulations 2008 – Exemption from working hour restrictions* regulation sets out what is required by the operator, and by implication, the Regulator.

The survey response data indicate that mining intensive states such as Western Australia, South Australia and Queensland regulators would incur significant ongoing costs in meeting the requirements of Option 3. The rationale behind the additional costs is a direct result of mining operators seeking exemption, which in turn, raises the administrative and processing workload for the Regulator. The exception is New South Wales, which is currently operating under the prescribed requirements. It has been assumed that any rail operator in New South Wales that considers it necessary or appropriate will have already applied for an exemption.

For the high case it has been assumed that the 15 mine train operators and the 37 interstate operators (see 2.2.3 of this appendix) would apply for an exemption. For the low case it has been assumed that the rate of exemption applications would be roughly equivalent to that of New South Wales, which is 6 per cent. The resulting costs to the Regulator are therefore high $1.04 million and low $0.11 million. The ongoing costs have been estimated at high $0.26 million and low $0.07 million.

Rail transport operators

Given the additional cost implications of Option 3 for mine train operators, it is anticipated that these operators as a minimum would seek exemption. It is also understood from discussions held that the mining sector rail operators generally have sophisticated risk management practices in the area of fatigue, which are thought to be more comprehensive than that proposed by Option 3 and may be accepted as a suitable alternative.

In addition, there are two very significant commercial drivers for rail transport operators, particularly operators in the mining industry, to apply for exemption. Firstly, the cost of additional train drivers would be significant, and secondly, the availability of the number of drivers required meet contract quantities and comply with Option 3 has been questioned. Accordingly, it is expected that these operators would use their current risk based fatigue management plan to argue for an exemption. If an exemption were granted for that component of the safety management system then this could avoid costs of up to $155 million per annum for the mining sector. An application for exemption is expected to cost each rail operator in the mining sector between $50,000 and $100,000. It is estimated that there are 15 mine train operators that may apply for an exemption.

For interstate operators, the implied additional cost of Option 3 (circa $5.0 million per annum per interstate operator) is likely to encourage the development of sophisticated fatigue management systems and to use this in their application for an exemption. An application for exemption is expected to cost each rail operator in the interstate operations sector between $50,000 and $100,000.

Depending on the take-up of exemptions, a similar cost would apply as for regulators (see above).

The resulting costs to operators are therefore high $255.13 million and low $34.02 million.

The ongoing cost of an exemption, demonstrating that the exemption should be continued, is expected to be 25 per cent of the initial application cost.

Tourist and heritage rail transport operators

Tourist and heritage operators would not be affected by Option 3 and are not expected to seek exemption under this section.

Summary

A summary of the costs associated with this amendment is provided in the tables below.

There are no incremental safety benefits as the aim of an exemption is to maintain safety whilst lowering costs.

Table 46. Exemption from fatigue hours of work/rest, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
	(1.04)	(0.11)	(0.26)	(0.07)	(2.87)	(0.46)

Table 47. Exemption from fatigue hours of work/rest, operator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
	0	0	255.13	34.02	1,791.95	238.93

3.13 Network rules

This item is addressed in Section 6.5.8 of the regulatory impact statement.

The Model Bill does not explicitly discuss network rules. They are covered under the general duties and safety management systems provisions of the Model Bill. It is proposed to require consultation with rolling stock operators and rail infrastructure managers when developing or amending network rules.

The costs and benefits of the following options are assessed:

Option 1

Status quo; continue to manage through General Safety Duties without specific provisions in law (no impact).

Option 2

Strengthen and clarify the requirement to consult with affected parties including rail infrastructure managers, rolling stock operators, maintainers, and rail safety workers.

Proposal

Option 2 is proposed.

3.13.1 Economic cost

Regulator

Regulators estimate that they would incur no additional costs as a result of Option 2. The perception is that this option would bring about improved coordination and facilitate the development of more appropriate effective network rules.

It is anticipated that there would be a cost saving to the Regulator as it is expected to reduce the need for the Regulator to intervene when consultation has not been considered adequate. It is assumed that Option 2 may mitigate one such intervention per annum per state or territory at a low cost of $5,000 per occurrence and a high cost of $10,000 per

occurrence. These estimates reflect the range of time costs involved in dealing with occurrences of varying degrees of complexity.

Rail transport operators

Operators surveyed noted that complying with the consultation requirements would lead to a marginal cost increase.

However, offsetting the additional costs of consultation would be the cost savings by avoiding the need to comply with 'inappropriate' and potentially costly network rules, which may otherwise be implemented without the need for proper consultation. In extreme cases a network rule change may result in unnecessary and very costly implications for operators (such as the need to make an upgrade to all rolling stock). Improvements in consultation would help to optimise network rules.

It is considered that this amendment would also reduce the number of network rule breaches due to improved dissemination of information, although the cost implication of this is negligible.

Overall the cost impact for operators is assessed as neutral.

Tourist and heritage rail transport operators

ATHRA considered that the impact of the proposal would be minor.

3.13.2 Economic benefits

The objective of Option 2 is to ensure that rail infrastructure managers engage in appropriate consultation in advance of changing the network rules. A more holistic and coordinated approach is likely to reduce the risk of accidents and promote improved levels of safety.

However, this benefit may be tempered since under the current practice network rules are considered a very serious matter and changes are not undertaken likely. Additionally, there are only a few reported cases of network rules being changed without proper consultation for which there is no information to support the assertion that such cases have resulted in negative safety impacts. Therefore, it has been conservatively estimated that Option 2 may result in the avoidance of one rail safety accident per annum. This gives a high benefit estimate of $1.04 million per annum and the low estimate is zero.

3.13.3 Summary

The tables below provide a summary of the costs and benefits of Option 1 and Option 2.

Table 48. Network rules, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	0.07	0.04	0.49	0.28

Table 49. Network rules, economic benefits, $million ($2010)

	Benefit Per Annum		Present Value Benefit	
	high	low	high	low
Option 1	0	0	0	0
Option 2	1.04	0	7.30	0

3.14 Regulator to conduct cost benefit analysis for mandatory safety decisions

This item is addressed in Section 6.6.2 of the regulatory impact statement.

The Model Bill provides the Regulator authority to make decisions that impact on how rail transport operators manage safety risks. Such decisions may potentially have significant cost impacts on rail transport operators, and perhaps may not represent a cost-effective outcome that delivers the desired safety objective.

The costs and benefits of the following options are assessed:

Option 1

Status quo (no impact).

Option 2

That the Regulator be required to undertake a cost benefit analysis for mandatory decisions made on behalf of a rail transport operator. Applicable decisions would include those made under the following provisions of the draft National Law:

- Conditions or restrictions placed on a rail transport operator's accreditation (Section 68 - Determination of application)
- Directed amendments to a safety management system (Section 74 - Regulator may direct amendment of safety management system)
- The issuing of improvement notices (Section 182 - Issue of improvement notices)
- Requiring specified safety or protective equipment to be fitted (Section 204 - Response to certain reports).

Proposal

Option 2 is proposed.

3.14.1 Economic costs

Regulator

Regulators estimate that they would incur additional costs as a result of Option 2. Many regulators have not, in the past, issued a direction that would under these rules have been subject to a cost benefit analysis. Use of a direction requiring a cost benefit analysis would be infrequent. It is estimated that two cost benefit analyses would be needed each year with a high cost of $0.1 million and a low cost of $50,000 each.

Rail transport operators

The commissioning of a cost benefit analysis would not lead to any additional costs being imposed on operators. Moreover, it would mean that any direction would be justified on both viability (by the cost benefit analysis) and practicality basis.

Tourist and heritage rail transport operators

ATHRA considered that the impact of Option 2 would be minor.

3.14.2 Economic benefits

Option 2 requires that the Regulator to conduct a cost benefit analysis of all mandatory decisions made on behalf of the rail transport operator. This approach should ensure the most efficient allocation of resources and may improve safety outcomes. However, there is currently no basis for comparison and so it has not been possible to measure or estimate the potential economic benefits of the proposal.

3.14.3 Summary

The table below provides a summary of the costs of Option 1 and Option 2. The economic benefits have not been assessed.

Table 50. Regulator to conduct cost benefit analysis for mandatory safety decisions, Regulator consolidated cost, $million ($2010)

	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	high	low	high	low	high	low
Option 1	0	0	0	0	0	0
Option 2	0	0	(0.20)	(0.10)	(1.40)	(0.70)

4. Measurable impact items options summary

This report documents the methodology and findings of the CBA undertaken to evaluate the material impacts of the proposed amendments and additions to the existing Model Bill as part of the introduction of the proposed Rail Safety National Law. The CBA has been undertaken in accordance with the Office of Best Practice Regulation (OBPR) Best Practice Regulation Handbook Appendix E Cost Benefit Analysis.

The analysis has been heavily reliant upon key assumptions as detailed in the text. This is a specialist area and a proposal for which there is no direct parallel. As a result, and given the limits of available information (such as rail safety accident data) this CBA has focussed on identifying the likely range within which these costs and benefits may fall. Nonetheless it is considered that the high and low values presented represent informed and credible assessment of the likely impacts of the proposed amendments and additions to the Model Bill. The key determinants of the results will be the interpretation of the new National Law by the single national rail Regulator.

The Net Present Value of the preferred options, in 2010 dollars, is given below. The Net Present Value for each of the preferred options is summarised by item in Table 51.

- NPV $72.71 million to $29.39 million discounted at 7 per cent real

The results of sensitivity analysis using real discount rates of 3 per cent and 10 per cent are as follows:

- NPV $90.97 million to $36.97 million discounted at 3 per cent real
- NPV $62.06 million to $24.97 million discounted at 10 per cent real

Table 51. Cost benefit analysis summary results, proposed options, 7 per cent real

CBA item	Preferred Option	Net Benefit $2010 Millions					
		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
		High	Low	High	Low	High	Low
Railways to which the Act does not apply	1.2	0	0	0.06	0.02	0.42	0.17
	2.4	(1.02)	(0.45)	0.04	(0.06)	(0.74)	(0.87)
Private sidings exemption from accreditation	2	(2.75)	(1.38)	1.47	0.17	7.60	(0.20)
Exemption framework	2	0.97	0.04	0.34	0	3.35	0.02
Powers with respect to interface with parties whose operations may impact rail safety	2	(0.20)	0	0.32	0	2.05	0
Duty for loading and unloading rolling stock	3	(0.10)	(0.05)	1.10	0.55	7.60	3.80
Safety Management System	2	(1.17)	(0.48)	0.19	0.11	0.20	0.28
Health and fitness management program	2	(1.82)	0	0.38	0.13	0.82	0.94
Drug and alcohol management program	3	(1.71)	(1.02)	4.58	2.28	30.46	14.96
Fatigue risk management program	3	(3.92)	(2.22)	1.15	0.62	4.16	2.14
Testing for drugs or alcohol	2	(0.58)	(0.29)	1.28	1.02	8.41	6.90
Fatigue risk management hours of work/rest	2	(0.10)	(0.08)	0.30	0.25	2.01	1.68
Network Rules	2	0	0	1.11	0.04	7.80	0.28
Regulator to conduct CBA for mandatory safety decisions	2	0	0	(0.20)	(0.10)	(1.40)	(0.70)
Total	-	(12.39)	(5.92)	12.12	5.03	72.71	29.39

Table 52 provides a summary of implementation costs as they accrue to the Regulator and operators, including tourist and heritage operators.

Table 52. Costs to Regulator and operators, proposed options, 7 per cent real

Stakeholder group	Cost $2010 Millions					
	Initial Cost		Ongoing Cost Per Annum		Present Value Cost	
	High	Low	High	Low	High	Low
Regulator	(1.80)	(1.13)	(0.21)	(0.01)	(2.48)	(1.23)
Rail transport operator	(7.42)	(3.04)	(0.64)	0.11	(11.93)	(2.28)
Tourist and heritage operator	(3.17)	(1.75)	(1.29)	(0.76)	(12.22)	(7.12)
Total Cost	(12.39)	(5.92)	(2.14)	(0.67)	(26.63)	(10.63)
Social Benefit	0	0	14.26	5.7	99.34	40.02
TOTAL	(12.39)	(5.92)	12.12	5.03	72.71	29.39

Table 53 below presents a completed summary for each measureable item and for each option proposed. It also shows:

- the high and low estimate of the initial cost (the set up cost of each item)
- the high and low estimate of the forecast ongoing costs to the various parties. In some cases there are efficiency gains and so the costs are shown as positive values
- the high and low estimate of the forecast ongoing safety benefit. The benefits are not allocated to any party as they accrue to society as a whole. Benefits are shown as positive values
- the high and low net present values (sum of the discounted economic costs and benefits) for each item. Note the high and low reflect the costs of each item.

Table 53. Measurable impact items option summary, benefits and costs, Net Present Value ($million 2010)

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Railways to which the Act does not apply																		
Regulator																		
Option 1.1	0	0	0	0	0	0												
Option 1.2	0	0	0.03	0.01	0.21	0.08												
Option 2.3	(1.20)	(0.60)	(0.12)	(0.06)	(2.04)	(1.02)												
Option 2.4	(0.60)	(0.30)	(0.06)	(0.03)	(1.02)	(0.51)												
Operator																		
Option 1.1	0	0	0	0	0	0												
Option 1.2	0	0	0	0	0	0												
Option 2.3	0	0	0	0	0	0												
Option 2.4	0	0	0	0	0	0												
T&H																		
Option 1.1	0	0	0	0	0	0												
Option 1.2	0	0	0.03	0.01	0.21	0.08												
Option 2.3	(0.42)	(0.15)	(0.06)	(0.03)	(0.84)	(0.36)												
Option 2.4	(0.42)	(0.15)	(0.06)	(0.03)	(0.84)	(0.36)												
Total Cost																		
Option 1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 1.2	0	0	0.06	0.02	0.42	0.17	0	0	0	0	0	0	0	0	0.06	0.02	0.42	0.17
Option 2.3	(1.62)	(0.75)	(0.18)	(0.09)	(2.88)	(1.38)	0	0	0.16	0	1.12	0	(1.62)	(0.75)	(0.02)	(0.09)	(1.76)	(1.38)
Option 2.4	(1.02)	(0.45)	(0.12)	(0.06)	(1.86)	(0.87)	0	0	0.16	0	1.12	0	(1.02)	(0.45)	0.04	(0.06)	(0.74)	(0.87)
Private sidings exemption from accreditation																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	0.89	0.45	0.33	0.17	4.03	1.62												
Operator																		

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Option 1	0	0	0	0	0	0												
Option 2	(3.63)	(1.81)	0	0	(3.63)	(1.81)												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	(0.02)	(0.01)	0	0	(0.02)	(0.01)												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	(2.75)	(1.38)	0.33	0.17	(0.41)	(0.20)	0	0	1.14	0	8.01	0	(2.75)	(1.38)	1.47	0.17	7.60	(0.20)
Exemption framework																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.60)	(0.26)	(0.33)	(0.11)	(2.93)	(1.03)												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	1.57	0.30	0.67	0.11	6.28	1.05												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	0.97	0.04	0.34	0	3.35	0.02	0	0	0	0	0	0	0.97	0.04	0.34	0	3.35	0.02
Powers with respect to interface with parties whose operations may impact rail safety																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.20)	0	(0.20)	0	(1.60)	0												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
T&H																		

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	(0.20)	0	(0.20)	0	(1.60)	0	0	0	0.52	0	3.65	0	(0.20)	0	0.32	0	2.05	0
Duty for loading and unloading rolling stock																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	(7.00)	(3.50)	(49.17)	(24.58)												
Option 3	(0.10)	(0.05)	(0.36)	(0.18)	(2.63)	(1.31)												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	(20.80)	(10.40)	(146.09)	(73.05)												
Option 3	0	0	0	0	0	0												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	(0.11)	(0.05)	(0.76)	(0.38)												
Option 3	0	0	0	0	0	0												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	0	0	(27.91)	(13.95)	(196.01)	(98.01)	0	0	1.46	0.73	10.23	5.11	0	0	(26.45)	(13.23)	(185.79)	(92.89)
Option 3	(0.10)	(0.05)	(0.36)	(0.18)	(2.63)	(1.31)	0	0	1.46	0.73	10.23	5.11	(0.10)	(0.05)	1.10	0.55	7.60	3.80
Safety management system																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.18)	(0.11)	(0.02)	(0.01)	(0.31)	(0.18)												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.50)	(0.17)	(0.05)	(0.02)	(0.86)	(0.29)												

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	(0.49)	(0.21)	(0.05)	(0.02)	(0.83)	(0.35)												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	(1.17)	(0.48)	(0.12)	(0.05)	(1.99)	(0.81)	0	0	0.31	0.16	2.19	1.09	(1.17)	(0.48)	0.19	0.11	0.20	0.28
Health and fitness management program																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	0.33	0	0.33	0	2.65	0												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	(1.18)	0	(0.10)	0	(1.89)	0												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	(0.98)	0	(0.12)	0	(1.83)	0												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	(1.82)	0	0.11	0	(1.07)	0	0	0	0.27	0.13	1.89	0.94	(1.82)	0	0.38	0.13	0.82	0.94
Drug and alcohol management program																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.56)	0	(0.56)	0	(4.49)	0												
Option 3	(0.56)	(0.45)	0	0	(0.56)	(0.45)												
Option 4	(0.56)	(0.45)	0	0	(0.56)	(0.45)												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.53)	0	0	0	(0.53)	0												
Option 3	(0.53)	(0.27)	(0.05)	(0.04)	(0.88)	(0.55)												

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Option 4	(0.53)	(0.27)	(0.05)	(0.04)	(0.88)	(0.55)												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Option 3	(0.62)	(0.31)	(0.05)	(0.03)	(0.97)	(0.49)												
Option 4	(0.62)	(0.31)	(0.05)	(0.03)	(0.97)	(0.49)												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	(1.09)	0	(0.56)	0	(5.03)	0	0	0	4.68	0	32.87	0	(1.09)	0	4.12	0	27.84	0
Option 3	(1.71)	(1.02)	(0.10)	(0.07)	(2.41)	(1.48)	0	0	4.68	2.34	32.87	16.44	(1.71)	(1.02)	4.58	2.28	30.46	14.96
Option 4	(1.71)	(1.02)	(0.10)	(0.07)	(2.41)	(1.48)	0	0	4.68	2.34	32.87	16.44	(1.71)	(1.02)	4.58	2.28	30.46	14.96
Fatigue risk management program																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.69)	0	(0.18)	0	(1.95)	0												
Option 3	(0.69)	(0.35)	(0.10)	(0.05)	(1.42)	(0.71)												
Option 4	(0.69)	(0.35)	(0.10)	(0.05)	(1.42)	(0.71)												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	(1.29)	0	0	0	(1.29)	0												
Option 3	(1.29)	(0.65)	(1.72)	(0.86)	(13.37)	(6.69)												
Option 4	(1.29)	(0.65)	(1.72)	(0.86)	(13.37)	(6.69)												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Option 3	(1.94)	(1.23)	(1.71)	(0.81)	(13.93)	(6.90)												
Option 4	(1.94)	(1.23)	(1.71)	(0.81)	(13.93)	(6.90)												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Option 2	(1.98)	0	(0.18)	0	(3.24)	0	0	0	4.68	0	32.87	0	(1.98)	0	4.50	0	29.63	0
Option 3	(3.92)	(2.22)	(3.53)	(1.72)	(28.72)	(14.30)	0	0	4.68	2.34	32.87	16.44	(3.92)	(2.22)	1.15	0.62	4.16	2.14
Option 4	(3.92)	(2.22)	(3.53)	(1.72)	(28.72)	(14.30)	0	0	4.68	2.34	32.87	16.44	(3.92)	(2.22)	1.15	0.62	4.16	2.14
Testing for drugs or alcohol																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Option 3	(0.60)	(0.30)	(0.48)	(0.24)	(3.99)	(2.00)												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.29)	(0.15)	1.28	1.02	8.70	7.05												
Option 3	(3.98)	(1.99)	(1.15)	(0.92)	(12.05)	(8.45)												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	(0.29)	(0.15)	0	0	(0.29)	(0.15)												
Option 3	(1.89)	(0.95)	(0.40)	(0.20)	(4.68)	(2.34)												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	(0.58)	(0.29)	1.28	1.02	8.41	6.90	0	0	0	0	0	0	(0.58)	(0.29)	1.28	1.02	8.41	6.90
Option 3	(6.47)	(3.23)	(2.03)	(1.36)	(20.72)	(12.79)	0	0	0	0	0	0	(6.47)	(3.23)	(2.03)	(1.36)	(20.72)	(12.79)
Fatigue risk management hours of work/rest																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	(0.10)	(0.08)	0.30	0.25	2.01	1.68												
Option 3	(0.60)	(0.45)	(1.80)	(1.50)	(13.24)	(10.99)												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Option 3	0	0	(340.18)	(85.04)	(2,389.27)	(597.32)												

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Option 3	0	0	0	0	0	0												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	(0.10)	(0.08)	0.30	0.25	2.01	1.68	0	0	0	0	0	0	(0.10)	(0.08)	0.30	0.25	2.01	1.68
Option 3	(0.60)	(0.45)	(341.98)	(86.54)	(2,402.51)	(608.30)	0	0	0	0	0	0	(0.60)	(0.45)	(341.98)	(86.54)	(2,402.51)	(608.30)
Fatigue hours of work/rest Option 3 exemption																		
Regulator	(1.04)	(0.11)	(0.26)	(0.07)	(2.87)	(0.46)	0	0	0	0	0	0	(1.04)	(0.11)	(0.26)	(0.07)	(2.87)	(0.46)
Operator	0	0	255.13	34.02	1,791.95	238.93	0	0	0	0	0	0	0	0	255.13	34.02	1,791.95	238.93
Network Rules																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0.07	0.04	0.49	0.28												
Operator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	0	0	0.07	0.04	0.49	0.28	0	0	1.04	0	7.30	0	0	0	1.11	0.04	7.80	0.28
Regulator to conduct CBA for mandatory safety decisions																		
Regulator																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	(0.20)	(0.10)	(1.40)	(0.70)												
Operator																		

CBA item	Economic Cost						Economic Benefit						Net Benefit					
	Initial Cost		Ongoing Cost Per Annum		Present Value of Cost		Initial Benefit		Benefit Per Annum		Present Value Benefit		Initial Net Benefit		Net Benefit Per Annum		Net Present Value	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
T&H																		
Option 1	0	0	0	0	0	0												
Option 2	0	0	0	0	0	0												
Total Cost																		
Option 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option 2	0	0	(0.20)	(0.10)	(1.40)	(0.70)	0	0	0	0	0	0	0	0	(0.20)	(0.10)	(1.40)	(0.70)

Note 1: all figures in $million 2010; positive figures show a net benefit.