AUSTRALASIAN RAILWAY ASSOCIATION INC
Association Number A03958 ABN 64 217 302 489

25 March 2009

Senate Standing Committee on Economics
PO Box 6100
Parliament House
CANBERRA ACT 2600
Email: economics.sen@aph.gov.au

Inquiry into the Carbon Pollution Reduction Scheme Legislation Submission

I refer to the request for submissions in response to the *Inquiry into the Exposure Drafts of the Legislation to Implement the Carbon Pollution Reduction Scheme*. This submission is made by the Australasian Railway Association on behalf of its membership.

The rail industry supports the introduction of a Carbon Pollution Reduction Scheme and the Government's broad design of the Scheme.

Australia needs price signals for carbon emissions to commence now, so that long term price effects drive the necessary changes in the transport sector. The rail industry supports an emissions trading scheme which includes all transport which means:

- excluding transport from the emissions trading scheme will threaten the integrity and viability of the scheme and therefore the ability of Australia to reduce emissions to acceptable levels;
- excluding transport from the emissions trading scheme will transfer the burden of cost to other sectors and increase costs in those sectors to higher and disproportionate levels; and
- excluding transport will not reduce the cost of emissions trading to Australia, but will merely increase the costs on a narrower group of industries (including domestic electricity).

While the Carbon Pollution Reduction Scheme is a valuable mechanism in reducing carbon price, it will not be sufficient in itself to meet the greenhouse gas targets. Price impacts will have only a limited effect in changing transport towards low emissions modes and solutions, and it will be the complementary policies for transport that will be successful in driving the most significant change in the shorter term. Nevertheless, the long term advantages of a carbon price can only be achieved through early implementation of the Carbon Pollution Reduction Scheme.

Policies, whether price based or otherwise, that support modal shift from road to rail will not only reduce greenhouse gases in the transport sector but will also significantly reduce the social costs from the transport sector. Social costs (for example, air pollution, accidents, and deaths) to Australia of current transport patterns are immense.

The social costs arising from transport are estimated at $52 billion or 5.6% of GDP in Australia in 2005, before including congestion costs. These social costs are mainly due to

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road transport. Rail contributes only 9% of these social costs, despite carrying 53% of the Australian land freight task, in addition to a large number of passengers.

Investment and policies that support rail and a cost for carbon from the Carbon Pollution Reduction Scheme will provide high social returns and lower emissions. The social benefits accruing over 2010 – 2020 are estimated to be worth $27.4 billion.

All track owners and rail operators are already experiencing the direct cost impacts of climate change. While the Carbon Pollution Reduction Scheme will have economic costs, Australia should not be ignoring the economic costs to businesses of climate change and the adaptation that will be necessary.

The most effective way to reduce emissions in the transport sector is through modal shift from road to rail and sea, for both passenger and freight. The short term protection proposed for road users is not desirable, but disagreement on short term matters is no reason for delaying the Scheme's commencement in July 2010.

The rail industry also urges the Senate to further improve the Carbon Pollution Reduction Scheme with the following initiatives:

1. Optimising Rail's Economic and Environmental Credentials
   - Offset intermodal railways fuel to match heavy road transport;
   - Accelerated taxation depreciation for environmentally friendly rolling stock and infrastructure;
   - Provide a Climate Change Credit; and
   - Provide incentives to use public transport.

2. Climate Change Action Fund (CCAF)
   - Allocate CCAF funds for targeted rail investment; and
   - Allocate CCAF funds for programs to inform transport choices.

The rail industry urges the Senate to implement an improved Carbon Pollution Reduction Scheme in July 2010 to address climate change.

The rail industry looks forward to continuing to work co-operatively with the Australian Government on issues relevant to the rail industry. It would be greatly appreciated if in future you could liaise with the ARA's Director Policy, Brett Hughes on (02) 6270 4508 or bhughes@ara.net.au and our other rail industry members throughout Australia.

Yours sincerely

Bryan Nye
Chief Executive Officer

AUSTRALASIAN RAILWAY ASSOCIATION INC

Submission to the Senate Inquiry

Inquiry into the Exposure Drafts of the Legislation to Implement the Carbon Pollution Reduction Scheme

March 2009

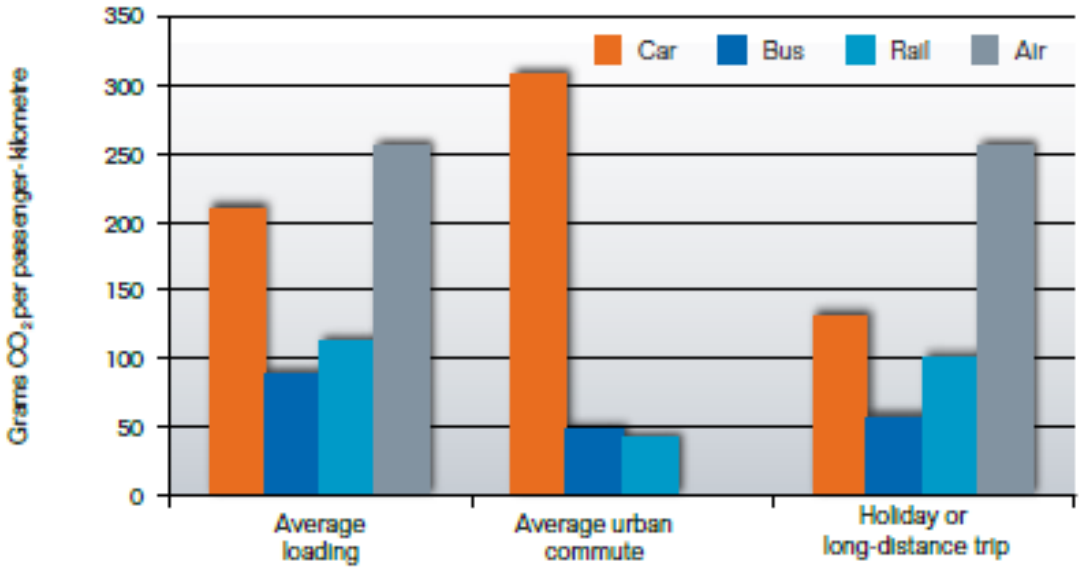
1. Background

In March 2009 the Federal Government Department of Climate Change released its exposure draft for the Carbon Pollution Reduction Scheme (CPRS) legislation. The rail industry has been an active participant in the inputs for the design of the CPRS. Submissions have been provided through the Industry Roundtable Consultation forums, and submissions have been made to the Garnaut Climate Change Review, the CPRS Green Paper, the Wilkins Review and the Federal Treasury. The industry actively participates in other transport activities involving energy and emission including the National Transport Commission reviews on Rail Productivity, and Freight Transport in a Carbon Constrained Economy. The ARA's submission to the CPRS Green Paper has been adapted in light of recent developments to the proposed CPRS and is attached to provide more comprehensive information.

Transport in Australia is the third highest contributor to national greenhouse gases, with stationary energy (electricity) and agriculture holding first and second place respectively. If the electricity used in the provision for electric rail transport is taken into account, transport is the second highest cause of emissions.

Rail transport is inherently a much less carbon intensive form of transport than other modes of motorised land transport. The short and long term benefits of switching people and freight to rail transport are immediate and significant. The chart below from the Garnaut Final Report demonstrates rail's carbon efficiency for passenger transport. The report concludes:

> *There are substantial opportunities for mode shift in local passenger transport, particularly in urban areas.*



The availability of current technology that allows rail to use electricity and therefore lower emissions as a result of reform in the electricity generation sector, is a significant benefit and available tool to lower Australia's emissions.

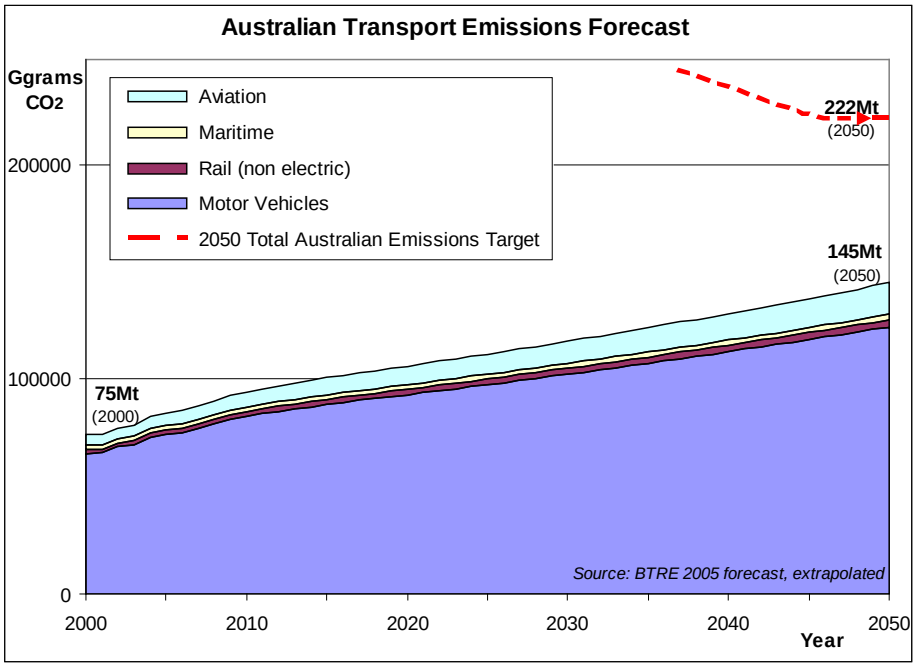
As a large energy users, the rail industry will be affected by the Carbon Pollution Reduction Scheme, but nevertheless, recognises the need for such a scheme to control greenhouse gas emissions.

2. The Need for a Carbon Pollution Reduction Scheme

The rail industry supports the government timeframe for the introduction of a Carbon Pollution Reduction Scheme to commence in July 2010. Debate could continue without benefit, on the merits of a cap and trade scheme versus a carbon tax, or other further design options. However, the rail industry believes that the broad mechanism for the design of the proposed scheme is sound and is not a cause for further delay.

There have been significant opportunities for industries to engage with the government on the design of the CPRS. While the diabolical nature of climate change policy means that there will be winners and losers as a result of introducing such policy, the threat of climate change and the need to implement a framework for the future should not be drowned out by the complaints of the uninformed, mischief makers and those who will ultimately have to change their businesses in response to climate change.

Interpretation of Australian Government data[1] indicates that if there is no significant new intervention, emissions from the transport sector alone will comprise over 66% of the target for all Australian emissions in 2050 (ie 40% of year 2000 emissions), as shown in the chart below.



Clearly incremental changes alone will not achieve the target required and fundamental structural changes to Australian transport systems are essential. Therefore, the rail industry accepts the policy agenda to address climate change issues and the general parameters of the policies outlined by the Australian Governments various activities.

The delay in bringing some sectors into the CPRS through protection to road vehicles (on-road business users, passenger vehicles, and heavy vehicles) and delays in including the agriculture sector and deforestation, is in itself recognition that a staged delay will soften the implementation of the Scheme on the economy.

[1] *Greenhouse Gas Emissions From Australian Transport*: Base Case Projections to 2020, Bureau of Transport and Regional Economics (BTRE), Report for the AGO, DEH, August 2005

While the rail industry does not support the exclusion of road vehicles from the CPRS in its early years, these points of disagreement are no reason to delay the Scheme's commencement. The exclusion of further sectors or a delay in the introduction of the start of the Scheme will not serve to provide further significant improvement, but instead place a greater burden on the remainder in achieving the National emissions reduction targets.

The Scheme includes protection / transitional assistance to disproportionately affected industries and Emissions Intensive Trade Exposed entities. The concerns of some of the perceived or real fairness in the level protection they receive should also not delay and compromise the introduction of a Scheme that aims to benefit all through addressing climate change.

3. Complementary Measures to a Carbon Price

The Garnaut Review states that the transport sector is a market failure when it comes to the desired effect from a CPRS. The price effect of carbon will be too low in the short term, and the alternative transport choices too few due to infrastructure limitations, to drive a change to lower emissions transport solutions. The Garnaut Review recommends that complementary policies are necessary to support structural change in the transport sector to complement the price effects from a carbon price, and drive a change to lower emissions transport modes such as rail and shipping.

While a carbon price will not drive lower emissions in the transport sector in the short term, delaying the start date only lengthens the time it will take for a sufficiently expensive carbon price to have an effect in reducing transport emissions. For this reason, the commencement of emissions trading in Australia should not be delayed and complementary measures to support the use of lower emissions transport should be a key element of government policy to reduce transport emissions. As the Garnaut Final Report states:

> *Governments have a major role to play in lowering the economic costs of adjustment to higher oil prices, an emissions price and population growth, through planning for more compact urban forms and rail and public transport. Mode shift may account for a quarter of emissions reductions in urban passenger transport, lowering the cost of transition and delivering multiple benefits to the community.*

4. The Benefits of the CPRS and Complementary Policy in Rail Transport

Recent economic research conducted by the Co-operative Research Centre for Rail Innovation[2] identifies that the economic and social costs to Australia of current transport patterns are immense. A summary of the important information from this significant research is attached.

The social costs arising from transport are estimated at $52 billion or 5.6% of GDP in Australia in 2005, before including congestion costs. These social costs are mainly due to road transport and rail contributes 9% of these social costs.

Investment, policies that support rail and a cost for carbon from the CPRS will provide high social returns and lower emissions. The social benefits accruing over 2010 – 2020 are worth $27.4 billion.

[2] *Transforming Rail: A Key Element in Australia's Low Pollution Future, Final Report*, Co-operative Research Centre for Rail Innovation, Brisbane, 2009, www.railcrc.net.au

Similar carbon emissions benefits are realised through pricing and complementary policies and investment that drive modal shift from higher emissions transport modes to rail. On a business as usual case, transport emissions will be approximately 30% above their 2010 levels in 2030. Implementation of the CPRS and the introduction of complementary policies and investment would reduce emissions and slow their growth so that they would be approximately 5% above their 2010 level in 2030.

The benefits of structural adaptation of Australia's transport to reduce greenhouse gases through a carbon price with additional complementary policies will provide significant environmental and business effects for Australia.

5. Climate Change is Already Increasing Business Costs

In providing an essential national transport system, the rail industry is affected by most extreme weather events across Australia, which critically affects national business and the Australian community. Climate events are increasingly impacting on business operations and causing operational disasters for railways including:

- extreme heat causing the potential rail buckling;
- drought conditions encouraging animals to enter the rail corridor in search of food, increasing the number of incidents of trains striking single or large mobs of animals;
- extreme wind from storm events blow obstructions onto track and toppling double stacked containers off trains; and
- heavy rain from storms creates flash flooding.

The consequences of these events include:

- trains are slowed;
- transit times are extended;
- altered train plans reduce network efficiency;
- track structures are eroded and damaged;
- tracks are flooded;
- trains derail; and
- rolling stock and products are damaged.

These events have become greater than a weekly occurrence leading to delays, equipment damage, track damage and livestock deaths. These effects are today resulting in direct cost impacts to railways and to Australian businesses.

For instance, in the 2008 – 2009 year, a major rail operator experienced a number of significant incidents directly attributable to extreme climate events that cost the rail operator in excess $11.4m in damages, plus additional costs due to revenue and damage to rail network infrastructure.

Across all track owners and rail operators, these impacts and the cost of climate change will be much higher. While the CPRS will have economic costs, Australia should not be ignoring the economic costs to businesses of climate change and the adaptation that will be necessary.

ATTACHMENT A

Information from

Transforming Rail: A Key Element in Australia's Low Pollution Future, Final Report

Co-operative Research Centre for Rail Innovation, 2009

This information is based on "*Transforming Rail: A Key Element in Australia's Low Pollution Future Final Report*" and supporting papers, by CRC for Rail Innovation, March 2009.

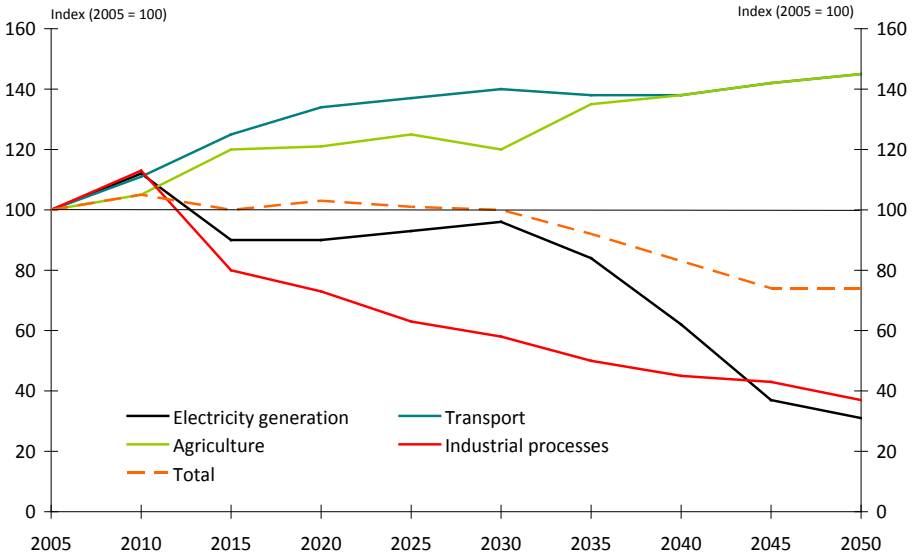
Major Arguments

1. Australia cannot achieve its climate change goals to 2030 implied in its recent White Paper without a sharp reduction in transport emissions;
2. These changes will not be achieved by emission trading systems alone; a new generation of transport policies are required to support the massive private and public investment; and
3. Reducing transport emission will require a substantial modal shift from road to rail, as well as lower emissions intensity in all transport modes. A modal shift from road to rail will have large economic, social and environmental benefits.

CPRS Emissions Forecasts

Figure 1 summarises the Australian Treasury projections for domestic emissions for the 5% reduction target, with industry emission levels equal to 100 in 2005. This modelling estimates that transport emissions will increase by 40% to 2030 before flattening, if other transport policies stay unchanged.

Figure 1. Industrial sector emissions for Australia, CPRS-5 scenario, 2005-2050



Three factors imply large scale reductions in emissions from domestic industries which are not Emissions Intensive Trade Exposed (EITE[3]) industries will be required:

1. the underestimation of the current level of global emissions;
2. the difficulties in shifting virtually all of the absolute reduction in Australia's emissions up to 2030 offshore; and
3. the profound implications of the EITE scheme for other industries.

[3] EITE industries receive favoured treatment in the form of free or cheap permits due to international competition from competitors in countries not subject to carbon costs

If the EITE industries grow at 3% per annum over 2010-20 and Australia's target is for a 5% reduction in emissions by 2020 relative to 2000, the allocation for all other industries falls by 29.4% between 2010 and 2020. Therefore non EITE industries (including rail) will be required to make the larger share of abatement and at higher cost to business, the community and the general Australian economy.

Estimation of Benefits

The CRC research project developed a model to investigate the benefits and costs of three scenarios representing different transport policies over the next 12 years to 2020, compared to the base case as proposed in the Treasury modelling. The three scenarios were:

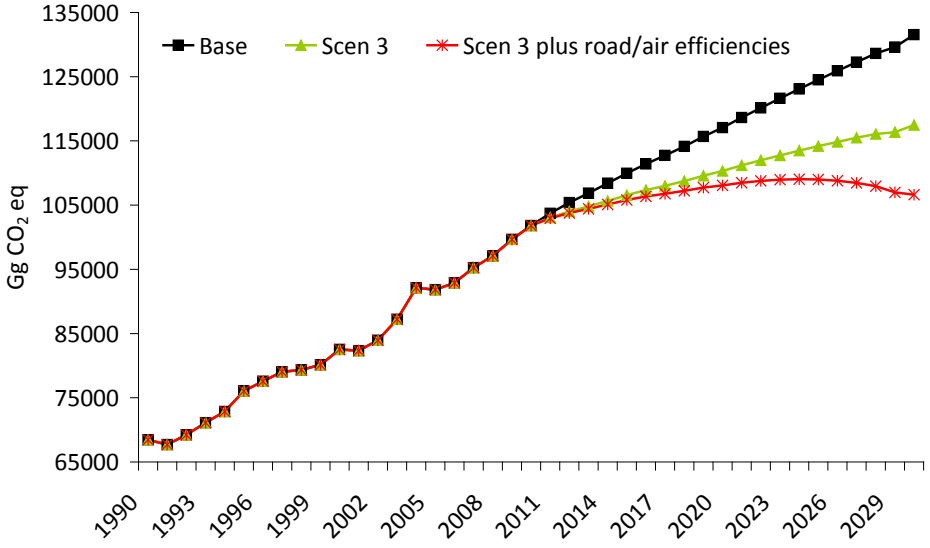
1. No increase in truck tonne-km after 2010; all growth in freight carried by rail;
2. 50% of 2010 - 2020 passenger growth is provided by public transport (70% rail, 30% bus); and
3. Scenarios 1 and 2 plus increased electricity and renewable energy for rail.

The practicability of these scenarios have not been tested, but represent possible strategic changes in transport policy directions.

Transport Greenhouse Gas Emissions Reductions

The estimated effects of Scenario 3 on total transport emissions are summarised in Figure 2. Total transport emissions are about 11% lower than in the base case by 2030. If account is also taken of further action to reduce emissions intensity levels in road and air transport, then total transport emissions are about 19% lower than the base case by 2030.

Figure 2. Total transport emissions to 2030, base case, scenario 3 and increased fuel efficiency in road and air transport (Gg CO2-e)



When freight tasks are modified as in Scenario 1 the emissions savings are estimated at 3.8 Mt CO2-e; when an increase in rail passenger traffic alone is achieved (Scenario 2) annual greenhouse gas emissions are reduced by about 2.3 Mt CO2-e; and when increased electrification and greater use of renewable energy is added to the passenger and freight changes (Scenario 3), then there is about 6.8 Mt CO2-e less greenhouse gas emitted annually by 2020 (see Table 1).

Table 1. Greenhouse gas emissions (Mt CO2-e) benefits from investing in rail

Greenhouse gas emissions reductions (Mt $CO_{2\text{-}e}$ per annum)	**Scenario 1**	**Scenario 2**	**Scenario 3**
2020	3.8	2.3	6.8

Time Savings and Reliability Improvements

Other non-financial business benefits of the three scenarios are also shown in Table 2, which indicates substantial savings in both journey time and increases in reliability would occur on both the North-South and East-West corridors.

Table 2. Time and reliability benefits from investing in rail infrastructure

Non-financial Business Benefits	**Scenario 1**	**Scenario 2**	**Scenario 3**
North-South corridor			
Hours saved from upgrades	23	23	23
Reliability increase	35%	35%	35%
East-West corridor			
Hours saved from upgrades	26.1	26.1	26.1
Reliability increase	30%	30%	30%

Social Benefits

Table 3 indicates substantial annual savings in social effects; accidents, noise and air pollution (excluding climate change) of the scenarios in 2020.

Table 3. Reduction in social costs in 2020 ($ billion)

Social effects	**Scenario 1**	**Scenario 2**	**Scenario 3**
Accidents	0.58	1.04	1.62
Noise	0.12	0.09	0.20
Air pollution	3.37	0.11	3.48
Total	4.06	1.23	5.30

Total Benefits

Table 4 shows a reduction in annual operating costs of at least $1.8 billion all scenarios by 2020 compared to the base case, with this benefit reaching $4.3 billion in Scenario 3. Social costs, such as noise and air pollution, are reduced by at least $1.5 billion compared to the base case, with a total of $5.3 billion in Scenario 3. Climate change costs when compared to the base case are reduced by $0.12 billion to $0.34 billion. The overall benefit for the year 2020 ranges from $3.8 billion in Scenario 2 to $10.0 billion in Scenario 3.

Table 4. Summary of benefits: Annual benefits in 2020 ($ billion)

Scenario 1	Scenario 2	Scenario 3
Total reduction in operating costs		
1.88	2.44	4.32
Total reduction in social costs (ex. climate change costs)		
4.06	1.23	5.30
Total reduction in climate change costs		
0.19	0.12	0.34
Total benefits		
6.14	3.79	9.96

Using a conservative real discount rate of 10% per annum, the net present value in 2010 of the benefits accruing over 2010-20 ranges from $16.8 billion to $27.4 billion, as shown in Table 5. Substantially higher returns result for lower discount rates.

Table 5. Net present value in 2010 of total benefits over 2010-20, relative to the base case ($ billion, constant prices)

Discount Rate	Scenario 1	Scenario 2	Scenario 3
4%	25.6	16.1	41.7
7%	20.6	13.0	33.7
10%	16.8	10.6	27.4

The benefits included in the net present value calculations only extend to 2020, and these benefits will also accrue for many subsequent years. The benefits illustrate the magnitude of the economic and social costs being imposed on Australia by the transport patterns that have built up since the Second World War, and hence the benefits that can be gained by even partially reversing those trends.

Investments to Achieve the Benefits

It has not been possible to quantify the costs of the many and varied investments required, although some important components (the rail freight track component for the North-South corridor) have been costed by the ARTC at $4.9 billion. Overall it is likely that an investment of the order of $15-20 billion (in constant prices) over 2010-20, or $1.5-2.0 billion per annum, would be required to achieve the outcomes.

The growth rates for rail freight are assumed to be in accordance with the expected increases reported by the ARTC. These growth rates will be easily contained within the growth projections of which ARTC report, so the extra rail task is practicably achievable.

Table 6. Annual justified investment to achieve total benefits, for different discount rates
($ billion per annum over 2010-20)

Discount Rate	Scenario 1	Scenario 2	Scenario 3
4%	2.9	1.8	4.8
7%	2.7	1.8	4.5
10%	2.6	1.8	4.2

Table 6 shows an annual real level of investment outlay of $4.2 billion, or an undiscounted total of $42 billion over the period would be justified by these benefits. This is well above the actual level of investment that is likely to be necessary in practice to achieve the benefits.

Alternatively, the implied social rate of return in 2010 of an upper bound estimate of $2 billion annual investment , or an undiscounted total of $20 billion over the period 2010-20 to achieve these benefits has an implied social rate of return on this investment is 50%.

ATTACHMENT B

Adapted from

ARA Submission to Carbon Pollution Reduction Scheme Green Paper

Summary

The Rail Industry's Position on Emissions Trading

The rail industry must play a positive role in responding to climate change issues.

- the rail industry must improve the environmental performance of its activities by using existing technology, which will further reduce its emissions to lower levels (zero if using electricity from zero emissions sources)
- increased rail use, relative to total transport use, will positively improve environmental outcomes including reducing the impact of climate change.

Rail industry supports an emissions trading scheme which includes all transport which means:

- excluding transport from the emissions trading scheme will threaten the integrity and viability of scheme and therefore the ability of Australia to reduce emissions to acceptable levels.
- excluding transport from the emissions trading scheme will transfer the burden of cost to other sectors and increase costs in those sectors to higher and disproportionate levels.
- excluding transport will not reduce the cost of emissions trading to Australia, but will merely increase the costs on a narrower group of industries (including domestic electricity).

The government should include in its legislation the ability for companies to pass on reasonable carbon permit costs if contracts don't have existing means to do so.

Emissions reporting for companies with a permit liability should not be required at facility level and is instead reported at entity level.

The government should use the revenue from the auction of the emissions trading permits to facilitate even greater environmental benefits by supporting energy efficient industry, including rail.

With respect to the CPRS as outlined in the Green Paper, the rail industry proposes the following specific measures to optimise the effectiveness of the CPRS and mitigate transport's impact on climate change.

Improvements to the Carbon Pollution Reduction Scheme

1. Optimising Rail's Economic and Environmental Credentials

- **Offset intermodal railways fuel to match heavy road transport**
  Intermodal rail carrying contestable freight, should be granted the same offset of emissions costs which are to be granted to heavy road transport. A subsidy of the carbon price for heavy road transport provides competitive cost advantage to road over rail. This subsidy will drive shippers to use energy intensive trucks increasing greenhouse gases, and result in further market share loss from rail that will take many years to recover.
- The average age of Australian rail rolling stock is more than 30 years resulting in opportunities for significantly improving environmental performance. Sympathetic taxation arrangements will encourage the introduction of new technology to speed faster deployment of environmentally efficient investment.
  Accelerated taxation depreciation should be introduced for new, environmentally friendly locomotives and wagons, and for infrastructure within the rail industry.

- **Provide a Climate Change Credit**
  Freight forwarders should be encouraged to use rail for contestable freight instead of more emissions intensive transport. This arrangement places the incentive on those who decide the mode of transport, and equalises the offset provided to road transport industry.
  Taxation measures should be introduced to provide incentives for freight forwarders to use rail instead of more emissions intensive transport, by offsetting emissions costs.
- **Provide incentives to use public transport**
  Employers should be encouraged to maximise the environmental advantages of using public transport.
  Taxation measures should be introduced to provide incentives for employers to encourage employees to use rail public transport.

2. Climate Change Action Fund (CCAF)

- **Allocate CCAF funds for targeted rail investment**
  Investment in railway facilities and rolling stock would advance the climate change agenda and improve productivity. This would include the use of alternative fuels, hybrids and new technologies.
- **Allocate CCAF funds for programs to inform transport choices**
  There are several products which provide information to users about the consequences of their travel choices. Schemes such TravelSmart and internet carbon calculators change user's behaviour resulting in cost effective environmental benefits. Other transport and environmental information would assist freight forwarders and developers to better integrate land use and transport resulting in lower emissions.

1. Background

The rail industry welcomes the introduction of a Carbon Pollution Reduction Scheme into the Australian economy. The need to reduce greenhouse gas emissions is urgent and the introduction of a Scheme that drives Australia to a lower emissions target is needed.

The rail industry provides the following comments in relation to the design of the Scheme which in its early design phase could benefit from the consideration of a number of factors and amendments, to ensure its long term success.

The Role of Rail

Greater use of both passenger and freight rail will benefit business, the environment and the Australian community in general. Rail should be the preferred mode of transport for high volume, long distance freight including

- all intermodal freight between capital cities;
- bulk freight; and
- mass public transport.

Rail transport is around four times as energy efficient as road transport for freight and twice as efficient as for moving people. These efficiencies are much higher for tasks with higher demand. Therefore any climate change legislations should maximise the inherent advantages of rail transport to be successful. If Australia is to achieve its emissions reduction targets, a significant increase in rail transport must be part of the solution. Government policy and infrastructure investment must ensure that rail transport contributes as a key solution in reducing transport emissions.

Principles

The ARA proposes that the following principles should guide the development of climate change policies and programs:

- there should be positive environmental outcomes at all levels (not just overall);
- consequences should be equitable and fairly distributed;
- the regulatory burden should be as low and possible;
- any perverse regulatory, market or environmental outcomes should be minimised; and
- compensatory mechanisms should be implemented where these principles are not achieved.

At present there is insufficient information available about the energy and emission policy proposals (including emissions trading), the legislation and the transport systems to determine whether these principles will be achieved.

1. The Rail Industry's Position on Emissions Trading

The rail industry must, and is in a prime position to play a positive role in responding to climate change issues.

- the rail industry must improve the environmental performance of its activities by using existing technology, which will further reduce its emissions to lower levels (zero if using electricity from zero emissions sources)
- increased rail use will positively improve environmental outcomes including reducing the impact of climate change.

Rail industry supports an emissions trading scheme which includes all transport which means:

- excluding transport from the emissions trading scheme will threaten the integrity and viability of scheme and therefore the ability of Australia to reduce emissions to acceptable levels.
- excluding transport from the emissions trading scheme will transfer the burden of cost to other sectors and increase costs in those sectors to higher and disproportionate levels.
- excluding transport will not reduce the cost of emissions trading to Australia, but will merely increase the costs on a narrower group of industries (including domestic electricity).

Railways with substantial emissions should have the choice to purchase and acquit emissions permits directly. Railways with small emissions and other transport (including trucks and cars) should pay for emissions permits downstream (eg at the point of purchase of fuel).

The government should use the revenue from the auction of the emissions trading permits to facilitate even greater environmental benefits by supporting energy efficient industry, including rail.

2. Liquid Fuels

The emissions that result from liquid fuels are a considerable part of Australia's greenhouse gas emissions. These fuels, by their nature of being easily transportable, are used significantly in the transport sector. The Green Paper suggests a number of design elements specifically related to liquid fuels. The rail industry has concerns with some of these elements which it believes diminishes the aims of the Scheme.

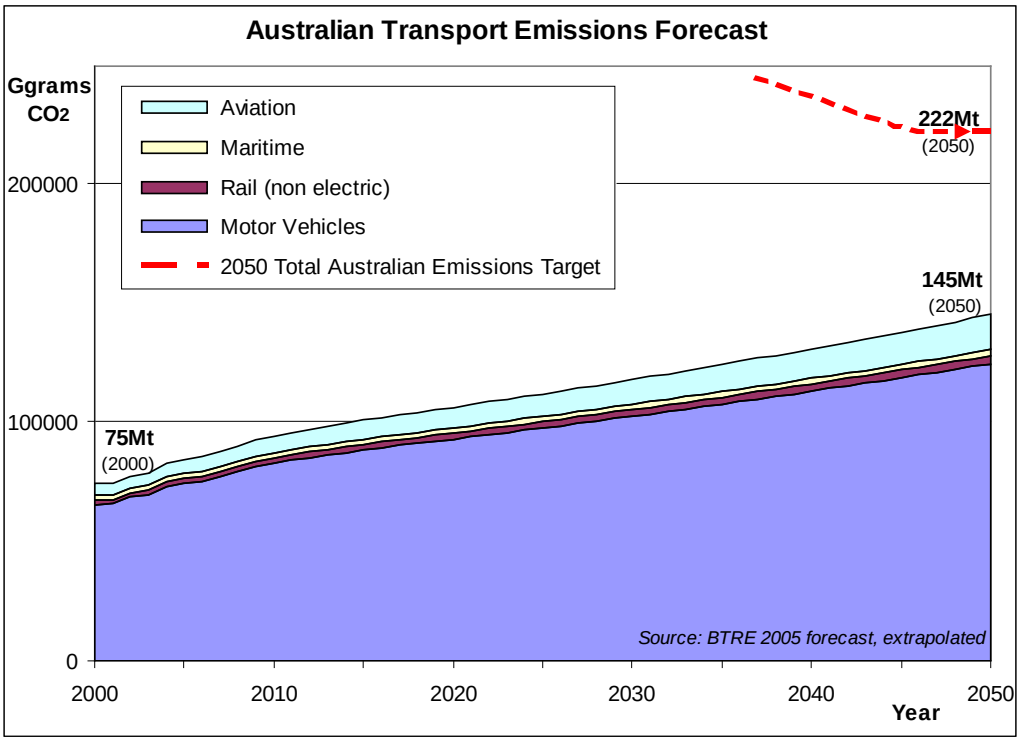
One new and surprising introduction into the Carbon Pollution Reduction Scheme which appears at odds to its whole economic principle, relates to the protection of road users and in particular Heavy Vehicle Road Users of the carbon costs.

Including all Transport in the Carbon Pollution Reduction Scheme

It is self evident to market economists and transport planners that transport should be included in the Carbon Pollution Reduction Scheme. Professor Ross Garnaut in his Draft Report (June 2008) states:

> *"an effective market-based system will be as broadly based as possible, with any exclusions driven by practical necessity and not by short-term political considerations. It will include transport and petroleum products. This will allow abatement to occur in the enterprises and industries and regions in which it can be achieved at lowest cost."*
>
> *"The emissions trading scheme and associated mitigation policies will contribute to large structural change throughout the Australian economy. The changes will be most profound in the sectors in which emissions are most important—first of all energy, and then transport, and agriculture and forestry."*
>
> *"The more sectors included in the emissions trading scheme, the more efficiently costs will be shared across the economy. The transport sector should be included."*

Interpretation of Australian Government data[4] indicates that if there is no significant new intervention, emissions from the transport sector alone will comprise over 66% of the target for all Australian emissions in 2050 (ie 40% of year 2000 emissions).



Clearly, incremental changes alone will not achieve the target required and fundamental structural changes to Australian transport systems are essential. Therefore, the rail industry accepts the policy agenda to address climate change issues and the general parameters of the policies outlined by the Australian Governments various activities.

Protection of Heavy Road Vehicles Users

The Green Paper has devoted much thought and consideration to the protection of vulnerable business. These vulnerable businesses have been categorised as Trade Exposed Emissions Intensive and Strongly Affect Industries. Contrary to the proposed Carbon Pollution Reduction Scheme design in having mechanisms to assist these businesses in transitionary phases of the Scheme, the Government has introduced a new category of vulnerable businesses, namely those that operate heavy road vehicles.

The concept of having a Scheme that embraces as many sectors as practically possible in the economy is immediately compromised by removing categories of energy use from the Scheme and the protection of a select part of an Industry. Other members of the Transport Industry who compete with Heavy Vehicle Road Users are immediately put into a position of competitive disadvantage with an industry sector that is the most inefficient transport mode in respect of emission per tonne kilometre.

Intermodal rail, which carries container freight between the interstate capital cities is much more energy efficient than heavy vehicle transport. Intermodal rail emissions are at least

[4] *Greenhouse Gas Emissions From Australian Transport*: Base Case Projections to 2020, Bureau of Transport and Regional Economics (BTRE), Report for the AGO, DEH, August 2005

three time lower than heavy vehicle road transport, even when the road pick up and delivery of the goods at either end is taken into account. Therefore, the introduction into the Carbon Pollution Reduction Scheme of a new design element that lowers the competitive position of the most greenhouse favourable mode of transport is absolutely incongruous with the intent of the Scheme.

The protection of Heavy Vehicle Road Users in the Carbon Pollution Reduction Scheme will result in the rail freight industry losing market share to road, which achieves the total opposite of the desired outcome. While the protection to road may be reviewed after one year, such protection is notoriously difficult to remove. It is rail's experience that after such price corrections, it still takes many years for rail freight market share to recover.

The key climate change ramifications of this decisions is that this resulting transfer of rail freight to road will result in an additional 10,500 tonnes per annum of greenhouse gases emitted into the atmosphere each year. With a number of years to recover market share, this amount will extend to an estimated 28,500 additional tonnes as a result of one year of protection of the heavy vehicle road users, in addition to the lost opportunities of decreasing emissions during this period.

The ARA concurs with Professor Ross Garnaut who stated in his presentation of his Supplementary Draft Report on 5 September 2008, that all fuel should be included in the Carbon Pollution Reduction Scheme from day one and there are no good reasons not to do so. While the government may be reticent to remove the protection of the fuel carbon costs from road users, on-road business users and heavy vehicle road users, then at least parity on this position should be given to those in direct competition.

The ARA submits that any compensation for the ETS impacts should be delivered independent of fuel costs (ie nil or minimal fuel subsidies) so as to ensure parity between and greater incentives to reduce emissions across all sectors of the high-emitting transport industry.

Market Failures and Distortions

Government policies and the decision to offset the emissions cost for road transport results in some bizarre market failures and distortions, including:

- car driver's costs will not change, but rail public transport costs will increase;
- road freight charges will not change, but rail freight costs will increase;
- CPRS charges are not market linked to public transport pricing or provision of infrastructure;
- car owners CPRS costs are discounted by tax rebates or payments by others (eg when used for business purposes);
- international flagged shipping carrying domestic cargo won't pay the CPRS charge, but competing rail and local shipping will incur the charge.

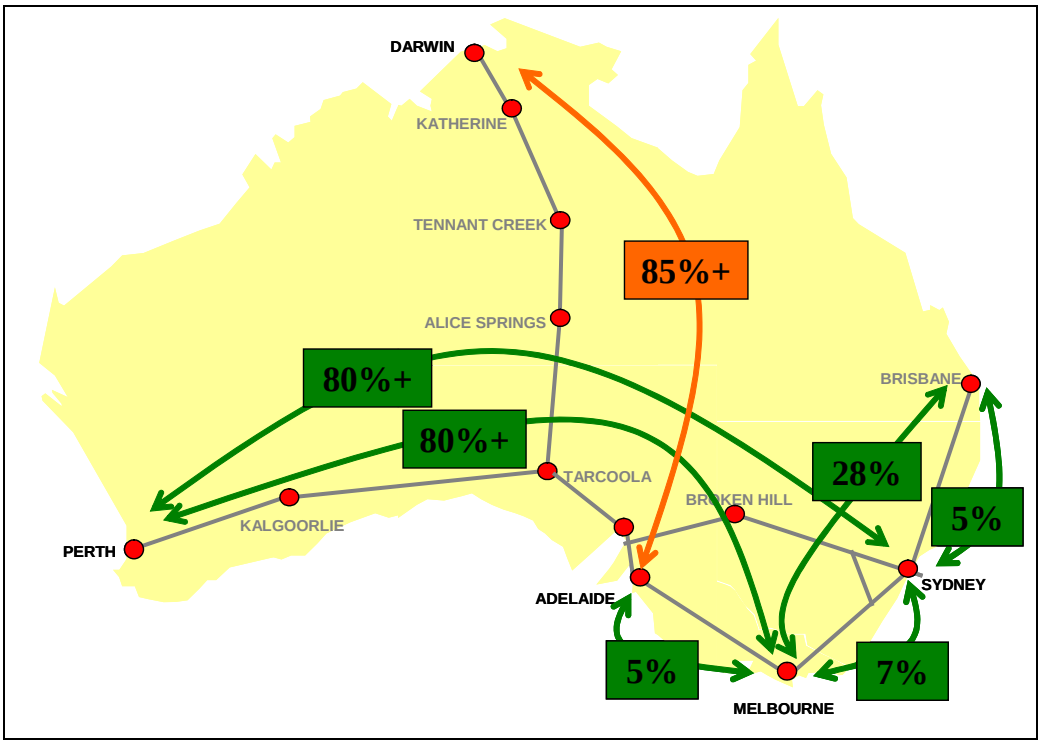
The changes in behaviour that the market costs are intended to achieve cannot occur if the market is distorted in these ways. The result of these distortions is that the CPRS will be inefficient and the outcomes will be more costly to achieve.

Road and Rail Competitive Freight Environment

The competitive position between road and rail is active and real on the main North South transport corridor. This corridor covers the goods moved between Melbourne – Sydney, Melbourne – Brisbane, and Sydney – Brisbane. Due to underinvestment in the rail infrastructure on this North South corridor, the market share held by rail is very low

compared to the Intermodal market share held on the corridor between Perth and the Eastern States.

Rail Market Share of Interstate Freight Movements



The nature of the success in market share for rail on the North South corridor is in direct proportion to:

- its ability to meet key delivery timeframes of the freight market;
- its ability to provide freight goods on time; and
- its ability to carry large volumes and therefore to gain a cost advantage over road.

The introduction of protection to a competitor to intermodal rail will lessen the cost advantage of rail over road, and reduce rail's competitive position and market share.

The mechanism to protect Heavy Vehicle Road Users from carbon price impacts and not intermodal rail will result in an increase in greenhouse gas emissions. As a bare minimum, parity for these two freight transport industry modes must be maintained to prevent this increase in greenhouse gases.

Optimising Rail's Economic and Environmental Credentials

Intermodal rail carrying contestable freight, should be granted the same offset of emissions costs which are to be granted to heavy road transport. A subsidy of the carbon price for heavy road transport provides competitive cost advantage to road over rail. This subsidy will drive shippers to use energy intensive trucks increasing greenhouse gases, and result in further market share loss from rail, which is a significantly more carbon efficient mode than road transport, that will take many years to recover. **Therefore the Government should offset intermodal railways fuel to match heavy road transport.**

The average age of Australian rail rolling stock is more than 30 years resulting in opportunities for significantly improving environmental performance. Sympathetic taxation arrangements will encourage the introduction of new technology to speed faster deployment of environmentally efficient investment.

Accelerated taxation depreciation should be introduced for new, environmentally friendly locomotives and wagons, and for infrastructure within the rail industry. **The Government should introduce accelerated taxation depreciation for environmentally friendly rolling stock and infrastructure.**

Freight forwarders should be encouraged to use rail for contestable freight instead of more emissions intensive transport. This arrangement places the incentive on those who decide the mode of transport, and equalises the offset provided to road transport industry. Taxation measures should be introduced to provide incentives for freight forwarders to use rail instead of more emissions intensive transport, by offsetting emissions costs. **The Government should provide a Climate Change Credit.**

Employers should be encouraged to maximise the environmental advantages of using public transport. Taxation measures should be introduced to provide incentives for employers to encourage employees to use rail public transport. **The Government should provide incentives to use public transport.**

Recommendations

Optimising Rail's Economic and Environmental Credentials

- **Offset intermodal railways fuel to match heavy road transport**
- **Accelerated taxation depreciation for environmentally friendly rolling stock and infrastructure**
- **Provide a Climate Change Credit**
- **Provide incentives to use public transport**

3. Contracts & Carbon Permit Cost

While many contracts have some mechanism to pass on increases in energy prices, as these can be a key cost element within the contract, it is likely that very few contracts at this point in time have a mechanism to pass on a carbon permit cost.

The need to consider a carbon permit cost in customer contracts is only a recent consideration for energy users, where for energy creators or suppliers this has been a consideration for some time. As a result, few would have any mechanism for a carbon permit cost pass through to customers at commencement of the Carbon Pollution Reduction Scheme.

When the permit cost remains the liability of the energy supplier, the outcome is an increase in the energy costs which in most cases will be easily pass through the contractual chain from customer to customer.

With the ability for large energy users to Opt In to manage direct carbon permit liabilities, this will only be desirable if the company has the contractual means to pass on this cost. Likewise, where companies have industrial or fugitive emissions for which they must purchase permits and therefore recover costs from customers, they must be able to recover these costs.

Consideration should be given by the Government for legislation that allows companies to pass on reasonable permit costs to customers where there is no existing contractual method to do so.

The government should include in its legislation the ability for companies to pass on reasonable carbon permit costs if contracts don't have existing means to do so.

4. Reporting

The Green Paper canvases the option of requiring facility level reporting of emissions for permit liabilities. Such a requirement is onerous and does not neatly match the reporting requirement for National Greenhouse and Energy Reporting System. The reporting requirements of the National Greenhouse and Energy Reporting System are comprehensive and this System has adequate public reporting requirements.

Total entity emissions reporting for entities managing permit liabilities in the Carbon Pollution Reduction Scheme is more than adequate.

Therefore emissions reporting for companies with a permit liability should not be required at facility level and is instead reported at entity level.

5. Complementary Policies

The transport sector faces unique challenges in achieving emissions reduction. A paucity of alternative fuel options and technologies, and reliance on government investment and policies in support of transport infrastructure all shape the transport choices made in Australia.

The rail industry submits that the government implement complementary policies as an integral element of the Carbon Pollution Reduction Scheme in assisting the achievement of the National emissions target at the lowest cost.

The rail industry proposes the Government introduce a tax credit to freight forwarding companies that use and therefore support lower emissions rail and shipping transport modes. Such an incentive would complement shifts in transport emissions in a sector where the carbon price will have limited effect.

The government should use the revenue from the auction of the emissions trading permits to facilitate even greater environmental benefits by supporting energy efficient industry, including rail.

6. Climate Change Action Fund

There is a need to make structural changes to transport infrastructure in Australia to place it in a position to provide lower emissions solutions. The Climate Change Action Fund would be a useful mechanism in funding some of this structural change.

Transport efficiency is affected by the whole of the logistics chain. Efficient intermodal terminals and ports are essential to maximise efficiency. The interaction between terminals and other transport modes and the removal of barriers to ensure that these transport hubs operate efficiently, can provide greenhouse gas reduction gains in transport. Funds from the Climate Change Action fund should be available to fund the acquisition of land by government to provide transport facilities and corridors in metropolitan areas.

The capital cost of new rail rollingstock is high which has led to the age of the rail fleet in Australia to be above 30 years, where the United States average is 8 years. The low rate of growth of the carbon price expected in the first years of the Carbon Pollution Reduction Scheme will have no effect on modernising the Australian rail fleet. A program of accelerated depreciation on existing rolingstock with funds to be committed to new

rollingstock would introduce lower emissions equipment into the rail fleet. This accelerated depreciation could be funded from the Climate Change Action Fund.

The trial on alternate fuels in locomotives is a prohibitively costly exercise due to the expense of the capital equipment. Some of the solutions being examined internationally may not apply well in an Australian energy context. It is recommended that the Climate Change Action Fund be used to assist in developing future fuels and their application in the rail industry.

Climate Change Action Fund (CCAF)

Investment in railway facilities and rolling stock would advance the climate change agenda and improve productivity. The CCAF should be available to acquire and develop transport facilities and corridors in metropolitan areas, fund the accelerated depreciation of the existing rail fleet to fund a fleet renewal program, and assist the development of alternative fuel or energy solutions in the rail industry. **The government should allocate CCAF funds for targeted rail investment**

There are several products which provide information to users about the consequences of their travel choices. Schemes such TravelSmart and internet carbon calculators change users behaviour resulting in cost effective environmental benefits. Other transport and environmental information would assist freight forwarders and developers to better integrate land use and transport resulting in lower emissions. **The government should allocate CCAF funds for programs to inform transport choices**

Recommendations

Climate Change Action Fund (CCAF)

- **Allocate CCAF funds for targeted rail investment**
- **Allocate CCAF funds for programs to inform transport choices**

7. Climate Change is Hurting Business

In providing an essential a national transport system, the rail industry is affected by most extreme weather events across Australia, which critically affect national business and the Australian community. Climate events are increasingly impacting on business operations and causing operational disasters for railways.

Extreme heat causes the potential rail buckling and therefore trains are slowed to reduce the potential for this buckling unless the rail track is of excellent standard. This means that transit times are extended, train plans are affected and operational costs increase. When buckling occurs there is significant risk of train derailment.

Drought conditions also encourage animals to enter the rail corridor in search of food, increasing the number of incidents of trains striking single or large mobs or animals. This is becoming greater than a weekly occurrence leading to delays and equipment damage as well as livestock deaths.

Extreme wind from storm events blow obstructions onto track and can topple double stacked containers off trains. The heavy rain from these storms creates flash flooding that erodes the track structure causing potential derailments or completely flooding the track resulting in complete stoppages.

For instance in the 2008 – 2009 year, a major rail operator experienced a number of significant incidents directly attributable to extreme climate events: Significant incidents include derailments from heat buckling of track, flash flooding destroying track and extreme wind cause double stacked containers to topple, with all of these incidents causing derailments that cost the rail operator in excess $11.4m in damages. Significant lengthy obstruction on main rail corridors, lost revenue and damage to rail network infrastructure costs are additional to this $11.4m of direct damage to rail rollingstock.

'Minor' climate events such as diversion due to the Victorian bushfires, collisions with livestock and native animals, flooding in north Queensland and bad weather affecting port operations have also impacted on the costs of operating a transport company in Australia.

Across all track owners and rail operators, these impacts and the cost of climate change will be much higher. While the Carbon Pollution Reduction Scheme will have economic costs, Australia should not be ignoring the economic costs to businesses of climate change and the adaptation that will be necessary.