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*Paper 3: Emissions
Trading and
Transport*

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Executive Summary

The full details of the Australian Government's Carbon Pollution Reduction Scheme (CPRS) were released on 15 December 2008. This paper summarises the main features and undertakes a preliminary analysis of the likely implications of the scheme for the economy, and for transport.

Main Features of the CPRS

The main features of the CPRS as a whole are as follows:

- A target for emissions reduction of between 5-15% by 2020 relative to 2000, with the decision to be made after the 2009 Copenhagen conference. The 15% target will be adopted if all major countries commit to restrain emissions and developed countries accept comparable targets.
- Permits to be either auctioned or given freely in some cases, to be fully tradeable and bankable, with a 5% per annum borrowing allowance.
- A trajectory involving a 1% per annum reduction in total emissions has been established for the first three years, with subsequent trajectories to 2020 to be set when the target is established.
- There will be a price cap on permits of \$40 per tonne of CO₂-e in 2010 for five years, rising by 5% in real terms.
- There is a high formal coverage, with about 75% of emissions included, but this is substantially watered down by the effect of other provisions.
- The arrangements to offset the impact of the CPRS on fuel prices are retained as in the Green Paper, as are those for assistance to households and for the Climate Change Action fund. The Government will fully offset the impact of the CPRS on motor vehicle fuel prices for three years, by appropriate reductions in fuel taxes. This scheme will be reviewed after three years, but the reduction in fuel taxes will be permanent. The Government will also implement a new CPRS fuel credit to offset the impact of the CPRS on fuel costs for heavy vehicles, for one year.
- Permits will be issued freely to energy intensive trade exposed (EITE) industries, covering both their onsite emissions and those relating to electricity use. These will be issued at two levels (90% and 60%) based on the energy intensity of production, with the rate declining by 1.3% per annum, and will be available for new or increased production. They can grow by up to 5% a year, and at that rate would account for 57% of emissions by 2020.
- Substantial support has also been provided for coal based generators, subject to maintaining their generation capacity.
- Emissions will be internationally tradeable, both through Kyoto mechanisms, and through linkage to other defined trading schemes.

Immediate Implications for the Transport Sector

Several major conclusions seem to emerge about the implications of an ETS, as currently proposed, for the transport industry up to say 2020:

- The impact on the overall level of transport activity in Australia seems likely to be modest, and could even be perverse in terms of the reduction in emissions. Even a carbon price of \$50 per tonne of CO₂-e amounts to an increase of only about 20 cents per litre on the fuel price, a modest change in terms of recent price movements. The elasticity of motor vehicle use with respect to the fuel price is low, in part because of limited alternatives in many areas and also because fuel costs are only a small proportion of the overall cost of owning and operating a car. The fuel cost offset arrangements will also serve to reduce its impact, and indeed to further advantage road transport relative to rail.
- Given the much higher impact on electricity prices (a carbon price of \$50 per tonne of CO₂-e will lead to an increase of about \$50/MWh in wholesale electricity prices, an approximate doubling) than petrol prices, rail's competitive position vis-à-vis road could deteriorate in some cases.

- There is, however, likely to be a substantial impact on individual owner-operators in the road freight industry after the first year when the fuel offset ceases since margins are very tight and higher costs could force many out of the industry.
- With lags in the adoption of new technologies for motor vehicles, transport emissions are unlikely, on proposed policies, to deviate much from the unchanged policy case through 2020.

Broader Implications for Transport

The White Paper makes little reference to transport, and the Treasury modelling of the 5% reduction case has transport emissions rising on virtually an unchanged path, to be about 40% higher in 2030 than in 2005. There are three reasons why the reduction in transport emissions is necessary.

First, the Treasury modelling understates the task of achieving a given stabilisation level, and all countries will need to make bigger cuts than implied to achieve, say, 550 ppm CO₂-e. Secondly, the modelling implies that 30-40% of the reduction in Australia's emissions allocation will be achieved by purchasing permits overseas rather than by reducing emissions in Australia. This level of overseas purchases is unlikely to be either achievable or morally sustainable. Thirdly, the generous free permit allocation provisions in the White Paper for energy intensive trade exposed industries (EITEs) mean that the allocations available for other industries are correspondingly reduced, falling by 30-50% over 2010-20. Transport is responsible for about 27% of non-EITE industries emissions; these will need to be reduced sharply if such reductions in non-EITE emissions are to be achieved.

Overall, a fundamental change in Australia's pattern of transport use, including a substantial modal shift to a modernised, low emissions rail, will be central to achieving the goals laid out in the White Paper.

1. Context and Targets

The objective of this paper is to define the likely operation of an Australian Emissions Trading System (ETS), and its impact on the transport sector, and to provide a framework for analysing and assessing the ongoing debate through to 2010 about the shape and impact of the ETS.

The release of the Australian Government's White Paper on December 15 2008 provides the primary source of information about the likely shape of an emissions trading scheme, although this must be read in the context of the detailed Green Paper of July 2008 and of the modelling and analysis contained in the final Garnaut Review Report released on 30 September 2008, and in the paper prepared by the Australian Treasury, released as *Australia's Low Pollution Future: The Economics of Climate Change Mitigation* on 30 October 2008. One of the appendices to that document, a study prepared by the Bureau of Infrastructure, Transport and Regional Economics and CSIRO entitled *Modelling the Road Transport Sector (2008)*, is also relevant.

While it is clear that the final shape of Australia's response to climate change will be heavily influenced both by international negotiations leading up to the crucial UN meeting on climate change in Copenhagen in December 2009 and by trends in the world economy over that time, the Government's overall intentions are documented clearly in the White Paper. In the long run, it intends to have a comprehensive cap-and-trade system based on largely auctioned permits, with full banking and trading of permits and fully linked into an international trading scheme, and with limited complementary policies. The immediate impact of an ETS will be determined by the details of the development of the scheme over the next five years or so.

1.1. The Overall Targets

The impact of an ETS will be heavily influenced by the targets that are adopted as a basis for setting the cap. The Government, while committed to achieving a reduction in Australia's total emissions of 60% by 2050 (relative to 2000 levels), has not yet finally adopted intermediate targets. In the Green Paper, it indicated that it would provide, by the end of 2008, a national target range for 2020, and the national trajectory for 2010-11 to 2012-13, with that extended to 2014-15 in 2010. For the ETS caps (which will differ from the emissions trajectory because of excluded sectors), the Government intends to set a five-year scheme cap with a subsequent ten year range (a gateway). In late 2008, the approach to setting scheme caps for 2010-11 to 2014-15 will be announced, with the first five years of caps and the first ten year gateway announced in early 2010.

The Garnaut Review proposes specific intermediate targets and somewhat different transitional arrangements. The intermediate target proposals are summarised in Table 3.1. The unconditional offer is for a 5% reduction in total emissions from the 2000 level by 2020; this constitutes a cut of 22%-27% relative to the unchanged policy estimate for 2020¹. The preferred conditional offer, said to be consistent with a 550 CO₂-e ppm stabilisation scenario, is for a 10% reduction (-25% to -31% relative to base), while a cut of 25% should remain a goal in appropriate international circumstances.

¹ The lower figure is relative to the DCC (2008) projections, which include the Mandatory Renewable Energy Target (MRET) of 20%; the larger reduction is relative to the Garnaut Report's projections, which do not include MRET.

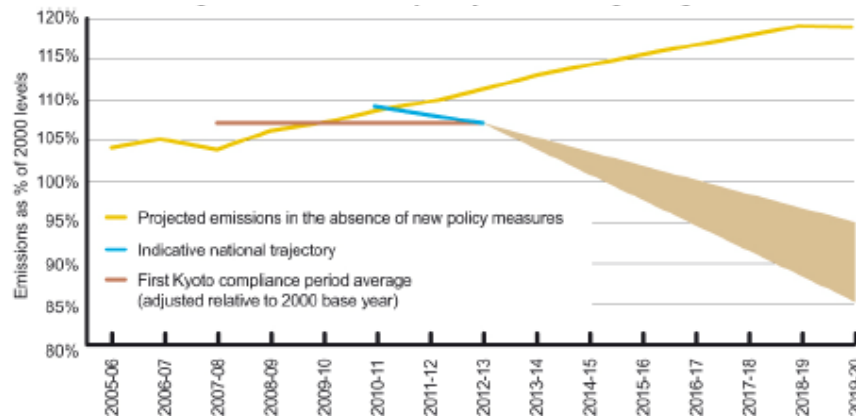
Table 3.1 Scenarios modelled in the Garnaut Review and the Treasury October 2008 paper

	Garnaut -10	Garnaut -20	CPRS -5	CPRS -15
Stabilisation level (pp CO ₂ -e)	550	450	550	515
Per cent change in emissions, relative to 2000 (%)				
Emissions allocation at 2020	-10	-20	-5	-15
Domestic emissions, 2020	+9.9	-8.7	+5.8	-4.3
Emissions allocation at 2050	-80	-90	-60	-60
Domestic emissions at 2050	-23.2	-69.1	-24.1	-46.3
Context	Assumes full international emissions trading in place by 2013		Assumes more gradually divergence from national reference cases, and take up of emissions trading	

Source: Garnaut et al. (2008) and Treasury (2008).

The target is for emissions reductions of between 5-15% by 2020 relative to 2000, with the final decision to be made after the 2009 UNFCCC conference in Copenhagen. The 15% target will be adopted if all major countries commit to restrain emissions and if developed countries accept comparable targets. A trajectory involving a 1% per annum reduction in total emissions has been established for the first three years starting with 2010-11, with subsequent trajectories to 2020 to be set when the final target is established. As shown in Figure 3.1, the impact of these targets relative to business as usual emissions will be substantial – if the 15% target for reduced emissions is adopted post Copenhagen, the emissions allocation for 2020, taking account of expected growth in the business as usual case, will be about 28% below that unchanged policy base.

Figure 3.1: Indicative trajectory and 2020 target range

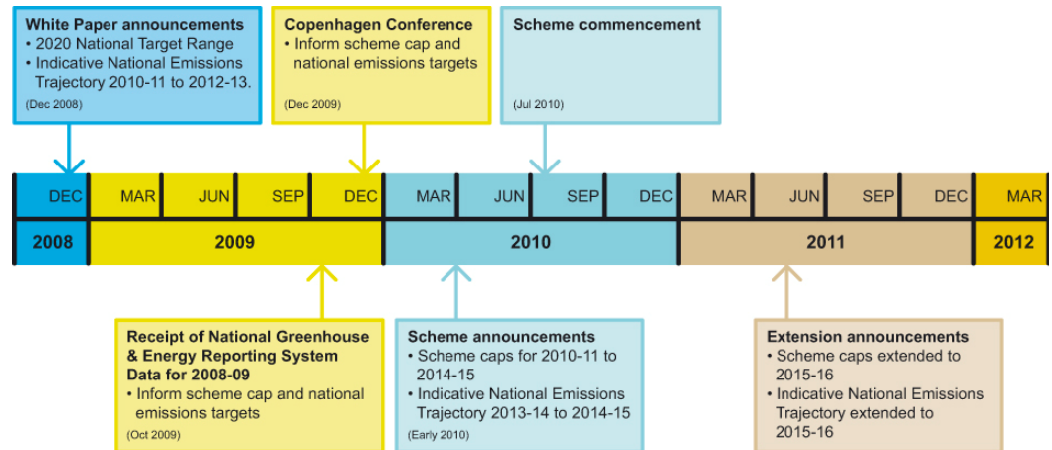


Source: DCC (2008, Chapter 4, Figure 4.4).

1.2. Setting the Emission Caps

The process by which the Government plans to set the scheme caps for different periods in the context of evolving national emissions targets is summarised in Figure 3.2, drawn from the White Paper (Treasury 2008).

Figure 3.2 Scheme cap following the Copenhagen conference of the Parties to the UNFCCC



Source: DCC (2008, p. xxxii).

1.3. Coverage Issues

Permits will be either auctioned or given freely in some cases, to be fully tradeable and bankable, with a 5% per annum borrowing allowance. The permit price will be determined in the market, subject to a price cap on permits of A\$40 per tonne of CO₂-e in 2010, rising by 5% per annum in real terms. Emissions will be internationally tradeable, both through Kyoto mechanisms and through linkages to other defined trading schemes.

There is a high formal coverage, with about 75% of emissions included, but this is reduced by the effect of other provisions. Permits will be issued freely to energy intensive trade exposed (EITE) industries, at two levels (90% and 60%) based on the energy intensity of production, with the eligible base declining by 1.3% per annum, and will be available for new or increased production. They can grow by up to 5% a year, and at that rate would account for 57% of emissions by 2020. Substantial support has also been provided for coal-based generators through the issue of free permits, subject to maintaining their generation capacity.

Transport is included in the CPRS, but the arrangements to offset the impact of the CPRS on fuel prices for heavy road vehicles, on-road business users and private vehicle use are retained as in the Green Paper, as are those for assistance to households and for the Climate Change Action fund. This offset has not been extended to rail. The offsets for passenger cars and for trucks will be reviewed after three years and one year respectively. The Government has decided that all shipping (international and domestic) that carries domestic cargo will face an equivalent carbon cost to that emerging from emissions trading.

2. The Role of Transport in Meeting Australia's Emissions Targets

2.1. The Apparent Implications for Transport

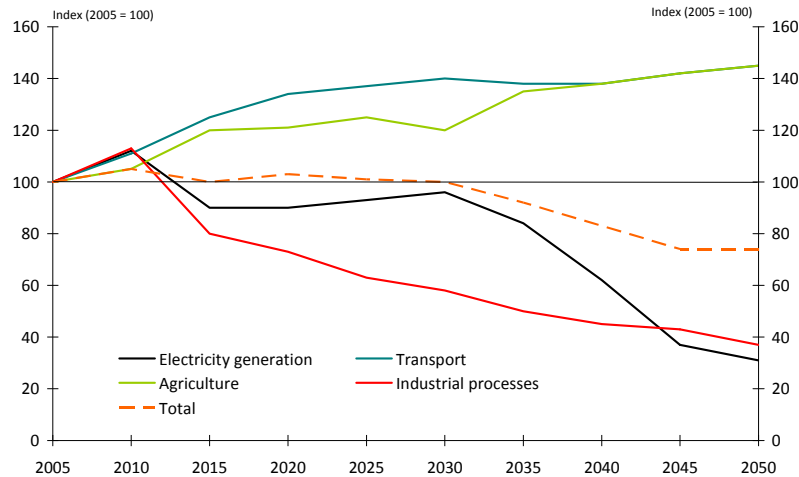
Even though transport is responsible for 17-18% of Australia's emissions on a full life-cycle basis, the reduction in transport emissions plays a limited role in expected CPRS outcomes over the next few decades. There is limited discussion of transport issues in the White Paper, although a supplementary paper is provided (BITRE and CSIRO 2008).

While transport providers – in road, rail and air modes – will be affected by emissions trading in many ways, its impact on the overall level and structure of transport activity in Australia is presented as modest through to 2030. This impact will be through prices, but even a carbon price of A\$50 per tonne of CO₂-e amounts to an increase of only about 20 cents per litre on the fuel price, a modest change in terms of recent price movements. The elasticity of motor vehicle use with respect to the fuel price is low, in part because of limited alternatives in many areas and also because fuel costs are only a small proportion of the overall cost of owning and operating a car.

Given the much higher impact on electricity prices (a carbon price of A\$50 per tonne of CO₂-e will lead to an increase of about A\$50/MWh in wholesale electricity prices, an approximate doubling) than petrol prices, in some cases rail's competitive position vis-à-vis road could deteriorate. There is likely to be a substantial impact on individual owner-operators in the road freight industry, where margins are very tight and higher costs could force many out of the industry. But with lags in the adoption of new technologies for motor vehicles, transport emissions are unlikely, on proposed policies, to deviate much from the unchanged policy case through 2020 if the only policy mechanism at work is the carbon price generated through emissions trading.

This conclusion about the impact of emissions trading per se is confirmed by the modelling undertaken by the Australian Treasury and released before the publication of the White Paper (Treasury 2008). Figure 3.3 summarises Treasury's projections for domestic emissions for the 5% reduction target, with emissions by industry expressed as an index with 2005 levels equal to 100. By 2030, total Australian domestic emissions will be at 2005 level, with the required reduction in emissions relative to 2005 levels achieved by the purchase of emissions overseas. By 2020, emissions from industrial processes are projected to be more than 40% below 2005 levels and those from electricity generation nearly 10% lower, but transport emissions are projected to be nearly 40% higher and still very close to the business as usual case. Thus the modelling of this case implies no substantial reduction in transport emissions relative to unchanged policies before 2030.

Figure 3.3: Industrial sector emissions for Australia, CPRS-5 scenario, 2005-2050



Source: Adapted from Treasury (2008).

2.2. Three Reasons for a More Substantial Impact in the Transport Sector

Nevertheless, there are, in our view, three related reasons why Australia will need to, and probably will be forced to, achieve a much greater reduction in domestic emissions, and hence in transport emissions, than is implied in this analysis. The first is that the Treasury modelling starts from an unrealistically low base of current global emissions, so that any given stabilisation path (say 500 ppm CO₂-e) is more difficult to achieve, in the sense of requiring deeper cuts in emissions. The second is that the modelling framework allows up to 50% of Australia's reduction in emissions relative to the base case to be achieved by net purchases of emissions permits overseas, rather than by reductions in domestic emissions, and, in the CPRS-5 cases, about 40% of the reduction is achieved in that manner by 2030. Especially in the context of a more difficult global challenge than anticipated in the modelling, this outcome seems unrealistic. Australia is thus likely to be required to achieve a substantial reduction in domestic emissions. Thirdly, the White Paper proposals for the issue of free permits to energy intensive trade exposed (EITE) industries are extremely generous, amounting to up to 57% percent of all permits available in 2020 on some assumptions. This generous EITE allocation, which was not included in the Treasury modelling, means that the reduction in emissions required from other industries for a given emissions target is much greater than would otherwise have been the case.

2.3. The Base Level of Global Emissions

Table 3.2 provides a number of estimates of total global greenhouse gas emissions for 2005. The Fourth Assessment Report of the International Panel on Climate Change (IPCC 2007) published an estimate of total global greenhouse gas emissions in 2004 of 49.0 Gt CO₂-e, of which some 44.3 Gt CO₂-e were for all emissions other than CO₂ emissions from biomass decay and peat, and about 4.7 Gt CO₂-e from that latter source. The International Energy Agency (IEA 2008) provides estimates of all emissions (excluding CO₂ emissions from biomass decay and peat) on which the IPCC draws, and has provided updated estimates for 2005. Other non-Treasury estimates shown in the table include unpublished estimates prepared by the present authors for the Garnaut Review (Garnaut et al. 2008).

Table 3.2: Estimates of global greenhouse gas emissions, 2005 (Gt CO₂-e)

	IPCC AR4 ¹	IEA	Treasury (Gt CO ₂ -e)	Garnaut et al.	CSES
CO ₂					
<i>Energy use</i>					
Fuel combustion (including fugitive emissions)	27.7	27.3	27.0	26.7	27.3
Industrial processes and waste	1.4	1.3	1.2	1.0	1.3
<i>Land use and forestry</i>	3.8	3.3	2.8	3.5	3.5
<i>Total CO₂ (excluding biomass and peat)</i>					
CH ₄	7.0	6.8	5.3	6.6	7.1
N ₂ O	3.9	3.9	2.4	3.3	4.1
Other Kyoto gases	0.5	0.8	0.4	na	0.8
Total (ex biomass and peat)	44.3	43.4	39.1	41.1	44.1
CO ₂ biomass decay and peat	4.7	na		4.0	4.0
Total emissions	49.0	na	39.1	45.1 ²	48.1

Notes: 1. For 2004. 2. Excludes other Kyoto gases.

Sources: IPCC (2007), IEA (2008), Treasury (2008), Garnaut et al. (2008) and unpublished estimates of the authors prepared for the Garnaut Review.

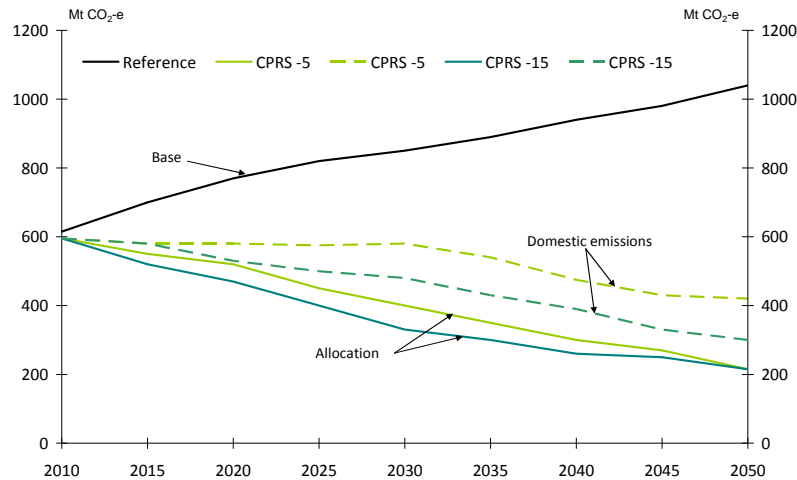
While there remains considerable uncertainty about total global emissions, Table 3.2 suggests that the best available estimates of all emissions excluding CO₂ emissions from biomass decay and peat are in the region of 43-44 Gt CO₂-e. With CO₂ emissions from biomass decay and peat put at 4-5 Gt CO₂-e, the best estimate of total global greenhouse gas emissions in 2005 is 47-49 Gt CO₂-e. By comparison, and for reasons that remain unclear in the document, the Treasury base figure for 2005 is 39.1 Gt CO₂-e. The best estimate range is 20-25% higher than this figure, with the IPCC figure for 2004 25% above the Treasury figure for 2005.

2.4. Purchasing Emission Permits Overseas

This underestimation of the base emissions level in the Treasury modelling may have important ramifications, although there are many complexities in the way in which a base level of total emissions are incorporated into the climate models for analysis. A particular atmospheric concentration level for greenhouse gases is related to the total historical stock of emissions and other factors (such as decay and absorption rates). This means that, if the underlying path of emissions is higher than projected, the reductions that must be made by all countries relative to that path, in order to achieve a given concentration level (say 550 ppm CO₂-e), will be larger than anticipated. Not only does this mean that Australia will probably be required to accept a greater reduction in its emissions allocation than currently planned, but also implies that global carbon prices are likely to be higher than modelled for a given concentration target, since countries are required to achieve more rigorous reductions.

For this and other reasons, it is unlikely that Australia will be able to achieve all the actual reduction in its emissions allocation by purchasing overseas permits, as is implied by the Treasury modelling of the CPRS-5 case (Figure 3.4). Australia is likely to find itself under great pressure to adopt a stronger target, at least the CPRS-15 case of a 15% reduction by 2020, and to achieve much of this by a reduction in absolute emissions levels domestically.

Figure 3.4: Australian emissions: Reference case and two scenarios, domestic emissions and emissions allocation, 2005-2050 (Gt CO₂-e)



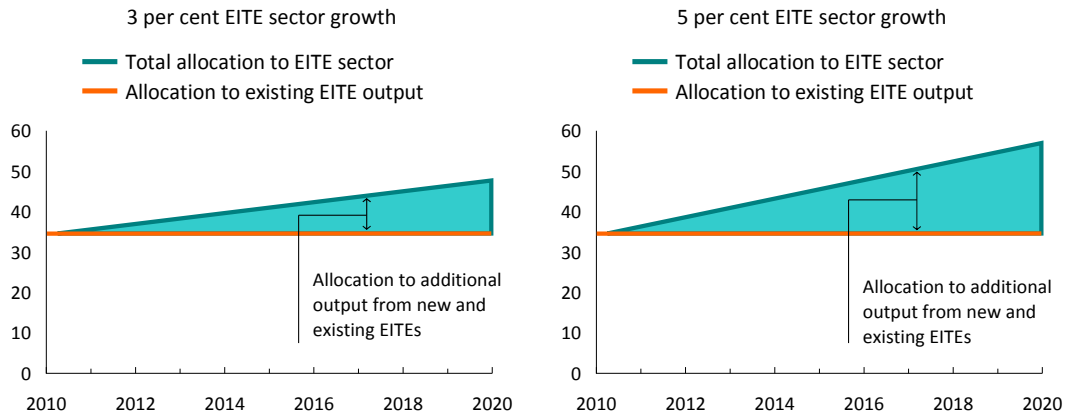
Source: Adapted from Treasury (2008).

2.5. The Arrangements in the White Paper for Energy Intensive Trade Exposed Industries

The third relevant consideration arises from the arrangements proposed in the White Paper to assist EITE industries, which are much more generous than those included in the Treasury modelling. Figure 3.5, taken from the White Paper, shows the rising share of permits allocated to the EITE sector (including agriculture, and assuming, as the White Paper, does that agriculture is admitted to the EITE scheme) on two assumptions about the average annual growth of these industries (3% and 5%, where 5% is the maximum growth rate for which free permit allocation will be provided from this scheme). The chart uses the White Paper specification of a 1.3% per annum carbon productivity contribution, so that entitlement to free permits per unit of EITE output falls by 1.3% per annum. (The Treasury modelling assumed that assistance per unit of output fell by 3% per annum, which would reduce the impact of the scheme significantly.)

One implication of such a generous EITE scheme is that an increasing share of Australia's emissions allocation is given to these industries over time, with the extent of that increasing share tied to the growth rate of these industries, and to Australia's final target for emissions in 2020. As shown in Table 3.2, 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, an annual reduction of 3.4% per annum. If the EITE growth rate is 5% per annum and the target is for a 15% reduction, the fall in the allocation for all other industries is 57%, or 8% per annum over 2010-20, which would constitute a very difficult challenge.

Figure 3.5: Share of permits allocated to the EITE sector, for different growth rates (per cent)



Source: Reproduced from DCC (2008).

Table 3.3: Implied change in emissions allocations for non-EITE industries, 2010-20, for given emissions reduction targets and EITE industry growth rates (per cent)

Growth rate of EITE industries	5% reduction target		15% reduction target	
	3%	5%	3%	5%
Change in allocation in 2020 relative to 2010 (%)				
Total allocation	-12.8	-12.8	-22.0	-22.0
Free permits for EITE industries	18.1	43.2	18.1	43.2
Allocation for other industries	-29.4	-42.9	-43.5	-57.0

Source: Estimates of the authors based on DCC (2008).

2.6. A Major Transport Response is Required

These three factors, i.e., the underestimation of the current level of global emissions, the difficulties in shifting virtually all of the absolute reduction in Australia’s emissions up to 2030 offshore, and the profound implications of the EITE scheme for other industries, imply that large-scale reductions in domestic non-EITE emissions will be required in Australia over the decade to 2020. Even allowing for some cushioning of the domestic adjustment process by purchase of permits overseas, reductions of 20%-40% in non-ETIE emissions are likely to be required over the decade to 2020 if the EITE scheme remains unchanged.

In such a situation, the benign world of Figure 1, in which transport emissions effectively continue on a business as usual basis until 2020 and are about 40% higher than 2000 levels in 2030, will no longer apply. On a full life-cycle basis, transport contributes about 27% of non-ETIE emissions. If non-ETIE emissions are to fall by 20%-40% over 2010-20, substantial efforts will be needed to reduce transport emissions, not only relative to the business as usual case but also in absolute terms in due course.

The various papers in this series, and the project Final Report, address the steps that need to be taken to reduce transport emissions and the costs and benefits of those steps, although it focuses only on those relating to rail. That is, the emphasis is on achieving a reduced emissions intensity of rail transport and particularly on achieving lower emissions (and other benefits) through a sustained modal shift to an enhanced, low-pollution rail transport system. This is not to deny the great importance of further steps to reduce the emissions intensity of road transport. The substantial role that the transport sector can and should play in reducing Australia’s emissions is discussed in Paper 10.

3. Other Aspects of the Operations of the Emissions Trading Scheme

3.1. Adjustment Assistance

The Garnaut Review argues for a stringent approach to complementary policies, thus echoing the common view that such policies will be either costly or distorting in the context of an ETS. But it does accept a role of complementary policies whether market failures are present, citing in particular R&D, network externalities, and some information problems. In relation to MRET, it suggests that it should be phased out, with the current non-indexed cap price for RECs being held unchanged and eventually absorbed into the ETS.

In the White Paper, the Government again takes a stringent approach to complementary policies, but outlines a generous range of assistance and adjustment policies. In addition to MRET, the household adjustment assistance and the EITT industries scheme discussed above, the key measures are:

- *the Climate Change Action Fund, which will assist businesses in the transition to a cleaner economy, which will provide partnership funding for, for example, capital investment in new, low emissions projects, energy efficiency projects and dissemination of best practices; and*
- *the Electricity Sector Adjustment Scheme, which will provide over \$3 billion in direct assistance to coal-fired electricity generators, subject to few conditions.*

For the proposed disbursement of anticipated CPRS revenue see Table 3.4.

Table 3.4 Impact on fiscal balance of the CPRS and related measures

	2008-09	2009-10	2010-11	2011-12
	(A\$ billion)			
Revenue from the issuing of permits			11.5	12.0
Households assistance measures				
Assistance for low and middle income households			-3.9	-6.0
Fuel tax adjustment			-2.4	-2.0
Industry assistance measures				
Assistance to emissions-intensive trade-exposed industries			-2.9	-3.1
Assistance to strongly affected industries			-0.7	-0.7
Climate Change Action Fund		-0.3	-0.7	-0.7
Net impact of revenue and assistance measures		-0.3	0.8	0.8
Resourcing of the CPRS regulator	*	*	*	*

Note: * Final costs will be published in the 2009-10 Budget.

Source: DCC (2008).

The Building Australia Fund, into which the Government contributed A\$20 billion during 2008 and the assessment guidelines that have recently been released, could also provided complementary investment in the area of infrastructure.

3.2. Complementary Policies

The principles espoused in the White Paper for addressing complementary policies are summarised in Box 3.1. The central criterion is that complementary measures are targeted at a market failure that is not adequately addressed by the Scheme or which impinges on the effectiveness of the Scheme in reducing emissions.

Box 3.1 Principles for complementary measures

The Government will use the following principles to guide assessment of emission reduction measures:

1. The measures are targeted at a market failure that is not expected to be adequately addressed by the Scheme or that impinges on its effectiveness in driving emissions reductions.
2. Complementary measures should adhere to the principles of efficiency, effectiveness, equity and administrative simplicity and be kept under review. They may include:
 - a) measures targeted at a market failure in a sector that is not covered by the Scheme;
 - b) measures for where the price signals provided by the Scheme are insufficient to overcome other market failures that prevent the take-up of otherwise cost-effective abatement measures ;
 - c) measures targeted at sectors of the economy where price signals may not be as significant a driver of decision making (e.g. land use and planning); and
 - d) some measures in (a) or (b) may only need to be transitional depending on expected changes in coverage or movements in the carbon price.
3. Complementary measures should be tightly targeted to the market failures identified in the above criteria that are amenable to government intervention.
4. Complementary measures may also be targeted to manage the impacts of the Scheme on particular sectors of the economy (for example to address equity or regional development concerns).
5. Where measures meet the above criteria, they should generally be implemented by the level of government that is best able to deliver the measure.

Source: DCC (2008, p. 12-2).

There is little reason to dispute these principles, so that the key question is the extent of relevant market failures in transport and other areas. Given the limited role of complementary measures in the CPRS, the assumption follows that the practical extent of such relevant market failures is limited. In our assessment, this assumption is not correct. Market failures are pervasive throughout the transport and energy sectors, and complementary policies to address such market failures should play a central role in Australia's full climate change response. These matters are taken up in Paper 4.

4. References

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