



Australia

The World's Carbon Markets: A Case Study Guide to Emissions Trading

Last Updated: March 2014

NOTE: This case study relates to the Carbon Pricing Mechanism (CPM), passed on November 8, 2011 as part of the Clean Energy Future (CEF) legislative package. The current government has announced its intention to repeal the CPM and replace it with the Direct Action Plan and Emissions Reduction Fund.¹

Brief History and Key Dates:

Australian governments have sought to move forward with emissions trading for almost ten years, spanning governments of the center-right (Liberal-National Coalition) and center-left (Australian Labor Party). Emissions trading and carbon pricing remain politically contentious not only between the main parties, but also within their ranks in Parliament.

The election of 2007 saw climate change as a central theme on the campaign trail and the national discourse, with both progressive and conservative leaders promising to introduce an emissions trading system (ETS) if elected. The victorious center-left Labor Government under Prime Minister Kevin Rudd claimed a mandate to progress quickly with actions to tackle climate change. Just weeks after the election, Prime Minister Rudd ratified the Kyoto Protocol at the UNFCCC conference in Bali, in December 2007. Following this commitment, attention turned to domestic policies to reduce emissions, with a Government Green Paper released in July 2008. This was soon followed by the independent Garnaut Review Report in September 2008, whose main recommendation was to implement a national ETS at the earliest opportunity with a target of 25% from 2000 levels by 2020 in the context of an international agreement.

A Government White Paper followed the Garnaut Review in December 2008, and it responded to comments on the Green Paper. It set out Government policy on conditional 2020 targets for emissions reductions, and it refined the design of the Carbon Pollution Reduction Scheme (CPRS), the primary policy measure to achieve the emissions targets. Also, notably, this Government White Paper increased the proposed compensation for 'emissions-intensive trade-exposed' industries, and it did not include agriculture as a capped sector. This White Paper underpinned the CPRS Bills that the Government sought to pass in late 2009 before the Copenhagen UNFCCC meetings. The Government had sufficient votes in the House of Representatives, and it seemed likely that the Opposition parties under the leadership of moderate MP Mr. Malcolm Turnbull would support the bills. However, six days before the Senate vote, Mr. Turnbull lost the Opposition leadership to Mr. Tony Abbott who opposed the bills. Consequently, Opposition Senators and non-Labor Senators (including the Green Party) joined to vote down the CPRS on various grounds: that it would harm Australian competitiveness and exports; that emissions would merely 'leak' abroad to competitor economies; and, that its environmental ambition was not sufficient. Mr. Abbott began an aggressive new political attack on the ETS as 'a great big new tax'.²

The Rudd Government reintroduced the CPRS legislation in February 2010, when it again passed the House of Representatives but was delayed in the Senate. Seemingly frustrated by the lack of progress in Copenhagen, and with little prospect of the legislation passing, in April 2010 the Prime Minister postponed the legislation until after the end of the first commitment period of the Kyoto Protocol in 2012. His personal poll ratings fell dramatically and immediately, and in June 2010, the Labor Party replaced him as Leader and Prime Minister with Ms. Julia Gillard. Days before the resulting federal election in August 2010, Prime Minister Gillard sought to defuse the Opposition's attack on climate policy by declaring 'there will be no carbon tax under the Government I lead'.

The election resulted in a hung parliament in which the Labor Party formed a minority government with the support of three Lower House Independents and one Green Party MP conditional upon the implementation of a carbon price. In September 2010, then Prime Minister Gillard announced plans to work with the Independents and Greens to introduce a carbon price mechanism, despite her pre-election pledge.

The resulting Clean Energy Future (CEF) legislation, which is broadly based on the foundations of the earlier CPRS, was announced in the Climate Change Plan in July 2011 and passed on November 8, 2011. Its central feature is a Carbon Pricing Mechanism (CPM), which commenced on 1 July 2012 as a permit system with a fixed carbon price at which permits can be bought from the government (A\$23, rising at 2.5% per year in real terms), along with some flexibility to use domestic offset credits for compliance. The CPM is then scheduled to transform into an emissions trading system from 1 July 2015 onwards. Opposition leader Tony Abbott and the Liberal Party have maintained a bipartisan, unconditional commitment to reducing emissions by 5% by 2020, as well as the increased targets subject to international conditions. However, they are strongly opposed to the imposition of an emissions trading system or carbon tax in the absence of similar policies in other nations (such as China and the US). National elections were held on September 7, 2013, in which the Liberal-National coalition gained a majority of seats in the House of Representatives, and Tony Abbott became Prime Minister. As noted above, the government intends to seek repeal of the CEF and to replace it with a Direct Action Policy.

Summary of Key Policy Features:

CAP/TARGET: The emissions reduction *target* put forward by the Australian government on January 27 2010, following COP 15 in Copenhagen in 2009³, is to reduce emissions *5% below 2000 levels by 2020*. More recently, following negotiations with the Green Party, a longer term target of *80% reduction below 2000 levels by 2050* was agreed. The annual emissions caps will be set in May 2014 for the five years from 2015 onwards, as the flexible price phase commences. From this point, an additional review takes place each subsequent year to determine the cap for the next undefined year. Therefore, there are always *caps five years in advance*. The caps are set to ensure national emissions meet international obligations, and emission projections for non-covered sectors, primarily the transport and agriculture sectors, are specially considered. If no agreement can be reached on the cap – either chamber of parliament can disallow a decision – then a default cap is triggered that must at a minimum, achieve the five percent target.

The emissions reduction target of 5% below 2000 levels by 2020 is unconditional. However, the Government may increase its target *up to 25% below 2000 levels by 2020* depending on the scale of global action.



Figure 1: Projected Emissions, including impact of new land sector activities (using Global Warming Potentials from AR4). Source: Australian Government, Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education

SCOPE/COVERAGE: Australia's ETS *will cover approximately 60% of Australia's emissions.*⁴ However, there are additional sectors with an equivalent carbon price that increase this fraction to roughly two-thirds of Australian emissions. The program excludes the agriculture *sector* and the majority of emissions from transportation from the cap. The ETS covers most power generation sources. In addition, oil and gas manufacturing processes, rather than point-of-use emissions, industrial process, fugitive emissions processes (with the exception of decommissioned coal mines), and non-legacy waste are all covered for sources with annual emissions above a 25,000 tCO2e *threshold*. There is an option to cover landfill emissions are covered for sources above 10,000 tCO2e/yr, but the government has not extended coverage to them at the time of writing. For each of these sectors the *point of regulation is downstream* and lies with the corporation or person who has "operational control" of a facility that meets the emissions threshold. Operational control is defined as:

"A corporation or person has operational control over a facility if it has the authority to introduce and implement operational, environmental and health and safety policies for the facility or is declared by the Regulator to have operational control of the facility."⁵

The exception to this is the natural gas sector, where the point of regulation falls upstream on the supplier of gas through a pipeline, unless such liability is held by a "large gas consuming facility" (LGCF) or an Obligation Transfer Number (OTN) is quoted. The rationale behind OTN is to allow consumers of natural gas to take on the obligation for covering emissions rather than suppliers taking the obligation and passing through carbon related costs to consumers. LGCFs are defined as consumers with emissions above $25,000 \text{ tCO}_2\text{e}$ per financial year.⁶

The *transport sector* is partly covered, using an equivalent carbon price. Fuel-related emissions for domesticbased aviation, shipping and rail emissions will be covered by increasing fuel excise by an equivalent amount. Fuel for business transport will also have an equivalent carbon price imposed. From July 1, 2015, where the carbon price becomes flexible, the effective carbon price will be set every six months using the average carbon price over the period. Fuel for light commercial transport, households, agriculture, forestry and fisheries are excluded from equivalent carbon prices.⁷

Agriculture and land-use emissions are excluded from the emissions trading system, but voluntary emissions reductions in these sectors are encouraged through an offset mechanism whose credits can be used by covered entities for compliance (the *Carbon Farming Initiative*). The program will cover four of the six greenhouse gases under the Kyoto Protocol – *carbon dioxide, methane, nitrous oxide, and perfluorocarbons (PFCs)* from aluminum smelting. Other synthetic greenhouse *gases* are excluded from the CPM but will have an equivalent carbon price imposed, using already existing national regulations.⁸

AUCTIONING/ALLOWANCE DISTRIBUTION: The Australian government will auction a proportion of allowances. The exact amount that will be auctioned is not a fixed percentage, but determined by the Regulator once free units are allocated or bought back from covered entities. The level of *free allocation* will be dependent upon the level of *emissions-intensive trade-exposed industries* (EITE) that apply for assistance through free allocation. The auction schedule will allow purchase of 1/8 of the total vintage allocation in the two years prior to that vintage, 4/8 are made available during the vintage year, and a further 1/8 are available in the year following the vintage. The Australian government announced on February 24, 2014, that it would cancel auctions that were due to take place before 30 June 2014.⁹

COMPLIANCE YEAR - AUCTION SCHEDULE										
VINTAGE	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
2015-16		15m*	1/8 + (28 - 15m)**	4/8	1/8					
2016-17		15m*	1/8 + (1/8 - 15m)***	1/8	4/8	1/8				
2017-18			1/8	1/8	1/8	4/8	1/8			
2018-19				1/8	1/8	1/8	4/8	1/8		
2019 - 20					1/8	1/8	1/8	4/8	1/8	
2020 - 21						1/8	1/8	1/8	4/8	1/8
2021-22							1/8	1/8	1/8	4/8

The table below details this:

* 15m refers to the 15 million unit limit, without a pollution cap in place.

** The number of 2015-16 vintage units available for auction in 2014-15 will be 1/8 of the total vintage allocation plus the excess units that were unable to be auctioned in 2013-14 due to the 15 million unit limit.

*** The number of 2016-17 vintage units available for auction in 2014-15 will be 1/8 of the total vintage allocation plus the excess of units that were unable to be auctioned in 2013-14 due the 15 million unit limit.

Table 1: Expected Australian Auction Schedule for Allowance Vintages (2015/16 to 2021/22).Source: Carbon Market Institute July 201210

Companies can also apply to have an activity be considered 'Emissions-Intensive Trade Exposed' (EITE) industries. Assessments are then made on an industry-wide basis by the government. Companies will be considered **'trade**- *exposed*' if the value of their imports and exports is greater than 10% of the value of their domestic production. *'Emissions-intensity'* will be determined based on a threshold of emissions as a percentage of revenue or value added. Allocation of free permits is based on the weighted average emissions per unit of production across all entities conducting the activity, during the period 1 July 2006 to 30 June 2008. See Table 2 for more information.

In addition, there are measures to allocate funding towards compensation for households facing higher costs because of Australia's ETS. Auction revenues are a main source such funding (see *Complimentary and Supplementary Measures*).

Cri	teria and Thresholds for Industrial Ass	istance measures		
	Measurement	Criteria and Thresholds		
Trade Exposure	Value of Imports and Exports/Total value of domestic production, on industry basis	10%; inability to pass-through costs		
Emissions Intensity	Average emissions/revenue, or value added (tCO2-e/AUD Million)	2000t CO2e/AUD m (Revenue) or 6000t CO2e /AUD m (value-added) = 94.5% allocation 1000t CO2e /AUD m (Rev.) or 3000t CO2e /AUD m (value-added) = 66% allocation		
Coal-Fired Generators	Average emissions/Megawatts per hour generated (tCO2-e/MWh)	1t/CO2-e, eligible for free permits (41.7m total p/y). Free permits are issued between 2013-14 and 2016-17. \$1bn in cash also available in 2011-12.		
Liquefied Natural Gas (LNG)	Production level	50% free allocation		
Steel Transformation Plan	Investment in Innovation Activities	Sum of costs to conduct innovation activities; total \$300m available over six years from 2011-12 onwards.		

Table 2: Criteria and Thresholds for Industrial Assistance Measures.Source: Australia Department of Climate Change and Energy Efficiency

FLEXIBILITY PROVISIONS: the Carbon Pricing Mechanism encourages the use of both domestic and international credits. Within Australia, the *Carbon Farming Initiative* (CFI) allows the production of offset credits from projects in agriculture and land-use management. If the abatement achieved to generate credits are Kyoto-compliant then they may be used for compliance purposes under Australia's ETS, but if the abatement is not Kyoto-compliant then they can only be retired for voluntary compliance. The government originally proposed an AUD \$250 million fund to purchase non-Kyoto offsets, but in May 2013 this fund was scrapped because of extensions to the definitions of land-use emissions under the Kyoto Protocol. Australia's Kyoto accounts can now cover offsets previously defined as 'Non Kyoto', and so they are now defined as Kyoto compliant abatement. Both Kyoto and Non-Kyoto projects are covered under the CFI.¹¹ *Australian Carbon Credit Units* (ACCUs) produced by the CFI program are limited to 5% of a company's compliance obligation while the carbon price is fixed, but then there are no limits in place once the flexible price phase commences in 2015 (although this is subject to negotiation as part of the Australia-EU linking discussions). The following table provides details of the CFI.

	Summary of Carbon Farming	Initiative (CFI)	
Eligible Activities	Compliance grade:	Not yet compliance grade:*	
	 Reducing emissions from livestock Reducing emissions from fertilizer use Reforestation Avoided deforestation Reducing emissions from waste deposited in landfills before July 2012 	 Soil carbon management Feral animal management Improved forest management Non-forest re-vegetation 	
Markets	 Carbon Pricing Mechanism International compliance markets (pending bilateral agreements) 	Voluntary Markets	
Obligation Limit	Carbon Pricing Mechanism only: During fixed-price phase 5% of a facilities compliance obligation, in cap-and-trade phase up to 100% of obligation		
Methodology Approval	Assessment and approval by Domestic Offsets Integrity Committee. Currently 13 methodologies approved and 28 other submitted ¹²		

Source: Carbon Farming Initiative Handbook, Clean Energy Future Australia (2012) *Note: Australia has announced that it will elect these activities under Article 3(4) of the Kyoto Protocol, with the exception of Feral Animal Management.

In addition, as of 2015, *international credits* can be used up to 50% of an entity's compliance obligation, with the specific criteria still to be finalized. Credits from the UNFCCC Clean Development Mechanism (CDM) and Joint Implementation (JI) programs are already approved, so that **12.5% of an entity's compliance obligation** can be fulfilled using Certified Emissions Reduction (CER) or Emission Reduction Unit (ERU) credits. The Minister has discretion to allow other non-Kyoto international units to be used, subject to government restrictions.

The Australian Government views *international linking* as a key cost containment device. It estimates that the costs of abatement would double if all reductions were sourced domestically.¹³ It has identified the EU and New Zealand as its most coveted prospective linking partners. On August 28, 2012, the Australian government released details of an agreement to link to the European Union Emissions Trading System (EU ETS). The linking will take place in a two-stage process, whereby from July 1 2015 to July 1 2018 Australian firms will be able to purchase European Union Allowances (EUAs), under a one-way linking arrangement. The agreement also calls for negotiations on a number of design issues, including the treatment of international offsets and land-sector credits, in order to establish a two-way link so that European entities can also purchase Australian permits by no later than July 1 2018. At this point the two programs' permits will be fully interchangeable. Plans to link with the New Zealand ETS continue to progress, with a possibility of linking in 2015. ¹⁴ However, there are substantial differences between the two schemes in relation to international offsets that would need to be reconciled before linking becomes a possibility. Australia continues to consider potential linkage with other ETS's, such as the California ETS in the United States.¹⁵

Banking is not permitted within the first three years of the ETS, while prices are fixed, and compliance must be fulfilled annually. However, as carbon prices become more flexible after 2015, unlimited banking of allowances between years will be allowed. **Borrowing** will be limited; an entity can surrender up to 5% of their liability from permits from the following vintage year.

COST CONTAINMENT/VOLATILITY MANAGEMENT: The Australian ETS is divided into three phases of cost containment: fixed, flexible, and floating. The **fixed price phase** entails companies purchasing allowances directly

from the government for AU\$23 (increasing year-on-year with inflation), with additional limited offset possibilities. During the **flexible price phase** from 2015 to 2018, the Government will set a *price ceiling* at AUD \$20 above the international price (i.e. European Union Allowance (EUA) price), rising 5% annually. There is no price floor in place during the flexible price period from 2015 onwards, as a result of the EU-Australia linking agreement. The government moved away from instituting a price floor and a surrender charge for international offsets, which would have served as a top-up fee for international units to reach the floor price. During the *floating price phase* after 1 July 2018, the price ceiling will be removed. Greater access to international markets, through links and credits, will become an important cost containment measure.

Banking and borrowing arrangements will help manage volatility, and are discussed above.

MARKET REGULATION AND OVERSIGHT: The Government and Parliament retain oversight and responsibility for major policy decisions, including setting annual national emissions caps and international linking. The new *Clean Energy Regulator* will administer the CPM, the CFI, the Renewable Energy Target, and the emissions reporting under the National Greenhouse and Energy Reporting Scheme (NGERS). This regulator had broad oversight authority to monitor compliance and take enforcement actions where necessary. The new *Climate Change Authority* will have a similar role and mandate to the UK's Climate Change Committee. It will provide independent but not binding advice to the Government on national emissions targets, integrity of international credits, the operation of the CPM and other mitigation activities. The existing *Productivity Commission* will report on the appropriateness of industry compensation arrangements, specifically in light of international mitigation actions.

Penalty Companies are required to surrender allowances for all emissions in line with the timetables outlined in the regulations, or face an emissions shortage penalty. During the fixed price period, 75% of emissions obligations must be surrendered by June 15 of the relevant compliance year. The remaining 25% must then be '**trued up**' by February 1 in the following year. If a company has a shortfall after February 1, it must pay a charge of 1.3 times the fixed allowance price for that year. As prices become flexible, companies must account for their compliance obligations by February 1 of the following year. The **penalty for non-compliance** is double the benchmark average auction charge for that year.

COMPLEMENTARY AND SUPPLEMENTARY MEASURES: The Carbon Pricing Mechanism (CPM) is one of a number of initiatives included in the *Clean Energy Future (CEF)* legislative package passed into law in November 2011. The *Carbon Farming Initiative (CFI)*, as already detailed, provides a platform for investing in emissions reductions in the land-use management and agricultural sectors of the economy. Australian Carbon Credit Units (ACCUs) can be generated and liable entities can surrender them as part of their compliance obligation.

The CEF also created two new organizations to promote clean energy investment. *The Clean Energy Finance Corporation* (CEFC), a commercially focused investment vehicle, will oversee AU\$10 billion in funding to invest in the commercialization and deployment of renewable energy and enabling technologies, energy efficiency and low-emissions technologies. The CEFC can leverage private sector investment with loan guarantees, equity investments, and concessional loans.

The Australia Renewable Energy Agency (ARENA), established as an independent statutory body, will oversee and administer existing and new Government funding of AUD \$3.2 billion to provide grant funding for the research, development and demonstration phases of new and unproven energy technologies.

The AU\$1.2 billion *Clean Technology Program* will distribute grant-matching funds for projects related to emissions reducing technology development and deployment across the Australian economy, including manufacturing and agriculture.

In terms of *transitional support for industry*, the CEF also includes:

- Generous industry assistance in the form of free allocations to 'trade-exposed, emissions-intensive' entities (discussed above);
- An Energy Security Fund to provide AUD \$5.5 billion in transitional assistance to coal-fired power generators;
- AUD \$300 million Steel Transformation Plan to encourage investment and innovation in the Australian steel manufacturing industry;
- AUD \$983 million Coal Sector Jobs Package for 'gassy' coal mines with the highest fugitive emissions.

In September 2012, the Government abandoned a proposal to tender for the closure of highly polluting coal-fired generators, pronouncing that the secret bids did not represent value for money. In May 2013, the government announced that there will be savings of AUD \$3.9 billion in allocation of free permits over a four year period, due to lower projected carbon prices.¹⁶

At the *household level*, the program will return more than half of the revenue raised to offset higher energy costs for Australian citizens associated with the carbon price by using offsetting income tax reductions, increases in household benefits and higher pensions and allowances for qualifying families. These assistance packages are permanently implemented to account for the costs associated with the CPM.

The CPM will co-exist with Australia's existing *Renewable Energy Target of 20% by 2020*, and the parallel market for credits.

ECONOMIC PROJECTIONS: The Australian Treasury has conducted several rounds of macroeconomic analysis of the effects of introducing the carbon price in Australia, including in support of the *Garnaut Review* in 2008. The most recent, *Strong Growth, Low Pollution,* released in July 2011, shows that the Australian economy will continue to grow strongly under a carbon price, but slightly more slowly than without one; from 2010 to 2050, *Gross National Income per person* grows at an average rate of 1.1% per year, compared to 1.2% per year without carbon pricing.¹⁷ *Employment* growth is still projected to be 1.6 million jobs through 2020, with or without the CPM in place.¹⁸ In terms of composition, the *economic structure* in Australia shifts from emissions intensive industries towards lower emissions intensive sectors.¹⁹ According to alternative analysis from Vivid Economics in 2011 relating to the macroeconomic impacts of the Carbon Pricing Mechanism (CPM), with no carbon price Gross National Income (GNI) per capita will be AUD \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita will be AUS \$65,100 whereas with a carbon price in place GNI per capita

What Distinguishes this Policy?

UNIQUE ASPECTS:

- Australia is one of the first countries, along with New Zealand, to take a *phased approach to pricing that begins with a fixed price*. Australia's fixed price will increase in flexibility over time until the price floats from 2018 onwards.
- **2.** The Australian ETS has the ability to change its *emission reduction trajectory* based on international efforts and agreements, and a five-year cap is updated each year.
- **3.** Australia has designed an ETS to be *highly linked into emerging carbon markets* elsewhere; the proposed link with the EU ETS would be the first international linking of independently established systems.
- **4.** The Australian ETS introduces a project-scale system for creating *domestic land-sector offsets*, thus addressing a key domestic constituency and creating a test-bed for new approaches to land-sector management.

CHALLENGES:

- 1. The Government has announced that it will seek to **repeal** the CPM in 2014 and to replace it with the Direct Action policy.
- 2. Australia's carbon policy is being implemented against a backdrop of *huge planned investments in* emissions intensive sectors of the economy, such as mineral extraction and natural gas production. Reducing aggregate emissions will therefore need to rely on taking advantage of all internal and external opportunities to minimize economic impacts and increase the cost effectiveness of the program.
- The stronger and quicker international action is on climate, the easier it is likely to be for proponents to defend 3. the Australian program. The converse is also true; **slow international progress** makes it harder for proponents to defend Australia's actions against accusations that it is moving ahead of the world.

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Disclaimer: The authors encourage readers to please contact the EDF and IETA contacts with any corrections, additions, revisions, or any other comments, including any relevant citations. This will be invaluable in strengthening and updating the case studies and ensuring they are as correct and informative as possible.

- ⁶ Supra, Note I, pp.23
- 7 http://www.cleanenergyfuture.gov.au/transport-fuels/

¹ http://www.environment.gov.au/topics/cleaner-environment/clean-air/repealing-carbon-tax ² Carbon Market Institute, *Australia's Clean Energy Legislative Package: A Guide for Business*, November 2011 pp. 12

³ Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, http://www.climatechange.gov.au/international/negotiations/history-negotiations/copenhagen

⁴ Supra, Note 1. Pp.18 5 s. 11 of the National Greenhouse and Energy Reporting Act, 2007.

⁸ C2ES, Australia's Carbon Pricing Mechanism, November 2011 Available: http://www.c2es.org/docUploads/Australia Pricing Mechanism.pdf

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¹² visit http://www.climatechange.gov.au/reducing-carbon/carbon-farming-initiative/methodologies for latest information.

¹³ Jenny Wilkinson (October 2012), *Presentation at IEA-IETA-EPRI Emissions Trading Workshop*, Available: <u>http://www.iea.org/media/workshops/2012/ghg/1_Wilkinson_IEAIETAEPRIWorkshop2012.pdf</u>

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²⁰ Vivid Economics (2011) The economic impacts of the Carbon Pricing Mechanism, available: http://www.vivideconomics.com/uploads/reports/the-economicimpact-of-the-carbon-pricing-mechanism/Australian_carbon_presentation.pdf