Australian Carbon Pollution Reduction Scheme Legislation – International Comparative Analysis

Segment 2

Targets
Metrics of International Burden Sharing
Auctioning of Permits

Legal Policy Advice to the Australian Green Party and Others

23 September 2009
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1. Executive Summary

1. **ClientEarth is a non-profit environmental law and policy organisation with offices in London and Brussels. In July 2009 ClientEarth expanded to Australia and exists to lend a sustained and creative international legal perspective to proposed Australian environmental legislation.** A number of academic commentators have noted the ‘minimal attention being paid to the lessons from other regulatory regimes’\(^1\) in the design of an Australian emissions trading model. This is segment 2 of our legal policy advice and represents the beginning of a remedying of this gap, aiming to evaluate the proposed Australian Carbon Pollution Reduction Scheme (CPRS) legislation and propose alternative design solutions in light of international models, drawing particular attention to recent legislative developments in other jurisdictions subsequent to the release of the White Paper in 2008. The most important of these developments include the revised EU *Emissions Trading Scheme Directive 2009*\(^2\) and the proposed US *American Climate and Energy Security Bill 2009*.

2. The low levels of ambition demonstrated by the proposed CPRS legislation have been widely condemned. The target range of between 5 and 15% reduction below 2000 levels by 2020, (rising to 25% in the event of international agreement) falls unacceptably below world standards, with the current international negotiating range for developed countries falling between at least 25% and at least 45% below 1990 (a lower base year than the Australian commitment) levels by 2020 according to the revised negotiating text prepared for Copenhagen in June 2009.\(^3\) This represents an increase of 5% in the upper end of the range of 25-40% that was agreed upon by the Ad Hoc Working Group on Further Commitments for Annex 1 Parties under the Kyoto Protocol in 2008\(^4\),

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informed by IPPC 4th Assessment Report of 2007. It is noted that this range does not take into account lifestyle changes which have the potential to considerably increase this range.5

3. On an analysis of the legal texts, combined with the critical mass of scientific evidence and international momentum, ClientEarth advises that the current target range proposed in the CPRS Bill leaves Australia open to allegations of breach of its international legal obligations under articles 4, 5 and possibly 6 of the World Heritage Convention (WHC) and article 4 of the United Nations Framework Convention on Climate Change (UNFCCC). Targets also have a significant bearing on Australia’s ability to discharge its obligations under other instruments of international law such as the Convention on Biological Diversity 1992.

4. Full consideration of the precautionary principle requires an assessment of climate science since IPCC AR4 in the setting of national and global targets. The most important policy implication of this latest science is that the choice of emissions reduction pathway is more critical than previously thought, providing compelling arguments that developed nations such as Australia must make deeper cuts sooner and that to avoid dangerous or irreversible climate change, the global stabilisation level must be set well below 450ppm with 350ppm as a judicious goal.

5. The question of international burden sharing, and metrics for calculating national targets totalling a designated global stabilisation level is highly complex and fraught with political tensions. ClientEarth examined recent submissions by the Australian government to the Ad Hoc working group to the Kyoto Protocol and considers that the metrics the Australian government is stressing provide a distorted picture of Australia’s effort and capability to pay, that an undue emphasis on percent change in Gross National Income (NGI) as a cost indicator and change in

emissions per capita as an indicator of effort may not be supported by the legal text of the UNFCCC and may not be in accordance with the approach that is beginning to crystallize in the EU leading up to Copenhagen. ClientEarth notes recent models that call for a rights based approach to international burden sharing, one that takes account of the distribution of wealth within nations, rather than merely aggregate costs, as has been recently proposed by the Greenhouse Development Rights framework. From a human rights perspective, there is a strong argument that this kind of welfare metric should be included in burden sharing calculations.

6. Most literature on burden sharing agrees that a balanced indicator (a combined metric) is required. ClientEarth notes that the chosen indicators must be grounded in the legal text of the UNFCCC and Kyoto Protocol, and supports the two guiding principles of capability and historical responsibility put forward by the European Council in 2009. Examining the figures, it is clear that any balanced combined indicator based on these guiding principles, (particularly where ‘capability to pay’ is given its full and natural meaning and not merely reduced to distorting aggregate cost indicators such as change in percentage of GNI or GNP, and where historical responsibility is calculated on a per capita basis) will lead to Australia having to make among the deepest reductions out of annex 1 countries. The choice of metrics has a notable difference on the exact target for Australia, with incorporation of certain indicators such as early action and emissions per capita leading to even greater cuts by Australia. In light of this, ClientEarth considers that an Australian target of less than 25% below 1990 levels by 2020 and 80% by 2050 would leave Australia open to allegations of breach of its international legal obligations under various instruments. Additionally, higher targets of less than 35% by 2020 would be, if not in contravention of international law, unconscionable for Australia given its comparative high mitigation potential and very high levels of economic welfare.

7. The last section of this segment contains comparative legal analysis of provisions for auctioning and utilisation of permit revenues under the CPRS. The findings indicate that, when compared with other international models, the CPRS contains an unimaginative use of revenues that fails to maximise on the ability of emissions trading to accelerate
abatement via the direction of revenues or use of permit values. The proposed US model, and the revised EU ETS Directive of 2009 respectively commit to channelling 19% and at least 50% of revenues primarily towards reducing emissions. ClientEarth calculates the Australian revenues used for this purpose (in the form of the Climate Change Action Fund) as less than 10% of total permit values. In light of the details of revenue use in other jurisdictions, ClientEarth proposes alternative design solutions for the direction of CPRS revenues, including considerations for revision of the type and proportions of assistance to households and petrol users.

8. Throughout the various segments of this report the following international emissions trading models have been drawn upon as a springboard for analysis: the European Union Emissions Trading Scheme (ETS) as codified in ETS Directives 2003 and 2009, the Model Rule for the Regional Greenhouse Gas Initiative in the United States, the SO2 and NOX trading scheme established in the US Clean Air Act 1990, the proposed US American Clean Energy and Security (ACES) Bill 2009 currently before the Senate, and the New Zealand Climate Change Response (Emissions Trading) Act 2008.

9. This report is legal policy analysis and does not constitute legally privileged advice.

10. The most important findings from this segment are as follows:

**Targets:**

- The choice of targets has a significant bearing on Australia’s ability to discharge its obligations under instruments of international law. On a preliminary analysis of the legal texts combined with the critical mass of scientific evidence and international momentum, ClientEarth advises that targets of less than 25% below 1990 levels by 2020 and 80% by 2050 (and probably higher) leave Australia open to allegations of breach of articles 4, 5, and possibly 6 of the World Heritage Convention, and article 4(2) of the UNFCCC.

- Full consideration of the precautionary principle requires revising the international negotiating range in light of scientific findings since IPCC AR4. The policy implications
of these findings are that the choice of emissions pathway is more critical than previously thought, and Australia must therefore make deeper cuts sooner.

- After an examination of recent modelling, metrics of international burden sharing and Australia’s mitigation potential, ClientEarth concurs with CANA that Australia’s specific targets must be at least 40% below 1990 levels by 2020 and 95% by 2050.
- The CPRS Bill would be strengthened by including a mechanism for the future revision of targets through subordinate legislation similar to the power that exists in article 2 of the UK Climate Change Act 2008.

**Metrics of Burden Sharing:**

- While it is realised that national targets at Copenhagen are likely to be agreed upon more on the basis of politics than metrics, ClientEarth is concerned that the metrics for international burden sharing that the Australian government appears to be stressing in its submissions to the Ad hoc Working group to the Kyoto Protocol give a misleading picture of Australia’s capability to pay for deep emissions cuts.

- Percentage *change* in gross national income or gross domestic product resulting from abatement is not synonymous with ‘capability to pay’ – one of the guiding principles for burden sharing put forward by the European Council and derived from the legal texts of the UNFCCC. Capability to pay should be given its full and natural meaning and be based on comparative welfare indicators *after* applying the predicted cost of abatement rather than focusing on percentage *change* in GNI or GDP, which for the richest nations like Australia, may give a distorting picture of effort.

- Disagreeing with the Australian government in its submissions to the Ad Hoc Working group to Kyoto Protocol, there are compelling arguments why marginal abatement costs (comparative cost of emissions reduction per tonne) should be included as a cost indicator as well as (and perhaps above) aggregate costs. This is important to give information about comparative cost-efficiency of abatement and to balance the fact that aggregate costs predictions are more prone to over-estimation.
ClientEarth puts forward the following propositions about the sort of combined metric Australia should accept to guide negotiations of burden sharing:

⇒ Metrics must be firmly grounded in the legal text of the UNFCCC and Kyoto Protocol having regard to their objects and purposes. The most relevant ‘national circumstances’ for the purposes of the UNFCCC are ‘capability to pay’ and ‘mitigation potential.’ Australia is well placed on both.

⇒ A rights based approach requires that historical responsibility must be at least partly calculated as cumulative emissions per capita since 1900, (or another base line) rather than just total emissions for each nation.

⇒ It is true that marginal abatement costs (cost of reducing per tonne) see higher costs for Australia compared to several other annex 1 parties. However, this must be interpreted against the high mitigation potential and the generally very high levels of economic well being in Australia.

⇒ A rights based approach to ‘capability to pay’ requires accounting for distribution of wealth within countries rather than aggregate costs. One way to do this is to exclude incomes below a certain poverty threshold as recently proposed by the Greenhouse Rights Framework.

⇒ Australia must recognise the full and natural meaning of the term ‘capability to pay’ rather than basing its international negotiating position on indicators which give a distorted picture of its ability to pay.

According to recent numerical modelling of various combined metrics proposed by the EU, OECD and by the recently proposed Greenhouse Developments Rights index, most combined metrics being discussed show that Australia is able to make among the deepest cuts out of annex 1 parties. Australia must now translate this ability into an international commitment.

Auctioning and Auction Revenues
A significantly smaller proportion of CPRS auction revenues is directed towards accelerating emissions abatement when compared with the EU and US legislation. As an alternative design solution, ClientEarth recommends:

⇒ Reducing the portion of household assistance revenue granted to middle income households, and making part of the revised proportions of household assistance in the form of energy saving/heating rebates or programs rather than cash handouts, drawing on the US and NZ models as examples.

⇒ Reducing the portion of revenue directed to fuel credits and fuel tax adjustment and instead introducing CO2 performance standards for new vehicles following the lead of the EU in April 2009.

⇒ Increasing the revenue directed to accelerating emissions abatement, and adaptation to ensure the greatest environmental and social benefits from the scheme. The US and EU models channel approximately 19% and 50% of total revenue toward these purposes respectively.

⇒ Concurring with the recent proposal by the Australian Conservation Foundation, creating a new stream of funding, (possibly by expanding the Climate Action Fund), to direct revenues towards reducing emissions from biocarbon by further protecting and replanting Australian forests, noting revised science that ranks certain Australian temperate forests as containing the highest carbon sequestration potential in the world.

⇒ Criteria and mandatory considerations for the award of money under the Climate Change Action Fund should be detailed in the legislation as is the approach in the NZ and US models.

⇒ A mechanism for a formal review of the Climate Action Fund should be included in the legislation.
2. Targets

2.1 Potential Breach of Australia’s Obligations under International Law

United Nations Framework Convention on Climate Change (UNFCCC)

11. The objects of the CPRS Bill enshrine unconditional reduction emissions reduction targets of 5-15% below 2000 levels by 2020, rising to 25% in the event of international agreement. The unconditional 2050 target is 60% below 2000 levels. Australia, as an annex 1 party of the UNFCCC, is bound by article 4(2) which requires developed countries to adopt national policies limiting anthropogenic emissions, and that these policies and measures ‘will demonstrate that developed countries are taking the lead in modifying longer term trends in anthropogenic emissions consistent with the objective of this Convention’. The objective of the Convention in article 2 is to stabilize GHG emissions in the atmosphere at levels that would

"prevent dangerous levels of anthropogenic interference with the climate system... such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.” (Emphasis added.)

12. Regarding averting ‘dangerous levels’ of climate change, the IPCC 4th Assessment Report of 2007 demonstrated that it is necessary to achieve an atmospheric stabilization level of between 445 -490 CO2 equivalent ppm to have a reasonable chance of preventing the worst impacts of climate change. It recommended that to achieve this, annex 1 countries to the Kyoto Protocol must commit to between 25 and 40% below 1990 levels by 2020 and 80 to 95% reductions by 20506. This is assuming substantial deviations from baseline emissions in many developing countries. The ranges would need to be increased were annex 1 parties required to shoulder more of the burden than anticipated in IPCC reduction scenarios. The objects of the CPRS Bill include a commitment to reducing to 25% below 2000 levels if comprehensive international agreement is reached to stabilize ‘at around 450 ppm or lower.’ However, this target of 25% adopts a different base year

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6 IPCC 4th Assessment Report, box 13.7, p776
of 2000, when emissions were slightly higher than in 1990. Compared to 1990 levels the government’s target range of 5-25% equals a 3 to 24% reduction. **Therefore, the proposed level of Australia’s commitment is in fact outside any acceptable range for Annex 1 countries, even if it is assumed that stabilisation between 445-490 CO2eq is safe.**

13. The European Union has committed to an unconditional target of 20% below 1990 levels by 2020, rising to 30% in the event of international agreements. It is noted therefore, that the current unconditional EU target of 20% also falls below what is recommended by the IPCC, but not as drastically as the Australia target of 5-15% below 2000 levels. Regarding the 2050 target, on 4 February 2009 the European Parliament adopted a resolution calling for a reduction of at least 80% below 1990 levels by 2050. A number of EU member states have committed to achieving these reductions earlier, with Germany committing to 40% reductions by 2020.

14. The United States proposal in s702 of the **ACES Bill** 2009 sets an economy wide reduction goal of 20% below 2005 levels by 2020, and 83% by 2050. Noting the much higher baseline of 2005, this translates to approximately 4% below 1990 levels by 2020. **This commitment is also far below the international negotiating range, yet still slightly above the bottom end of the Australian unconditional target range equating to 3% below 1990 levels by 2020.** It has been calculated that if the effect of all complimentary measures legislated in the US Bill is factored in, the US reduction actually equates to a stronger commitment of around 17%.

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7 Select Senate Committee Report, Climate Policy June 2009, **CPRS Bill 2009 and its related provisions** Table 2.1,
8 European Parliament resolution, **2050: The future begins today – recommendations for the EU’s future integrated policy on climate change**, adopted 4 February 2009, 2008/2105(INI)
below 1990 levels by 2020\textsuperscript{11}. In terms of emissions from capped sources (that is, those subject to emissions trading scheme), s703 requires capped sources of emissions to be reduced by 17\% below 2005 levels by 2020, and 83\% below 2005 levels by 2050.

15. ClientEarth notes that the choice of 2000 as a baseline for the Australian proposal does not accord with the approaches of targets legislated in the EU or the baselines commonly used in IPCC recommendations or UNFCCC negotiations. Australia’s emissions in 2000 were slightly higher than they were in 1990. This baseline may have been influenced by the initial terms of reference of the Garnaut Review, which required modeling to stabilize between the 450 and 550ppm scenarios. Examination of the science in the 4\textsuperscript{th} Assessment report reveals that, were the majority of developed countries to adopt the target range (including the conditional target) Australia has proposed, the world would be squarely on track to heading for a 550 - 650ppm stabilization level or worse.\textsuperscript{12} That would likely correspond to warming significantly above the critical 2 degrees generally considered the limit before the most dangerous impacts of climate change become highly likely and quite possibly irreversible.\textsuperscript{13}

16. It is noted that there is widespread scientific agreement that even at stabilization levels of 450 parts per million there is only a 50\% probability of remaining within the critical 2 degrees of warming\textsuperscript{14}. The IPCC 4\textsuperscript{th} assessment report has said that this 2 degree limit is “likely” to be met (with likely defined as a 2\% to 55\% chance of stabilizing) by stabilizing at 400 ppmv CO\textsubscript{2}eq. It is further noted that there is no such thing as a safe level of climate change, given the thousands of human casualties already being statistically


\textsuperscript{12} IPCC, 4\textsuperscript{th} Assessment Report, 2007, \textit{Policies Instruments and Cooperative Arrangements}, page 776

\textsuperscript{13} Dr John Hunter, Antarctic Climate and Ecosystems Cooperative Research Centre, \textit{Proof Committee Hansard}, 23 April 2009, cited in select senate committee report climate change June 2009 at page 9

\textsuperscript{14} Australian Government, Select Senate Committee Climate Policy June 2009, page 9 citing Mr Peter Cosier, Director, Wentworth Group of Concerned Scientists, \textit{Proof Committee Hansard}, 15 April 2009
attributed to its effects as announced earlier this year by Kofi Anan,\(^\text{15}\) not to mention devastating impacts on ecosystems all over the globe.

17. **ClientEarth believes that the critical mass of scientific evidence, combined with international momentum are sufficient to make an Australian target of anything below 25% below 1990 levels by 2020 (and possibly higher) open to allegations of breach of it’s commitments under article 4 of the UNFCCC.** The question of illegality would be to some extent dependent upon what was requested of Australia by majority or consensus at Copenhagen informed by metrics and principles of international burden sharing, yet if Australia succeeded in resisting international pressure to accept higher targets than it currently proposes, this would likely represent a breach of article 4 commitments.

**The World Heritage Convention**

18. **In addition to the UNFCCC, choice of targets has a significant bearing on Australia’s ability to discharge its obligations under other instruments of international law.** Prior to Australia’s ratification of the Kyoto Protocol, the Sydney Centre for Global and International Law prepared a report for the EDO and advised that Australia’s failure to ratify the Kyoto Protocol constituted a failure to discharge Australia’s international legal obligations under article 4 of the World Heritage Convention.\(^\text{16}\)

19. ClientEarth considers that, despite now having ratified Kyoto, it is highly likely that the setting of inadequate emissions reductions targets would be also open to allegations of breach of articles 4 and 5 and possibly 6 of the World Heritage Convention, given the incontestable nexus between climate change and world heritage areas including but not limited to, the Great Barrier Reef. It is immaterial that climate change may not have been one of the threats to world heritage sites anticipated by the international community at the time the Convention was drawn.


\(^{16}\) UNECSO, *Convention Concerning the Protection of the World Cultural and Natural Heritage*, (World Heritage Convention,) adopted by the General Conference at its 17th Session, Paris, 1972
in 1972. A purposive approach to statutory interpretation combined with the express considerations in the preamble of the Convention are more than sufficient to establish the relevance of emissions reduction targets to the WHC. In fact there may be no issue of greater relevance. The Preamble considers it incumbent upon the international community to cooperate to protect world heritage ‘in view of the magnitude and gravity of new dangers’ and considers it essential that the Convention be organised ‘in accordance with modern science.’ To dispel any doubt, the current and future impacts of climate change upon world heritage areas was formally acknowledged in a decision of the 29th session of the World Heritage Committee in 2005.17

The powerful language of article 4

20. It is noted that the language of the WHC is stronger than the UNFCCC as regards obligations upon member states. Article 4 requires parties to identify, protect and conserve the natural heritage areas listed in articles 1 and 2 lying within their jurisdiction. It commits each party to

‘do all that it can... to the utmost of its resources, and, where appropriate, with any international assistance and cooperation’18 (emphasis added)

21. Were Australia to succeed in emerging from Copenhagen with less than its fair share of reductions, a strong case would exist for breach of article 4 and 5 commitments. The connections between emission reductions and Australian World Heritage areas are supported by science. It is predicted that without deep cuts in global emissions, coral cover will decrease to 5% of most reefs by mid century19. The likely counter argument to the connection between Australian targets and protecting the reef would be Australia’s comparatively small contribution to global emissions. However, the inclusion of ‘international cooperation’ in article 4 strengthens the argument that national emissions reduction targets are capable of activating the WHC. Rules of international

17 World Heritage Committee, 29th Session, WHC-05/29.COM/22, 9 September 2005
18 UNESCO, Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted in Paris 16 November 1972, article 4
19 Sydney Centre for International and Global Law: Global Climate Change and the Great Barrier Reef, Media Summary 2004, at 1
treaty interpretation, including the Vienna Convention, dictate that the object and purpose of treaties guides the interpretation of the ordinary meaning of the language within substantive articles. The preamble of the WHC is unambiguous in its intention that the WHC requires international cooperation\(^{20}\) (in addition to national measures) to protect world heritage areas.

22. It is clear from economic modeling of the Garnaut review, Treasury’s *Australia’s low carbon pollution future*, combined with the untapped potential for reductions that exists in the form of lifestyle changes from the profligate consumption and use of energy in Australia, that the targets of 5-25% below 2000 levels do not discharge Australia’s duty to ‘do all that it can’, ‘to the utmost use of its resources’ as required by the Convention. A recent briefing by the Climate Institute in conjunction with McLennan Magasanik Associates contained preliminary modeling based on the absolute lowest level of acceptable reductions – 25% below 1990 levels by 2020. For this scenario, it found that over half of the necessary abatement for this target could be achieved at a net saving to the Australian economy, largely due to the ‘large untapped opportunities to improve energy efficiency savings in the residential, commercial and industrial sectors\(^{21}\).’ In general, the report concluded that Australia has abundant low cost abatement options,\(^{22}\) but that not all of the highlighted options would be driven by emissions trading alone.

23. Earlier modelling by international group McKinsey and Company found that 30% reductions below 1990 levels by 2020 were easily feasible in Australia ‘*without* major technological breakthroughs or lifestyle changes’.\(^{23}\) A technical paper from the UNFCCC in 2007 contained modeling related to mitigation potential of annex 1 parties. As an

\(^{20}\) In particular the following element of the preamble: “*Considering* that, in view of the magnitude and gravity of the new dangers threatening them, it is incumbent on the international community as a whole to participate in the protection of the cultural and natural heritage of outstanding universal value, by the granting of collective assistance which, although not taking the place of action by the State concerned, will serve as an efficient complement thereto”, WHC, preamble

\(^{21}\) Climate Institute, *Australia’s 2020 Carbon Pollution Reduction Potential* (2008) at 4

\(^{22}\) Ibid.

example, an examination of table 5\textsuperscript{24} of this document reveals that Australia’s comparative mitigation potential in energy industries and fugitive emission is definitely high when pitted against other developed countries\textsuperscript{25}. At the time that document was written Australia’s share in renewable energy was comparatively low at only 8.3% (compared to figures ranging up to 70.5% for Austria, and 85.2% for Norway). While this criterion will improve in light of the recent passing of the Mandatory Renewable Energy Target legislation, which mandates 20% renewable energy for Australia by 2020, other indicators such as emissions intensity per KWh rank Australia at the very worst. This is of course due largely to Australia’s energy industry profile given high reserves of coal. However, other policy decisions, such as a failure to encourage high efficiency co-generation, have a bearing. The comparative efficiency of Australia’s fossil fuel generation also ranked as the worst for those annex 1 countries where data was available.\textsuperscript{26} This is in keeping with reports from the Centre for Global Development which calculated the Australian power sector to represent the highest emissions per capita of the entire world,\textsuperscript{27} with the United States coming second. A UNFCCC technical paper of 2007 examined indicators of mitigation potential among various nations.\textsuperscript{28} Among the chosen indicators, the comparatively low levels of co-generation (combined heat and power) and low levels of renewable energy in Australia contribute to the large opportunities for emissions abatement in the Australian energy sector.

\textbf{24. Highly relevant to the potential illegality of Australia’s current emissions reduction target under the WHC is the principle of intergenerational equity, expressly written into the text of article 4 of the WHC, requiring protection and}

\begin{footnotesize}
\textsuperscript{24} UNFCCC, \textit{synthesis of information relevant to determining mitigation potential... of annex 1 parties FCCC/TP/2007/1 Table 5 page 27}

\textsuperscript{25} Note that mitigation potential here does not include an assessment of cost of mitigation – and it is true that the structure of the Australian economy is likely to make mitigation more expensive than in some other annex 1 countries – yet this must be interpreted in the context of the very high levels of wealth and welfare in Australia

\textsuperscript{26} UNFCCC, \textit{synthesis of information relevant to determining mitigation potential... of annex 1 parties FCCC/TP/2007/1 Table 5, page 27}

\textsuperscript{27} Centre for Global Development, Data for 2008 summary available at http://www.cgdev.org/content/article/detail/16578/

\textsuperscript{28} UNFCCC, \textit{synthesis of information relevant to determining mitigation potential... of annex 1 parties FCCC/TP/2007/1 Table 5 page 27}
\end{footnotesize}
conservation for ‘transmission to future generations’. Article 5 of the WHC requires parties to endeavour to ‘ensure that effective and active measures are taken’ to achieve the objects of article 4. An allegation of breach on the basis of Australia’s inadequate targets which do not concur with science or the international negotiating range for developed countries would be likely to rest upon a combination of articles 4, 5 and 6 but most specifically upon article 4(d) which requires parties to
‘take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage.’

The limits of Article 4 and 5 commitments

25. This and other requirements in article 5 are prefixed by a discretionary element, – ‘in so far as possible and as appropriate for each country.’ ‘So far as possible’ is a consideration of feasibility, and according to the rules of statutory interpretation should be read in the context of the objects of the Convention located in article 4, which require parties to ‘do all that they can, to the utmost of [their] resources’. It has been demonstrated above that Australia is well placed to take deep emissions cuts with low or negligible impacts upon the wellbeing of its citizens.

26. Jurisprudence from the Australian High Court has affirmed that Australia regards itself as bound by the WHC and that the discretionary element in article 5 does not mean those requirements are merely a statement of intention. Instead each requirement is ‘a command requiring each party to bring about [the necessary protection as specified in the text of the treaty]’. ClientEarth notes that Australia’s international legal obligations in the UNFCCC and WHC would not require Australia’s emissions trading targets (i.e. the cap) to fall within the international negotiating range, provided that Australia had legislated for appropriate national reduction targets elsewhere, and positioned emissions trading as one of a number of regulatory measures to achieve this. This is not the case as the targets proposed in the CPRS legislation represent Australia’s national commitment to emissions reduction.

29 \textit{The Commonwealth v Tasmania} (1983) (‘Dams Case’)158 CLR 1 at p 131, per Mason J
27. A preferable approach is perhaps that of the United Kingdom or proposed US model, where broader climate change legislation exists enshrining emissions reductions targets, laying the framework for emissions trading but also specifying a number of other regulatory measures and powers additional to emissions trading to achieve these reductions. These include emissions performance standards in the US ACES Bill 2009 and the direct regulation of electricity users via the Carbon Reduction Commitment (CRC) Order in the UK, both of which will be discussed in the next segment of this report dealing with complementary measures. This future segment will also examine issues of flexibility in emissions trading models, noting that unlike article 2 of the UK Climate Change Act 2009, the CPRS Bill does not provide a mechanism requiring or providing for the revision of national targets over time and in light of new science.

The duty to refrain from deliberate actions which may damage World Heritage sites.

28. Also of relevance is article 6(3) of the Convention which requires parties to refrain from taking ‘deliberate measures which might damage, directly or indirectly, World Heritage Sites’. Arguably, a continuation of large amounts of fossil fuel generation when feasible alternatives exists amounts to positive action capable of satisfying the language of ‘deliberate measures’ in article 6(3). Article 6(1) again calls for international cooperation, stating that is the duty of the international community to protect world heritage. Climate change is the international issue of relevance to the WHC par excellence, with many world heritage sites in other jurisdictions also being particularly vulnerable to climate change. It is further noted that the general commitment to international cooperation in the text of the WHC has implications for other climate change issues beyond targets – most obviously technology transfer and assistance to developing countries.

29. For all these reasons, ClientEarth advises that Australia is open to allegations of breach of its obligations under articles 4 and 5 and possibly 6 of the WHC by its currently proposed target range.

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30 For example, the Waterton Glacier International Peace Park in Canada is a notable example of a World Heritage Site that is already suffering from climate change.
Relevance of targets to Other Instruments of International Law

30. Finally, it is noted that choice of targets has a significant bearing of Australia’s obligations under other instruments of international law such as the Convention on Biological Diversity 1992. While this does not contain commitments as explicitly relevant to climate change mitigation as the UNFCCC and WHC, article 3, bestows upon states the responsibility “to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.” This extra jurisdictional responsibility is clearly highly relevant to the legal obligations of developed countries to mitigate climate change. The arguments for causation and nexus between damage to biodiversity and emissions reduction targets would be similar to those previously discussed in the context of the WHC.

2.2 New Arguments for Higher Targets – the Science Since AR4

31. Furthermore, latest science since IPCC AR4 has delivered even sterner warnings and revisions of required reductions. In 2008 the IPCC agreed at its panel meeting in Budapest that the next AR report will be informed by a revised set of scenarios and frameworks based on latest scientific advances. A recent report produced by eminent NASA scientist Professor James Hansen and others is an important articulation of climate science post AR4 based on an analysis of the paleoclimatic record. Of the 450ppm stabilization scenario this report states:

“Our current analysis suggests that humanity must aim for an even lower level of GHG’s. Paleo-climate data and ongoing global changes indicate that ‘slow’ climate feedback processes not included in most climate models, such as ice sheet disintegration, vegetation migration, and GHG release from soils, tundra or ocean sediments, may begin to come into play on time scales as short as centuries or less [7]. Rapid on-going climate changes and realization that Earth is out of energy balance, implying that more warming is ‘in the pipeline’ [8], add urgency to investigation of the dangerous level of GHGs.”

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32 Professor James Hansen et al., ‘Targets, where humanity should be at’, Open Atmospheric Science Journal, (2008) 2, 217 at 217
32. Regarding ice sheet disintegration, a few months ago the Potsdam Institute for Climate Impact Research also released a synthesis report\textsuperscript{33} of revised climate science since IPCC AR4. This work represents the beginning of quantifying the amplifying effect of previously uncertain climate vulnerabilities such as the level of vulnerability of carbon and methane sinks in arctic permafrost. The findings are alarming and suggest a revision of some IPCC AR4 scenarios to between 1.0 and 1.5 degrees of extra warming by the end of this century.\textsuperscript{34}

33. It is not known to what extent the revised scenarios and frameworks that will inform IPCC AR5 as agreed upon in Budapest will take into account these ‘slow climate feedback’ processes in modeling, but this recent report and others warn that the long term climate sensitivity is likely to be more acute than previously factored. It discusses ‘tipping points’, such as the breaking up of the West Antarctic ice sheet, which may melt at an accelerated rate due to aforementioned feedbacks once ice loss reaches a certain critical level. It states that regarding tipping points, there is a discrepancy between modeling and the ‘real world’. The report draws inferences from the Earth’s history and based on paleo-climatic data, to help fill the gap caused by the fact that current climate modeling has difficulty simulating some aspects of climate change. It concludes that the current global mean of approximately 385ppm is already ‘in the dangerous zone’\textsuperscript{35}, and recommends 350ppm as the global goal. It concludes that it is scientifically possible to reduce global stabilization level to below current levels by the end of the century, but only via ‘prompt’\textsuperscript{36} policy changes.

34. Prompt is the critical word here, and these sorts of scientific findings are an important counterpoint to earlier modeling which grants more leeway in emissions reductions

\textsuperscript{34} Potsdam Institute for Climate Impact Research, \textit{Synthesis Report 2009} page 11
\textsuperscript{35} Professor James Hansen et al., ‘Targets, where humanity should be at’, \textit{Open Atmospheric Science Journal}, (2008) 2, 217 at 218
\textsuperscript{36} Ibid. at 219
pathways, and relate primarily to an increased understanding of climate sensitivity based on the warming already ‘in the pipeline’ and the long lifespan of carbon in the atmosphere. These findings which factor in slow climate feedback effects more comprehensively (including the albedo effect, release of gasses from soils and tundra) add significant weight to the need for deeper emissions cuts in the short term. **Full consideration of the precautionary principle demands taking into consideration findings since IPCC AR4 and without waiting until AR5 to revise necessary targets.**

35. In this regard, the Hansen science refers again to the critical role of coal, stating that “if the world continues on a business-as-usual path for even another decade without initiating phase-out of unconstrained coal use, prospects for avoiding a dangerously large, extended overshoot of the 350ppm level will be dim.” The Australian government’s current proposal to shield coal from the price of carbon for the first 5 years of the scheme, combined with its failure to follow the lead of the US proposal and set CO2 emissions performance standards for new coal must be evaluated in the context of these latest findings by IPCC and other eminent climate scientists. **The implication to be drawn from this therefore is that the choice of emissions reduction pathway may be more critical than previously thought, and the most recent science requires deeper cuts in the shorter term due to increased understanding of tipping points and the long life of CO2 in the atmosphere.** The EU has formally acknowledged these revised projections since AR4 in the Commission Communication **Towards a Comprehensive Agreement at Copenhagen** acknowledging that stabilization level may need to be as low as 350ppm and therefore the door must remain open at Copenhagen to allow for such a scenario. Under the multi-stage approach assumed in this report, it is also noted that the choice of short term targets and starting points exerts great political influence on other countries, particularly developing countries, and are therefore particularly important in achieving adequate global reductions.

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37 Ibid. at 227
36. As the science post IPCC AR4 continues to escalate toward or above the very upper limits of IPCC climate change modeling, and this has been reflected with the upper end of the international negotiating range increased in the revised negotiating text prepared for Copenhagen, ClientEarth suggests that the lower end of the negotiating range is no longer conscionable, and is particularly unconscionable for Australia in light of how favourably Australia is placed to achieve significant reductions. The range must lie within at least 35% to 45% below 1990 levels by 2020, and 90 to 95% by 2050. This represents a raising of the minimum reduction by 10% in light of latest science. Having established this range, this paper will now examine possible metrics employed to shed light more precisely on what Australia’s target should be.

3. Metrics of International Burden Sharing

37. The binding targets agreed upon by the Kyoto Protocol 1998 are located in Annex B. Taken collectively, the individual developed country targets set out here average out to approximately a 5% reduction below 1990 levels. It is important to note that the initial Kyoto agreement failed to determine a formula (an agreed metric or set of metrics) to equitably determine targets. Instead the final figures from Annex B were determined largely according to political expediency with Australia controversially being allowed to increase its emissions by 8% above 1990 levels due to land use change issues. The guidance for burden sharing that does exist in the legal texts of the Kyoto Protocol and UNFCCC is limited, but stresses the notions of equity and ‘common but differentiated responsibilities,’ the latter being of primary relevance to the distinction between developed (Annex 1) and developing (Annex 2) parties. The UNFCCC requires parties to act ‘on the basis of equality and in accordance with their common but differentiated responsibilities and respective capabilities. In preparation for further commitments to be agreed upon at Copenhagen, a variety of studies and government submissions have been revisiting the metrics underpinning burden sharing.

39 United Nations Framework Convention on Climate Change, (1992) article 3(1)
38. A 2007 report by ECOfys to the UK DEFRA provided an analysis of metrics that may be used as a methodology underpinning international discussions about burden sharing for future reductions commitments. One of the key messages was that the most important consideration is the choice of stabilization scenario. The science based scenario (e.g. 350 ppm, 450 ppm) is the most important consideration and must provide the working range within which all developed countries must commit. As has been demonstrated here and in other literature, both Australia’s conditional and unconditional commitments fall well below this range. After the scenario, metrics are important in determining exact commitments and burden sharing at international agreements. However, the range must not be used as an excuse for aiming at the lowest permissible reductions within each range, and to this end ClientEarth is concerned that Australia supports a balanced combined indicator approach that does not unduly subordinate its global responsibilities (not to mention responsibilities to future generations of Australians) in the interests of short and medium term economic gain.

39. The two dominant conceptual frameworks for achieving a designated global stabilization level (e.g. 450ppm) are ‘multi stage approach’ and ‘contraction and convergence.’ Under contraction and convergence, countries participate from the start and per capita emissions for all countries converge over time to achieve the designated CO2e stabilization level. Under multi stage, the number of participating countries expands over time, with countries deviating from their emissions reference point based on notions of comparable effort and historical responsibility. While the Garnaut Review assumed a contraction and convergence approach to allocation (where per capita emissions for all countries converge over time) the CPRS targets were informed by the multi-stage approach, where using a variety of indicators, countries diverge from their own emission reference base line rather than converging toward a designated global (or developed world) per capita emissions level. Treasury modeling acknowledges that the multi stage approach tends to grant more generous allocations (i.e. comparatively lower emissions reductions) to countries that have initial high per capita emissions, such as Australia, when compared with a contraction and convergence approach. Conversely, countries

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whose populations have a lower carbon footprint per head, are generally shouldered with smaller allocations (larger emissions reductions) in the long run when compared to contraction and convergence:

“Regions with high initial per capita emissions receive larger allocations under the multi-staged approach (CPRS -5 scenario) than the contraction and convergence approach (Garnaut -10 scenario). Both scenarios achieve the same global environmental objective (Table 5.2). The multi-stage approach places more weight on pre-existing emission levels and emission growth trends than the contraction and convergence framework. For example, Canada’s allocations in 2050 are 9 per cent below 2001 levels in the [multi stage] scenario, compared with 33 per cent below in the [contraction and convergence] scenario…. In contrast, regions with lower per capita emissions, such as the European Union, Japan, India, Indonesia and the rest of world, receive smaller allocations under the multi-stage approach in the long term.”

40. ClientEarth notes that this general assumption that multistage involves lower reduction targets for high per capita emitting countries when compared to contraction and convergence, is greatly influenced by the choice of metrics employed to determine comparability of effort and historical responsibility. Though the contraction and convergence approach has some advantages including simplicity and more equitably reflecting the equal right of all humans to a healthy planet in the long term (once emissions per capita eventually converge), it ignores the fact that developmental equality requires looking at cumulative emissions rights, - and the developed world has already profited from unlimited carbon budgets. A metric based on cumulative emissions per capita has been suggested by Bolivia and China, and may be deserving of further examination. Compared to contraction and convergence, the multi stage approach is generally regarded as more refined, is certainly likely to be easier to achieve politically and may well be the approach resulting from Copenhagen. The actual targets and trajectory of each country would be determined by various indicators or metrics to determine comparable effort and burden sharing. To give a sense of the spectrum of metrics being proposed internationally, an indicative list of proposed indicators is as follows, drawn from both OECD and IPCC materials:

• Total national GHG emissions
• Emissions per capita
• Ability to pay
• Share of global emissions
• Proportion of world average per capita emissions
• Emissions per GDP
• Early action
• Emission growth rate
• GDP per capita
• Human Development Index
• Grandfathering (reductions based on current emissions)
• Climate Vulnerability indicator

As will be discussed throughout this section, on most of these metrics, particularly those that relate to emissions intensity, per capita metrics and the early action metric, Australia emerges with having to reduce well above its current target range to achieve global stabilisation of not more than 450ppm.

3.1 Preferred Metrics of the Australian Government – a distorting picture of ‘capability to pay’

41. In its justification of choice of targets, the Australian government often stresses a change in emissions per capita metric and aggregate cost in the form of change in Gross National Product (GNP) and Gross National Income (GNI). The White Paper and other articulations of policy appeared to justify the choice of targets partly by referring to a change in emissions per capita, whereby the minimum 5% below 2000 levels equates to a 34% reduction in emissions per capita compared to 1990 levels\textsuperscript{42} which presents the Australian proposal in a favourable light against Europe’s targets leading to 24% reduction in the emissions per European citizen. \textbf{ClientEarth highlights that the emphasis of this metric in isolation is misleading given Australia’s low}

population and government intention to promote population growth, combined with the comparative profligacy of Australian consumption and energy use, resulting in the worst carbon footprint per head, on the planet. As noted in a recent UNFCCC technical paper\(^{43}\), high emissions per capita can (but need not necessarily) mean high mitigation potential. This is certainly the case for Australia as already mentioned, however the question of cost of mitigation complicates the picture as will be discussed. On the subject the Australian Green Party stated:

“...The Australian Government, owing to its policies to expand the economy by promoting population growth (including through high levels of skilled migration), favours metrics such as comparable per capita emission reductions. Other nations, particularly those with stable populations, are likely to argue for burden sharing to recognise other metrics such as historical responsibility, comparable effort in terms of cost of emission abatement cost and/or abatement effort since 1990...”\(^{44}\)

42. **ClientEarth examined a recent 2009 submission by the Australian government to the Ad Hoc Working Group on Further Commitments for Annex 1 Parties to the Kyoto Protocol.** While acknowledging the importance of other indicators, this submission stressed *percentage of change* in Gross National Product or Gross National Income as “one way to better reflect comparability of effort”\(^{45}\) and stated that aggregate costs (costs to the whole economy) are more appropriate than marginal cost\(^{46}\) (cost per tonne of carbon reduced) given the fluidity provided by international trading mechanisms such as the Kyoto Protocol. It argued that this fluidity can help equalize abatement costs. However, this latter point is premised on an assumption about design of emissions trading models and as discussed in segment 1, other jurisdictions have taken a more environmentally stringent approach by limiting access to international credits.

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\(^{43}\) UNFCCC, technical paper *Synthesis of information relevant to determination of mitigation potential and possible ranges of emissions reduction ranges for Annex 1 parties.* FCCC/TP/2007/1 26 July 2007, at 9.

\(^{44}\) Australian Government, Senate Select Committee on Climate Policy, June 2009, Minority report from the Greens, at 230

\(^{45}\) Australian Government, Submission to Ad Hoc Working Group on Further Commitments for Annex 1 parties to the Kyoto Protocol, *Economic Cost as an Indicator of Comparative Effort,* (2009) at 2

\(^{46}\) Ibid.
43. **ClientEarth notes that other literature supports marginal abatement cost as a preferable cost indicator to aggregate costs.** A report from the Harvard project on International Climate Change Agreements stated that marginal cost abatement has an advantage of indicating 'cost effectiveness of the international distribution effort, as well as giving information about competitive impacts of climate policies regarding international trade. It further notes that 'not surprisingly, estimates of the total costs of regulations tend to vary more widely in most modeling analyses than those of marginal cost (Fischer and Morgenstern 2005)'.

47 On this question of accuracy of cost predictions, other studies express concern about the modeling undertaken by the Australian government, including regarding a failure to give adequate weight to ‘endogenous technological change.’ This is the capacity of technology to change in response to relative price changes across the economy. It has been said that adequately including this factor often gives rise to lower (and more accurate) predicted costs of adjustment to low emissions scenarios.

44. **Important, ClientEarth notes that the Australian government’s emphasis on change in gross national product or GNI above other indicators gives a distorted picture of Australia’s capability to pay, and therefore comparative effort.** This emphasis may also run somewhat contrary to the approach that appears to be crystallizing in the EU and the revised negotiating text for Copenhagen. In March 2009 the European Council adopted *Conclusions on the further development of the EU position on a comprehensive post 2012 Climate Agreement.* Here the Council considered that:

“distribution of the overall target for developed countries should be guided by considerations of capability and responsibility, making use of a balanced combination of criteria, such as:

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• the capability to pay for domestic emission reductions and to purchase emission reduction credits from developing countries;
• the GHG emission reduction potential;
• domestic early action to reduce GHG emissions;
• population trends and total GHG emissions.\textsuperscript{49} (emphasis added)

45. It is noted that these guiding principles of historical responsibility and capability are nothing new and are firmly grounded in the legal texts of the UNFCCC and Kyoto Protocol, as previously discussed. Similar principles have been enshrined in the revised negotiating text for Copenhagen of June 2009, which states setting emissions reduction targets based on ‘historical responsibility and national circumstances’ in options 1 and 2, with other options such as 5.1 stressing ‘historical responsibility capacity and national circumstances’\textsuperscript{50}. Included in the revised negotiating text are proposals for adding guiding principles building upon article 3 of the UNFCCC. These clarify that the most important ‘national circumstances’ are likely to be historical responsibility and capability:

\textit{“...}

c) all parties should undertake a similar level of effort to others at a similar level of development and with similar national circumstances

d) those parties whose national circumstances reflect greater responsibility or capability should make a greater contribution to the global effort.”\textsuperscript{51}

46. Taking the first of the non-exhaustive list of criteria proposed by the European Council, ClientEarth notes that ‘capability to pay’ for domestic emission reduction is not at all synonymous with change in GNI or GNP, and therefore a measure based on such change is not necessarily a sound way to measure ‘effort’. Arguably, what is more relevant to ‘capability to pay’ is the welfare level after factoring in

\textsuperscript{49} European Council, \textit{Conclusions on the further development of the EU position on a comprehensive post 2012 Climate Agreement}, at 3
\textsuperscript{50} United Nations Framework Convention on Climate Change, Ad Hoc Working Group on Long Term Co-Operative Action, \textit{Revised Negotiating Text}, 6\textsuperscript{th} Session, Bonn, June 2009, at 16
\textsuperscript{51} United Nations Framework Convention on Climate Change, Ad Hoc Working Group on Long Term Co-Operative Action, \textit{Revised Negotiating Text}, 6\textsuperscript{th} Session, Bonn, June 2009, at 70
the economic impact of abatement (and in the case of Australia it is acknowledged that abatement costs may be higher than several other annex 1 parties owing to industry profile). The Australian government submission to the Kyoto Ad Hoc Working Group stressed the weight that change in GNP or GNI should be given in any consideration of ‘capability to pay.’ While the Council Conclusions in question do not expand upon the metrics of these criteria, from the language of the document and others, it appears that the European approach to ‘capability to pay’ would be likely to examine various indicators, perhaps including change in GNP and industry profile as stressed by the Australian government, but the most important consideration should be a measure based on a baseline of fiscal capacity against levels of wellbeing, with wellbeing being based on existing robust metrics such as the Human Development Index. Importantly, capability to pay and aggregate cost are not synonymous, particularly in the case of Australia which, on many measures, enjoys one of the highest standards of wellbeing and general prosperity among developed countries. The criterion ‘Capability to pay’ must be given its natural and full meaning and not reduced merely to aggregate economic impacts such as predicted percentage change in percentage of GNP or GNI.

47. Briefly looking at the other indicative criteria put forward by the European Council, Australia certainly performs well in terms of GHG reduction potential, if assessed as opportunities for significant abatement within the international negotiation range, as already discussed in this document. The third criteria, domestic early action, was specifically modeled by the EU and presented in a recent Commission working paper. Not surprisingly given the absence of legislated regulatory measures to comprehensively regulate greenhouse gas emissions and late ratification of Kyoto, this indicator on its own leads to over twice the required reductions when compared to the developed country average. Indeed on a preliminary assessment, ClientEarth considers that it is likely only the 4th of these criteria, (population trends and total GHG emissions) by which Australia may make a credible argument for lower cuts compared to some other annex 1 parties.

52 IPCC AR4 notes “There is also high agreement and medium evidence that changes in lifestyle, behaviour patterns and management practices can contribute to climate change mitigation across all sectors.” Summary for policy makers, page 18
53 EU Commission staff working document, Towards a Comprehensive Agreement at Copenhagen, COM(2009) 39 final Table 4, at 51
48. ClientEarth believes that a rights based approach to calculating historical responsibility requires including historical emissions *per capita* in calculations rather than solely looking at total historical contribution to global emissions for each nation. On such a measure Australia emerges with among the very highest levels of responsibility.

49. It is noted that the EU has already undergone the process of calculating burden sharing among member states in the distribution of reductions under both the ETS cap and the non-ETS Effort Sharing Decision\(^54\), which mandates obligatory reduction commitments to be achieved by member states in sectors not covered by the ETS. However, rather than proceeding via a selected composite metric, these targets were largely agreed upon on a political basis, but informed by studies including cost effectiveness (including technological potential for renewables) and ability to pay indicators.\(^55\) It is likely that Copenhagen will proceed on a similar basis with the political process being given primary weight, partially informed by metrics as discussed in this paper.

### 3.2 Combined Indicator Approach of the European Commission 2009

50. In 2009 the EU Commission undertook a preliminary modeling exercise based on collective reduction of 30% below 2020 levels using a combination of 4 indicators. The results are presented in the table below. It can be seen that second only to Canada, Australia emerged with the highest required reductions based on these combination of indicators, despite the fact that population growth was factored into this model. It is noted however, that the choice of these particular 4 indicators above others is not necessarily supported by ClientEarth, and a weakness of the Commission paper in question is a failure to adequately elaborate the connection of these 4 indicators (as opposed to others) to the principles in the legal texts of the UNFCCC and Kyoto Protocol.

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\(^{54}\) European Union, *Decision on the Effort of Member States to Reduce their Greenhouse Gas Emissions to Meet the Community’s Reduction Target up to 2020*, adopted 26 March 2009

51. **Table A. Example of a distribution of targets for developed countries using 4 indicators**

(For a collective reduction of 30% below 1990 levels by 2020, presented with 2005 as a reference point. The required reductions are based on a burden sharing model based on a combination of 4 indicators, each given equal weight: GDP/capita, GHG intensity per GDP, Early Action, and Population Trend)

<table>
<thead>
<tr>
<th>Share according to GDP per capita</th>
<th>Share according to GHG/GDP</th>
<th>Share according to GHG 1990-2005 (early action)</th>
<th>Share according to Population 1990-2005</th>
<th>Target relative to 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td>c</td>
<td>D</td>
<td>(a+b+c+d)</td>
</tr>
<tr>
<td><strong>EU27</strong></td>
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</tr>
<tr>
<td>-10.2</td>
<td>-10.1%</td>
<td>-5.2%</td>
<td>+1.7%</td>
<td>-24%</td>
</tr>
<tr>
<td><strong>USA</strong></td>
<td>-14.3%</td>
<td>-12.3%</td>
<td>-15.9%</td>
<td>+8.2%</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td>-12.8%</td>
<td>-5.6%</td>
<td>-12.5%</td>
<td>+1.7%</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>-12.6%</td>
<td>-14.6%</td>
<td>-19.3%</td>
<td>+7.8%</td>
</tr>
<tr>
<td><strong>Australia and NZ</strong></td>
<td>-12.2%</td>
<td>-16.3%</td>
<td>-19.9%</td>
<td>+10.0%</td>
</tr>
<tr>
<td><strong>Other OECD Europe</strong></td>
<td>-17.9%</td>
<td>-4.4%</td>
<td>-11.9%</td>
<td>+3.7%</td>
</tr>
<tr>
<td><strong>Commonwealth of Independent States</strong></td>
<td>-1.0%</td>
<td>-20.0%</td>
<td>+8.0%</td>
<td>+0.6%</td>
</tr>
<tr>
<td><strong>Average Developed</strong></td>
<td>-10.5%</td>
<td>-12.8%</td>
<td>-8.5%</td>
<td>4.5%</td>
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</tbody>
</table>
52. It is noted that the Australian target presented in this table of 38% below 2005 levels equates to approximately 27% below 1990 levels when land use land use change and forestry (LULUCF) is included\(^{56}\). Note that the 3\(^{rd}\) column (‘share according to GHG 1990-2005’) represents the early action criterion.

53. At the time of writing there is no internationally agreed methodology for determining burden sharing among developed countries. However, it appears to be well accepted that a balanced combined indicator approach is the only fair option. Material from the OECD and EU support this common sense proposition, stating “none of the indicators individually is able to reflect the multiple principles laid out in Article 3 of the UNFCCC, including those of equity, common but differentiated responsibilities and respective capabilities. Multiple principles can be better reflected with composite indicators”\(^{57}\). The recent EU commission working paper concurred, cautioned that using or emphasizing a single indicator can lead to disproportionate costs or gains for individual countries.\(^{58}\)

### 3.3 Recent OECD Modelling based on 8 combined metrics

54. The following table is taken from an OECD paper of November 2008.\(^{59}\) It reveals the scores for the top 25 countries (i.e. those that must reduce the most) according to the composite metrics selected. Note that non-annex 1 parties are included in these parameters:

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\(^{57}\) OCED, *Differentiating Countries in terms of Mitigation Commitments, Actions and Support* (2008) at 5

\(^{58}\) EU Commission working paper, *towards a comprehensive climate change agreement in Copenhagen* 2009, at 6

\(^{59}\) Ibid at 27
calculations. It can be seen that in 7 of the 8 metric scenarios, Australia emerges toward the upper end of the top 25 countries in terms of required reductions. The composite metrics are as follows (each equally weighted): scenario 1 = GHG emissions; GDP per capita and emissions per capita, scenario 2 = cumulative emissions 1990-2004; GDP per capita; emissions per capita, scenario 3 = GHG emissions; GDP per capita, scenario 4 = GHG emissions and emissions per capita, scenario 5 = GHG emissions per GDP; GDP per capita, scenario 7 = GDP per capita; GHG emissions per capita and scenario 8 = GHG emissions; GHG emissions per GDP.
### Table 8: Scenario Results for the Top 25 and Bottom 5 Countries

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<td>USA 81</td>
<td>USA 71</td>
<td>USA 51</td>
<td>Qatar 84</td>
<td>DRC 53</td>
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<td>Qatar 56</td>
<td>China 55</td>
<td>DRC 50</td>
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<td>Luxembourg 74</td>
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<td>Luxembourg 49</td>
<td>EU 27* 55</td>
<td>Qatar 50</td>
<td>Boliví 48</td>
<td>EU 27* 37</td>
<td>USA 55</td>
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<td>EU 27* 42</td>
<td>Luxembourg 50</td>
<td>EU 27* 43</td>
<td>Qatar 39</td>
<td>DR Congo 35</td>
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<td>UAE 34</td>
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<td>Canada 32</td>
<td>Brunei 32</td>
<td>Mongolia 32</td>
<td>Qatar 26</td>
<td>Canada 48</td>
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<td>Australia 31</td>
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<td>Norway 24</td>
<td>Norway 45</td>
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<td>Brunei 34</td>
<td>Norway 30</td>
<td>Russia 30</td>
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<td>Japan 23</td>
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<td>Ireland 29</td>
<td>Germany 30</td>
<td>Bahrain 29</td>
<td>Canada 25</td>
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<td>UK 26</td>
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<td>Brazil 17</td>
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<td>Saudi Arabia 18</td>
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<td>Russia 19</td>
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<td>Germany 17</td>
<td>Sweden 27</td>
<td>Netherlands 27</td>
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<td>France 26</td>
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<td>France 23</td>
<td>Russia 23</td>
<td>Korea 13</td>
<td>Italy 18</td>
<td>**</td>
<td>Venezuala 9</td>
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<td>Total emission for Top 25 countries in 2005 (MtCO2e): 25320</td>
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<td>Total emission for Top 25 countries in 2005 (MtCO2e): 17890</td>
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<tr>
<td>Total emission for Top 25 countries in 2005 (MtCO2e): 25052</td>
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<tr>
<td>Total emission for Top 25 countries in 2005 (MtCO2e): 31041</td>
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<tr>
<td>Total emission for Top 25 countries in 2005 (MtCO2e): 13033</td>
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<tr>
<td>Total emission for Top 25 countries in 2005 (MtCO2e): 26188</td>
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<td></td>
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<tr>
<td>Total emission for Top 25 countries in 2005 (MtCO2e): 13735</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total emission for Top 25 countries in 2005 (MtCO2e): 31361</td>
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55. As previously stated, regarding Australia’s stressing of change in GNP and GNI as a cost indicator in its submissions to the Ad Hoc Working Group on Further Commitments for Annex 1 Parties to the Kyoto Protocol, ClientEarth advises that a more equitable and appropriate use of GNP or GNI as an indicator of capability to pay is to assess the relative levels of GNP or GNI after factoring in estimations of national cost of achieving emissions abatement, rather than focusing on the change in percentage as this results in a distorted picture of effort given Australia’s very high levels of economic wellbeing, profligate use of energy, and low population. Furthermore the appropriateness of aggregate costs has itself been questioned. In the context of climate change mitigation policies, the 4th Assessment Report of the IPCC noted that ‘distributional considerations may be more important than aggregate cost effectiveness when policymakers evaluate an instrument’\(^{60}\). Distributional considerations relate fundamentally to ideas about equity and have both global and intra-jurisdictional dimensions. It is clear that Australia, as a highly developed and wealthy nation that has reaped all the benefits of a fossil fuel rich economy, and has been a late entrant to international commitments to tackle climate change, bears a heavy responsibility to shoulder deep emissions reductions.

56. For the purposes of unravelling ‘capability to pay’ some potentially useful categories for differentiating countries include ‘High Income Economies’ as categorized by the World Bank based on Gross National Income per capita. Most Annex 1 parties including Australia fall within the ‘high income’ category, but it is important to note that some Annex 1 parties (for example Poland) come within the ‘upper middle income category’. Another measure proposed is the Human Development Index compiled by the UN. In 2008, Australia ranked 4th in the world among the 75 countries in the top category of ‘high human development’.\(^{61}\) Both these categories are relevant to considerations of cost and capability to pay.

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\(^{60}\) IPCC, 4th Assessment Report, at 752

3.4 A rights based approach to burden sharing

Another interesting burden sharing model has been recently proposed by EcoEquity with the Stockholm Environment Institute, the ‘Greenhouse Development Rights’ framework. The framework seeks to calculate burden sharing based on the principles of responsibility and capability as required by the UNFCCC, and in keeping with the EU Council Conclusions previously discussed, yet gives a stronger emphasis to the right to development, in keeping with the text of the UNFCCC which enshrines the right to sustainable development in article 3(4). It stresses that it is the consuming classes in all countries that must pay for climate change reductions, and the metrics have been designed to take some account for distribution of wealth within nations rather than just taking aggregate figures of GNI or GDP. The framework gives rise to a ‘Responsibility and Capability Indicator’ (RCI) which will determine the share of reductions required for each party. Capability to pay is essentially calculated simply as national income per capita, after excluding incomes below the poverty threshold and applying conversions for purchasing power parity (ppp).

While this appears an overly simplified indicator of capability to pay, it certainly has advantages of transparency and equity and therefore may be deserving of being a heavily weighted cost indicator. It is certainly more equitable and more in keeping with the language and objectives of the UNFCCC treaty than is a change in GNI/GNP resulting from abatement indicator as stressed by the Australian government. Furthermore, the exclusion of incomes below the threshold of $20 a day in this calculation is an important contribution to the global debate on burden sharing, as the usual income/GDP per capita metrics fail to take account of the distribution of wealth within countries. It must be acknowledged that the text of article 4 commitments of the UNFCCC also allow account to be taken of ‘national circumstances’ and therefore it may be legitimate for countries to push for other considerations as well as ability to pay.

62 see http://www.ecoequity.org/docs/TheGDRsFramework.pdf
59. In the Greenhouse Rights Development framework historical responsibility is also simply calculated as percentage of global emissions since 1990, after excluding emissions below a threshold for development. **ClientEarth considers that a broader spectrum of indicators is likely to be necessary to fully capture capability and responsibility, in the broad manner envisaged by the UNFCCC. Nevertheless the model advances the debate in a number of ways including the conceptual approach of an indicator that is easily revisable over time, and in being among the first to attempt to account for distribution of wealth within nations.** The indicator approach also allows a solution to the annex 1, non-annex 1 divide, and circumvents the need to find a way to revise these categories to take into account development since 1990. In these ways it advances the question of how to assess ‘comparability of effort’ to borrow the language from the Bali Road Map. The preliminary results of the Responsibility and Capability Index (RCI) from the model are presented below:

**Table B**

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EU 27</strong></td>
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<td></td>
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<tr>
<td>Population (percent of global)</td>
<td>7.3</td>
<td>28.8</td>
<td>22.6</td>
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<tr>
<td>GDP per capita ($US ppp)</td>
<td>30,472</td>
<td>22.9</td>
<td>19.6</td>
</tr>
<tr>
<td><strong>EU 15</strong></td>
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<tr>
<td>Population (percent of global)</td>
<td>5.8</td>
<td>26.1</td>
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<tr>
<td>GDP per capita ($US ppp)</td>
<td>33,754</td>
<td>22.9</td>
<td>19.9</td>
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<tr>
<td><strong>EU +12</strong></td>
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<tr>
<td>Population (percent of global)</td>
<td>1.5</td>
<td>2.7</td>
<td>2.8</td>
</tr>
<tr>
<td>GDP per capita ($US ppp)</td>
<td>17,708</td>
<td>3.0</td>
<td>3.0</td>
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<tr>
<td>Country</td>
<td>% of Annex 1</td>
<td>Population</td>
<td>Emissions</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td>U.S</td>
<td>4.5</td>
<td>45,640</td>
<td>29.7</td>
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<tr>
<td>Japan</td>
<td>1.9</td>
<td>33,422</td>
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<tr>
<td>Russia</td>
<td>2.0</td>
<td>15,031</td>
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<tr>
<td>China</td>
<td>19.7</td>
<td>5,899</td>
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<td>India</td>
<td>17.2</td>
<td>2,818</td>
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<td>Brazil</td>
<td>2.9</td>
<td>9,442</td>
<td>2.3</td>
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<tr>
<td>Sth Africa</td>
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<td>10,117</td>
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<td>Mexico</td>
<td>1.6</td>
<td>12,408</td>
<td>1.8</td>
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<td>LDC's</td>
<td>11.7</td>
<td>1,274</td>
<td>0.1</td>
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<tr>
<td>Annex 1</td>
<td>18.7</td>
<td>30,924</td>
<td>75.8</td>
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<tr>
<td>Non Annex 1</td>
<td>81.3</td>
<td>5,096</td>
<td>24.2</td>
</tr>
<tr>
<td>High income</td>
<td>15.5</td>
<td>36,488</td>
<td>76.9</td>
</tr>
<tr>
<td>Middle income</td>
<td>63.3</td>
<td>6,226</td>
<td>22.9</td>
</tr>
<tr>
<td>Low income</td>
<td>21.2</td>
<td>1,599</td>
<td>0.2</td>
</tr>
<tr>
<td>World</td>
<td>100</td>
<td>9,929</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: [http://www.ecoequity.org/docs/TheGDRsFramework.pdf](http://www.ecoequity.org/docs/TheGDRsFramework.pdf) at 19

60. It is noted that this modeling does not specifically include Australia. However, given the choice of indicators for this particular model and the fact that capability to pay and historical responsibility appear to be measured on an emissions per capita basis it is
safe to estimate that the Australian RCI would lead to emissions reductions above the annex 1 average.

61. **ClientEarth notes that the design of emissions trading models should also be taken into consideration in the question of burden sharing. This is particularly important given the fluidity created by linkages with Kyoto and other trading mechanisms.** In the case of Australia, the current proposal is to allow unlimited access to international offset credits as an alternative to domestic reductions. This has a bearing on domestic costs, and ideally, this would be factored into any consideration of burden sharing, as liable facilities/sectors in other models such as the EU and US have only limited access to international offsets, which, depending on behaviour of the carbon price in each jurisdiction, is likely to have a bearing on comparative costs of emissions abatement.

3.5 **What should Australia’s exact target be?**

62. The Climate Action Network Australia have called for at least 40% reductions below 1990 levels by 2020 and at least 95% below 1990 by 2050.63 ClientEarth supports these targets for the reasons set out in this segment, and notes they fall within the international negotiating range, and within the revised range for Australia proposed by ClientEarth earlier in this segment. Importantly, it is noted that the international negotiating range explicitly does not take into consideration lifestyle changes which, as noted by the Ad Hoc working group of the Kyoto Protocol, have the ‘potential of increasing the reduction range.’64 On this point, ClientEarth notes that, Australia, having enjoyed one of the most profligate energy usages in the world, having one of the highest levels of consumption and carbon footprints per capita, with low levels of efficiency in fossil fuel generation, has at its disposal a large amount of untapped potential to further achieve abatement by requiring or encouraging significant lifestyle changes. This has been confirmed by modeling referred to earlier. **Other**

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jurisdictions have begun to articulate in legislation and policy the commitment that all players, including citizens must play their part in climate change. The fact that the Australian way of life is a sizeable part of the problem has not been adequately acknowledged by the Australian government. In general terms we are yet to arrive at acceptance of the fact that climate change requires deep cultural change. In this vein, the interim report from the Garnaut review, in explaining the suite of reasons why Australia is well placed to achieve significant emissions reductions, stated that:

“Australia’s past profligacy in energy use has left an exceptional legacy of opportunities for low-cost energy savings in business and amongst households”.

Finally, ClientEarth believes that the profoundly grave implications of climate change as discussed earlier in this segment demand that developed states such as Australia transcend traditional patterns of acting primarily in narrow self interest and act on climate change in enlightened self interested. There are a range of reasons why it is inequitable, and in the long run, unjustifiable for Australia to go to the international negotiating table stressing aggregate cost indicators like change in GNP/GNI above other cost indicators more relevant to the questions of responsibility and in particular ‘capability to pay.’

3.6 ClientEarth’s Propositions on Targets and Metrics of Burden Sharing

The inadequate targets of the CPRS have been widely and rightly condemned. In this section we have advanced the case for higher targets via an examination of most recent climate change science and an examination of the relationship between targets set and Australia’s ability to discharge its obligations under various instruments of

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65 For example, as an aspirational commitment, the EU Effort Sharing Decision states in the 29th recital that: “In addition to individual Member States, central governments and local and regional organizations and authorities, market actors — together with households and individual consumers — should be involved in contributing to the implementation of the Community’s reduction commitment, irrespective of the level of greenhouse gas emissions which can be attributed to them”. (Emphasis added.)

international law. After an analysis of Australia’s high emissions mitigation potential and an analysis of the texts, ClientEarth advised that targets of anything less than 25% below 1990 levels and 80% by 2050 would leave Australia open to allegations of breach of Australia’s commitments under the UNFCCC as well as the WHC.

65. In regards to burden sharing, ClientEarth is concerned that the Australian government appears to be stressing metrics that give a distorted picture of Australia’s capability and responsibility to shoulder deep reductions. A rights based approach to climate change mitigation and burden sharing demands that capability to pay and historical responsibility are assessed with reference to the distribution of wealth within countries. One way to approach this is to exclude incomes or emissions below a certain threshold as has recently been proposed by the Greenhouse Development Rights Framework.

66. **Regarding metrics of burden sharing ClientEarth makes the following propositions:**

⇒ Metrics must be firmly grounded in the legal text of the UNFCCC and Kyoto Protocol having regard to their objects and purposes. The most relevant ‘national circumstances’ for the purposes of the UNFCCC are ‘capability to pay’ and ‘mitigation potential’. Australia is well placed on both.

⇒ It is true that marginal abatement costs (cost of reducing per tonne) see higher costs for Australia compared to several other annex 1 parties. However, this must be interpreted against the high mitigation potential and the general very high levels of economic well being in Australia.

⇒ A rights based approach to ‘capability to pay’ requires accounting for distribution of wealth within countries rather than aggregate costs. One way to do this is to exclude incomes below a certain poverty threshold.

⇒ Australia must accept the full and natural meaning of the term ‘capability to pay.’

⇒ A rights based approach to historical responsibility must be at least partly calculated on a per capita basis.
67. **Resulting from international comparison, the following is a summary of policy approaches ClientEarth regards to be conducive to higher targets.**

10 **POLICY DECISIONS THAT SUPPORT HIGHER TARGETS OVERSEAS:**

- Positioning targets within broader climate change legislation rather than in emissions trading specific legislation,
- Coupling emissions trading legislation with tough complementary measures such as emissions performance standards in the proposed US model,
- Willingness to regulate electricity users directly, such as via the CRC Order in the UK (This will be discussed in segment 3)
- Commitment to base free allocation to industry on best practice benchmarks rather than grandfathering (EU ETS Directive 2009)
- A commitment to phase out transitional free allocation rather than have it grow as is proposed in the CPRS (segment 1 of this report)
- General principle of full auctioning in the power sector (from 2013 in the EU ETS Directive 2009)
- More innovative and environmentally progressive use of auctioning funds or allocation of permits as a financing mechanism to drive the green revolution and less of an emphasis on returning proceeds to ease households and industry. (see section that follows)
- Legislated figures for annually decreasing cap in the EU and proposed US models

4. **Auctioning and Revenues**

**Auctioning Rules**

68. Subdivision C of the CPRS Bill deals with auctioning of emissions units. S103 allows for subordinate legislation to set procedures and policies surrounding auctions, including for such matters as limiting the total number of emissions units that can be obtained by a person at a particular auction (s103(2)(l)). ClientEarth supports the inclusion of this provision and notes that these kinds of auction regulations may prove particularly important to counteract ‘hoarding’ of units, given the decision to allow unlimited banking. It is noted that s103 appears to foreshadow the possibility of a
reserve price for auctions in subdivision 2(m). This would effectively amount to a price floor and it is noted that this is in keeping with the approach of the US ACES Bill and lessons from the EU. In s791(d) of the US ACES Bill a reserve auction price is set at $10 US for 2012, increasing annually by 5% plus CPI. This is designed to protect the market from drops in the price of carbon that are likely to occur due to lack of scarcity or economic downturn.

69. The EU scheme does not include a price floor or cap, but various commentators in the EU, including a recent report by Sandbag have advocated a reserve auction price as price floor, to maintain the market in the event of ‘sustained low price signalling a lack of scarcity’. ClientEarth considers that the lack of scarcity is a real risk for Australia in light of other design features and drafting decisions previously examined, including unlimited access to international offsets, a transitional price cap, low levels of ambition in targets, inadequate decay rates of free assistance, and a ‘one size fits all’ approach to levels of free allocation for EITE sectors. As was concluded in segment 1 of this report, many of these controversial features are not in accordance with international best practice in the design of emissions trading models, and the corresponding risk of a lack of scarcity strengthens the call for a price floor rather than a transitional price cap. The EU legislation could perhaps benefit from the inclusion of a similar provision to s103(2)m) of the CPRS allowing for subordinate legislation to create a reserve auction price if needed. However, it is conceivable that the option may remain open in the EU given the Commission Regulation that is anticipated by June 2010 dealing with ‘timing, administration and other aspects of auctioning’.  

Use of Revenues

70. Article 10(3) of the revised EU ETS Directive of 2009 requires that member states channel ‘at least 50% of revenues generated from the auctioning of allowances’ to one or more of a long list of activities in art 10(3)a) to (i). All of these activities relate to stimulating GHG reductions and/or investment in renewables and greener

67 European Union, ETS Directive 2009, art 10 (4)
technologies with the exceptions of article 10(3)h) which allows for supporting lower and middle income families and article 10(3)i) which allows for covering administrative expenses of the scheme from within this 50%. The other permissible uses of this 50% of revenues are all about reducing emissions and include including demonstration projects and research, investing in renewables, encouraging the shift to low carbon transport, avoiding deforestation and increasing afforestation in developing countries, forestry sequestration within the EU, and CCS. To fulfill this obligation on use of revenues Member States must report on use of revenues pursuant to article 10(3) under Decision 280/2004/EC. The other 50% of revenues can be used at the discretion of the member state. Nevertheless, the overall direction of revenues is clearly more progressive in the EU than in the CPRS as is visible from the pie graphs that follow.

71. In the White Paper the Australian government has decided to direct ‘every cent’ of auction revenues to help households and business adjust to the scheme. Looking at the budget implications provided in the white paper in real terms the vast majority of revenues will be directed to offsetting the impact of the price of carbon and only a tiny slice to the Climate Change Action Fund. This small slice equates to only 6% of permit value and is the only piece of the pie allocated to green innovation, efficiency improvements, and greener technologies. These figures have been graphed below based on data in table E3 of the White Paper vol 1 pxlvii, and compared against the auctioning rules in art 10(3) of the revised EU ETS Directive 2009.
Predicted Direction of CPRS Revenues in 2010-11 (in $ billions)

- Assistance for low and middle income households: 2.9
- Fuel tax adjustment: 0.7
- EITE assistance: 0.7
- Assistance to strongly affected industries (coal): 3.9
- Climate Change Action Fund: 2.4

72. If we exclude free allocation from this graph so as to provide a more direct comparison with the EU graph which follows, it looks like this: (note that the Climate Action Fund still represents a very small piece of the pie and represents the only direction of revenues towards abatement activities, investments, or green innovation)
Predicted Direction of CPRS Auction Revenues in 2010-11 (excluding free allocation assistance)

- Assistance for low/middle income households: 34%
- Fuel tax adjustment: 10%
- Climate Change Action Fund: 56%
73. As can be seen, while the drafting of EU legislation does not prevent a Member State to direct 50% or more of its auction revenues to support low and middle income families in a similar fashion to the CPRS, it is clear from an examination of the long list of emissions reducing activities in art 10(3) of the ETS Directive 2009, that the legislative intention is for member states to channel a high percentage of revenue into technologies and practices that will reduce emissions, thus accelerating the impact of the price of carbon. The same cannot be said of the CPRS, where the emphasis is clearly on counteracting the increased price of carbon, which runs counter to the entire purpose of emissions trading schemes.

74. **ClientEarth calculates that The US ACES Bill directs approximately 19% of revenues emissions trading revenues toward emissions abatement,**
comprising 15% to support greener and more efficient technologies such as CCS and renewables and 4% towards preventing tropical deforestation.\textsuperscript{68} This figure of 19% is notably higher than Australia’s inadequate portion of less than 10%.

75. The graphs and figures must be interpreted in the context of the overall proportion of auctioning versus free allocation, and initially Australia compares favorably with other models with its decision to begin at approximately 75% auctioning. However, as was examined and graphed in the previous segment, if we fast track to 2020 and beyond, Australia’s predicted increase in EITE assistance will see it fall behind the EU and NZ. This is the case because, unlike Australia, both these jurisdictions have committed to phase out most categories of free allocation by 2027 and 2030 respectively, whereas Australia predicts an increase over time. The phase out graph is presented again in appendix A of this segment.

**Innovative financing through permit allocation**

76. Emissions trading models in other jurisdictions utilize allocation of permits as an innovative financing mechanism to accelerate abatement and research, development and demonstration of low carbon technologies. The proposed US \textit{ACES Bill 2009} contains approximately 20% of total allowances granted to stimulate development of clean technologies. S794 deals with oversight of the entire allocation process, requiring a biannual report into the distribution of allowances (including allocation categories) and government distribution of any revenues generated from federal auctions. S794 of the US ACES Bill stipulates that the focus of these periodic evaluations will be on: 1) creating and preserving jobs, 2) ensuring a manageable transition for working families, 3) reducing emissions or enhancing sequestration of emissions, 4) developing clean technologies and 5) building resilience to the impacts of climate change. As a minor point, while the CPRS Bill has built in a periodic review for the EITE program of allocation, it has not legislated for any such comprehensive review into the direction of auction revenues such as via the climate change action

\textsuperscript{68} Pew Centre on Global Climate Change, Distribution of allowances, available at http://www.pewclimate.org/policy-memo/allowance-distribution-under-waxman-markey
fund. (The White Paper indicates that some uses of revenue, such as fuel credits will be reviewed, but is silent as to transparently reviewing the Climate Change Action Fund.)

77. One of the more innovative features of the revised EU ETS Directive of 2009 is its use of free allocation as a financing mechanism for demonstration projects and for the modernization of fossil fuel generation. Article 10a)8) of the ETS Directive 2009 sets aside 300 million allowances for the purpose of constructing and operating commercial demonstration projects for CCS or renewable energy technologies that are not yet commercially viable.

78. S74 of the NZ Climate Change Response (emissions trading) Act 2008 establishes an innovation fund for the purposes of “facilitating deployment of innovative technology that significantly reduces or avoids, or has the potential to significantly reduce or avoid, greenhouse gas emissions from the industrial sector”. Each year 150,000 NZ emissions units will be set aside for the fund, and will be distributed by the Minister on a contestable basis. Distribution appears to be highly discretionary, according to ‘any criteria the Minister considers appropriate’.

79. In its current form, the CPRS represents an unimaginative use of auction revenues and fails to maximize on the potential of emissions trading to stimulate significant change. In light of the emphasis in other international models the distribution of revenues must be revised. The unique geographic features of Australia combined with its highly skilled workforce make it one of the most favourable nations on earth for renewable energy uptake and technological innovation. It also contains carbon sinks of global significance – recent scientific re-evaluations of forest biomass have discovered that parts of Australia’s temperate forests contain the highest biomass carbon density of any forests in the world – including tropical forests. The emphasis in the CPRS is on regulating fossil fuel emissions rather than bio carbon emissions such as those which result from deforestation, land use and land

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69 New Zealand, Climate Change Response (Emissions Trading) Act 2008, s74(1)
70 New Zealand, Climate Change Response (Emissions Trading) Act 2008, s74 (6)(b)
71 See http://www.pnas.org/content/106/28/11635.full.pdf
use change, despite the fact the latter account for 25% of global emissions. **For all these reasons ClientEarth advises that revenues be distributed more strategically, and supports the recent submission by the Australian Conservation Foundation to establish a National Biodiversity and Climate Change Fund**\(^2\) **directing CPRS revenues toward protection and restoration of Australian habitats and vegetation.**

80. To conclude, the CPRS directs smaller proportions of auction revenue towards emissions abatement and green innovation. An important point of distinction between the CPRS and several other models is that it does not use allocation as a financing mechanism. Instead it establishes the Climate Change Action Fund to encourage green innovation and emissions abatement, but this represents only a very small slice of the auction revenue pie when compared to other models, which have less of an emphasis on offsetting the price of carbon. Additionally, a possible advantage of allocation as a financing mechanism within emissions trading legislation rather than the establishment of a discretionary pot of money comes down to transparency. The proposed Australian Climate Action Fund has not been enshrined in the CPRS Bill and exists only in policy documents. There is a risk therefore, that the criteria for its use will be less transparent than had the operation of the fund been detailed in the legislation.

**Fuel Credits and Household Assistance**

81. It is noted that the current proposal is to direct 21% of auction revenue into fuel tax adjustments. The fuel credit is envisaged as a transitional measure and will apply for 3 years to agriculture and fishing businesses and for 1 year to heavy on-road transport business. While this fuel credit is presented as a transitional measure, the white paper appears to foreshadow the extension of this measure after a review, with the possibility that it will become a 'permanent feature after three years.'\(^3\) ClientEarth

\(^3\) Australian Carbon Pollution Reduction Scheme, White paper vol 1, (2008) exec summary, page xliii
does not support this ‘cent for cent’ eradication of the price signal for fuel in the early years of the scheme and is particularly concerned that fuel tax cuts are envisaged as possibly being a permanent measure to offset the impacts of the price of carbon. While it is true that in several circumstances, fuel users may have less opportunities for abatement than fixed sources of emissions, incentives must still be preserved for operators of these activities to invest in more efficient engines, alternative fuels and continually seek greater operational efficiencies. By contrast the EU ETS directives 2003 and 2009 do not provide for assistance for costs passed on from fuel, despite the fact that fuel production is covered by the ETS Directive 2003 in annex 1. Unfortunately, there is nothing preventing individual member states from directing sizeable portions of auction revenue towards offsetting increased fuel cost, as has already been discussed.

82. As an alternative design solution, ClientEarth recommends that the overall amount of fuel assistance be reduced and that Australia considers introducing CO2 emissions performance standards for new vehicles (commercial and passenger), following the lead of the EU, most recently exemplified in Regulation EC/443/2009 setting CO2 emissions performance standards for new passenger cars. While Australia has introduced CO2 labelling requirements for new vehicles, the Australian Design Rules do not regulate CO2 performance of new cars either manufactured in or imported into Australia. This will be revisited in the next segment of this report dealing with complementary measures.

83. According to the white paper, the CPRS Household assistance package will compensate not only low income households, but 60% of middle income households will also receive assistance equal to the increased cost of living resulting from the

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74 EU, Regulation EC/443/2009 setting emissions performance standards for new passenger cars as part of the Community’s integrated approach to reduce CO2 from new light vehicles, adopted 23 April 2009
scheme. This is not presented as a transitional measure but will be ongoing and will take the form of direct cash assistance. **As has been discussed, it is clear from the drafting of art10(3) of the ETS Directive 2009, that the intention is that there is less emphasis on assistance to low and middle income households when compared to the CPRS. This may reflect a greater understanding that environmentally effective emissions trading schemes should be designed to achieve reductions from both the supply and demand side of the economy.**

84. It is acknowledged that other models such as the proposed US **ACES Bill 2009** contain a commitment to easing the impact of the scheme on households, and directing auction revenues to this end. In this proposed US model 15% of total allowances will be auctioned and revenue directed to low and middle income families in the form of payments. Significant revenues are also channelled to electricity distributors with the end goal of protecting consumers. **Nevertheless, its use of revenues is in a number of respects more progressive than the Australian model.** While some revenues are directed to households in the form of monetary assistance, others are directed towards helping consumers via energy saving measures. As an example, s785 (‘home heating oil, propane and kerosene consumers’) requires US states to distribute emissions allowances ‘exclusively for the benefit of consumers of [heating fuel]’, with proceeds being used exclusively for:

(a) effective energy efficiency programs for consumers that use oil heat fuel, propane or kerosene for residential or commercial purposes; or

(b) rebates or other forms of direct financial assistance programs

85. While some of these activities may be eligible for funding under the Australian Climate Change Action fund, none of its 4 streams directly target energy efficiency measures for consumers. Instead the Australian approach is to protect consumers primarily via payments and fuel tax cuts, which are unlikely to yield environmental gains.

76 US ACES Bill 2009, s785 c)1)
86. Another preferable approach is to be found in the NZ Act. **While the NZ government also plans to direct cash to households (in the form of one off rebates and ongoing assistance for certain families receiving benefits) it also establishes a sizeable ‘household fund’ in s223 of the Act. This section sets out a non-exhaustive list of eligible activities for the fund. Moneys will be made available to award grants for purposes including a) household insulation and clean heating retrofits, b) energy efficient appliances and lighting and c) space and water heating efficiency improvements.** Before considering criteria for the award of this fund, the Minister is bound by a number of mandatory considerations including the energy and income needs of households (s223(6)a)). ClientEarth supports this kind of assistance and notes that there is no real equivalent to this in the CPRS, and it is noted again that as envisaged by the government the Climate Change Action fund will include 4 streams of funding for business and the community sector and none of these relate directly to households.

87. This segment previously called for a rights based approach to international burden sharing. The increasing currency of rights based approaches within international human rights discourse also has relevance to acceptable levels of impact of climate change mitigation upon citizens and households in all nations. Sustaining this global perspective, it is hard to argue against the starting point that, with the exception of those that genuinely cannot afford it, Australian households should be subject to increased flow on prices so as to effect behavioural change. To put things in perspective, it is envisaged that the CPRS as currently designed will result in only a $4 increase per week\(^{77}\) in the price of electricity – clearly insufficient to stimulate energy savings or behavioural change on the part the majority of Australians.

5. Summary of findings and proposed alternative design solutions

88. The following is a summary of the most important findings and suggested amendments resulting from the international comparative analysis throughout this report:

Targets:

- The choice of targets has a significant bearing on Australia’s ability to discharge its obligations under instruments of international law. On a preliminary analysis of the legal texts combined with the critical mass of scientific evidence and international momentum, ClientEarth advises that targets of less than 25% below 1990 levels by 2020 and 80% by 2050 (and probably higher) leave Australia open to allegations of breach of articles 4, 5, and possibly 6 of the World Heritage Convention, and article 4(2) of the UNFCCC.

- Full consideration of the precautionary principle requires revising the international negotiating range in light of scientific findings since IPCC AR4. The policy implications of these findings are that the choice of emissions pathway is more critical than previously thought, and Australia must therefore make deeper cuts sooner.

- After an examination of recent modelling, metrics of international burden sharing and Australia’s mitigation potential, ClientEarth concurs with CANA that Australia’s specific targets must be at least 40% below 1990 levels by 2020 and 90% by 2050.

- The Bill would be strengthened by including a mechanism for the future revision of targets in the form of subordinate legislation similar to the power that exists in article 2 of the UK Climate Change Act 2008.

Metrics of International Burden Sharing

- ClientEarth is concerned that the metrics for international burden sharing that the Australian government appears to be stressing in its submissions to the Ad hoc Working group to the Kyoto Protocol give a misleading picture of Australia’s capability to pay for deep emissions cuts.

- The government often stresses change in GNI or GNP as a way to ‘better assess comparability of effort.’ ClientEarth advises that percent change in gross national income or gross domestic product resulting from abatement is not synonymous with ‘capability to pay’ –one of the guiding principles for burden sharing put
forward by the European Council and derived from the legal texts of the UNFCCC. Capability to pay should be given its full and natural meaning and be based on comparative welfare indicators \textit{after} applying the predicted cost of abatement rather than focusing on percentage \textit{change} in GNI or GDP, which for the richest nations like Australia, gives a distorting picture of effort.

- Disagreeing with the Australian government in its submissions to the Ad Hoc Working group to Kyoto Protocol, there are compelling arguments why marginal abatement costs (comparative cost of emissions reduction per tonne) should be included as a cost indicator as well as (and perhaps above) aggregate costs. This is important to give information about comparative cost-efficiency of abatement and to balance the fact that aggregate costs predictions are more prone to over-estimation.

- ClientEarth notes the recent work of ECOrights and the Stockholm Institute calling for a rights based approach to international burden sharing. One way to incorporate the right to development into burden sharing metrics is to account for distribution of wealth within nations rather than only aggregate welfare measurements. Excluding incomes below a certain poverty threshold is one way to attempt this as proposed by the recent Greenhouse Rights Framework.

- A combined indicator is needed, and the choice of metrics must be firmly grounded in the text of the UNFCCC and Kyoto Protocol. By the examined combined metrics proposed by the EU, and by the recently proposed Greenhouse Developments Rights index, Australia is able, and must make cuts towards the upper end of reductions required of annex 1 parties.

- \textbf{ClientEarth puts forward the following propositions about the sort of combined metric Australia should accept to guide negotiations of burden sharing:}

  \begin{itemize}
    \item Metrics must be firmly grounded in the legal text of the UNFCCC and Kyoto Protocol having regard to their objects and purposes. The most relevant ‘national circumstances’ for the purposes of the UNFCCC are ‘capability to pay’ and ‘mitigation potential’. Australia is well placed on both.
  \end{itemize}
A rights based approach requires that historical responsibility must be at least partly calculated as cumulative emissions per capita since 1900 (or another base year).

It is true that marginal abatement costs (cost of reducing per tonne) see higher costs for Australia compared to several other annex 1 parties. However, this must be interpreted against the high mitigation potential and the general very high levels of economic well being in Australia.

A rights based approach to ‘capability to pay’ may require accounting for distribution of wealth within countries rather than aggregate costs. One way to do this is to exclude incomes below a certain poverty threshold.

Australia must accept to give the term ‘capability to pay’ its full and natural meaning.

**Auctioning and Auction Revenues**

- A significantly smaller proportion of CPRS auction revenues is directed towards accelerating emissions abatement when compared with the EU and US legislation. As an alternative design solution, ClientEarth recommends:
  - Reducing the portion of household assistance revenue granted to middle income households, and make part of the revised proportions of household assistance in the form of energy saving/heating rebates or programs rather than cash handouts.
  - Reduce the portion of revenue directed to fuel credits and fuel tax adjustment and instead introduce CO2 performance standards for new vehicles following the lead of the EU in April 2009.
  - **Increasing the revenue directed to accelerating emissions abatement to between 19% and 50% of total revenue, these being the proportions of the US and EU models respectively.**
  - Concurring with the recent proposal by the Australian Conservation Foundation, creating a new stream of funding, (possibly by expanding the Climate Action Fund), to direct revenues towards reducing emissions from...
bio-carbon by further protecting and replanting Australian forests, noting revised science that ranks certain Australian temperate forests as containing the highest carbon sequestration potential in the world.

- Criteria and mandatory considerations for the award of funds under the Climate Change Action Fund should be detailed in the legislation as is the approach in the NZ and US models.

- A mechanism for a formal review of the Climate Action Fund should be included in the legislation.