



1. INTRODUCTION

The Australian Industry Greenhouse Network (AIGN) welcomes the opportunity to respond to the Climate Change Authority (CCA) on Australia's greenhouse gas emissions reduction goals as part of a special review requested by the Minister for the Environment.

AIGN notes the three key areas the Authority will consider when reviewing Australia's future reduction goals:

- What climate science tell us about the size of the global emissions reduction task, and the likely impacts and costs of climate change in Australia;
- What other countries are doing to reduce their emissions, and Australia's fair contribution to the global response; and
- Economic factors affecting the costs and benefits of reducing greenhouse gas emissions.

The Authority has commented that it will be revisiting submissions made to its 2013 Targets and Progress Review to which AIGN made a number of detailed submissions. Whilst briefly referencing some previous comments AIGN will primarily comment on issues around the setting of targets beyond 2020 noting the Government's advice that it does not intend to move beyond the current unconditional 5 per cent emissions reduction target for 2020.

AIGN does consider past comments remain highly relevant such as, for example, those on why it would not be appropriate to set emission budgets prior to an agreed outcome at the end of year Paris Committee of Parties meeting on a Post 2020 International Agreement . However the focus of the Authority should be on intended contributions and the content of the text of the Post 2020 Agreement.

The wide variety of approaches by our trade competitors to reducing emissions, plus the timing of the introduction of measures, highlights that decisions regarding the post-2020 environment need to be undertaken in a considered manner with a focus on trade-competitiveness effects. The AIGN supports the approach of the Government, namely: *"Australia will consider its post-2020 target as part of the review we will conduct in 2015 on Australia's international targets and settings. This review will consider the comparable actions of others, including the major economies and Australia's trading partners. We are striking the responsible balance of safeguarding economic growth while taking action on climate change"*¹.

AIGN also looks forward to the opportunity to, in time, provide comment to the Authority on its Review as to whether Australia should have an emissions trading scheme and the actions Australia should take following the international climate negotiations in Paris in 2015.

In participating in the climate change policy debate, AIGN bases its input on our policy principles (outlined in *Attachment 1*), which detail the manner in which we believe Australia's commitments and actions in relation to addressing greenhouse gas emissions should be shaped.

In considering this response the CCA should note AIGN's broad range of members, and resultant wide diversity of views on greenhouse and energy policy. This response accords with the views of our members in general; however at times there are variations in the positions of individual members on specific issues. It is therefore important that the CCA considers AIGN's feedback alongside any responses made to the draft report by our members.

¹ Minister for Foreign Affairs & Trade, The Hon Julie Bishop, at the UN Leaders Climate Change Summit, 23 September 2014.



2 CLIMATE CHANGE

AIGN acknowledges that the prosperity, improved living standards and social conditions that industrial economies have experienced over the last 200 years has been as a result of activities that we now understand have had an impact on the global climate through increased atmospheric levels of greenhouse gases.

AIGN notes the recent findings of the Fifth Assessment Report by the Intergovernmental Panel on Climate Change that *“Warming of the climate system is unequivocalthat the human influence on the climate system is clear”* although predictions of the potential impact on global temperatures appear more cautious than earlier reports.

The continued, increasing release of emissions from a growing base of industrialising economies threatens to see levels of greenhouse gases rise to critical concentrations with potential serious adverse impacts globally and in Australia as highlighted in the work of the CSIRO and others.

This link between economic prosperity and activities that generate greenhouse gases dictates that improved environmental outcomes must be achieved at the lowest possible cost to the community. To do otherwise will harm social conditions, in particular on those economies that are more vulnerable to the impacts of climate change.

AIGN has consistently advocated Australia should make an equitable contribution, in accordance with its differentiated responsibilities and respective capability, to global action to reduce greenhouse gas emissions and to adapt to the impacts of climate change.

3 REDUCING GREENHOUSE GAS EMISSIONS – IMPLICATIONS FOR THE COMPETITIVENESS OF AUSTRALIAN INDUSTRIES

Australia's contributions to future global emissions reductions need to pay close regard to the global situation, and must take a realistic view of our trading performance, particularly noting Australia's industry structure. Due to our natural resources advantage, Australia is home to a relatively large share of emissions-intensive production, resource and extractive sectors, particularly in relation to our population size. Arguably this is an economically and environmentally efficient outcome from a global perspective, and could continue to be so in the future.

Reducing emissions can be costly. Activities that give rise to greenhouse gas emissions occur across all sectors of society such that the domestic policies that underpin a post 2020 emission reduction target have implications for the nation's economic competitiveness. While the effects of increasing levels of atmospheric greenhouse gases are felt globally, the impacts from the emissions reduction policies will be regionally enforced and will impact each sector of an economy differently. It is vital therefore that any action taken by Australia be in step with the actions of other economies so as to limit unintended and inefficient impacts on our economy.

Put simply, if Australia – with a large share of emissions-intensive production, resource and extractive sectors – raises the cost of production in the Australian economy at a higher rate than in other economies, it will put itself at a relative disadvantage and reduce the economic welfare of Australian citizens for no appreciable change in the global level of emissions.



In this respect it is important that comparisons on post 2020 targets are undertaken with those countries that are our major trading competitors as it is their approaches that will have implications for relevant Australian industry.

Attachment 2 identifies Australia's major trading competitors for a range of key energy intensive sectors². It highlights the diversity of our competitors. AIGN provides in this submission some further information on the policy approaches adopted by these countries towards climate change which vary considerably.

3.1 APPROPRIATE METRICS FOR MEASUREMENT

In assessing the actions of Australia's competitors and other countries we need to be careful in not using simplistic metrics such as per capita emissions that do not portray the true impact upon an economy.

As the recent Deloitte Access Economics Report ("Emissions metrics: Australia's carbon footprint in the G20" November 2014) noted "*Carbon emissions per capita (CO₂-e/capita) is commonly used as a benchmark to compare the carbon intensity of economies. Although widely used, CO₂-e/capita is a simplistic benchmarking metric, as it fails to adequately capture the complexities of the underlying drivers of carbon emissions such as the structure of a country's energy and economic systems. ...If emissions are to be expressed on a per capita basis, a country's carbon emissions should, at the very least, account for imported and exported emissions.*"

The implications of the Australian economy being heavily dependent on a large share of emissions-intensive production, resource and extractive industries is often downplayed or ignored in comparing targets at the international level as is its growing population (as Box 1.3 of the recent Intergenerational Report indicates, Australia's population growth is very high by international standards). A production-based emission reduction target will tend to impact more heavily on those countries with an emissions-intensive industry sector than would a consumption based target. Countries with stable or even falling population growth will find it easier, all other things equal, to reduce emissions, for example Germany, Japan, Italy.

For this reason great care should be exercised when comparing the various targets put forward to determine comparable levels of effort or to prevent the creation of incentives for countries to outsource emission activities to other economies.

3.2 SETTING TARGETS – MEASURING COMPARABLE EFFORT

The measurement of abatement targets must go beyond simple comparisons of measures that may apply at the "top-line". A seemingly relatively modest top-line national target may have profound national and/or sectoral economic cost dependent on the fabric of each economy and the technical ability to substitute to lower emission technologies. For example, comments are often made that Australia's existing target of -5% is not particularly onerous. However, this ignores the nature of Australian industry, and that Australia has become significantly less emissions-intensive over the last two decades as detailed in the Department of Environment's Report "Australia's emission projections 2014-15."

The PricewaterhouseCoopers' "Low Carbon Economy Index 2014" highlighted that over the period 2008 to 2013, Australia reduced emission intensity by 4.6%, whilst on average GDP grew by 2.6% pa.



Past Treasury modelling demonstrated that the 2020 targets are particularly ambitious when compared to a business-as-usual scenario, and will impose higher economic costs on Australia than almost any other developed nations. AIGN recognises that this work is dated and is commissioning some further work in examining “comparability of effort”.

The Deloitte Access Economics Study highlights that when measuring Australia’s performance in carbon emissions per unit of GDP it is better than the G20 average. It also highlights that there are different ways to estimate reductions and that the use of differing baselines for different economies can return significantly different emission reduction targets.

A minimum requirement in comparing effort between countries, and at the sector and potentially entity level, is to understand the true economic cost associated with the policies in place. There are a number of ways of measuring this including the calculation of the effective carbon price faced by particular sectors within the economy. The effective price paid by individual sectors will depend crucially on the details of policy implementation.

4. WHAT OTHER COUNTRIES ARE DOING

The true comparison of climate change policies between countries requires the measurement of the differential economic effect of various policies. Carbon is such a ubiquitous input in most economies that mitigation policies will have economy-wide effects that extend well beyond the individual sectors that may have particular mitigation options.

At the entity level there can be interplay between what is expressed as a national policy on carbon and the actual impact on an entity when all relevant policy measures are taken into account, as well as the impact upon other firms within the economy. Broad economy-wide comparisons are unlikely to be sufficient if different sectors face different effective carbon prices arising from different patterns of exemptions and offsets.

From the point of view of comparing effort between countries, what needs to be measured are the resource flows (or the incentives for resources flows) from carbon based production to non-carbon based production, or equivalently, the effort in decarbonising the economy. In particular, the crucial issue is to understand whether these flows are consistent with the long term global policy objectives or whether they move against them – that is, whether they create ‘leakage’ or whether they lead to a net reduction in emissions.

This comparison of policies is difficult when countries are “talking of action” but not establishing the policy parameters that will support such action and that allow judgements to be made on their impacts and commitments. More information, on targets at least, should be available as countries bring forward their commitments to post 2020 emission targets (Individually Determined National Contributions) under the auspices of the UNFCCC and the development of a new International Agreement on Climate Change.

AIGN acknowledges that at the global level an increasing number of countries are talking of implementing policies to reduce their emissions post 2020 as highlighted by the climate agreement signed by the United States and China late 2014 and more recently announcements by such nations as Norway. Recognising the focus in 2015 is on obtaining intended national contributions AIGN looks forward to more information, in time, on how these positive developments may translate into firm policy actions post 2020. In many cases, including that of the US and China (which collectively account for 40% of global emissions), only relatively broad indications have been given of the emission reduction targets they hope to achieve post 2020.

The United States has announced a proposed 26-28% reduction on 2005 levels by 2025. China



has spoken of peaking emissions by 2030 (or earlier) and of promoting the use of renewables but not announced a specific target.

The EU has already brought forward its INDC committed to a binding target of an at least 40 per cent domestic reduction in GHG emissions by 2030 (compared to 1990).

Australia's experience highlights that the commitment to take action and effective implementation is a lengthy process, including the establishment of credible processes to monitor emissions.

While acknowledging the importance of assessing and comparing national targets, it is also crucial to understand the potentially significant differences between the domestic policies that individual countries may choose to put in place to meet their targets. When looking at the 17 distinct ETS in force across four continents (ICAP Status Report 2015) it becomes clear that no two schemes are the same not just because targets might vary or that some are sub national but also the different composition of policy with for example differences in legislative frameworks, implementation timetables, coverage of sources, coverage of sectors, treatment of emission-intensive, trade-exposed industry, exemptions and allowances and robustness of monitoring, review and verification (MRV) practices.

For example some policies are aimed exclusively at particular sectors. Agriculture remains a commonly non-covered sector in many countries, such as the EU, partly due to the difficulties inherent in measuring and managing carbon cycles in soils and vegetation. The EU trading scheme does not include methane due to these difficulties.

Even when a policy covers a particular economic sector, the costs that entities within the sector are exposed to may not be the same as the headline costs of the policy. This is due to the practice of compensating, shielding or exempting emission intensive, trade-exposed (EITE) industries from part or all of a policy's costs. This is done in recognition of the inability of a domestic sector to influence the world price of goods and commodities, and the resulting competitive disadvantage of climate change policy costs in this context.

This will continue to be an important issue until climate change policy costs become more globally common and begin to converge. The exemptions that apply to EITE industries vary considerably from a minimum of 60% (up to 100%) for the proposed South African scheme, and 100% of credits to be administratively allocated in the Korean scheme for the first 3 years. It is difficult to understand how current loose cap arrangements will translate into post 2020 policies or translate in a target. The seven trial emissions trading schemes underway in China do not include all relevant industries, and apply a very loose cap. Similarly details have not been provided on how the seven trials underway in China, which only cover 20% of the population, will translate to a national ETS scheme.

The ability of countries to monitor, review and verify (MRV) the impact of climate change policies plays a significant role in comparing policies across countries and in providing confidence that a climate change policy has rigour. It requires accessible transparent and accurate reporting systems and many countries are experiencing difficulties with developing rigorous MRV arrangements.

It should also be noted that a considerable number of the emerging competitors countries with a range of energy intensive industries have yet to outline any climate change policies and in many cases are unlikely to do so any time soon. This not only includes many Gulf State economies who are Australia's major competitors in the area of LNG and other energy intensive industries (e.g. aluminium) but also a number of our Asian competitors including Malaysia and Thailand.



The variables in policy approaches highlight the importance of understanding how targets will be implemented and impacts across the economy, particularly those that are trade exposed so as to avoid unintended losses of competitiveness.

5. POST 2020 GLOBAL AGREEMENT

AIGN notes the comments by the Authority on “positive momentum in international negotiations” in respect of a new international agreement on climate change. This is consistent with Authority’s past assumption in its Targets and Progress Report that, at the global level, we are close to agreement on emissions reductions of sufficient magnitude to restrict temperature increases to 2 degrees Celsius. However there are a number of uncertainties that continue to exist.

While AIGN welcomes progress on developing a new International Agreement, the outcomes from the recent United Nations Framework Convention on Climate Change (Committee of Parties 20) negotiations at Lima highlight that considerable further work is required before a far-reaching and meaningful global agreement is attained that will replace the Kyoto Protocol from 2020. For example at this stage it is understood that the Decision text which will form the basis of the new International Agreement exceeds 80 pages in length with a significant number of alternative statements applying to the key sections of the proposed agreement.

Discussions around the new agreement are highlighting a preference for a flexible bottoms-up approach in bringing forward commitments via Intended Nationally Determined Contributions (INDCs) rather than the prescriptive top-down approach of the Kyoto Protocol. This highlights the need for clear templates around what should be contained in the INDCs to allow comparisons of effort (though this activity will not be undertaken by the UNFCCC).

As Lima highlighted continuing differences remain between developing and developed countries over key aspects such as the legal nature of the Agreement, whether binding or not, timeframe, adaption, loss and damage and finance. These differences have dominated past COP meetings and all indications in the lead up to Paris indicate that the differences will continue to dominate as for example shown by the current size of the draft Paris Decision Text.

Reflecting these differences and that these disagreements have been carried over from a number of COP meeting it is likely that any new agreement will be high level in nature with the detail on the arrangements and key aspects to be completed in subsequent years. As was noted by a number of speakers at the recent Crawford School Conference on Post 2020 the Paris negotiations are likely to result in an agreement that provides a stepping stone to further work post 2015 to define the detail of the Post 2020 Agreement.

6 AUSTRALIA'S EMISSION BUDGET

AIGN has in the past expressed reservations with the approach adopted by the Authority in considering Australia’s emission budget and whether in fact it is appropriate at this point in time to outline a proposed budget. The proposed budget approach assumes global agreement on a global budget that has over a specified period of time the objective of keeping temperature rise to a certain level – and then allocating a proportion of the global budget to Australia.



Without repeating all the commentary provided in our earlier responses on Targets and Progress we do note that a considerable number of issues are yet to be resolved before global agreement signed. It is therefore optimistic in the extreme to propose utilising an emissions budgets approach until all major economies are committed to stabilising and reducing emissions in a meaningful way (i.e. as part of an international agreement). Indeed, AIGN questions the value of recommending an emissions budget at all in the current circumstances; if necessary at all (and AIGN questions whether such an exercise is necessary) this is an exercise that could be undertaken late in 2015 when more is known about the post 2020 framework and the commitments (or contributions) of major economies.

In addition, any consideration of an emissions budget must take account of the reality that national commitments are made based on economic impact. This is an important concern that must be kept in mind in setting any budget for Australia. Due to our similar wealth and standards of living, it is reasonable for Australians to bear a similar economic burden to OECD countries, for example – however because of the different structure of our economies, per-capita emissions are not appropriate to be compared while policies are based on production.

As previously commented AIGN considers a consumption-based approach in determining a budget as a poor basis on which to allocate emissions rights in a world of production-based policy.

7 ACCESS TO INTERNATIONAL UNITS

Allowing international permits is consistent with AIGN's principle of least-cost abatement. AIGN does not support quarantining domestic abatement efforts from global action. This could have the effect of increasing the cost of abatement. We support the Authority's past comments that allowing access to international abatement opportunities reduces the risks associated with achieving a stated abatement task compared to achieving this task through domestic abatement alone.

8 CONCLUSION

Thank you for the opportunity to provide input into this process. AIGN is committed to engaging constructively with the Climate Change Authority in this review by providing feedback to assist the CCA in understanding the way in which our members are affected by significant national policy decisions.

If we can be of further assistance, please do not hesitate to contact Alex Gosman on 02 6295 2166, or by emailing alex.gosman@aign.net.au.

Yours sincerely

Alex Gosman
CEO AIGN



1 ATTACHMENT 1 – AIGN CLIMATE CHANGE POLICY PRINCIPLES

The Australian Industry Greenhouse Network's position on climate change is informed by the following principles.

Australia should make an equitable contribution, in accordance with its differentiated responsibilities and respective capability¹, to global action to reduce greenhouse gas emissions and to adapt to impacts of climate change.

Australia should engage the international community in pursuing identified and beneficial environmental outcomes through greenhouse gas emissions reduction action which:

- allows for differentiated national approaches;
- promotes international cooperation;
- minimises the costs and distributes the burden equitably across the international community;
- is comprehensive in its coverage of countries, greenhouse gases, sources and sinks;
- recognises the economic and social circumstances and aspirations of all societies; and
- is underpinned by streamlined, efficient and effective administrative, reporting and compliance arrangements.

In this global context, Australia should develop a strategic national approach to responding to climate change which:

- is consistent with the principles of sustainable development;
- is consistent with other national policies including on economic growth, population growth, international trade, energy supply and demand, and environmental and social responsibility;
- takes a long term perspective;
- maintains the competitiveness of Australian export and import competing industries;
- distributes the cost burden equitably across the community;
- adopts a consultative approach to the development of new policies; and
- is consistent and effectively co-ordinated across all jurisdictions throughout Australia.

Australia's future greenhouse policy measures should:

- be consistent with the strategic national approach;
- be trade and investment neutral, in a way that does not expose Australian industry to costs its competitors do not face;
- not discriminate against new entrants to Australian industry nor disadvantage "early movers" in Australian industry who have previously implemented greenhouse gas abatement measures;
- take account of the differing sectoral circumstances;
- be based as far as is practicable on market measures;
- address all greenhouse gases;
- address all emission sources and sinks; and



- balance, in a cost-effective way, abatement and adaptation strategies – both of which should be based on sound science and risk management.

Australia's contribution to the global climate change effort as set out here reflects the principle in Article 3.1 of the United Nations Framework Convention on Climate Change. Differentiated responsibilities and respective capabilities could take account of such matters as a country's economic growth and structure, population growth, energy production and use etc.



ATTACHMENT 2: AUSTRALIA'S MAJOR TRADING PARTNERS AND COMPETITORS

PARTNERS AND COMPETITORS

With low tariffs and generally deregulated services, Australia's economy is open to imports and investment in most industries. Most major Australian industries are trade-exposed. If Australia takes action that increases costs and reduces competitiveness in an industry or the economy at large, lower cost imports not subject to the same imposts, will reduce the market for Australian producers, with obvious flow-on consequences for employment, investment and economic activity. This has been recognised in Australia under past climate change policy frameworks, with the provision of specific arrangements for emission-intensive trade-exposed (EITE) industries.

This attachment provides information on Australia's key trading competitors across selected industries primarily on the basis of major producers and exporters³. The selected industries are: liquefied natural gas, coal, aluminium and alumina, iron ore and steel, and some agriculture commodities. Australian industry competes with a diversity of countries, for example:

- In the LNG sector, which is on the cusp of becoming one of Australia's major export industries, competitors are Qatar, Malaysia and Indonesia.
- For the aluminium industry, major competitors include China, Russia, Canada and, increasingly, the economies of the Middle East.
- USA is the major supplier of imported food and groceries, whilst Brazil is the dominant sugar exporter.
- Coal is Australia's largest energy export and competes with sources such as Indonesia, South Africa, US and Russia.
- In the steel sector, China is the largest steel producer, manufacturing almost half the world's steel. Other major producers, which are import competitors of Australia's steel industry, include Taiwan, South Korea, India and Japan.

Increasingly, Australia's trade competitors are drawn from the Asia Pacific region and the Middle East, which are attracting significant investment, the former on the basis of labour rates and the latter on access to low priced energy.

³ From a more detailed examination, it emerges that Australia's existing trading partners and competitors include: Algeria, Argentina, Bahrain, Brazil, Brunei, Canada, China, Cuba, France, Guatemala, Iceland, India, Indonesia, Iran, Ireland, Italy, Jamaica, Japan, Kazakhstan, Malaysia, Mexico, Mozambique, New Zealand, Nigeria, Norway, Oman, Qatar, Russia, South Africa, South Korea, Spain, Suriname, Taiwan, Thailand, Republic of Trinidad and Tobago, Turkey, Ukraine, United Arab Emirates, United Kingdom, and Yemen.

Of Australia's major competitors only a small proportion have some form of a carbon price or comprehensive climate change policy in place. AIGN will provide further detailed information analysing the climate change policies of a range of key competitor nations including emerging global producers based on recent investment.

Table 1: Australia's key bilateral trade partners

Country	Imports (\$bn)	Exports (\$bn)	Total (\$bn)
China	46.3	78.7	125
Japan	21.3	49.8	71.1
United States of America	41.6	14.6	56.2
Korea	10.3	21.6	31.9
Singapore	18.8	10.3	29.1

Source: Department of Foreign Affairs and Trade, *Trade at a Glance 2013*.

Attachment 1.2 Liquefied Natural Gas

Table 2: Global LNG exporters in 2013

Country	Share of exports
Qatar	32%
Malaysia	10%
Indonesia	7%
Australia	9%
Nigeria	7%
Trinidad & Tobago	6%
Algeria	5%
Russia	4%
Oman	4%
Brunei	3%
Yemen	3%
United Arab Emirates	2%
Egypt	1%
Other	7%

Source: Australian Petroleum Production and Exploration Association.

Table 3: Australian LNG export destinations in 2013

Trading Partner	Share of Australian exports
Japan	81%
China	16%
Korea	3%
Taiwan	0.3%

Source: Australian Petroleum Production and Exploration Association.

Table 4: Coal production by country in 2013

Country	Share of production
China	47.4%
United States of America	12.9%
Australia	6.9%
Indonesia	6.7%
India	5.9%
Russian Federation	4.3%
South Africa	3.7%

Source: British Petroleum *Statistical Review of 2013*.

Table 5: Coal exporters by country in 2013

Country	Share of major exports of major exporters
Indonesia	36%
Australia	28%
Russia	12%
USA	9%
Colombia	6%
South Africa	6%
Canada	3%

Source: World Coal Association

Table 6: Global Alumina Production 2012

Country	Share of production
China	39.1%
Australia	21.7%
Brazil	10.4%
United States of America	4.5%
India	4.5%
Russia	2.8%
Ireland	2.0%
Jamaica	1.8%
Kazakhstan	1.6%
Spain	1.6%
Ukraine	1.5%
Suriname	1.5%
Canada	1.4%
Germany	1.4%

Source: United States Geological Survey, *2012 Minerals Yearbook: Bauxite and Alumina Advance Release*.

Table 7: Aluminium Production by Country 2013

Country	2013 share of production
China	45.5%
Russia	8.4%
Canada	6.1%
United States of America	4.1%
United Arab Emirates	3.8%
Australia	3.7%
India	3.6%
Brazil	2.8%
Norway	2.5%
Bahrain	1.9%
Iceland	1.7%
South Africa	1.7%
Qatar	1.3%
Mozambique	1.2%
Argentina	1.0%

Source: United States Geological survey, *Mineral Commodity Summaries 2014: Aluminium*.

Table 8: Global Steel Production by Country 2013

Country	Share of global production
China	48.5%
Japan	6.90%
United States	5.40%
India	5.05%
Russia	4.28%
South Korea	4.11%
Germany	2.65%
Turkey	2.16%
Brazil	2.13%
Ukraine	2.04%

Source: World Steel Association, *World Steel in Figures 2014*.

Table 9: Flat Steel Imports to Australia by Country 2014

Country of Export	Share of total imports
Taiwan	34.3%
South Korea	25.6%
India	11.3%
Japan	7.9%
New Zealand	7.4%
China	6.7%
Belgium	1.4%
Thailand	1.2%
Malaysia	1.0%
France	0.9%

Source: ISSB Data

Table 10: Iron Ore Exporters 2013 by Country

Country	Exports (Mt)
Australia	579
Brazil	330
South Africa	48
Canada	36
India	9

Source: Minerals Council of Australia.

Table 11: Global Exporters of Sugar

Country	Share of Exports
Brazil	47%
Thailand	13%
Australia	6%
Mexico	5%
Guatemala	3%
European Union	3%
India	3%
South Africa	1%
Cuba	2%
United Arab Emirates	1%
Other	16%

Source: United States Department of Agriculture, *Foreign Agricultural Service*.

Table 12: Global beef exporters

Country	Share of global exports
Brazil	21%
India	20%
Australia	16%
United States	12%
New Zealand	6%
Uruguay	4%
Canada	4%
Paraguay	4%
European Union	3%
Belarus	2%
Argentina	2%
Others	6%

Source: United States Department of Agriculture, *Foreign Agricultural Service*.



**AIGN SUBMISSION TO CLIMATE CHANGE AUTHORITY'S REVIEW
ON AUSTRALIA'S EMISSIONS REDUCTION TARGETS**

MARCH 2015
