



AIGN SUBMISSION TO PRIME MINISTER AND CABINET

TASKFORCE REVIEW ON AUSTRALIA'S EMISSIONS REDUCTION TARGETS POST-2020

April 2015

Australian Industry Greenhouse Network Ltd

Unit 3, 4 Kennedy Street, Kingston ACT 2604

PO Box 4622, Kingston ACT 2604

T +61 2 6295 2166 | F +61 2 6232 6075

E info@aign.net.au | W www.aign.net.au



CONTENTS

1.	Introduction	2
2.	Climate Change.....	3
3.	Australia's Performance in Reducing Emissions.....	4
4.	International Efforts to Address Climate Change (The Paris Agreement).....	5
5.	Australia's Commitment to Post-2020 Targets	7
	5.1 Introduction.....	7
	5.2 Australia's Major Trading Competitors.....	7
	5.3 Australia's National Circumstances.....	8
6.	Setting a Post-2020 Target.....	11
	6.1 Metrics for Measurement	11
	6.2 Setting Targets – Measuring Comparable Effort	11
7.	What Other Countries are Doing	14
8.	Future Australian Climate Change Policies	16
9.	Access to International Units	17
10.	Conclusion.....	18

ATTACHMENTS

- Attachment 1. AIGN Climate Change Policy Principles
- Attachment 2. Australia's Major Trading Partners and Competitors
- Attachment 3. Centre for International Economics' Report



1. Introduction

The Australian Industry Greenhouse Network (“AIGN”) welcomes the opportunity to respond to the Taskforce examining Australia’s post-2020 emissions reduction target under the United Nations Framework Convention on Climate Change (“UNFCCC”).

AIGN notes below the three key areas the Taskforce will consider when reviewing Australia’s future reduction goals:

- What should Australia’s post-2020 target be and how should it be expressed?
- What would the impact of that target be on Australia?
- Which further policies complimentary to the Australian Government’s direct action approach should be considered to achieve Australia’s post-2020 target and why?

AIGN will primarily comment on issues around the setting of targets beyond 2020, with a focus on economic factors affecting the costs and benefits of reducing greenhouse gas emissions and the impact on the Australian economy. AIGN commissioned work by the Centre for International Economics (“CIE”) titled ‘Understanding emission reduction efforts – Approaches to assessing comparative effort’ and this report is provided at **Attachment 3**. It notes the Government’s advice that it does not intend to move beyond the current unconditional 5% emissions reduction target for 2020.

Further, AIGN welcomes the acknowledgement within the Issues Paper that Australia’s target must provide certainty to business and the Australian community to facilitate decision-making and investment. The stakes for AIGN members (who are the ‘engine room’ for many sectors of the Australian economy) on climate change are very high, and long-term policy stability and certainty is critical.

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. Australia’s future target must be based on comparable effort, not identical targets.

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.

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 Taskforce 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 Taskforce considers AIGN’s comments alongside any responses made to the Review 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.

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 referenced 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, those economies that are more vulnerable to the impacts of climate change.

AIGN has consistently advocated that 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. This we believe is consistent with the objective that *“the target will represent Australia’s fair share of the global effort needed to respond to global change”*².

² PMC Taskforce - Australia Post 2020 Target Issues Paper March 2015



3. Australia's Performance in Reducing Emissions

Australia's emissions in 2011 were around 1.3% of the estimated global total (including land use and forestry) and are declining as a percentage of global emissions, while total emissions from developing economies increase significantly.

Over the last two decades, Australia has become significantly less emissions-intensive and is on track to meet its target under the second commitment period of the Kyoto Protocol. However, it should be noted that some of this achievement is based on a fall in economic activity, particularly in the manufacturing sector, which is obviously not a desired outcome and contrary to the Government's intent of economic growth and increased investment.

Climateworks noted recently that, *"Since 1990, the overall emissions intensity of Australia's economy has almost halved and emissions per capita have decreased by approximately 25% over this period (ABS 2012, 2013a; DOE 2014)"*³.

Trading Nations Consulting commented, *"Australia has performed better than most other developed economies in constraining emissions growth since 1990. Its modest increase in total emissions of 2.4% from 1990 to 2012 compares favourably with Canada (+42%), Japan (+8.6%) and the United States (+2.7%) (page 6, Climate Policy and Australia's Resources Trade)...Taking into account emissions embodied in trade casts a still more positive light on Australia's emissions performance. If full account were to be made of the emissions embodied in trade by reporting consumption rather than production of emissions, the gap between Australia's level of reported emissions relative to the EU [European Union], the United States and Japan would narrow markedly"*⁴.

Australia's carbon productivity has improved considerably. 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.

³ *Pathways to Deep Decarbonisation*, Climateworks, 2015.

⁴ *Climate Policy and Australia's Resource Trade*, Trading Nation Consulting, March 2015.



4. International Efforts to Address Climate Change (The Paris Agreement)

Australia has been a significant contributor to the work of the United Nations Framework Convention on Climate Change (“UNFCCC”) since its formation in 1992, and AIGN acknowledges the importance of the Framework in providing a forum for the international community to formulate common actions to combat the effects of climate change.

AIGN welcomes progress on developing a new International Climate Agreement to be ‘signed’ at the Paris COP meeting in December 2015. The proposed Paris Agreement will establish a new agreement structure to replace the Kyoto Protocol, and will also determine the level of commitment by members to reduce their emissions post-2020.

Debate over the nature of the agreement has been at the forefront of recent annual COP meetings. The outcomes from the most recent COP 20 negotiations at Lima highlight that considerable further work is required before a far reaching and meaningful global agreement is concluded.

At both the Lima COP meeting and the more recent Geneva follow-up meeting (February 2015 – Advanced Durban Platform), continuing differences were apparent 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, which have dominated past COP meetings, will continue in the lead up to Paris. It is likely that any new agreement reached in December 2015 will be high level in nature, with the detail on the arrangements and key aspects to be completed in subsequent years. Discussions around the new agreement are also 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. Under the INDCs, the intent is for member countries to bring forward commitments to reduce their emissions post-2020 based on their national circumstances and levels of ambition.

As was noted by a number of speakers at the recent Australian National University’s 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. For example, it is understood that the Decision text, which will form the basis of the new international agreement, currently exceeds 80 pages in length with a significant number of alternative statements applying to the key sections of the proposed agreement, reflecting the different positions of participants.

As at the end of March 2015, the following countries had provided INDCs: European Union, Switzerland, Mexico, Norway and the United States. Expectations are that a considerable number of INDCs from developed economies will be lodged with the UNFCCC by mid-year.

The INDCs being brought forward highlight that no one likely policy approach will emerge; rather, a patchwork of different national and regional schemes. Whilst the European Union relies on an Emission Trading Scheme as its major approach to achieving its climate change objectives, the United States’ approach is heavily weighted in favour of regulatory intervention. Recent comments from within the European Union and the UNFCCC indicate some doubt as to the sum of INDCs that will be of sufficient magnitude to restrict temperature increases to 2° Celsius.



AIGN SUBMISSION TO PRIME MINISTER AND CABINET TASKFORCE REVIEW ON AUSTRALIA'S EMISSIONS REDUCTION TARGETS POST-2020

APRIL 2015

It is of concern that in the context of Australia announcing its post-2020 commitment mid-year, it does increasingly appear likely that the ability “to consider the comparable actions of others, including the major economies and Australia’s trading partners”⁵ will be constrained by the lack of details (via INDCs) of the proposed contributions of key economies such as Canada, Japan, the Middle East, China, India etc.

⁵ PMC Taskforce, *Australia Post 2020 Target - Issues Paper*, March 2015.



5. Australia's Commitment to Post-2020 Targets

5.1 Introduction

Australia's contributions to future global emissions reductions should take into account 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 impact each sector of an economy differently. It is vital, therefore, that any action taken by Australia be of comparable effort 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 (not simply our trading partners), as it is their approaches that will have implications for Australian industry.

To suggest Australia should adopt similar quantitative reductions as those embraced by other nations ignores the sometimes significant differences between countries, specifically in such areas as economic and population growth. The economic cost of reducing emissions should be no higher than that of our competitors in global markets, be they developed or developing nations.

5.2 Australia's Major Trading Competitors

Attachment 2 identifies Australia's major trading competitors for a range of key energy intensive sectors. It highlights the diversity of our competitors and that, 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 policy frameworks with the provision of specific arrangements for emission-intensive, trade-exposed ("EITE") industries.



Attachment 2 provides information on Australia's key trading competitors across selected industries, primarily on the basis of major producers and exporters⁶. The selected industries are: liquefied natural gas ("LNG"), 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.
- The United States 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, United States 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.

Of these 37 countries, only 27% (10 countries) have some form of a carbon price or climate change policy in place. The existence of a national policy is not the end of the story, as the design of the policy is significant for determining the cost that a facility bears, and other factors, such as coverage and the extent of exemptions, must be duly considered. Overall, only 12% of the world's population is presently covered by a form of carbon pricing mechanism⁷.

As the recent report titled 'Climate Policy and Australia's Resources Trade' noted, *"The number of emerging and developing economies supplying significant quantities of resources is increasing. From an Australian perspective this underscores the need for key emerging economies to make contributions to any global solution on climate change"*⁸.

5.3 Australia's National Circumstances

A key aspect of the process for developing a new post-2020 agreement will be the nature of the INDCs put forward by participants in which nations commit to emission reduction targets commensurate with their national circumstances. Obviously, circumstances vary considerably across the 194 participating members of the UNFCCC.

⁶ 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.

⁷ World Bank.

⁸ *Climate Policy and Australia's Resources Trade*, Trading Nation Consulting, March 2015, p6.



Australia has distinctive characteristics that differentiates it from most other advanced economies: rapid population growth, above average rate of economic growth, and the historical resources and emissions-intensive nature of the economy, reflecting Australia's natural resource base and past access to cheap sources of energy dominated by coal-fired generation. Additionally, agriculture has a large role in the economy, and Australia is sparsely populated, requiring long distance transport requirements.

As the recent Energy White Paper noted, minerals and energy exports account for over 50% of Australia's exports, compared with an OECD average of 11%. Amongst OECD economies, only Norway has a greater dependence on the export of minerals and fuels.

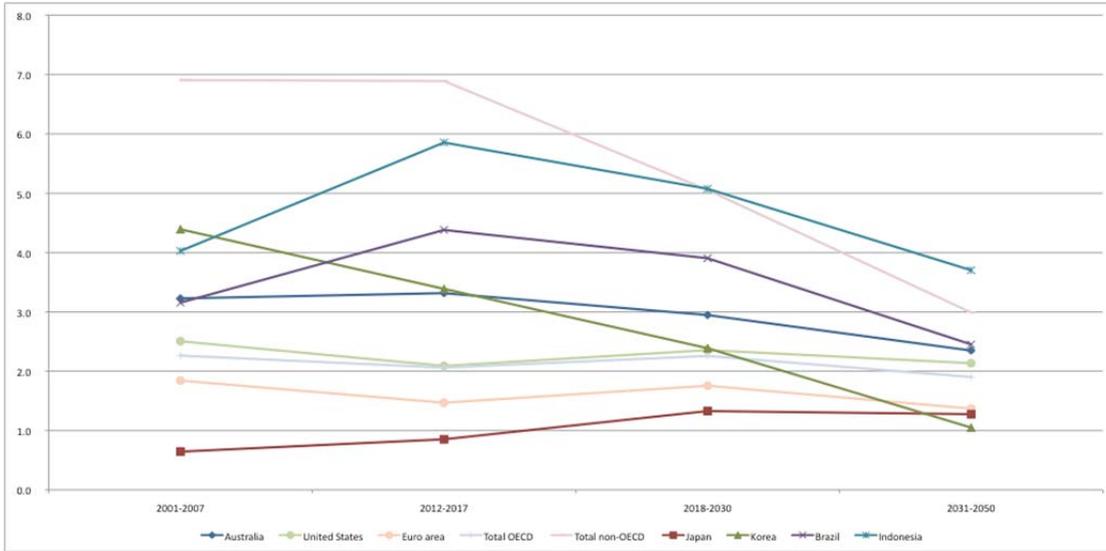
Table 1 below, highlights how Australia's average population growth is amongst the highest within developed economies.

Table 1. International Comparison of Australia's Demographic Indicators

	<i>POPULATION (millions) 2015</i>	<i>ANNUAL AVERAGE POPULATION GROWTH (percent) 2015 TO 2035</i>
Australia	23.9	1.1
Canada	35.9	0.8
China	1,401.6	0.2
France	65.0	0.4
Germany	82.6	-0.3
Greece	11.1	-0.1
Hungary	9.9	-0.3
India	1,282.4	0.9
Indonesia	255.7	0.9
Italy	61.1	0.0
Japan	61.1	-0.4
Netherlands	126.8	0.1
New Zealand	16.8	0.8
Poland	4.6	-0.2
Spain	38.2	0.1
Sweden	9.7	0.6
United Kingdom	63.8	0.5
United States	325.1	0.7
WORLD	7,324.8	0.9

Source: United Nations, Population Division, 2012 Revision.

Table 2. Long-term Economic Growth Projections



Source: International Monetary Fund.

6. Setting a Post-2020 Target

6.1 Metrics for Measurement

The most appropriate measure of the level of 'effort' is the cost of climate policies to reach the proposed target. Assessing the costs of a particular emission reduction target is complex. In assessing the actions of Australia's competitors and other countries, we need to be mindful of not using simplistic metrics such as *per capita* emissions that do not portray the true impact upon an economy. The differentiated abilities and responsibilities for tackling climate change cannot be boiled down to the one criteria of *per capita* emission. There is a range of other factors that are often unique to national circumstances and which must guide a nation's assessment of how much and how quickly its emissions can be reduced.

As the recent Deloitte Access Economics' report 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*"⁹.

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 being 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.

6.2 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.

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 has commissioned some further work in examining 'comparability of effort'. The report by the Centre for International Economics ("CIE") is provided at **Attachment 3**.

⁹ Deloitte Access Economics, *Emissions metrics: Australia's carbon footprint in the G20*, November 2014.

CIE's report highlights that no single metric is able to capture the full complexity of greenhouse gas mitigation programs. A good metric should be comprehensive, measurable, replicable and universal. Further, the report summarises the common metrics used to measure and compare mitigation effort, and concludes there is a trade-off between the complexity and relevance of mitigation effort metrics.

CIE notes that most comparisons of climate policies have looked at the top-line target, that is, a reduction in a particular year, relative to emission levels at some point in time. This type of comparison has the potential to be very misleading as it does not account for differences in emission profiles, economic structures or expected future emissions, as the following extract highlights. A minimum level of comparison between countries is to consider the emission target relative to expected business as usual emissions.

“Changing the base year for comparison can make a significant difference to a simple comparison of targets. For example, Table 1.2 [shown as Table 3, below] compares Australia’s 2020 emission target of a 5% reduction from 2000 levels with the US target of a 27% reduction from 2005 levels using several different metrics. Using a 2000 base year, the US target appears to be much greater than Australia’s, however, using the 2005 base year suggests a less significant difference between the targets. Using alternative metrics – emissions per person or emissions intensity – indicate Australia’s target is more stringent.”¹⁰

Table 3. Simple Comparison of 2020 Emission Targets

	AUSTRALIA (% reduction)	UNITED STATES (% reduction)
1990	6	4
2000	5	19
2005	13	17
2010	8	13
<i>Per capita</i> (2005)	32	27
Emission intensity (2005)	45	36

Source: Figures sourced from Climate Change Authority, Comparing Countries’ Emissions Targets: A practical guide, March 2015.

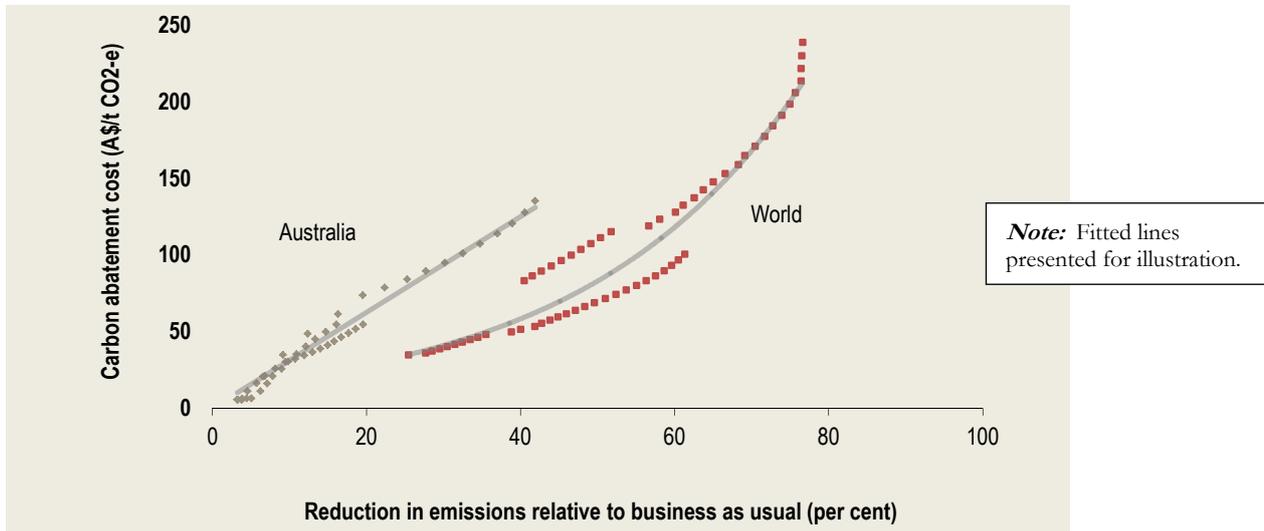
CIE considered a good metric should be able to characterise the entire policy framework for reducing greenhouse gas emissions and should be applicable to all countries. The CIE report examines in detail the advantages and disadvantages of a number of alternate metrics, such as emissions compared to historical base year, emission intensity, emissions relative to business as usual, carbon or energy prices, and economic cost.

Understanding how a country plans to meet its target has two major implications. Firstly, it highlights whether meeting the target is feasible and, secondly, how the emissions reductions that are achieved (in both Australia and other countries) has implications for the impact on Australia’s trade-exposed sectors.

Table 4 (overleaf) shows the relationship between the amount of abatement (in terms of the reduction in emission relative to business as usual) and the cost per unit of abatement (in \$/t CO₂-e). This is the marginal abatement cost curve implied by a number of simulations presented in Commonwealth Treasury modelling. The difference between the Australian and world abatement cost curves clearly shows, when expressed on a common basis and over the range covered, that the Australian cost of abatement is higher than the world cost of abatement.

¹⁰ Centre for International Economics, *Understanding emission reduction efforts*, April 2015.

Table 4. Emissions Reduction Cost Curves



Data source: CIE derivation from Commonwealth of Australia 2013 Climate Change Mitigation Scenarios charts 2.4, 2.6, 3.1 and 3.6.

The Deloitte Access Economics' study also 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.

These various reports highlight that the 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 this can be measured, 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.

7. What Other Countries are Doing

As highlighted, a key consideration in determining Australia's post-2020 target is the "*comparable action of others*"¹¹. Only seven countries (groups of countries) had provided their INDCs by the end of March 2015, which makes it hard to determine comparable levels of effort.

In the absence of this detail, AIGN considers there is value in examining the true comparison of climate change policies between countries. Such comparisons require 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, extending 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 resource flows) from carbon-based production to non-carbon-based production, ie. the effort required to decarbonise the economy. In particular, the crucial issue is to understand whether these flows are consistent with 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 talk of action, but have not yet established the policy parameters that will support such action, and which allow judgements to be made on their impacts and commitments.

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 in late 2014 and, more recently, announcements by such nations as Norway and Mexico. Recognising that 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. China has spoken of peaking emissions by 2030 (or earlier) and of promoting the use of renewables, but has not yet announced a specific target.

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.

¹¹ Minister for Foreign Affairs & Trade, The Hon Julie Bishop, at the UN Leaders Climate Change Summit, 23 September 2014.



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 Emissions Trading Schemes (“ETSs”) 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 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 European Union, partly due to the difficulties inherent in measuring and managing carbon cycles in soils and vegetation. The European Union 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 common globally 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 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. Australia is in a good position on this issue given the high level of transparency in Government and corporate reporting, and the history of schemes such as Greenhouse Challenge and the National Greenhouse & Energy Reporting System. It cannot be assumed that other countries are in the same position.

It should also be noted that a considerable number of emerging countries with a range of competing 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 (eg. aluminium), but also a number of our Asian competitors, including Malaysia and Thailand.

The variability in policy approaches highlights the importance of understanding how targets will be implemented and the likely impacts across the economy, particularly for those industries that are trade-exposed, so as to avoid unintended loss of competitiveness.

8. Future Australian Climate Change Policies

In noting the parameters discussed previously in this submission as to how Australia should set its target, ultimately the challenge is how Australia will meet that target. Australia's emission reduction target should be set with a clear understanding of the implications of the target for the Australian economy and industries.

Climate change policy has been an area of considerable change and uncertainty over past decade and, as highlighted by current debate over the Renewable Energy Target, this can have the effect of inhibiting industry investment, particularly for long-lived investments. Therefore, in considering new policies that encourage least-cost abatement and maintain international competitiveness, it will be critical that they are framed with the following overarching objectives:

- Provide policy predictability and stability.
- Long-term in approach.
- Developed in a consultative manner.

Proposed policies to achieve the target should then be assessed against the criteria outlined in AIGN's principles (refer **Attachment 1**).

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 those 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.

Finally, the taskforce has the opportunity to recommend a national climate change policy framework that will address jurisdictional responsibility across all levels of Government, and to set criteria by which climate change policy should be considered. Removal of many existing, and avoidance of new, emissions abatement policies, programs and regulations, will be essential if economic costs are to be minimised. AIGN's submission to the Garnaut Climate Change Review noted that, "*potentially all of the efficiency, effectiveness and equity benefits of a national climate change framework can easily be dissipated by other Federal and State policies, programs and regulations*"¹².

¹² AIGN Response to Garnaut Climate Change Review 2011.



9. Access to International Units

Allowing access to international permits is consistent with AIGN's principle of least-cost abatement.

AIGN does not support quarantining domestic abatement efforts from global action, as this could have the effect of increasing the cost of abatement.

We support the Climate Change 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.



10. Conclusion

Thank you for the opportunity to provide input into this process. AIGN is committed to engaging constructively with the Taskforce in this review by providing feedback to assist in understanding the ways 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



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 capability, to global action to reduce greenhouse gas emissions and to adapt to impacts of climate change.

Further, 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 those 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 coordinated 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 & 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 industries.

This attachment provides information on Australia's key trading competitors across selected industries, primarily on the basis of major producers and exporters¹³. 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.
- The United States 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, United States and Russia.
- In the steel sector, China is the largest steel producer, manufacturing almost half of 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.

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.

¹³ 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.



Table 1: Australia's Key Bilateral Trade Partners

<i>COUNTRY</i>	<i>IMPORTS (\$bn)</i>	<i>EXPORTS (\$bn)</i>	<i>TOTAL (\$bn)</i>
China	46.3	78.7	125.0
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 & Trade, Trade at a Glance 2013.

Table 2: Global LNG Exporters in 2013

<i>COUNTRY</i>	<i>SHARE OF EXPORTS</i>
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 & Exploration Association.



Table 3: Australian LNG Export Destinations in 2013

<i>TRADING PARTNER</i>	<i>SHARE OF AUSTRALIAN EXPORTS</i>
Japan	81%
China	16%
Korea	3%
Taiwan	0.3%

Source: Australian Petroleum Production & Exploration Association.

Table 4: Coal Production by Country in 2013

<i>COUNTRY</i>	<i>SHARE OF PRODUCTION</i>
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

<i>COUNTRY</i>	<i>SHARE OF MAJOR EXPORTS OF MAJOR EXPORTERS</i>
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

<i>COUNTRY</i>	<i>SHARE OF PRODUCTION</i>
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

<i>COUNTRY</i>	<i>SHARE OF PRODUCTION</i>
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

<i>COUNTRY</i>	<i>SHARE OF GLOBAL PRODUCTION</i>
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

<i>COUNTRY OF EXPORT</i>	<i>SHARE OF TOTAL IMPORTS</i>
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 by Country 2013

<i>COUNTRY</i>	<i>EXPORTS (Mt)</i>
Australia	579
Brazil	330
South Africa	48
Canada	36
India	9

Source: Minerals Council of Australia.

Table 11: Global Exporters of Sugar

<i>COUNTRY</i>	<i>SHARE OF EXPORTS</i>
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

<i>COUNTRY</i>	<i>SHARE OF GLOBAL EXPORTS</i>
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.



**Attachment 3.
Centre for International Economics' Report**