Investor Group on Climate Change

Investor Group on Climate Change (IGCC)

SUBMISSION TO 2017 CLIMATE CHANGE POLICY REVIEW

Discussion Paper: Review of climate change policies

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EXECUTIVE SUMMARY

Investors are seeking an integrated climate change policy framework where the key elements are grounded in broad-based bipartisan support and able to deliver a level of investment stability.

IGCC supports robust, investment-grade policies to reduce emissions. Investors are looking for policy which delivers clear and transparent market signals which support investment confidence.

IGCC supports an approach to setting a 2050 emission reduction goal of net zero emissions, consistent with the objectives of the Paris Agreement and built upon a science based approach to target setting.

Australia needs a comprehensive long term plan which set out a pathway to 2050, supported by a clear and transparent policy framework built on clear industry sector contribution, coupled with intermittent milestones reviewed regularly.

IGCC has long supported an integrated approach to energy and carbon policy. Investors strongly support the development of A National Electricity Blueprint, setting out long term objectives and a pathway for transition in the energy sector. A new National Electricity Blueprint must have as a core objective addressing investment considerations and facilitating efficient investment into Australia's energy sector.

IGCC supports a price on carbon. This has been our historical position, and remains our preferred policy response. IGCC members have long supported putting a price on emissions as the most effective and efficient way to provide a long-term, transparent and certain regulatory framework to address carbon risks in investment portfolios.

Australia's national climate change framework will need to accommodate anticipated changes in export demand for key energy commodities and ensure that impacted communities receive appropriate levels of certainty and support through the transitional process.

IGCC believes that a clear investment mandate and stable, long-term funding support for the operation of both the CEFC and ARENA are critical for building investor confidence in the transparency, certainty and longevity of the low carbon financing framework in Australia.

IGCC notes that a full and complete assessment of the infrastructure at risk to the effects of climate change should also be a key consideration for Australia's climate change policy framework.

Overall, better collaboration between industry, investors and financial policymakers on long term carbon risk management will increase Australia's carbon competitiveness and resilience to the economic impacts of climate change.

1. Introduction and overview

The Investor Group on Climate Change (IGCC) represents Australian and New Zealand institutional investors with over $1 trillion of funds under management, along with members of the investment community focused on the impacts of climate and energy issues.

IGCC members are invested across the Australian economy and are part owners of most of Australia's large companies. As managers of retirement savings and pooled investments we are concerned with the evident and increasing impacts of climate change on the global and Australian economies and the flow through impacts for investment returns.

It is increasingly apparent that there is a global transition underway, aimed at reducing the emissions intensity of economic activity in order to stabilize global warming at less than two degrees Celsius below pre-industrial levels, and move towards a net zero emissions economy by the second half of the century[i]. These are the goals set out in the Paris Agreement and ratified by Australia.

Australia has a carbon intensive economy which is exposed to the regulatory, physical and market risks of climate change. Over a decade of political volatility around Australia's response to climate change has already inhibited investment and driven up operating costs for business.

Investors are seeking an integrated climate change policy framework where the key elements are grounded in broad-based bipartisan support and able to deliver a level of investment stability.

Australia's policy response to climate change needs to be managing for the economic and investment implications of the global response to climate change, and set out a practical pathway for ensuring Australia's economic competitiveness in a carbon constrained global operating environment over the longer term.

In responding to the questions set out in the climate change review discussion paper, IGCC has sought to provide an investor perspective on key areas of a policy framework required to reasonably achieve Australia's existing 2030 emission reduction targets, as well as the longer term objectives of the Paris Agreement. Comment is provided in the context of global trends impacting all markets where institutional investors are active in managing climate change considerations.

This submission also draws upon IGCC's 'Seven Policy Priorities for Investors: A policy framework for an efficient transition to a sustainable low carbon economy' released in June 2016 and attached in summary at Appendix A.

Engagement in the public policy discussion on the most appropriate policy framework for Australia is a key way in which investors can positively support the development of an economically efficient and environmentally effective policy response for Australia.

IGCC welcomes the opportunity to contribute to the 2017 Climate Change Policy Review.

2. Principles and priorities for investors

In recent years, a significant shift has been occurring in how business and the financial community views climate change and the need to reduce greenhouse gas emissions. Specifically, carbon has moved from being seen solely an environmental issue to being understood more as an economic risk. Whether physical, regulatory, market-driven or technological, climate change has financial implications for business and for investors.

In reviewing the efficacy of our national climate change policy framework, Australia needs to be managing carbon risk as an economic and a financial risk and working to facilitate an economically efficient transition to a net zero emissions economy in line with global commitments under the Paris Agreement.

Continuing to build expertise, skills and capacity to manage climate change related financial risks and opportunities will underpin Australia's future economic profitability in a net zero emissions global economy. The need to integrate climate science scenarios into policy decisions is critical to future-proofing our economy. Removing or addressing policy factors which are currently contributing to substantive investment uncertainty must be a core principle in the 2017 climate change policy review process.

At the same time, a robust and stable policy framework will drive greater levels of investment into low carbon solutions and will help smooth the economic risks associated with structural decarbonisation of the Australian economy.

The impact on investment flows should be a key consideration for policy decisions.

2.1. UNDERSTANDING THE FINANCIAL AND INVESTMENT IMPLICATIONS OF CLIMATE CHANGE

The IGCC has been addressing and considering the issue of climate change as a financial consideration for over a decade. In the past 18 months, we have also seen a deepening in recognition across the broader business community of the financial and investment implications of climate change.

The Financial Stability Board's Task Force on Climate-related Financial Disclosure (TCFD) released their draft recommendations in December 2016. Launched in December 2015, the work of the Taskforce has – and will continue to be – hugely influential in driving strategic integration and harmonised corporate disclosure of climate change risks and opportunities.

The legal opinion of NSW barristers Mr Noel Hutley SC and Mr Sebastian Hartford-Davis jointly released by The Centre for Policy Development and the Future Business Council in November 2016[ii]. The legal opinion sets out why directors should consider climate risks as part of the duty of care and diligence they owe to the company under Australian Corporations law. Where directors consider climate risks to be material, there are obligations to disclose those risks and how the company intends to manage those risks under ASX Listing Rules.

A speech by Geoff Summerhayes, Executive Board Member of the Australian Prudential Regulation Authority (APRA) on 17 February 2017, clearly articulated that regulators expect businesses to engage in sophisticated scenario based climate analysis describing how climate risk might impact business operations and strategies for managing material impacts. Already, this message is resonating across corporate Australia[iii].

All three developments demonstrate the increasing recognition that Australian business has an obligation to identify and manage material climate change impacts for their business and disclose material risks and impacts to the market.

Australia's climate change policy framework must support and enable Australian business to effectively manage these obligations and respond to the emerging financial risks and opportunities which climate change represents.

About the Task Force on Climate-related Financial Disclosures (TCFD)

In December 2015, as policy talks at COP 21 were moving towards finalisation of the Paris Agreement, a major new initiative was launched under the oversight of the G20 with the potential to profoundly reshape corporate disclosure on climate change – the Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD).

Chaired by Michael Bloomberg, the 31 members of the TCFD include capital providers, corporate reporters and business, accounting firms and rating agencies. The intent of the TCFD is to undertake an assessment of the current state of climate-related risk disclosures and to design a set of voluntary recommendations to help shape best practice for disclosure. These will apply to investors, as well as corporate reporters.

Following a lengthy and wide ranging consultative process across all major markets and jurisdictions, in late 2016 the Taskforce released their draft Recommendations, setting out a framework for disclosure within financial reporting. The Task Force has structured its recommendations around four key areas of disclosure: governance, strategy, risk management, and metrics and targets. This is supported by additional guidance for all sectors, as well as supplementary guidance for non-financial sectors (energy, transport, buildings and materials, agriculture, food and forest products) and financial sectors (banks, insurers, asset owners, asset managers.

In addition, one of the TCFD's key recommendations relates to reporting the potential impacts of climate-related risks and opportunities on an organisation's businesses, strategies, and financial planning under different potential future states (scenarios), including a 2° Celsius scenario. While there is clearly more work to be done on developing a robust approach to scenario analysis, the strong emphasis on scenario analysis is influential for investors as both reporters and report users.

With the finalisation of the TCFD recommendations in mid-2017, a number of organisations will be developing more prescriptive guides to reporting against the recommended TCFD framework and, in some cases, looking at avenues for integrating the recommendations into new or existing mandatory financial disclosure requirements, including for investors[iv].

www.fsb-tcfd.org

3. Response to the review of climate change policies discussion paper

Australian institutional investors are seeing the policy response in both developed and developing countries change the fundamentals of their investments globally, and are acutely aware that Australia will need to strengthen our response to climate change. The policy settings which Australia establishes today, will determine whether the process of decarbonisation required to meet the Paris goals will be smooth and efficient or abrupt and disruptive. There are also significant implications for investment flows and Australia's future economic competitiveness.

3.1. AUSTRALIA'S PARIS TARGET

Investors are looking for policy which delivers clear and transparent market signals which support investment confidence. Where those policy settings are credible, capital will flow. IGCC welcomed the decision by the Australian Government to ratify the Paris Agreement in late 2016[v].

The Paris Agreement on climate change delivers an unambiguous market signal to investors, that the global transition to a net zero emissions economy is underway and will accelerate. It does this in three key ways:

1. The Paris Agreement covers over 190 nations, includes all the major emitters and both developed and developing nations.
2. It includes clear goals against which progress can be tracked, including the aim of limiting global warming to less than 2°C and the ambition of a net zero emissions economy by the second half of the century.
3. It establishes a realistic process and pathway for ongoing decarbonisation, which builds upon the nationally determined contributions of each country and works within a process of ever increasing ambition through the review and ratchet mechanism.

This combination of coverage, quantifiable goals and a practical process for change delivers financial markets the policy structure they need to invest. It is now vital that ratifying parties move to implement the national policy frameworks required to achieve the goals set out in the Agreement, and set medium to long term targets to support the goal of limiting global warming to less than 2C.

IGCC members believe that Australia has a responsibility to fairly share the burden of acting on climate change given its historic and currently high emissions per capita and the fact that it is a wealthy nation with strong economic and population growth forecast. Australia's post 2020 emissions reduction target and policy response must be consistent with the international commitments set out in the Paris Agreement, including the commitment to scale up over time.

IGCC has consistently supported the recommendations of the Climate Change Authority (CCA)[vi] that Australia's emission reduction targets be underpinned by science and aligned to the goals of the Paris Agreement to limit global warming to less than 2°C.

The goal of limiting global warming to less than 2°C was also supported by the Australian Climate Roundtable, a collaboration of diverse organisations reflecting business groups, unions, institutional investors, environment groups, research organisations and social policy organisations[vii].

IGCC supports an approach to setting a 2050 emission reduction goal of net zero emissions, consistent with the objectives of the Paris Agreement and built upon a science based approach to target setting. This will require an integrated approach to national climate change policy framework which strategically targets the largest source of emissions in Australia and which aims to grow the supply of offsets or negative emissions to achieve a net national position.

We note that a number of other countries, in thinking through their approach to 2050 targets, have also adopted approaches which aim to calculate the contribution key sectoral emissions make and align targets for 2030 with the longer term goal of net neutrality by 2050.

The German Climate Action Plan 2050 identifies major emissions sources and sets out nominated areas of action for energy, the built environment, industry, transport, agriculture and land use and forestry. This includes a guiding vision for 2050 coupled with specific 2030 targets for these sectors[viii]. The Climate Action Plan 2050 will be regularly reviewed and updated to accommodate progress achieved, technology change, economic implications and scientific developments. The first program will be submitted in 2018 and progress will be reported annually.

In New Zealand, a cross-party alliance of 35 members from all parties within the New Zealand Parliament recently commissioned Vivid Economics to undertake analysis on the economic and policy implications of a defined range of scenarios on future emission reduction pathways in New Zealand, targeting key contributing industry sectors (agriculture and forestry). The report provides a range of recommendations for the New Zealand Government, based on the scenario analysis undertaken on policy options to support implementation of the Paris Agreement[ix].

This broad approach - which aligns 2050 objectives to national commitments under Paris, building upon a clear and transparent approach to sectoral contribution and coupled with intermittent milestones and targets reviewed regularly - would be an effective framework for managing Australia's decarbonisation trajectory and for setting a 2050 pathway[x].

Essentially, Australia needs a comprehensive long term plan, supported by an integrated policy framework, for delivering on the goals of the Paris Agreement and consistent with UNFCCC reporting guidelines[xi].

Long term, transparent and predictable policy design can enable deep emissions reductions, a steady economic transition and encourage investment to take advantage of new opportunities for the Australian economy. With such a policy framework, investors will make long term, low carbon investment allocations. Delaying the resolution of a long-term policy framework is already leading to underinvestment in energy and emissions intensive industry, limiting Australia's options for economic growth and income in future.

It should be noted that if Australia and other countries chose to adopt shallow emission reduction targets in the short to medium term, either much more aggressive cuts will be required in the period 2030 to 2040 or global warming will clearly not be held below 2°C. For investors, this has implications for transition risk assessment in the immediate term and for physical risk assessment for assets and portfolios which must be factored into investment decision making.

2.1.1 Aligning investment with the Paris Agreement

The signing and entry into force of the Paris Agreement, as well as the supporting Nationally Determined Contributions (NDCs), is acting as a major market signal to investors and to the private sector more broadly. Increasingly, a number of '2°C aligned' or 'net zero emissions' products, portfolio strategies, corporate engagement and investor-led shareholder resolutions focused on 2°C scenario analysis are emerging.

Investors are also collaborating in unprecedented numbers to call on governments to maintain their commitment to and fully implement the goals of the Paris Agreement in national policy frameworks and support long-term emission reduction pathways. IGCC was recently one of six global investor

organisations coordinating a joint statement signed by 232 investors representing US$15.7 trillion in assets under management.

Released on May 8, 2017, the statement calls on global leaders to:

- Reiterate their support for and commitment to implement the Paris Agreement, including the delivery of their own Nationally Determined Contributions in full.
- Bring forward focused and targeted long-term climate and energy plans that will ensure their future actions align with commitments under the pact to keep global average temperature rise to well below 2°C above pre-industrial levels and preferably to 1.5 °C.
- Drive investment into the low carbon transition through aligning climate-related policies, phasing out fossil fuel subsidies and introducing carbon pricing where appropriate.
- Implement climate-related financial reporting frameworks, including supporting the Financial Stability Board Task Force on Climate-related Financial Disclosures' recommendations.

Further, the investor statement notes that "the implementation of effective climate policy mechanisms and the regular monitoring of outcomes is vital for investors to make well-informed investment decisions that can also better support governments in delivering their national commitments and priorities". The letter is supported by a detailed Briefing Paper setting out the key issues and considerations for investors.[xii]

3.2. ELECTRICITY GENERATION

Managing the decarbonisation of the electricity sector is critical to achieving Australia's emissions reduction goals. As the largest source of national greenhouse gas emissions, the electricity sector is both significantly impacted by the transition risks associated with Australia's direct response to climate change, and by the broader global market forces driving technological and consumer changes arising from the international response to climate change. In Australia and globally, energy and climate change policy are now inherently interconnected and must be treated as such.

Investors have a unique perspective on many of the issues playing out in the energy debate. Investors are exposed to the financial risks associated with short term policy decisions, and look to the longer term market signals for guidance on capital allocation. All of which have cost implications for investment across the sector when the policy response is fragmented, incomplete or sending contradictory signals to the market.

IGCC has long supported an integrated approach to energy and carbon policy and provided a detailed submission to the Independent Review into the Future Security of the National Electricity Market, led by Dr Alan Finkel AO (the Finkel Review)[xiii].

Investors strongly support the development of A National Electricity Blueprint, setting out long term objectives and a pathway for transition in the energy sector. A new National Electricity Blueprint must have as a core objective addressing investment considerations and facilitating efficient investment into Australia's energy sector.

A robust and stable policy framework will drive greater levels of investment into low carbon solutions and will help smooth the economic risks associated with structural decarbonisation of the Australian economy.

Unlocking investment is key to addressing concerns around security and reliability, affordability and reducing emissions. Currently, policy and regulatory factors driving significant investment uncertainty

are the key barrier for investment in the electricity sector, across all energy sources and technology types.

Key elements of a policy framework to support greater investment confidence can be summarised as follows:

1. A national blueprint for managing transition in the electricity sector which has broad based stakeholder endorsement and is likely to remain in operation for the medium term.
2. Explicit recognition of Australia's emission reduction targets in line with the stated ambition of the Paris Agreement to move to net zero emissions.
3. A price on carbon for the sector.
4. A technology neutral approach, where all aspects of technology performance and impact are properly taken into account in energy planning.
5. Recognition of the implications for energy infrastructure of the changing technology mix, and appropriate planning for managing the transition of the electricity sector by valuing storage or generation capacity availability.
6. Recognition of the changing physical impacts of climate change itself, and the need to incorporate adaptation requirements in long term planning for the electricity sector.

Overall, better collaboration between industry, investors, the community and government on energy sector management will increase Australia's competitiveness and resilience to the economic impacts of climate change.

Strong endorsement and buy-in across a broad range of energy industry, policy and community stakeholders will be critical for ensuring that the Blueprint addresses investor concerns about policy uncertainty. Without significant cross-party political support, as well as the right balance between industry and community endorsement, investors will continue to avoid investment decisions and price in uncertainties over the immediate term.

IGCC notes that an incremental approach to market reform with frequent regulatory interventions is unlikely to deliver certainty. A clear sense of agreed direction, a flexible approach for delivery subject to dynamic variables coupled with a signposted reform pathway is the preferred approach.

This also means that the electricity policy response must realistically address concerns over reliability and security of supply and emission reduction imperatives, without preferencing one technology solution at the expense of others in a manner which does not ring true with broader global investment trends or economic fundamentals.

Traditionally the debate around reducing emissions in the electricity sector has been characterized in a very binary debate of coal versus renewables. However, it is important to acknowledge that there are a range of activities will which need to occur across the sector to achieve substantive and sustained emission reductions over time. These range from generation to transmission and storage solutions, as well as demand management and changed behavioral patterns associated with pricing, to ensure return on investment.

The patchwork of policies aimed at achieving emission reductions in the electricity sector have been designed and implemented without reference to how they operate alongside or in an integrated manner with other policies, at either the state or the federal level. This has resulted in perverse outcomes, system instability concerns, inefficient pricing and heightened investment uncertainty, without delivering emission reductions.

Timeframes are also a key factor to both sectoral planning and decision-making over viable return periods for energy assets. While technology solutions (such as battery storage or pumped hydro) will likely be significant in addressing intermittency concerns, in the interim, gas will continue to have a role to play in ensuring stability of supply at times of high demand. This does not necessarily constitute a big increase in new generation capacity, but rather a rethink about valuing availability to meet demand at the right time. Getting the right solution and role for gas along the transition pathway will be an important factor to address in the Blueprint.

IGCC notes that it will be important to avoid replacing one set of incumbents with another, as the sector transitions away from highly carbon intensive energy generation sources. Less carbon intensive assets such as gas fired generation may still have a role to play in delivering an efficient transition across the sector, but ultimately remain more carbon intensive than is considered to be compatible with a net zero emissions economy in the long run.

The energy policy response should appropriately recognise implications for energy infrastructure of the changing technology mix, and required planning for managing the transition of the electricity sector. Given the intermittency of renewables, an incentive approach for valuing energy storage or generation capacity availability should be explored.

There may also be a role for greater planning of transmission infrastructure to facilitate the connection of renewables in areas currently not well served by existing transmission networks. The challenge remains, how to provide appropriate incentives to address high upfront capital costs, when the asset may only be increasingly utilised over time as more renewables are developed.

The need to address economic competitiveness implications should be incorporated into policy design, not seen as the basis for implementing a shallow or unambitious policy response. Failure to adequately position Australian business for the global low carbon economy of the future by being over-protectionist is just as likely to result in diminished economic competitiveness for Australian business as an excessively onerous policy response. This is a question of policy balance and transitional pathways which incorporate a full and frank acknowledgement of the direction and pace of decarbonisation in the future, rather than being based on the economic trajectory of the past.

It is also important to acknowledge that many of the supply / demand variables which form the basis of investment decision making in the electricity sector will increasingly be influenced by changing physical risk factors, arising as a result of climate change itself. The record-breaking heat wave conditions experienced over the 2016-17 summer, along with the projected increasing frequency of extreme weather conditions mean that Australia's National Electricity Blueprint must also take account the climate conditions influencing supply, transition and demand in the longer term. The blueprint, must have capacity to adapt to the effects of a 2°C temperature increase as well as respond to the drive to decarbonize to limit global warming to 2°C.

3.2.1. Recognising the need for a price on carbon

Policy frameworks which support the kind of structural transformation implied by the need to address climate change have historically worked best in Australia when they are founded in the principles of economic efficiency and are market based.

Market based responses allow business and the market to respond flexibly and effectively. They support greater innovation and competitiveness. They promote the efficient allocation of capital and investment and generate longer term prosperity. Policy responses which are short term, fixed and finite, or which have involved direct intervention in the market by Government, have usually proven to be less effective in supporting longer term structural change.

While politically unpopular, it remains the case that investors and the wider financial community (along with many sections of the business community) would prefer to see a carbon price introduced as a key policy response to managing investor uncertainty in the economy. Clear policy signals and frameworks deliver greater investment certainty, allowing the market to move ahead of fixed policy processes and ultimately smooth the path and reduce the cost of transition.

Without a carbon price to drive private sector demand, the Carbon Farming Initiative will continue to rely upon government funding provided through the Emissions Reduction Fund (ERF) as the primary source of future contracting. We note that the 2017 Federal Budget did not provide any further funding for the ERF, and would support greater clarity on future funding arrangements to provide contracting certainty to project devlopers.

Australian carbon project developers have shown that the will and the capacity is there to substantially grow supply of emission offsets and Australian Carbon Credit Units (ACCUs) when viable offtake contracts are available. This will be a critical source of domestic abatement to help achieve the longer term goal of net zero emissions as set out under the Paris Agreement. Developing private sector demand through a carbon price impost will deliver additional financial investment into the Carbon Farming Initiative and reduce the total cost for Government of achieving Australia's national emission reduction targets.

Similarly, continuing to engage in international negotiations around Article 6 of the Paris Agreement to develop international carbon market mechanisms is critical to reducing the total cost for business and for the Australian government of achieving emissions reductions. Access to international units must also be a key part of the Australian climate change policy framework.

As investors, IGCC remains supportive of the need for a market based carbon pricing solution. This has been our historical position, and remains our preferred policy response. The IGCC supports robust, investment-grade policies to reduce emissions. IGCC members have long supported putting a price on emissions as the most effective and efficient way to provide a long-term, transparent and certain regulatory framework to address carbon risks in investment portfolios. Impacts on pricing for households (and wholesale price markets) can be explicitly addressed via scheme selection and market design.

3.3. THE BUILT ENVIRONEMNT

As has been identified in the climate change policy review discussion paper, the Australian property sector – and property investors – are global leaders in pursuing low carbon, environmentally sustainable property.

Buildings consume around 40% of the world's energy and contribute up to 30% of its annual emissions, while global real estate assets are valued at around US$50 trillion. Therefore, the built environment has a vital role to play in curbing emissions in line with the goals set out in the Paris Agreement.

In decarbonising their own investment portfolios, investors are actively pursuing low carbon investment opportunities. Property is a significant low carbon investment opportunity. This can be evidenced by the role that buildings have played across a number of 'Green bonds' issued to date. In 2016, Buildings and Industry represented 18% of the total global use of proceeds for Green Bonds[xiv].

There have a been a number of recent reports which have demonstrated the ways in which energy efficiency and emission reductions can be achieved across the Australian property sector, with implications for the 2017 Climate Change Policy Review.

IGCC supports the broad policy measures set out in the report 'Low Carbon High Performance', published by the Australian Sustainable Built Environment Council (ASBEC) in 2016 and authored by ClimateWorks. This establishes a clear roadmap with 32 recommendations to realize the emissions reduction potential of the built environment[xv].

In May 2016, IGCC joined five of the world's largest investor networks, along with RICS supported by the Global Alliance for Building and Construction, to publish a concise, actionable framework for Real Estate investors to accelerate the integration of climate risks and opportunities into investment decisions. 'Sustainable Real Estate Investment - Implementing the Paris Climate Agreement: An Action Framework' sets out a range of measures to improve returns or better protect the future value of real estate investments through application of an ESG and climate change management approach[xvi].

Promoting investment into energy efficiency and energy productivity has also been recognised at the G20. IGCC notes that in early May, the G20 Energy Efficiency Finance Task Group (EEFTG) published the G20 Energy Efficiency Investment Toolkit[xvii]. The Toolkit provides a detailed assessment of the current state of investment into energy efficiency across G20 nations and provides recommendations for policy makers, structures and successful case studies of increasing investment into energy efficiency and energy productivity.

3.4. Adaptation and the built environment

IGCC notes that a full and complete assessment of the infrastructure at risk to the effects of climate change should also be a key consideration for climate change policy frameworks.

In April 2017, IGCC published a new report 'Risk to Return: Investing in Climate Change Adaptation'[xviii]. Developed through a multi-stakeholder climate adaptation finance consultation process, it aims to identify real world investment barriers and recommend potential solutions, with the goal of enabling the finance sector to access adaptation investment opportunities. It also sets out a pathway forward with specific recommendations.

Of note, IGCC has identified specifically that Australia needs an up to date national assessment of infrastructure at risk to the effects of climate change and an indicative quantification of the investment required into adaptation. Further, all levels of government should collaborate in the establishment of an expert advisory group to work with the finance sector on promoting private sector adaptation investment across Australia.

The report builds on IGCC's 2015 publication, 'Investing through an adaptation lens – A practical guide for investors', which described the risks, opportunities and associated interdependencies related to climate change that investors need to consider in order to adapt. The guide addressed these issues for investment in three sectors: direct property investments, direct infrastructure investments and listed equities.

3.5. RESOURCES, MANUFACTORING AND WASTE

Climate change policies implemented by trade partners and in key export markets will also impact Australia's economic competitiveness. As key export markets set their own decarbonisation pathways incorporating carbon and energy reduction targets, this will flow through to energy exports in particular, with implications for investors.

Governments need to adopt a policy approach which looks at all of the issues playing out across the energy sector and the major structural transformation currently underway in a coherent and strategic manner to achieve the best outcomes for investors, business and the community.

A number of coal fired generators have closed in Australia this decade, with the expectation of more to follow. Aging of the electricity generation fleet and increased competition from alternative energy sources combined with potential policy changes related to emissions pricing, will have implications for generation.

The interaction between price, market pressure, climate policy and plant age will have important roles in determining when a coal-fired generator will close. Other considerations, including the evolution of the regulatory environment, continuing uncertainty over the post 2030 future of the Renewable Energy Target (RET), Government intervention in gas markets and continuing material cost reductions in renewable electricity generation and in electricity storage costs will also influence decommissioning decisions.

There are also considerable decommissioning costs after shutting down the plant, including dismantlement of buildings and equipment and site remediation and restoration in accordance to environmental and safety regulations.

Yet while the exact timeline for specific plant closure remains unpredictable, it will increasingly need to be planned for. Due to the inherent uncertainty of actual closure dates, planning needs to be flexible and broadly applicable, and take into account the circumstances of the communities most affected. Without strategic planning, the transition will likely be more expensive and more disruptive to impacted communities.

In addition, the implementation of decarbonisation trajectories in key export markets could create longer term challenges for thermal coal mining and associated logistics with flow through implications for the future economic development of impacted regions. Government, industry, civil society, and investors will all have a role to play in determining how this transition plays out.

Australia's national climate change framework will need to accommodate anticipated changes in export demand for key energy commodities and ensure that impacted communities receive appropriate levels of certainty and support through the transitional process. IGCC supports the concept of the Just Transition, as expressed in the Paris Agreement, and believes that there is a role for government to support impacted communities.

3.6. RESEARCH, DEVELOPMENT, INNOVATION AND TECHNOLOGY

In order to meet our national emissions reduction targets and facilitate investment in the renewable energy sector, Australia needs a robust approach to public finance which delivers the long-term certainty and funding required to unlock private sector capital and accelerate investment in clean energy and energy productivity opportunities.

An independent financing institution is a key complementary policy measure to stimulate the transition to a low carbon economy. Public finance bodies such as the Clean Energy Finance Corporation (CEFC) and the Australian Renewable Energy Agency (ARENA) have a critical role to play in deploying public sector capital to encourage private sector investment in areas where private sector capital is needed to fund the transition to a low carbon economy.

IGCC believes that a clear investment mandate and stable, long-term funding support for the operation of both the CEFC and ARENA are critical for building investor confidence in the transparency, certainty and longevity of the low carbon financing framework in Australia.

Ongoing support for a national science and innovation agenda is also critical to ensuring Australia's future prosperity, including in the area of adaptation. IGCC has worked with the National Climate

Change Adaptation Research Facility (NCCARF) on a number of occasions in recent years, translating climate science into investment practice. Ensuring funding is maintained for bodies such as this able to translate complex science into investment and industry impacts will be increasingly important as the effects of climate change itself are increasingly felt.

Similarly, maintaining a technology approach to funding and grants is critical for supporting an internationally competitive research and development environment in Australia.

4. In conclusion

Australia needs a vision for future economic prosperity in a net zero emissions global economy, and long term plan for how best to make the transition. This has to include the key components of long term targets coupled with interim milestones, a policy framework which supports an economically efficient transition to decarbonisation and which manages the economic, social and environmental impacts.

A robust and stable policy framework will drive greater levels of investment into low carbon solutions and will help smooth the economic risks associated with structural decarbonisation of the Australian economy.

We note that the Paris Agreement has been broadly supported across the major political parties in Australia. While recognising that there will always be areas of policy debate, investors would strongly encourage all political parties to support the development of a stable policy framework grounded in broad bipartisan support. This framework must align with the goals of the Paris Agreement. It must be durable and scalable to deliver an efficient transition for Australia's economy.

A stable policy environment is attractive to capital. This includes both ensuring that policy settings are capable of achieving Australia's current national emission reduction goals, but also one which establishes a clear pathway for review and ratchet in line with the process dimensions of the Paris Agreement to scale up ambition to limit global warming to less than 2°C and move to a net zero emissions global economy.

As the global economy transitions in line with the Paris Agreement, Australia must take steps to remain economically competitive. Failure to effectively manage climate change creates the risk that Australia will become increasingly uncompetitive as investors look to manage down climate change risk and pursue new low carbon finance opportunities in other markets.

Overall, better collaboration between industry, investors and financial policymakers on long term carbon risk management will increase Australia's carbon competitiveness and resilience to the economic impacts of climate change.

APPENDIX A

	SEVEN CLIMATE CHANGE PRIORITIES FOR INVESTORS
1.	**Long-term emission reduction targets** Long-term targets which align to the goals supported under the Paris Agreement to limit global warming to well below 2°C and move to a net zero emissions economy**.**
2.	**A durable policy framework grounded in broad bipartisan support** An integrated policy framework where the key elements are grounded in broad-based bipartisan support and able to deliver a level of investment stability.
3.	**A market based carbon pricing mechanism** A market based carbon price signal which can be incorporated into investment decisions and which responds to dynamic market conditions
4.	**An integrated approach to energy sector transition** A policy approach which manages carbon, technology changes and energy market considerations in an integrated manner delivering greater investment certainty.
5.	**Long-term certainty and funding for clean energy public financing vehicles** A robust approach to public finance provision that provides the long-term certainty needed to unlock and accelerate private sector capital and investment into clean energy and energy productivity opportunities.
6.	**A National Adaptation Action Plan to reduce the cost of climate change** A National Adaptation Action Plan underpinned by Australian scientific research which delivers a roadmap for managing the costs and impacts of climate change for investors and the community.
7.	**A disclosure framework for climate-related financial reporting** A financial disclosure framework which acknowledges the financial and economic implications of climate change and promotes better risk management through more effective financial reporting practices of companies.

http://www.igcc.org.au/resources/Documents/IGCC%20Seven%20Climate%20Change%20Policy%20Prioritites%20for%20Investors%20FINAL%202%20June2016.pdf

END NOTES

[i] The Paris Agreement states "well below 2°C and continue all efforts to limit the rise in temperatures to 1.5°C".
[ii] The Centre for Policy Development and the Future Business Council, "Climate Change and Directors' Duties: Memorandum of Opinion", 7 October 2016, available http://cpd.org.au/2016/10/directorsduties/
[iii] Australia's New Horizon: Climate change challenges and prudential risk (2017) http://www.apra.gov.au/Speeches/Pages/Australias-new-horizon.aspx
[iv] In April 2017, IGCC released Transparency in Transition: A guide to investor disclosure on climate change – a practical guide setting out current and emerging investor disclosure practices. www.igcc.org.au/publications
[v] http://www.igcc.org.au/news/4375616
[vi] Climate Change Authority (2015), Final Report on Australia's Future Emissions Reduction Targets: http://climatechangeauthority.gov.au/reviews/special-review/final-report-australias-future-emissions-reduction-targets
[vii] Australian Climate Roundtable Joint Principles for Climate Policy (2015) http://www.australianclimateroundtable.org
[viii] Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, Climate Action Plan 2050 (2016) Principles and Goals of the German government's climate policy http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Klimaschutz/klimaschutzplan_2050_kurzf_en_bf.pdf
[ix] Vivid Economics, report prepared for Globe NZ (2017), 'Net Zero in New Zealand: Scenarios to achieve domestic emissions neutrality in the second half of the century', www.vivideconomics.com/publications/net-zero-in-new-zealand
[x] The Canadian approach to a Mid Century Strategy also includes some interesting approaches to intra-State and municipal collaboration and Indigenous peoples which may have some applicability to Australia. The UK Committee on Climate Change tracks ongoing progress against a range of low carbon programs, policies and sector objectives and reports progress to Parliament.
[xi] This should be consistent with and aligned to reporting undertaken currently, such as 'Australia's emissions projects 2016', Commonwealth of Australia (2016) https://www.environment.gov.au/climate-change/publications/emissions-projections-2016 .
[xii] 'Over 200 Global investors (managing more than $15 Trillion in assets) urge G7 to stand by Paris Agreement and drive its swift implementation' http://www.igcc.org.au/news/4819502
[xiii] IGCC Submission to the Independent Review into the Future Security of the National Electricity Market (2017) http://www.igcc.org.au/igcc-public-submissons
[xiv] Bonds and Climate Change: State of the Market 2016. https://www.climatebonds.net/resources/publications/bonds-climate-change-2016
[xv] Low Carbon High Performance (2016) http://www.asbec.asn.au/research-items/low-carbon-high-performance-report/
[xvi] Sustainable Real Estate Investment Implementing the Paris Agreement: An Action Framework (2016) http://www.igcc.org.au/resources/Pictures/sustainable_full_report.pdf
[xvii] G20 Energy Efficiency Investment Toolkit (2017), published by the G20 Energy Efficiency Finance Task Group under the content direction of the International Energy Agency (IEA), the UN Environment Finance Initiative (UNEP FI) and the International Partnership for Energy Efficiency Collaboration (IPEEC). http://www.unepfi.org/wordpress/wp-content/uploads/2017/05/G20-EE-Toolkit.pdf
[xviii] Risk to Return: Investing in climate change adaptation (2017) http://www.igcc.org.au/resources/Pictures/Adaptation_FINAL.pdf