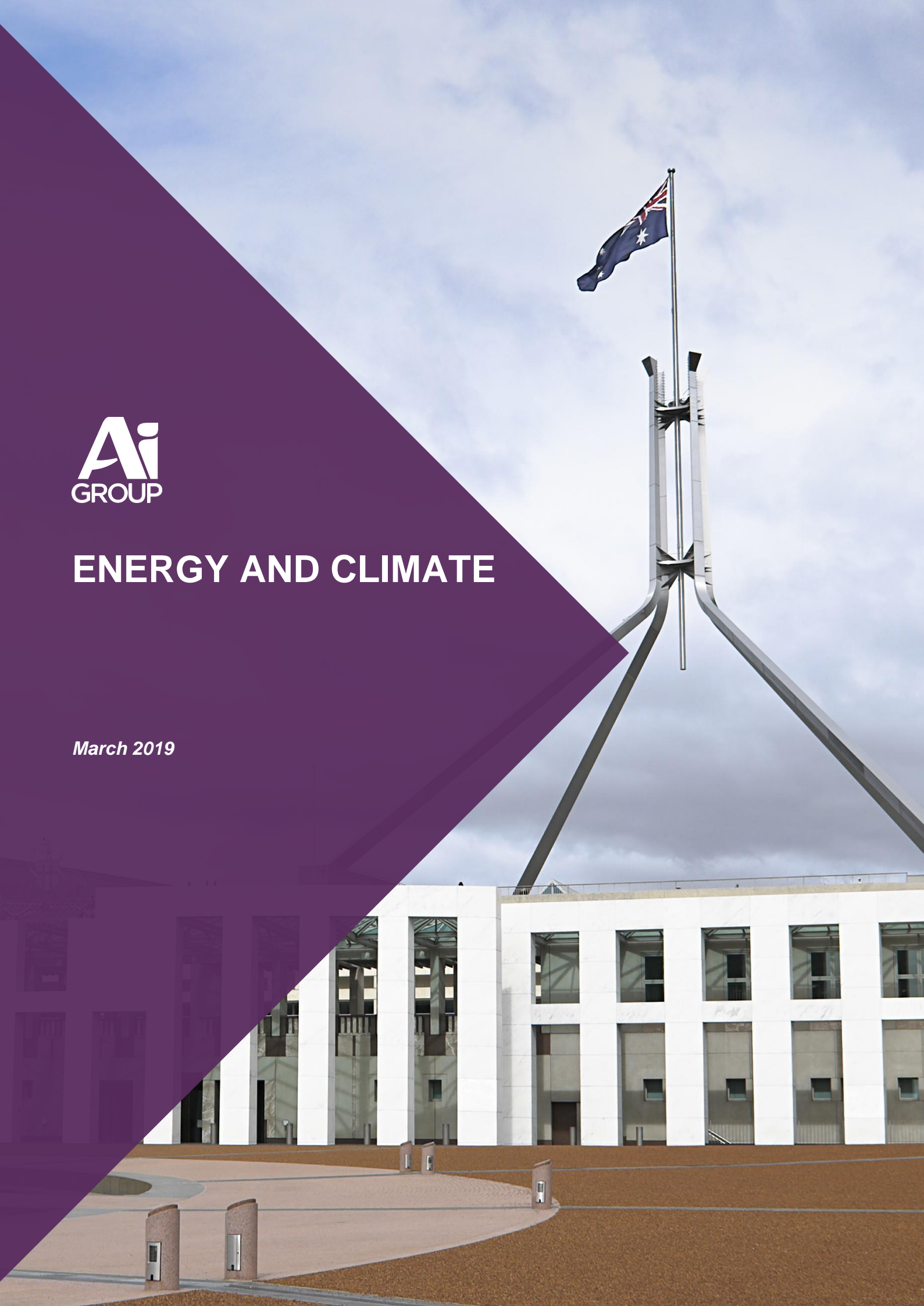




ENERGY AND CLIMATE

March 2019



EXECUTIVE SUMMARY

The next Government should:

- *Cement durable frameworks for energy and climate, the lack of which is a serious barrier to needed investment;*
- *Pursue a new energy advantage by improving energy productivity, lowering the cost and risk of investment, encouraging competition, making provision for likely scenarios and ensuring policy can cope with surprises*
- *Ensure that deeper emissions targets over time are consistent with continued and increased prosperity, by ensuring policies are trade-neutral and facilitate successful industry transition;*
- *Adopt climate policy measures that collectively access emissions reductions from across the Australian and world economies and operate at least cost; and*
- *Work with industry, employees, States, local government and community organisations to develop effective and proactive responses to anticipated closures or transitions of existing emissions-intensive facilities.*

MAKING ENERGY AND CLIMATE POLICY WORK

Reliable and affordable energy are necessary for our economy and society to prosper, as is a successful response to climate change. These are abiding challenges that will require coherent and dynamic long-term strategy - and substantial ongoing private investment, beyond the undoubted role for public funding and finance in research and innovation. Risk, uncertainty and a lack of strategic context are serious barriers to that investment. While some risk is unavoidable, especially given the massive technological and market changes impacting energy worldwide, government policy can provide a clear and stable basis for investors to plan around. Unfortunately, deep political conflict over energy and climate, particularly at the Federal level, has made public policy into a glaring source of uncertainty inhibiting the investments we need.

This situation needs to stop. It is imperative that the next Government develop climate and energy policies that are well integrated, credible and durable responses to our long-term strategic challenges. If we continue with a succession of rapidly reversed policies or no policy at all, at best we will see a patchwork of more costly State and localised interventions, and at worst we will see energy disadvantage cemented and emissions targets recede.

The best outcome would be for the major parties at the Federal level to forge greater bipartisan consensus on the direction and framework of policy, as is the case in the United Kingdom and in some Australian states. This will require genuine communication and a spirit of compromise.

We encourage bipartisan consensus-building. If it remains elusive, alternatives will be needed to make policy investable. Options may include the use of intergovernmental agreements, as proposed in the National Energy Guarantee; contracts, such as Contracts For Difference; or property rights, as seen in certificate markets. Care is needed in pursuing any of these design features. But no policy can achieve much if it is not expected to last.

A NEW COMPETITIVE ADVANTAGE IN ENERGY

The relatively low price and plentiful supply of energy in Australia was for many years an important competitive advantage for many industries that drove investment, jobs and economic diversity. That advantage has vanished, at least in Eastern Australia: the closure of old coal generators, while inevitable, made the market much tighter and more dependent on gas-fired generation to meet demand and set prices; at the same time, the growth of Liquefied Natural Gas exports from Queensland radically increased the price of gas and the cost of gas generation. Without urgent action these changes threaten a painful adjustment and loss of opportunity.

The next Government should pursue a strategy for a new energy advantage, though the Commonwealth cannot achieve this alone. It needs to coordinate action and work closely and constructively with the States and Territories, who have power over electricity and onshore energy resources; with energy users and suppliers; with the energy market institutions; and with the full range of civil society stakeholders. Across electricity and gas this should include the elements below.

Radically improve the productivity of energy use and supply

Low unit prices for energy made relatively low energy productivity affordable. An oversupplied electricity system made it possible to ignore the potential of demand-side resources. This is no longer the case.

Improved practices and technologies can help most energy users cut bills through greater efficiency or fuel switching. A major national effort should modernise standards, finance retrofits in all sectors (including in rental properties; nearly a third of Australians rent), spread awareness of leading practice and fund research and demonstration that advances it.

Demand response can substitute for high-cost low-utilisation assets when demand surges or other supply slumps. Standards should encourage demand response capability in energy intensive appliances, smart meters should be rolled out proactively rather than incrementally; time-of-use and maximum demand-based price structures should be the default with an opt-out; and a rule change is needed to encourage and reward demand response in the National Electricity Market.

Reduce the cost and risk of energy investment in Australia

We have strong energy resources of all sorts, and global technology improvements are sharply reducing renewables costs. However, finance, construction and regulatory costs could still make Australia uncompetitive, particularly given the capital-intensive and low operating cost nature of wind and solar power. Steps needed include:

- Most urgently, reducing uncertainty by cementing durable long-term energy and climate policy. The wide range of possible structures and tempos for future climate policy makes any energy project much more risky than its fundamentals would otherwise suggest.
- Growing construction sector productivity and achieving a productive workplace relations climate in construction. Higher performance here would help underpin more energy projects and cut their costs, making it more likely that Australia can sustain and expand

energy intensive industries like aluminium, and develop new ones like hydrogen production. The benefits for high-quality jobs across Australia need to be achieved.

- Ensure that planning and regulatory processes meet community expectations and address substantive concerns with energy developments (for instance around water impacts or rival land uses) while facilitating responsible, timely and efficient development.

Encourage effective competition

Maintaining or increasing competition in every segment of our energy markets can help sustain lower costs for energy users. Conversely, concentrated market power or malfunctioning competition will bring harm. Specific measures include:

- The ACCC's electricity market review made a host of recommendations, all of which require detailed consideration and response. The proposed 20% soft cap on generation market share, enforced through a prohibition on growth through acquisition, is particularly important. Governments at all levels should reorganise publicly owned generation assets over time to adhere to this cap.
- Facilitation through relevant market rules and regulatory systems of new entrants in energy markets, including demand response aggregators, new gas producers, gas importers, bioenergy and waste-to-energy, distributed energy, hydrogen production from electrolysis and from fossil fuels with carbon capture and storage, and virtual power plants.
- Specific gas market measures to manage the immense impact of Eastern Australian LNG exports without threatening the well-functioning Western market and emerging resource development in the Northern Territory. These include a national interest test for new or expanded LNG capacity; having in place rigorous export control powers in the event of an acute threat to domestic gas use; continued monitoring of the gas market and regular reporting by the ACCC; and continued implementation of Gas Market Reform Group recommendations.

Plan for the likely

Policy should be tested against expected trends.

Relative cost trends suggest that Australian electricity generation will be increasingly dominated by renewables in volume terms. If this is correct it entails substantial corresponding growth in flexible resources to complement variable supply; major new large-scale infrastructure and smarter distribution networks; and a host of market and regulatory reforms to facilitate change.

The linkage of the Eastern Australian domestic gas market to international markets through LNG exports, and the commitment or depletion of gas resources with low production costs, suggest that wholesale gas prices will remain substantially above historical levels. If this is correct, in addition to the efforts outlined above to keep prices as low as sustainable, we will need widespread energy efficiency and fuel switching, along with efforts to shrink the role of gas in setting electricity prices.

Be open to surprise

Policy should be dynamic in the face of unexpected developments.

Energy has seen major technological and market upheaval in recent years and more may come. Fossil generators with improved flexibility or efficiency, carbon capture and storage options,

biomass or nuclear energy might prove more viable than they appear today.

Energy markets and policies should be technology neutral where practical. That means incentivising desired outcomes (on price, reliability, or emissions) rather than specifying technologies which must be deployed at scale. With respect to innovation, commercialisation and supporting infrastructure, the approach should be to spread bets and put many plausible technologies in a position to compete on their merits.

SETTING AND PURSUING EMISSIONS TARGETS

Ai Group recognises that our national emissions targets will have to keep deepening over time to achieve our widely shared objective: a successful global effort to mitigate the risks of climate change, together with continued and increased Australian prosperity. These targets should be pursued through policies that maintain our trade competitiveness and help industry thrive through a successful transition.

Halting climate change ultimately requires global emissions to fall to net zero or below – by around 2050 to keep temperature rises below 1.5°C or by around 2070 to keep below 2°C.¹ The Paris Agreement to which Australia is and should remain a signatory targets global net zero “in the second half of the century”. Around Australia, State and Territory governments of all political stripes aim for net zero by 2050, as do an increasing number of businesses.

Recent progress on scaling up renewable energy and sharply cutting its costs is heartening and suggests that past projections of abatement costs were too pessimistic. But we should not underestimate the scale or difficulty of the long-term emissions reduction challenge on two fronts: practical pathways, and trade competitiveness.

It is not yet clear what mix of technologies will best deliver a near-zero or sub-zero emissions electricity system that is also reliable and affordable. And electricity accounts for just 30% of Australia’s current national emissions. A prosperous Australia will continue to need industry, transport, heat, building materials, agriculture and mineral resources. These sectors need not just suitable policy drivers (see next section), but also viable pathways for transition (see final section).

Trade competitiveness must be maintained as Australia cuts emissions. Climate policy-related costs have the potential to damage competitiveness, especially where policies are uneven between Australia and other countries. This risk has changed since Kyoto, when developed countries had obligations and major emerging economies had none. Now all parties to the Paris Agreement have made commitments which are expected to deepen and will be held accountable to the same standards. Major economies are taking serious action to reduce emissions. But they are all doing so through policies designed to preserve the competitiveness of their trade exposed industries.

Trading schemes and carbon prices in Europe, China, South Korea, Canada, California and more include provisions that limit the out-of-pocket cost of carbon constraints to trade exposed industries while preserving an incentive to reduce emissions. Australia needs to ensure that our policies help industry ultimately transition to operating at low or zero emissions – the ultimate

¹ See Intergovernmental Panel on Climate Change, *Special Report on Global Warming of 1.5°C* (2018), C.1 <https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>.

protection against carbon costs. We need to work along the way to prevent the unnecessary loss of competitiveness by Australia's trade exposed industries and net increases in global emissions that might otherwise occur due to the uneven international application of climate policies.

CLIMATE POLICY MEASURES

Achieving our emissions reduction goals and building better conditions for investment, particularly in energy, will require the adoption of policies that are durable and trade neutral as outlined above. Any climate policy will have costs, whether explicit or not. It is important that these costs are spread fairly and the most vulnerable are protected. The suite of policies adopted should pursue the ideal of least-cost abatement. Access to the full range of potential abatement is crucial to minimise costs: there are emissions reduction opportunities in every part of the economy, on both the supply and demand sides, and in both Australia and overseas. Holistic design and geographic neutrality are important, for instance in coverage of Australia’s several electricity systems. Market mechanisms, including price signals and tradable instruments, can be very efficient and effective if well designed, though there are roles for careful regulation and public funding as well.

Specific sectors and policies to consider include:

Electricity

A clear, universal and technology-neutral price signal for abatement is the best policy fit for our electricity markets. The National Energy Guarantee is the most recent design for such a signal and attracted broad support from industry, civil society, the States and Territories, and across political lines. Ai Group continues to support the NEG. To maximise its durability, the NEG should be enacted entirely through the National Electricity Law, without depending on an Act of Federal Parliament; the NEL requires the unanimous consent of the NEM States and the Commonwealth to change. Emissions targets for the electricity sector can be derived from the commitments Australia makes under the Paris Agreement.

Public underwriting, Contracts For Difference or guarantees for electricity generation projects have been proposed by the major parties at the Federal level and implemented on a more limited scale by States and Territories to reduce emissions. These instruments can indeed lower project risk and finance costs, and the financial and reputational costs of breaking contracts can encourage policy stability. They also transfer risk to the public, can discourage other private investment, and tend towards central planning of the electricity system rather than the current market-led designs. If these tools are used they should be developed very carefully, with independent expert administration aimed at minimising full system costs.

Industry

The existing Safeguard Mechanism sets emissions baselines for all large emitting facilities in Australia and requires any emissions above these baselines to be offset. Building on this mechanism would make sense, but it would have to be done without compromising the competitiveness of trade exposed industries. There are several potential tools to consider:

- Baseline trajectories could reflect trade exposure and the level of carbon constraint faced by relevant international competitors;
- Border adjustments could set a level playing field for imports and exports, though they would have to be designed to comply with our World Trade Organisation and Free Trade Agreement commitments;
- Access to offsets from other Australian sectors could moderate and equalise marginal

abatement costs; and

- Access to offsets from overseas could do likewise, though the Paris Agreement rules for this remain unsettled, prices and volumes available are unclear for now but likely to be expensive and scarce in the long term, and confidence in the integrity of any offsets is essential.

Tools to address trade exposure should maintain incentives for abatement and facilitate successful transition. An option to cash out the net present value of future baselines could ease investment in major upgrades. All the above should be considered in close consultation with industry.

Transport

Cars and light commercial vehicles are the largest part of current transport emissions, but trucking and aviation account for most current and expected growth. Different instruments are needed for different transport contexts.

Fleet-wide fuel efficiency standards for new light vehicles are in place in the United States, the European Union, China and other key economies, and evidence suggests they benefit drivers directly through lower total cost of ownership while also lowering emissions. Australia should adopt comparable standards. Complexities around the availability of high-quality fuel and the timetable for investment in improved refining capacity need to be addressed but should not prevent the timely introduction of fleet-wide standards, since the slow turnover of the vehicle fleet means impacts take time to build up. It may be that hybrid, battery-electric and hydrogen-electric vehicles play a bigger role in meeting fleet targets due to these complexities. Supporting infrastructure, standards and improvements to electricity market rules and price structures are needed to facilitate this role.

Aviation may be well captured by the Safeguard Mechanism, but road freight is a poor fit; the sector is dominated by small operators who would find the administrative requirements impossible. The next Government should consult widely on a strategy and policy options to equitably and efficiently reduce freight emissions, coordinated with efforts on electric vehicle infrastructure and the National Hydrogen Strategy.

Land and agriculture

Agriculture is a substantial source of emissions. The land sector is currently a small net carbon sink but could be a much larger sink with wider reforestation, better land management and further reduced land clearing. Moderating national emissions costs requires that abatement options from both sectors be accessible. Equity requires that these sectors share in the costs of national targets, though we recognise that agriculture is trade exposed too and highly politically sensitive. The current approach of driving activity through the sale of offsets to other sectors and the government is a starting point, though constant improvement and updating of crediting methodologies is needed to ensure abatement is genuinely additional. Further policy measures, including regulation of land clearing and support for commercialisation of new technologies like livestock dietary supplements and meat analogues, should be considered in a national strategy with input from all sectors and stakeholders.

Industry transition

Global efforts to combat climate change will ultimately require net emissions of greenhouse gasses to reach net zero or below in most countries, including Australia. This transition will take decades and entail substantial changes in technology and practices across many sectors. This creates both economic opportunities for new products and industries, as well as vulnerabilities

where existing industries may experience a challenging transition or risk exit.

The next Government should develop and resource a strategy to seize the economic opportunities and manage the vulnerabilities. Bioproducts, carbon capture use and storage, electrification, hydrogen products, solar, wind and more present chances for new industries and the successful transition of existing industries. Coordinated policies, supporting infrastructure, and commercialisation finance can support growth and manage the considerable uncertainties.

Some sectors are likely to contract over time, including in the electricity generation sector. These closures have wider impacts, including on direct employees, the supply chains in which closing facilities are embedded, and the communities and regions in which they are located. Ai Group strongly supports a fair and successful transition for these sectors. To that end Australia should work with representatives of industry, employees, States, local government and community organisations to develop effective and proactive responses to anticipated closures or transitions of existing emissions-intensive facilities.

Further reading

Ai Group is a signatory to the Australian Climate Roundtable's Joint Principles for Climate Policy.²

Our July 2018 report *Eastern Australian Energy Prices - From Worse to Bad* analyses the energy markets and recommends steps for improvement consistent with this paper.³

2

http://cdn.aigroup.com.au/Reports/2015/Climate_roundtable_joint_principles_June_29_2015_final_em_bargoed.pdf

3

https://cdn.aigroup.com.au/Reports/2018/AiGroup_Report_Eastern_Australian_Energy_Prices_July_2018.pdf

CONTACT US



+61 419 190 347



aigroup.com.au



anthony.melville@aigroup.com.au



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