





## Introduction

The Carbon Market Institute (CMI) welcomes the opportunity to make a submission on this Discussion Paper regarding the proposed Technology Investment Roadmap (the Roadmap).

CMI is the peak industry association for business and climate action. CMI has over 75 corporate and associate members representing the spectrum of business engaged in emissions reduction and atmospheric drawdown. These members include some of Australia's most emissions intensive companies as well as pioneers in the deployment, commercialisation and export of near-zero, zero and negative emission technologies.

CMI's 2050 vision is for a prosperous, climate-resilient net-zero emissions world. Our mission is to help business manage risks and capitalise on opportunities in the transition to a net-zero emissions economy.

This brief submission seeks to make the following points, namely that the Australian Government should:

1. Set the Roadmap's vision to require a destination – net-zero emissions by 2050;
2. Evolve policies to leverage private investment;
3. Integrate criteria for employment, social, environmental and decarbonisation outcomes; and
4. Expand CEFC and ARENA's funding and mandate to also support emerging (non-renewable) net-zero emission technology development.

Key recommendations in this submission include:

- a) The Roadmap, and Long-Term Emissions Reduction Strategy (the Strategy) to follow, should have a clear goal of net-zero emissions by 2050 with a science-based emissions reduction trajectory guiding the strengthening of Australian interim targets
- b) A dashboard approach that highlights employment, environmental service, decarbonisation as well as indigenous and other social benefits should be developed as criteria for prioritising technologies and be included in annual statements and other reports.
- c) The Roadmap and Strategy should include processes to develop and evolve sectoral decarbonisation pathways.
- d) Any criteria for assessing technologies for public investment should include how such investments support technologies providing greater infrastructure and community resilience to growing climate impacts.
- e) Australian governments have and should develop policies that address genuine concerns for emissions intensive trade exposed industries in a timely transition to net-zero emissions
- f) CMI recommends a significant quantum of funding be assigned to developing a just transition strategy and related projects that would identify skills needs and develop training programs to support carbon market participation as well as economic and social transition across a range of sectors.
- g) CMI supports the recommendation by the Climate Change Authority for the establishment of a Land and Environment Investment Fund... this Fund should have a budget of \$1 billion over 5 years [Unless Government policy evolves the Safeguard Mechanism], this Fund must be in addition to the almost \$2 billion over 15 years in the Climate Solutions Fund which the Government has dedicated to the Emissions Reduction Fund.



## 1. Set the Roadmap's vision to require a destination – net-zero emissions by 2050

CMI's primary submission is that the Roadmap will be poorly directed by the proposed vision's repeated focus on a vague and ill defined "lower emissions" goal. **The Roadmap, and Long-Term Emissions Reduction Strategy (the Strategy) to follow, should have a clear goal of net-zero emissions by 2050 with a science-based emissions reduction trajectory guiding the strengthening of Australian interim targets.** The Roadmap and annual technology statements should, amongst other criteria, assess technologies for support against their capacity to contribute to that trajectory for domestic and global emissions.

CMI welcomes the fact that the Government continues to support the Paris Agreement with its unequivocal goal of net-zero emissions in the second half of this century, as well as the additional goals of keeping warming well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C. CMI also welcomes the fact that Prime Minister Morrison joined Australia with other Pacific nations by signing the [2019 Pacific Island Forum Communiqué and appended Kainaki II Declaration](#). This communiqué notes:

*"the shared prosperity and security of our Blue Pacific can only safely exist if the international community pursue efforts to limit global warming to 1.5°C".*

The September 2018 Intergovernmental Panel on Climate Change (IPCC) Report<sup>1</sup> identified pathways with no or limited overshoot of 1.5°C global net carbon emissions decline by 45% from 2010 levels by 2030, reaching net zero emissions around 2050. Modelling by the IPCC and others also show the need for at least multi-decadal levels of net-negative emissions beyond 2050.

The Roadmap and Strategy should be guided by these benchmarks, vision and related interim targets.

## 2. Evolve policies to leverage private investment

CMI and its members believe Australia has proven ability and significantly greater potential to commercialise and export near-zero, zero and negative emission technologies, including related knowledge and expertise. Examples of these net-zero technologies include renewable energy, hydrogen, clean transport, energy efficiency, biological sequestration (storing carbon in vegetation and soils), improved land management (including savanna burning and livestock management), as well as carbon capture utilisation and storage for industrial and geological sequestration.

Australia has abundant energy resources, significant land mass and expertise to develop further skills and capacity in these net-zero technologies. This means Australia is well placed to manage the risks and capitalise on the opportunities in the transition to net-zero emissions, domestically and regionally. This includes the potential for Australian business to be a significant exporter of carbon reduction and removal credits as well as associated expertise to a carbon constrained world.

CMI recognises that the Government is, appropriately, a significant investor in early stage technology development. However, the Roadmap will not succeed as a tool for leveraging necessary private investment without additional associated policy drivers. Market-based approaches are the most efficient policy mechanism to address the challenges of the climate crisis and realise the opportunities in the transition to a zero-carbon economy. However, CMI recognises that market mechanisms will need to be integrated with or support a broader policy toolkit requiring targeted sectoral approaches. Other mechanisms might include tax incentives such as accelerated depreciation rates, grants and discounted debt funding. This may further de-risk and leverage greater investments in clean technology.

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<sup>1</sup> IPCC Special Report on Global Warming of 1.5°C (<https://www.ipcc.ch/sr15/>)



Development of the Roadmap and Strategy should recognise the capacity for market and related policies to accelerate technology deployment through “learning by doing”. Past and current policy, including the Renewable Energy Target and Emission Reduction Fund auctions, have boosted the evolution of relevant technologies and their social and planning enabling environments.

Australia’s current policy framework where the Government, or taxpayer, is the dominant participant in Australia’s carbon market can evolve to provide the longer term certainty necessary for the substantial private sector investments which are required for an appropriate transition to net-zero emissions by 2050. The current Safeguard Mechanism compliance requirements could have baselines decline on an emissions reduction trajectory allowing businesses to recognise and, where needed, trade carbon reduction and removal credits to manage their emissions. In 2019 the Carbon Market Institute released a [discussion paper](#) that details options for this.

This policy evolution would make Australian business the major investor in Australian carbon markets and could allow some repurposing of Climate Solution Funds. More importantly this would provide a framework of greater certainty for investment in emissions reduction and sequestration technologies that require long term investment and revenue or benefit streams.

Australia’s system of assurance and integrity for carbon reduction measurement is world renowned as a leading scheme and should continue to be developed and enhanced. Many of the recommendations of the King Review of the Emissions Reduction Fund are supported by CMI with a detailed response in preparation.

### 3. Integrate criteria for employment, social, environmental and decarbonisation outcomes

The Roadmap and the Strategy are being developed as Australia seeks to recover from bushfire and COVID-19 crises. Both should include a focus on relative additional benefits that can come from relevant recovery and resilience technologies as well as integrating assistance for communities, workers and business potentially affected by the transition to net-zero emissions. **A dashboard approach that highlights employment, environmental service, decarbonisation as well as indigenous and other social benefits should be developed as criteria for prioritising technologies and be included in annual statements and other reports.**

The [IEA’s Sustainable Recovery Special Report](#) is a good example of this approach for the broad energy sector<sup>2</sup>. This report sets out the policies and targeted investments for each key sector, including several measures designed to:

- i. accelerate the deployment of low-carbon electricity sources like new wind and solar, and the expansion and modernisation of electricity grids;
- ii. increase the spread of cleaner transport such as more efficient and electric vehicles, and high-speed rail;
- iii. improve the energy efficiency of buildings and appliances;
- iv. enhance the efficiency of equipment used in industries such as manufacturing, food and textiles;
- v. make the production and use of fuels more sustainable; and
- vi. boost innovation in crucial technology areas including hydrogen, batteries and carbon capture utilisation and storage.

CMI’s [Carbon Farming Industry Roadmap](#) is a leading example in the land sector, highlighting the potential to generate up to 21 000 direct/indirect jobs from that sector by 2030. It contains an action plan with criteria for:

- a) optimising policy frameworks and market design;
- b) unlocking finance and investment;

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<sup>2</sup> See also <https://www.wwf.org.au/what-we-do/climate/renewables/renewable-export-covid-19-recovery-package#gs.8htw55>



- c) quantifying co-benefits and creating new markets; and
- d) commercialising benefits and building capacity.

The FCA's [Regional Horizons: Farming communities leading the recovery](#) report and recommendations also provides a significant reference on potential co-benefits for regional Australia.

**The Roadmap and Strategy should include processes to develop and evolve sectoral decarbonisation pathways.** ClimateWorks' [Decarbonisation Futures](#) Report provides excellent examples of criteria including 2030 and 2050 benchmarks that should be utilised or developed in the Roadmap and Strategy. For example, the Report notes with all other available decarbonisation initiatives, carbon forestry – a proxy for all drawdown sequestration technologies - will need to be at over 100 million tonnes per year by 2030 and over 300 million tonnes per year by 2050 for a 1.5°C Scenario. There is demonstrable potential for this but the last five years has seen an average of less than 10 million tonnes per year delivered under the Emission Reduction Fund.

**Any criteria for assessing technologies for public investment should include how such investments support technologies providing greater infrastructure and community resilience to growing climate impacts.**

The tragic and costly impacts of last Summer's bushfires should be a reminder of the exposure to such impacts of transport, communication, environmental, agricultural and other assets, infrastructure and technology. CMI's [national workshop on carbon farming and bushfire recovery](#) provided a range of actions for integration of resilience and technology funding. This included specific recommendations for the Australian Renewable Energy Agency (ARENA) and the support of indigenous fire management technologies.

The Investor Group on Climate Change (IGCC) has highlighted the importance of such considerations in its report [Policies for a resilient net-zero economy](#). This report notes:

*Governments can help unlock adaptation investment through coherent national adaptation plans and by facilitating better disclosure of climate related financial risks. National climate change adaptation strategies and strengthened climate-related disclosure requirements for companies and investors are central to increasing Australia's carbon competitiveness and resilience to the economic impacts of climate change.*

**CMI recognises the need to manage the transition required.** It is critical that a 'Just Transition' or regional resilience pathway is assured, and that communities and regions are assisted in strengthening, diversifying and/or transforming their economies to attract new industries, employment opportunities and share of co-benefits. **Australian governments have and should develop policies that address genuine concerns for emissions intensive trade exposed industries in a timely transition to net-zero emissions.**

**CMI recommends a significant quantum of funding be assigned to developing a just transition strategy and related projects that would identify skills needs and develop training programs to support carbon market participation as well as economic and social transition across a range of sectors.** This could involve a national Just Transition Authority or regional transition authorities or frameworks.



#### 4. Expand CEFC and ARENA's funding and mandate to also support emerging (non-renewable) net-zero emission technology development

CMI noted in its [submission to Grant King Expert Panel examining opportunities for further abatement](#) that greater public and private funding for technology and innovation development can be encouraged by adding to and reprofiling parts of the Climate Solutions Fund for earlier/upfront delivery through ARENA and the Clean Energy Finance Corporation (CEFC) as well as by leveraging appropriately targeted funding schemes. The submission recommended that:

- a) The Government should ensure that ARENA receives future funding to ensure ongoing operation and an expansion of its mandate to support grant funding and commercialisation of non-renewables emissions reduction innovation and technologies.
- b) The Government should explore expansion of the CEFC's mandate to support the deployment at scale of non-renewables emissions reduction innovation and technologies across the economy.
- c) The Clean Energy Regulator should be enabled to make joint investments with state government funds or private initiatives.

In relation to b) above, **CMI supports the recommendation by the Climate Change Authority for the establishment of a Land and Environment Investment Fund.** This should support the development of ERF methodologies and the research and development of technological applications for the measurement, reporting and verification of carbon in landscapes.

CMI welcomes the focus on carbon farming and land management opportunities in the Discussion Paper but notes that, curiously, it doesn't list this as one of our comparative advantages. Recognising Australia's comparative advantage in carbon farming and land management, and building the opportunities, is crucial. We welcome the recognition that *'Government will need to make strategic investments in R&D and demonstration activities now to see results beyond 2030, including in carbon capture and biosequestration at scale'*.

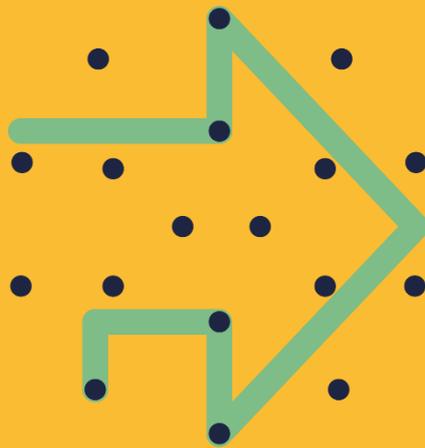
**Additionally, CMI notes and support's FCA's recommendation in its Regional Horizon's report that this Fund should have a budget of \$1 billion over 5 years.** Unless Government policy evolves the Safeguard Mechanism as noted above, **this Fund must be in addition to the almost \$2 billion over 15 years in the Climate Solutions Fund which the Government has dedicated to the Emissions Reduction Fund.**

#### Conclusion

CMI welcomed the release of the Technology Investment Roadmap Discussion Paper noting it marked the start of one of the most crucial national conversations in over a decade. It will be a test of our national character, comparative advantage and coordination. The Roadmap and Strategy, to be launched before COP26, offer a historic opportunity to move on from a decade of ideological wrangling. We can build on Australia's newfound spirit of national coordination and common purpose forged in bushfire and COVID-19 crises and ensure a sustainable recovery.

The final Roadmap and Strategy should have a clear destination of net-zero emissions by 2050. It provides a unique opportunity to coordinate the net-zero emission by 2050 goals of all states, territories and major business groups. Australia's prosperity and security, and that of our region, depend on our ability to transition our economy, and help coordinate the global economy, to net-zero emissions by 2050, this also includes substantial negative emissions thereafter throughout the remainder of this century. Our ability to help coordinate, and our standing in the Asia Pacific region, will depend on the timeliness of our own transition as well as our ability to assist clean technology deployment and investment.

CMI is happy to speak further to this submission.



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The Carbon Market Institute is at the centre of business and climate action in Australia. Independent and non-partisan, we bring business, policy makers and thought leaders together to drive the evolution of carbon markets towards a significant and positive impact on climate change.

Engaging leaders, shaping policy and driving action, we're helping business to seize opportunities in the transition to a zero carbon economy.

