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**Australian Academy of Science submission on the
*Climate Change Bill 2022.***

The Australian Academy of Science (the Academy) welcomes the opportunity to contribute to the Senate Environment and Communications Legislation Committee's inquiry into the *Climate Change Bill 2022*.

The Academy:

- Supports current legislation setting a floor for emissions targets while also allowing the capacity to adjust targets over the coming decades to focus on achieving Australia's 'fair share' of global emissions reductions.
- Stresses the importance of a scientifically sound plan to achieve these targets informed by ongoing expert advice.
- Emphasises the need for an improved understanding of negative emissions science, to develop technologies to the scale crucial for achieving net zero by 2050 alongside emissions reduction.

[Legislation is a crucial first step towards real climate outcomes](#)

It is time for a sophisticated national conversation on climate change; time to move beyond stifling destructive polarisation and to shift to action.

The Academy supports legislating climate targets in principle as a necessary step in enacting a real, Australia-wide response to climate change.

Australian targets must grow to be consistent with the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement goals of limiting global temperature rises to well below 2 degrees, preferably to 1.5 degrees Celsius.

[Evidence-informed policy mechanisms are key for ensuring meaningful pathways of emissions reduction](#)

Australia's Nationally Determined Contributions (NDCs) need to be accompanied by scientifically feasible plans of action to reduce Australia's emissions in a fair but meaningful way.

The mechanisms informing Australia's emissions reduction pathways need to be robust and evidence-based to achieve the tangible outcomes intended by the targets.

The Climate Change Authority (CCA), in its role as adviser to the government, will need to call on experts so it can synthesise the available evidence and make evidence-informed recommendations to government. The Academy will be pleased to work with the CCA and to support it in its essential purpose.

[Expanded science knowledge is needed](#)

Prioritising emissions reductions is an essential and immediate step toward net zero emissions.

The Intergovernmental Panel on Climate Change (IPCC) has declared that negative emissions – mechanisms by which carbon dioxide and other greenhouse gases are removed from the atmosphere – will be crucial if global temperatures are to be kept below 2 degrees Celsius.

Negative emissions approaches including direct air capture, soil carbon sinks, or nature-based restoration are all able to play their part, but in and of themselves are unlikely to be able to be deployed at a sufficient scale.

There is a compelling need to identify what novel scientific and technological approaches might be possible, as well as improving the scalability of existing technologies to address this critical challenge.

A fair adaptation

Not leaving people behind has to be front and centre in plans to reduce the dangers of climate change to us all.

Future Earth Australia is a national sustainability research organisation hosted by the Academy. It will publish a national strategy in the coming months focused on a 'just adaptation'. The plan will chart a novel approach to reshape the national climate adaptation and resilience agenda.

Science as a bedrock to ensure meaningful outcomes from climate policy

The passage of this Bill should be seen as a continuum in ensuring that Australia deploys a bedrock of science-informed approaches to address future challenges, including that of climate change. Such an approach will enable Australia to accelerate emissions reductions beyond 2030 and achieve tangible climate outcomes for the well-being of all Australians.

To this end, the Academy is prepared to assist the committee by convening groups with appropriate expertise to inform its deliberations.

To discuss or clarify any aspect of this submission, please contact Mr Chris Anderson, Director Science Policy at

