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# Climate Change (National Framework for Adaptation and Mitigation) Bill 2020 and Climate Change (National Framework for Adaptation and Mitigation) (Consequential and Transitional Provisions) Bill 2020

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To the Standing Committee on the Environment and Energy,

Thank you for the opportunity to provide feedback to the inquiry on the Climate Change (National Framework for Adaptation and Mitigation) Bill 2020 and Climate Change (National Framework for Adaptation and Mitigation) (Consequential and Transitional Provisions) Bill 2020.

Science & Technology Australia (STA) is the peak body representing more than 88,000 scientists and technologists in Australia. We do so through our member organisations including specialist scientific societies, research institutes, and research strategy bodies such as councils of deans in science, technology, engineering and maths (STEM) faculties.

Climate change poses major challenges to human safety, food and water security, our environment and coastlines, and to our economy and way of life. It requires each country, particularly those that emit greenhouse gases at a high rate per person, to act to limit emissions.

But, while this is a great challenge it is also an opportunity, especially for a country rich in renewable resource access and a high level of innovative thinking. To make the most of this opportunity, though, Australia needs a national climate change framework. This legislation provides such a framework.

The long-term planning and policy certainty afforded by a national climate change framework has the potential to help Australia capitalise on a global economy that is becoming more focused on renewable energy and emissions reductions. Recent modelling by Deloitte Economics suggests taking further steps to address climate change would add \$680 billion and 250,000 jobs to Australia's economy by 2070.

It is with these opportunities in mind that Science & Technology Australia recommends the passage of this legislation. STA draws the committee's attention to the following aspects of the bill:

- It takes a long-term, national approach to climate change;
- It proposes an orderly transition to a net-zero economy;
- It enshrines an evidence-based approach to climate change;
- It proposes considering both costs and benefits of tackling climate change; and
- It notes the role of science and technology in net-zero emissions economies.



Associate Professor Jeremy Brownlie  
President  
Science & Technology Australia



Misha Schubert  
CEO  
Science & Technology Australia

## Introduction

Science & Technology Australia supports the passage of this legislation.

Even amidst a global pandemic, the challenge of climate change is a pressing concern. The projected disruptions to the planet's climate - and the resulting risks to food and water security, the economy, and human health - would be substantially more challenging to navigate than even the COVID-19 pandemic.

The most recent [State of the Climate](#) report by the Bureau of Meteorology and the CSIRO presents a grim picture for Australia's climate.<sup>1</sup> The hopes of limiting climate change to 1 degree have faded, but this does not mean efforts to limit climate change should be abandoned.

We are already experiencing the terrifying effects of climate change. The 2019-20 Black Summer bushfires serve as a stark warning on the need to act faster on climate change.

The [State of the Climate](#) report also highlights changing rainfall patterns that will have a dramatic effect on our agricultural industry - an industry that is crucial to Australia and which already experiences severe drought conditions.<sup>1</sup>

STA draws the committee's attention to some of the challenges of climate change and how this Bill would address those challenges. Specifically:

- It takes a long-term, national approach to climate change;
- It proposes an orderly transition to a net-zero economy;
- It enshrines an evidence-based approach to climate change;
- It proposes considering both costs and benefits of tackling climate change; and
- It notes the role of science and technology in net-zero emissions economies.

Overall, STA considers this Bill to be an effective approach to address the challenges of climate change and recommends the Parliament pass this Bill.

## A long-term, national approach to climate change adaptation

To effectively address climate change, there needs to be policy certainty not just at a national level but also across the States and Territories and industry. Policy certainty is also key to encourage industry investment in emissions reduction technologies, and in new methods for generating electricity, which in turn will help to curtail costs for consumers. A national adaptation plan is a way to provide this policy certainty.

A 5-year plan, as outlined in Part 3 of the legislation, is important to help industry to plan for the future. This has been a key concern for industry groups who need to be able to ensure their long-term energy needs, and opportunities to invest in new, low-emissions technologies. In 2018, the International Monetary Fund said Australia needed policy certainty on emissions reduction to reduce uncertainty for investment decisions.<sup>2</sup>

It is not only international business groups that recognise the importance of addressing climate-change. The small business community (which employs around 50% of all Australians) recognises that a plan to reduce emissions is necessary.<sup>3</sup> It has specially noted any plans must "accept that any medium and long-term adaptation planning is

an iterative, ongoing process, not a one-time activity". This Bill would help achieve that goal.<sup>4</sup>

Investors, too, are paying greater attention to climate change. According to the EY Megatrends report, investors want to know what climate change means for companies and the potential for a systemic financial shock to the economy.<sup>5</sup>

Every State and Territory in Australia has committed to net-zero greenhouse emissions by 2050.<sup>6</sup> Not every State has legislated this target, however, and there is significant variation in how each State intends to achieve this goal. This variation creates challenges for nationally-operating businesses to comply with different legislative requirements in each jurisdiction.<sup>6</sup> A national adaptation plan would reduce compliance costs for businesses - freeing up resources for investment in low-emissions technologies and innovations.

## Ensuring an orderly transition to a net-zero economy

Science & Technology Australia represents 88,000 scientists and technologists. This includes geologists, mining engineers, and numerous other professionals in the fossil fuel industry, as well as scientists and engineers working in renewable energy. We understand how important it is that a transition to a net-zero emissions economy include a transition plan that protects jobs.

A move to net-zero emissions does not have to result in job losses. Research into the transition from coal to renewable energy sources in China, the USA, India, and Australia shows that it can be achieved with less disruption than initially thought.<sup>7</sup> This disruption can be reduced through the careful and deliberate planning rather than waiting for dramatic reduction in demand for coal.<sup>8</sup>

This is not to say there will not be changes to the fossil fuel industries in Australia. But through a national climate change framework, a transition to a cleaner energy future can be achieved with an approach that safeguards jobs. The alternative is sudden job-losses without a transition plan if the rest of the world stops importing Australia's fossil fuels.<sup>8</sup>

An orderly transition to a net-zero economy does not mean an end to mining or Australia's resources sector. Instead, as battery technology increases in demand, the mining of rare earth metals such as lithium can provide new markets for Australia's mining expertise.<sup>9</sup>

The proposed legislation recognises the need for an orderly transition for workers. 'Clause 14: Principle of fair employment transition' specifically outlines that any decision or action that may affect an industry or region should ensure a fair employment transition. This is the best protection for the resources sector in a world where a decline in demand for coal is inevitable.

## An evidence-based approach to climate change

Climate change is, at its core, a challenge outlined in facts, science and evidence. As a comparative example, Australia's response to the COVID-19 pandemic relied on the best available medical and scientific advice to inform the best possible policy decisions.

Decisions to close borders, adopt social distancing rules, and select the most promising vaccines to develop, have been based on the best available, peer-reviewed evidence.

The approach that has protected Australia during the COVID-19 pandemic needs to be applied to climate change. The best available evidence is not only integral in climate change modelling, but in mitigating the effects of climate change already being felt.

Technology that improves our capacity to fight bushfires of increased intensity, ocean simulators used to develop techniques which protect our reefs from rising sea temperatures, or even engineering solutions to increased coastal erosion, are all examples of the importance of an evidence-informed approach to climate change.

STA notes this Bill highlights the importance of evidence-informed decision making. Clause 11 "...provides that any decision or action under this Bill must have regards to the best available peer reviewed research..." among other resources.

## Considering both costs and benefits of tackling climate change

The cost of tackling climate change has often been used as a counter argument to further action to address climate change. Yet it is important to understand the costs of not addressing climate change. And it is also important to assess the economic benefits that can flow from further action to address climate change. This legislation addresses this through 'Clause 13: Principle of fiscal responsibility' which requires Australia's economic prosperity be maintained over the long-term.

A recent report from Deloitte Economics modelled the costs to the Australian economy of not taking further action to address climate change. It also modelled the potential strong economic benefits from further action to address climate change. By 2070, it forecasts \$680 billion and 250,000 jobs could be added to the Australian economy by changing to a green growth pathway.<sup>10</sup> Conversely, on the current policy trajectory, it suggests Australia's economy would be worse off by \$3.4 trillion and have 880,000 fewer jobs by 2070.<sup>10</sup>

The benefits are not confined to the Australian domestic economy but also offer strong potential for new export opportunities. Rare-earth mining and the manufacturing of battery technology is one potential new avenue for global export income. Australia's outgoing Chief Scientist, Dr Alan Finkel, has also been a champion for another. Developing hydrogen exports to countries such as Japan with limited physical space to locate solar and wind power facilities is expected to be a \$10 billion-a-year economy by 2040.<sup>11</sup> With our wealth of wind, sun and sea, the conversion of renewable energy to hydrogen for export could make Australia a global leader in energy exports.

## The role of science and technology in a net-zero emissions economy

STA also sees an opportunity for Australia from the policy certainty provided by a proposed National Climate Change Framework. Policy certainty strengthens the conditions for further investment in research and innovation. This investment in research will help build on Australia's already high quality science and technology work.

As is too often the case, Australian innovations do not always translate into new products and markets for the Australian economy. But climate change is a global challenge and solutions developed in Australia can be exported to a global market.

A national framework that delivers stronger policy certainty and long-term planning would help to give businesses the surety they need to invest in Australian solutions. What better way to develop and commercialise solutions to climate change than by reaping the benefits of Australian innovation at home - and also in a fledgling export market abroad?

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