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## **BUILDING LONG-TERM AUSTRALIAN COMPETITIVE ADVANTAGE THROUGH A CLEAN COVID-19 RECOVERY**

Submission to the Australian National COVID-19 Coordination Commission

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### **1. Executive summary**

**In comparison to global peers, COVID-19 economic recovery narratives in Australia have been noticeably focused on short-term economic outcomes, rather than long-term prosperity.**

**A lack of investment in future industries puts the nation at risk of losing long-term global competitive advantage. This is particularly true for emerging clean industries, which are receiving significant support in foreign nations.** For example, in hydrogen, Australia's recent AUD300mn fund is dwarfed by a single USD5bn (AUD7.2bn) green hydrogen project in Saudi Arabia, and recovery spending of EUR9bn (AUD15bn) committed to green hydrogen in Germany.

Since March 2020, the Smith School's economic recovery project at the University of Oxford, has helped nations around the world orient economic recovery packages towards clean initiatives. We find that Australia has one of the highest risk profiles for losing competitive advantage to nations with more generous approaches to clean fiscal spending. One of our [recent papers](#) demonstrates how clean stimulus spending can outperform traditional stimulus spending on both climate and economic metrics (see figure in Appendix 1).

The Smith School is beginning a detailed (funded) economic modelling exercise to determine national and regional job and long-run economic multipliers of clean stimulus policies in case study nations. **There is scope to include Australia as one of these nations if this would be useful for the NCCC.**

### **2. Context for a clean recovery**

In the wake of COVID-19, nations are investing heavily (in excess of AUD13tn) in economic rescue measures to protect lives and businesses, as well as recovery stimulus packages to reinvigorate their economies. As the Smith School has witnessed first-hand, there is growing enthusiasm for integrating long-term objectives to this spending.

Governments are increasingly interested in recent research demonstrating how investment in climate-friendly projects and technologies can be remarkably strong for both stimulating short-term economic activity and setting industries on the right path for long-term growth.

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Many nations are already acting on this. Germany has announced a EUR40bn (AUD65bn) plan for climate spending, supporting energy efficiency, electric vehicle sales, and green hydrogen, among other clean policies, as part of a EUR130bn (AUD212bn) stimulus package. Closer to home, the Republic of Korea has proposed over KRW12.9tn (AUD15bn) on green recovery spending. Canada has announced intentions to develop a national hydrogen strategy, joining the EU, Japan, South Korea, Australia, and numerous other economies, in doing so.

Given the need for recovery spending amidst the COVID-19 pandemic and associated recession, Australia should look to solidify its position as a leader in industries of the future. Unquestionably, many of those industries will be green.

While Australia has shown some small promising progress, with a AUS\$300m hydrogen fund to advance its national strategy, substantial new investments by competitors (Germany and Saudi Arabia, amongst others) renders this inadequate. For Australia to capitalise on its competitive advantage and capture market share, greater ambition and investment is required to build large-scale green hydrogen deployment and accelerate the research and development (R&D) of new hydrogen technologies. As it becomes increasingly clear that these technologies will form the basis of tomorrow's economy, a level of investment on par with Germany's EUR9bn (AUD15bn) commitment to green hydrogen may be more appropriate to ensure that Australia is not left behind.

### 3. Existing evidence base for a clean recovery

In a peer-reviewed May 2020 Oxford Review of Economic Policy paper, we partnered with Nobel laureate Joseph Stiglitz and other world-leading economists to demonstrate the economic and climate potential of clean recovery policies. We found that measures such as investments into energy efficiency schemes, clean infrastructure, and clean R&D best capture these attributes.

These findings support those of existing academic literature on clean stimulus spending. [One model suggests](#) that every \$1m of stimulus spending generates 7.49 full-time equivalent (FTE) jobs in renewable energy infrastructure and 7.72 FTE jobs in energy efficiency, but only 2.65 FTE jobs in fossil fuel sectors. [Another study finds](#) that one additional green job is associated with 4.2 new local jobs in non-tradeable, non-green activities, a multiplier significantly higher than those in mining or shale gas, for example.

As such, clean fiscal stimulus policies share desirable attributes for economies faced with a short-term economic recession and the economic and social costs of a changing climate. While solving for future climate goals, low training requirements of clean projects means that labour can be quickly deployed, providing an immediate economic boost. Meanwhile, employment gains in energy infrastructure is often skewed towards the construction phase, creating a timely opportunity for restoring economic growth.

A subset of these technologies show particular promise, given strong technological progress in the past decade. As the Australian Government has recognised, hydrogen is especially advanced and is at a key juncture – with large and targeted investment, the industry is poised to grow rapidly. Clean energy infrastructure has become increasingly competitive on economic grounds and shovel ready projects in this area should be accelerated as global reliance on fossil fuels necessarily falls.

### 4. Recommendations for Australia (abridged for submission)

**The COVID-19 recovery has precipitated a race to the top in several emerging clean technologies.** In particular, governments have begun investing billions into new clean energy infrastructure and R&D. To maximise economic growth and prosperity, the Australian Government should seriously consider action in these areas through greater spending and reducing red tape. We identify three priority spend areas particularly relevant to Australia:

1. **Green hydrogen and clean energy assets.** With one of the world's greatest endowments of renewable energy resources, the economic potential of green hydrogen in Australia is exceptionally strong. However, global competition is accelerating rapidly in hydrogen with significant COVID-19 recovery attention from nations including Canada, France, Korea, Saudi Arabia, Norway, the United Kingdom, and Germany, with the latter committing EUR9bn (AUD15bn) of spending towards the technology. Early actors such as the EU will enjoy a first-mover advantage that grants a global comparative advantage extending into the long term - the evidence for such an advantage has [already been identified in climate mitigation measures](#). Germany has dedicated EUR2bn (AUD3.3bn) to building new international hydrogen partnerships, while Saudi Arabia is attracting [significant private capital](#) to accelerate its own efforts. It is not yet too late for Australia to position itself as an early leader in green hydrogen, however, considering the COVID-19 stimulus actions of other nations, time is quickly running out. Further funding to accelerate and scale green hydrogen production would be consistent with the Government's National Hydrogen Strategy and compliment existing R&D commitments.
2. **Transmission grid infrastructure.** The [2020 Integrated System Plan \(ISP\)](#) produced by the Australian Energy Market Operator (AEMO) outlines a technically feasible, economically optimised pathway for enabling the energy transition while maintaining grid security and reliability. Inadequate grid infrastructure remains one of the biggest constraints preventing high rates of renewables penetration in Australia. A commitment to enhanced grid infrastructure, with an accelerated construction timeline, would unlock faster solar and wind new connection approvals, enabling otherwise shovel-ready, privately funded, renewable energy infrastructure projects to promptly begin. In this way, new transmission infrastructure could bring exceptionally high short-term employment multipliers, support significant future renewable energy investments, maintain grid security, and decrease Australian electricity prices.
3. **Clean R&D, with a focus on demonstrator projects.** Fiscal support of clean R&D has a rich history with well-documented economic success. For example, the Advanced Research Projects Agency–Energy (ARPA-E), introduced as part of the American Recovery and Reinvestment Act (ARRA) in the United States following from the 2008/09 Global Financial Crisis. The ambitious and active approach of ARPA-E was [dynamic and sustainable](#), quickly moving promising demonstrator projects from development to deployment. With strong research infrastructure and existing industrial advantages, Australia is well placed to build competitive advantage in areas like clean steel and clean agricultural solutions. This would cement Australia's research infrastructure and set the economy on a sustainable path for future clean growth.

#### 4. Opportunity for deep modelling case study in Australia

In partnership with the IMF, and Vivid Economics, the Smith School is beginning a comprehensive modelling project to compare the economic, social, and environmental outcomes of clean spending initiatives to traditional initiatives globally. The modelling will employ advanced econometrics and network economics approaches to ascertain job and GDP impacts at the regional level. The output will push beyond traditional projections for gross job creation and consider where exactly jobs could be created and the degree of skill match.

**We hypothesise that Australia's unique natural resource endowment and industrial capacity profile could result in some of the highest economic multiplier and job multiplier figures amongst high-income nations.**

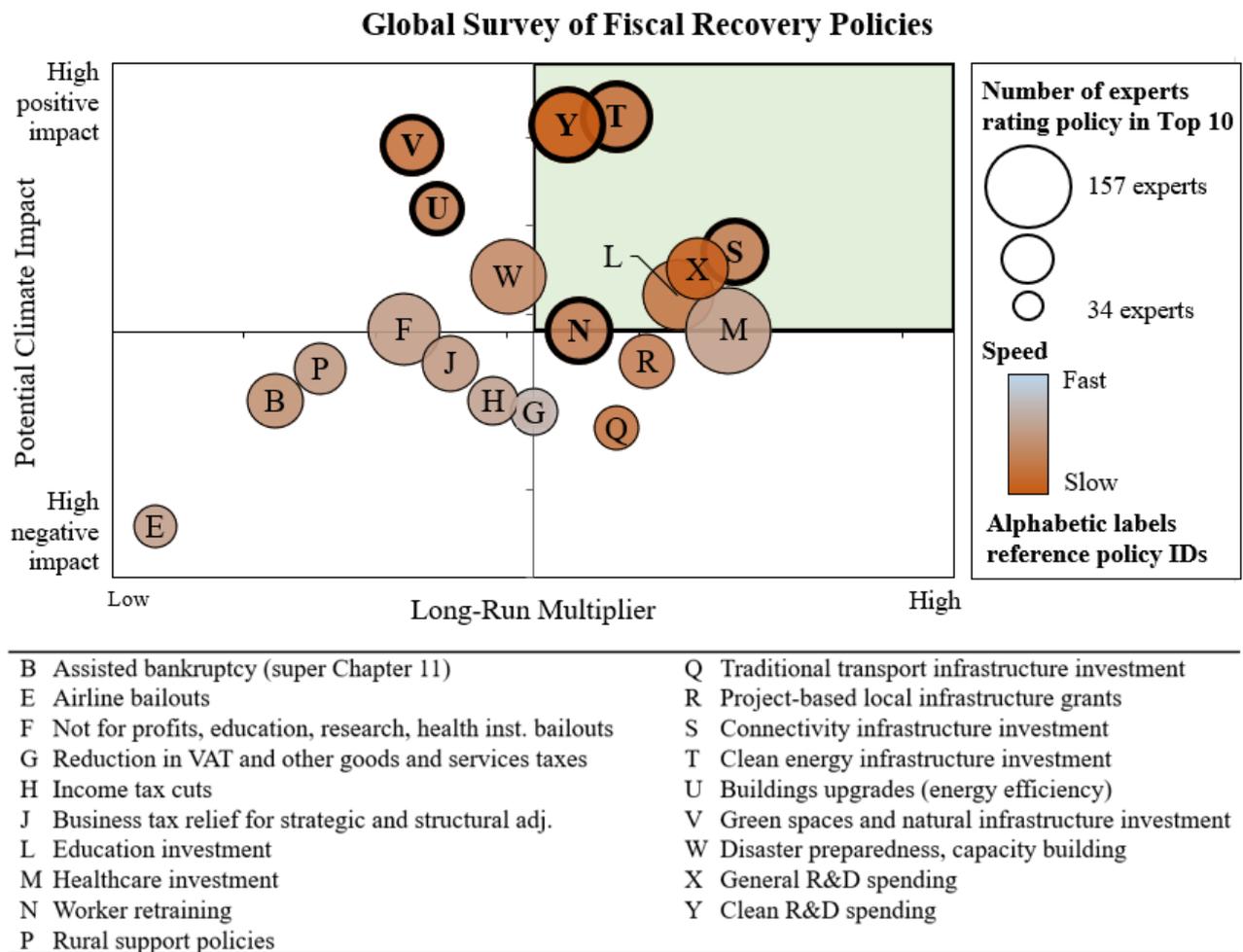
**If the NCCC were to provide an expression of interest in this modelling, the Smith School would prioritise a policy case study in Australia.**

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## Appendix 1: Excerpt from Hepburn et al. 2020



**Figure 1.** Results of our April 2020 survey of 230+ leading global economists, testing 25 fiscal policy types. Bubbles represent the 19 “recovery” policies only. Policies with higher long-run economic multipliers have greater economic impact per dollar spent. Faster policies achieve desired economic impact more quickly. Policies with positive climate impact are likely to support efforts to achieve net-zero emissions. Bubbles in bold are loosely defined as green policies.