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Pre-Budget Submissions: prebudgetsubs@treasury.gov.au

Pre-Budget Submission – Federal Budget 2021-22

The Clean Energy Council is pleased to provide a submission on priority investment areas to inform the development of the Federal Budget 2021-22.

The Clean Energy Council (**CEC**) is the peak body for the clean energy industry in Australia. We represent and work with around 900 of the leading businesses operating in renewable energy and energy storage. We also represent over 7000 accredited solar and battery installers and over 1000 businesses approved through our Solar Retailer Code of Conduct. We are committed to accelerating Australia's clean energy future.

The clean energy industries' priorities for the 2021 Federal budget are as follows:

- **Place *A Clean Recovery* at the centre of Australia's economic recovery plan**
- **Establish a Hydrogen Co-ordinator-General to drive the delivery of Australia's National Hydrogen Strategy**
- **Establish a \$50 million package of measures to support the needs of Australia's clean energy workforce and to position Australia as the global leader in clean energy skills**
- **Establish a future transmission fund to accelerate investment in Australia's electricity network and unlock the next wave of renewable energy investment**
- **Establish a taskforce to define, and advise the government on, priorities, terms, and timing for Australia's exit from electricity generated from coal**

As Australia continues the task of recovering from its first recession in three decades, it can stimulate jobs and private investment while establishing a globally competitive economic advantage through a swift transition to cheap, reliable, clean energy.

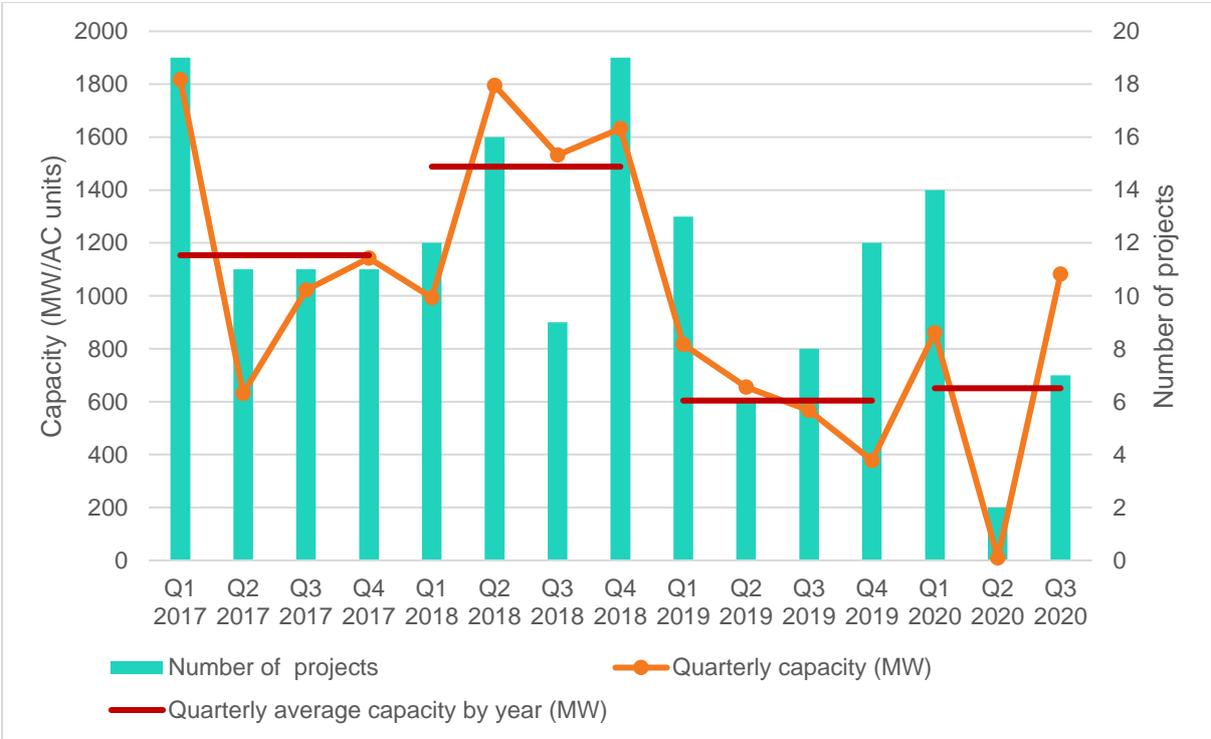
1. Place *A Clean Recovery* at the centre of Australia's economic recovery plan

Since 2017, the sector has built or committed 196 large-scale renewable energy projects, valued at more than \$30 billion and providing more than 25,000 peak construction jobs. Investment in large-scale wind, solar and storage has been unprecedented, and a record number of Australians have invested in the installation of rooftop solar and household battery solutions.

Today clean energy employs over 28,000 people, from project managers and construction workers on major project sites through to the 7,000+ accredited installers of rooftop solar and household batteries in our towns and suburbs. Many of these workers are in rural and regional Australia.

Yet Australia’s clean energy transition is in its early days. The renewable energy workforce can grow much larger. It could provide tens of thousands of new construction and operational jobs at a time when the country needs the new employment opportunities most, while delivering investment in long-life infrastructure that reduces operating costs for households, business and industry, and lowers Australia’s greenhouse gas emissions.

For this to occur, the sector must be stimulated over the next three years. Despite remarkable achievements in the past three years, investment has slowed due to the expiry of the Renewable Energy Target (RET), lower electricity prices, the inadequacy of Australia’s transmission network and significant barriers to grid connection which have deterred private investors and developers.



Financially committed projects by MW capacity and number of projects – red line indicates annual average of quarterly data.

The long-term fundamentals of investment in clean energy remain strong and compelling. We can repeat the success of ‘the big build’ in this essential infrastructure to support Australia’s economic recovery with the Commonwealth Government leadership supporting a co-ordinated effort to remove the barriers to investment.

Substantial levels (26-50 GW) of new private sector capital investment are needed for Australia to replace the certain exit of more than 15 GW of thermal generation over the next 15 years. The existing pipeline of wind and solar projects that already have planning approval equates to over 30 GW. If these projects alone were to be brought forward to assist Australia’s economic recovery, they could deliver over \$50 billion in investment (particularly in regional and rural areas) and over 50,000 new direct jobs (and many more indirect jobs).

Stimulating this investment in the electricity sector could have a much wider benefit to the Australian economy by supporting the competitiveness and expansion of energy-intensive mining, minerals processing and industrial manufacturing – opportunities which have been highlighted as national priorities within the Government’s Modern Manufacturing Strategy.

We urge the Australian Government to place the CEC’s *A Clean Recovery* proposal at the centre of Australia’s economic recovery plan. *A Clean Recovery* sets out a wide range of measures to unlock pent-up private investment, comprising smart regulatory reform and cost-effective initiatives that place minimal demands on government funding or impose on electricity customers.

2. Establish a Hydrogen Co-ordinator-General to drive the delivery of Australia’s National Hydrogen Strategy

The National Hydrogen Strategy established a vision of Australia as a leading exporter of clean hydrogen within the next decade, with 57 associated actions to be delivered by the Australian Government working in collaboration with states and territories.

The economic potential of the sector is large – up to \$26 billion annually in additional GDP and 16,900 new jobs by 2050¹. However, the delivery of the strategy is suffering from the lack of coordination. A national body could co-ordinate efforts across governments and industry, oversee progress against the delivery of the agreed actions, and ensure that we deliver on our stated objectives.

The potential size of the industry, combined with the size of the task in developing a large-scale industry from scratch, warrants the establishment of a national Hydrogen Co-ordinator-General that can spearhead the collective effort and maintain momentum against the following key areas:

- developing production capacity supported by local demand
- responsive regulation
- international engagement
- innovation and research and development (R&D)
- skills and workforce, and
- community confidence.

We encourage the Australian Government to establish and appropriately fund a Hydrogen Co-ordinator General, supported by a well-resourced team, to ensure that Australia realises its clean hydrogen ambitions.

3. Fund a package of measures that ensures Australia can deliver the clean energy jobs of the future for Australia and for export to the world

Systemic issues are creating barriers to the development and growth of the clean energy workforce. A package of measures that focuses specifically on the clean energy workforce is needed in the near-term to support the rapid pace at which renewable energy developments are taking shape and the enormous job creation opportunities that these present.

According to CEC commissioned research, several current and future skills shortages exist in the clean energy sector. At the professional level, Australia’s STEM skills deficiency is affecting the clean energy workforce through a shortage of engineers, in particular grid engineers, electrical

¹ Deloitte (2019) *Australian and global hydrogen demand growth scenario analysis*; COAG Energy Council – National Hydrogen Strategy Taskforce, November.

engineers and civil engineers. This issue has been exacerbated by COVID-induced border restrictions and is only likely to increase with the growth in renewable energy projects. At the trade level, there exists a misalignment between the needs of renewable energy employers – at both the household and utility-scale – and the offerings of the VET sector. A shortage of electricians with the skills and experience to work in renewable energy is already affecting the workforce, a fifth of these consisting of electricians or electrical trade assistants. Further, by 2035, up to 70 per cent of the clean energy workforce will be needed in remote and regional Australia. A genuine opportunity exists to create employment for regional Australia; however, this will only be possible if necessary training systems are supported.

A package of measures that focusses on the clean energy jobs of the future could address these barriers by targeting specific issues.

Higher Education: The package should seek to increase the number of engineering enrolments in universities. Recent reshaping of the Commonwealth Grants Scheme reduces base funding to engineering subjects, which is likely to drive numbers down. It should also include special funding opportunities for post-graduate studies in engineering fields relevant to clean energy.

Vocational Education and Training: The package should also seek to support VET systems in meeting the needs of the clean energy sector in the near- and medium-term. The CEC is working with registered training organisations (**RTOs**) across Australia to help them build strategies and offerings that meet the needs of the renewable energy sector. The CEC is also working with state governments to ensure that renewable energy training is included on the subsidised lists of courses. However, there is also a role here for the Australian Government to offer a competitive grant scheme for RTOs to finance new equipment, such as electrolysers for fuel cell courses or towers for wind turbine training courses, new licenses for globally recognised training, or to fund market research into the need for certain training types. This would reduce the financial risk for RTOs seeking to establish new offerings in the clean energy space. The scheme should be available to both TAFEs and independent providers with a preference given to regional institutions. The Australian Government could financially support the creation of mobile clean energy RTOs that would travel to regional areas, particularly those located within proposed renewable energy zones, to provide the skills base needed to support new projects. By 2025, more than two thirds of the clean energy workforce could consist of remote and regional Australians if the skills base exists. In the electrical trades many elements of the training cannot be done remotely as they require a physical presence. This puts remote and regional Australians at a disadvantage when there are no local RTOs. The Australian Government can play a role in improving the diversity of students in the clean energy VET system. Grants could be offered for women and other under represented groups to undertake clean energy training. Incentives could also be offered to employers that employ a more diverse workforce.

Evidence-base: Finally, the package should fund and steer research that supports a forward-thinking agenda around clean energy jobs. Energy policy discussions, roadmaps, and modelling should all be accompanied by research into the jobs and skills needed to complement and support those technology visions. In particular, and in the immediate, the Australian Government should fund a suite of research that seeks to understand:

1. The size and characteristics of the workforce supporting an Australian hydrogen economy;
2. The employment challenges and opportunities of an expanded Australian bioenergy strategy;
3. The reskilling needs of moving from thermal energy to renewable energy, natural gas to hydrogen and internal combustion vehicles to electric vehicles;
4. The employment challenges and opportunities of developing a green manufacturing industry based on cheap Australian renewable energy;

5. The potential size and location of a strong offshore wind industry and the size and characteristics of the workforce to support it; and
6. Employment associated with all AEMO ISP modelling

We recommend that the Australian Government establish a \$50 million package of measures to support the needs of Australia's clean energy workforce and to position Australia as the global leader in clean energy skills.

4. Establish a future transmission fund

The transition to a 21st century energy system requires investment in Australia's transmission network. Without it, new generation investment is stifled, constraining existing generation and resulting in increased risks to energy security and reliability and higher power prices for consumers.

The Australian Energy Market Operator (**AEMO**)'s 2020 Integrated System Plan (**ISP**) identifies a roadmap for transmission investment, including the highest priority transmission projects that have a clear business case to benefit electricity customers in respect to prices, security and reliability of the energy system.

The Commonwealth Government's commitment to funding for early works to progress all major priority transmission projects in the ISP demonstrates the importance of these projects. However, the current Regulatory Investment Test for Transmission (**RIT-T**) remains a challenge and is stalling the ability to deliver these projects quickly. Network service providers and private investors have a strong willingness to own and operate new transmission infrastructure, but the regulatory regime does not provide the level of certainty for substantial and timely financial investment in long lived assets.

The clean energy industry has called for reform for over a decade, particularly to the RIT-T, to accelerate transmission build to the benefit of consumers. Commonwealth Government involvement remains crucial to accelerate these strategic transmission projects to unlock the next wave of renewable energy investment, drive down power prices and deliver an economic and jobs boost through the construction of these transmission projects and related renewable energy projects throughout regional Australia. The Government's Grid Reliability Fund's scope is too broad to provide competitive or concessional finance for transmission – it is intended to support new energy generation, storage and both transmission and distribution infrastructure, including eligible projects shortlisted under the Underwriting New Generation Investments program.

We urge the Government to provide a dedicated capital funding program focused on accelerating a nation-building transmission program. The fund should be available for the ISP's priority projects,² which AEMO has estimated would cost approximately \$12.3 billion. The fund could be extended to include all ISP projects, which is estimated to cost approximately \$20.2 billion. As projects are built and costs are recovered, the funding could be recycled to fund subsequent rounds of transmission projects that will build Australia's electricity backbone of the future.

² I.e. Projects deemed as actionable and actionable with decision rules.

5. Establish a taskforce to define, and advise the government on, priorities, terms, and timing for Australia’s exit from electricity generated from coal

In line with and supporting the above recommendations, we urge the Australian Government to begin an informed, honest, and inclusive conversation about the end of coal-powered electricity in Australia. Examples of industrial transitions both in Australia and internationally suggest that a successful transition – that is a transition with minimal negative impacts to local economic and social conditions – is a planned transition. The phase-out of coal-power in Australia is inevitable. However, the way the phase-out occurs will determine the impacts on specific communities and workers. Around 10,000 Australians are employed in the domestic coal sector, and in some regions that workforce represents up to 5% of the community. Supporting these workers through a planned transition means providing communities with clarity, certainty, and options.

We recommend that the Australian Government establish a taskforce with a mix of relevant stakeholders to consult on a timeline for closure of Australia’s domestic thermal coal industry, including what criteria should be considered in setting such a timeline, and what measures are needed to support such a timeline.

In closing, a Clean Recovery can leverage investment in renewable energy and energy storage to assist the national economic recovery effort, creating thousands of jobs, empowering consumers, growing regional communities, lowering power prices and creating the smart infrastructure of the future to cement Australia’s place as a global clean energy super power.

We would welcome the opportunity to discuss these proposals further.

Yours sincerely,



Kane Thornton
Chief Executive