



27 January 2023

Pre-Budget Submission from the Clean Energy Council

The Clean Energy Council welcomes the opportunity to make a pre-Budget submission ahead of the forthcoming 2023-24 Federal Budget.

The Clean Energy Council is the peak body for the clean energy industry in Australia. We represent and work with more than 1000 businesses operating in Australia across solar, wind and hydro power, energy storage and renewable hydrogen.

The forthcoming Federal Budget marks a historic opportunity for the Australian Government to place the clean energy transition and climate action at the centre of its economic agenda, and unlock the immense potential that Australia has to power the nation – and other international markets – with low-cost, renewable energy.

The world is faced with an urgent challenge to slash emissions by almost half (43 per cent) by 2030 and reach net zero emissions by no later than 2050 in order to contain warming to 1.5°C, in which the worst impacts of climate change can be contained.

The task is immense, and Australia can play an outsized role in both decarbonising its own economy, and assisting other countries to decarbonise, drawing on its abundant, low-cost renewable energy resources – unequalled in the developed world – paired with our significant mineral resource endowment.

Our low-cost, renewable electricity could be used to make green hydrogen, ammonia, steel, iron and aluminium for domestic use and exports. We also have the potential to export bulk green electrons directly through undersea high voltage direct current cables.

These renewable energy resources, supported by smart, efficient and long-term policy frameworks, can give rise to a new era of economic expansion and regional development, as has been outlined in substantial detail by economist Ross Garnaut, and other experts over recent years.

Since coming to power in May 2022, the Albanese Government has increased Australia's level of ambition on emissions reduction and committed to delivering a range of programs to support accelerated renewable energy deployment, including the landmark \$20 billion Rewiring the Nation program, the \$1.9 billion Powering the Regions Fund and the \$3 billion National Reconstruction Fund. These complement existing avenues for the delivery of grants and concessional finance to renewable

energy and energy efficiency projects through the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC).

While this government support is positive and organisations such as ARENA and the CEFC have played vital roles in the development of the renewable energy sector in Australia, the CEC has grown increasingly concerned in recent months that the funding and institutional support that is envisaged will be wholly inadequate to attract the necessary capital, technology and people to realise our renewable energy superpower potential.

Specifically, the passing of the *Inflation Reduction Act 2022* by the United States Congress in August 2022 has precipitated the start of a global clean energy investment race, which Australia is at now at great risk of losing if it does not act swiftly.

This mammoth package of policies and incentives, which targets US\$369 billion (AUD \$520 billion) at clean energy and climate change initiatives, is a very positive development for the global decarbonisation agenda.

We are however, already beginning to hear examples from across the renewable energy and hydrogen sectors that private enterprise is rapidly pivoting their forward investment strategies to place a much larger focus on the North American market (Canada has also taken action to match elements of the US legislation). This is likely to have a profound impact on the flow of global capital, technology, intellectual property and people away from Australia (and other markets deemed less favourable than the US).

Game-changing incentives are redirecting global capital flows

Just a few of the key measures within the *Inflation Reduction Act* that we would like to draw your attention to include:

1. The extension of a production tax credit for wind and solar farms, which will effectively subsidise plants by between US 0.3-1.5 cents per kilowatt hour (or US\$3-15/MWh) for plant that begins construction by 1 January 2025.
2. A clean hydrogen production tax credit providing a US \$3/kg subsidy for renewable hydrogen for a 10-year period, provided that the construction of the hydrogen plant (electrolyser and balance of plant) begins by 31 December 2032. This tax credit can also be paid out directly (in cash, rather than tax offsets) in the first five years making it easier to monetise. This incentive is expected to make renewable hydrogen immediately cost competitive with gas-based hydrogen within a couple of years, and indeed production cost *negative* by the end of this decade. Consultancy BCG expects that it would see US-produced hydrogen become the most competitive option for North Asia – a market which has been

clearly articulated as a major export target for Australia within our National Hydrogen Strategy.

3. In lieu of the production tax credit, clean hydrogen proponents could alternatively claim an investment tax credit of up to 50 per cent of the cost of the hydrogen plant (where wage and apprenticeship standards are met), once again with a 'direct pay' option for the first five years.

We also note the generous and wide-ranging package of incentives to support the electrification of homes, vehicles and industry across the United States, which will lead to both an increase in consumer spending and major energy productivity improvements across the economy. Examples of these measures¹ include:

1. The High-Efficiency Electric Home Rebate (HEEHR) Program, which provides point-of-sale consumer discounts to enable low- and moderate-income households across America to electrify their homes, delivering up to US \$14,000 per household (the highest subsidies being reserved for low-income households).
2. A tax credit of up to US \$2000 per year for heat pumps for space heating/cooling and water heating
3. A 30 per cent uncapped tax credit for rooftop solar and battery storage
4. A clean energy manufacturing tax credit, which will drive down the overall cost of domestic clean manufacturing — including heat pump manufacturing — by cutting capital costs.
5. US \$200 million in electrification and energy efficiency contractor training grants, as well as contractor incentives per qualifying electrification and energy efficiency projects.
6. Up to US \$7500 in tax credits for the purchase of an electric vehicle, provided that it meets manufacturing requirements in terms of the use of critical minerals and battery components.

The *Inflation Reduction Act* is vast in its scope and implications for the development of a low-emissions US economy over the next two decades, and the measures detailed above are just a small sample of the game-changing incentives that have been announced in the United States. A number of other measures have also been introduced to stimulate domestic clean manufacturing and industrial decarbonisation.

¹ See a comprehensive range of fact sheets on the electrification initiatives included within the *Inflation Reduction Act* on the Rewiring America web site at <https://www.rewiringamerica.org/ira-fact-sheets>.

It is immediately clear however that the package dwarves the level of support being provided by Australian governments for the clean energy transition. The Australian Government has taken a range of decisive and welcome steps to provide greater certainty and confidence for clean energy investment in Australia. This includes investment in transmission augmentation and a range of grant funding and concessional loans, legislating strong climate change targets and accelerating reform of the energy market. **Australia has proven to be an attractive place for renewable energy investment. However, the scale of incentives now being offered in the United States and elsewhere around the world, warrants further consideration of policy incentives being provided for clean energy investment in Australia.**

Most other major economies have adopted either a price on carbon on the electricity sector or an expansive renewable energy incentive scheme. Australia's Renewable Energy Target (the 'RET') has been met, and demand for new large-scale generation certificates is being largely supported by voluntary demand from the private sector. The RET is due to wind up at the end of 2030 and there is no economy-wide carbon price envisaged to replace it.

Given the long-lead times for major infrastructure projects including wind, solar and energy storage facilities, 2030 now represents the 'near term', and the Australian Government has no mechanism in place which will explicitly pull new projects through to financial close. While the market fundamentals for deployment of renewable energy remain positive, the sector operates in a complex patchwork of state government interventions which are both messy and less predictable for investors to understand.

Set alongside the generous incentives for investment in the US, which are now being matched by other major economies, it is clear that Australia is at great risk of not being able to attract either the necessary capital or the equipment (eg. wind turbines blades and towers, solar modules, batteries) in order to complete its own domestic clean energy transition and realise its even greater potential as a renewable energy superpower.

This also presents a challenge to Australia's domestic electricity supply. Higher energy costs have been the result of Australia's over reliance on coal and gas generation. Acceleration of renewable energy deployment is crucial to restore electricity prices to a more sustainable level. Further, the Federal Government's forecast for 82 per cent renewable energy in the National Electricity Market by 2030 assumes an accelerating rate of renewable energy deployment. In 2022, 2.2GW² of large-scale renewable

² Green Energy Markets data for large-scale renewable energy projects completed in 2022

energy projects were completed across the NEM, compared with the necessary average deployment rate of ~3.5GW of large-scale renewables per annum. While industry is confident this can be achieved, it is contingent on Australia sustaining our global competitiveness in order to attract the necessary capital, equipment and people necessary.

Global supply chain capacity is being gobbled up by the most attractive markets

As a 'taker' rather than a 'maker' of equipment, Australia is dependent on global supply chains which are now being directed by the large clean energy players to the most attractive markets. For example, the European Union must build 350 GW of new wind energy capacity by 2030 to meet its renewable energy goals, and the US is now expected to build 290 GW of wind capacity by the same timeframe. As a result, we understand that in the order of 90 per cent of global turbine supply has already been contracted over the coming years to a small number of energy majors (only a few of whom are active in Australia).

Australia should actively explore developing and attracting domestic manufacturing capabilities to support our clean energy ambitions in areas of comparative or strategic advantage. Regardless of these plans however, our requirements will far exceed what any new domestic manufacturing capability will be able to fulfil, and Australia will need to continue to draw on well-established global supply chains in order to efficiently build the necessary capacity.

What we need to do

With the quickening pace of global decarbonisation efforts and the intensifying competition for capital and supply chains, Australia faces a clear and present danger to our domestic clean energy transition and renewable energy superpower aspirations.

Therefore, in this forthcoming Federal Budget, we urge the Australian Government to develop a comprehensive **Renewable Energy Superpower Package** which:

1. Sets a **concrete national target for renewable energy deployment in Australia (rather than relying on forecasts), matched by mechanisms to support the big clean energy build we require.** This could include an enhanced Renewable Energy Target with an increased legislated target to 2030 and extended timeframe to at least 2035. An increase and extension to the RET could provide the cleanest and simplest mechanism for providing a strong investment signal that improves our competitiveness with the US and other major economies that have adopted a step change in their policy incentives for clean energy. We also note there is a clear correlation between higher shares of renewable electricity generation and lower electricity prices, meaning that this measure would accelerate downward pressure on consumer electricity bills.

2. **Develops a national electrification plan and package**, which:
 - establishes clear goals for the phase out of fossil fuels from homes, light commercial businesses and transport
 - provides incentives for households and business to accelerate the switch to more efficient electric appliances and vehicles
 - commits to the introduction of minimum fuel efficiency standards for vehicles, which are in line with our major global trading partners, as soon as possible
 - provides funding to accelerate government and private investment in enabling charging infrastructure.
3. **Stakes our early claim in the emerging green hydrogen industry**, which can help to further stimulate Australia’s renewable energy build-out, support the expansion of domestic green industries (such as green iron and steel), and ultimately overtake and replace our declining fossil fuel export sectors. Specifically, we call on the Treasury to evaluate the introduction of a Renewable Hydrogen Production Tax Credit, which could deliver an immediate step change in the competitiveness of green hydrogen (and its derivatives, such as green ammonia) and allow Australian-based projects to secure a foothold in emerging international markets. Without this support, the industry is deeply concerned that we will miss our first-mover advantage, and long-term contracts will be secured by other suppliers in the US, Middle East and Africa.

Australia also needs a long-term Renewable Energy Superpower Masterplan

Beyond the urgency for an immediate funding package of incentives to stop the continental drift of green finance and investment to other markets, Australia must develop a long-term masterplan to guide the delivery of its superpower vision.

Ross Garnaut’s recently released book, *The Superpower Transformation*³, estimates that meeting the *full* Superpower opportunity (including the replacement of iron ore exports with ‘green’ iron, green aluminium and many other opportunities) ‘*would require in the order of 10,000 TWh of annual power generation*’ – which represents more than 50-times the current capacity of the NEM. On Garnaut’s estimates (based on current technologies and costs), the cost of this investment in the electricity sector alone would be in the order of \$6 trillion.

³ Garnaut, R., *The Superpower Transformation: Making Australia’s Zero-Carbon Future* (2022), Latrobe University Press

Similarly, the Net Zero Australia study⁴, currently being undertaken by researchers at the University of Queensland, University of Melbourne, Princeton University and Nous Group), which is ‘*analysing net zero pathways that reflect the boundaries of the Australian debate, for both our domestic and export emissions*’ finds in its ‘Electrification+ scenario’ that electricity generation capacity would expand to 40-times the capacity of the NEM in 2050.

These scenarios have enormous implications for policy makers. They demand strategic planning, investment and collaboration at federal, state and territory level in terms of land-use planning, transmission planning and investment, supply chain needs, workforce requirements, and building and maintaining social acceptance for these major infrastructure projects. Some of this work is already underway – eg. the Australian Government’s *Rewiring the Nation* plan, and the planning and development of renewable energy zones across NSW, Victoria and Queensland. However, to date, these efforts are primarily focused on meeting the needs of decarbonising our domestic electricity markets, and not on the much larger renewable energy superpower opportunities across all states and territories.

In response, the masterplan should clearly articulate Australia’s renewable energy superpower vision, and establish a holistic strategy for achieving it. The strategy should identify:

1. the key opportunities for Australia
2. the priority markets in which Australia has a comparative advantage
3. the implications of pursuing these markets – for First Nations and regional communities, for land use, electricity generation and transmission build, mineral resources, water resources, domestic manufacturing and processing, supply chain planning, workforce requirements, and
4. a policy framework which can guide government agency planning and support, and incentivise private sector investment over the long term.

Given the urgency of the race for capital, materials, equipment and a skilled workforce, this national strategy must be prioritised for development in 2023.

We note that the Federal Government has requested and will shortly receive a detailed analysis from Dr Alan Finkel on the implications of the *Inflation Reduction Act* and

⁴ <https://www.netzeroaustralia.net.au/>

advice on exploiting our comparative advantages in the global decarbonisation race. This analysis should be a key input into the development of a national masterplan.

Conclusion

Australia has a transformative opportunity before it, which should have wide-ranging ramifications for the nature and scale of the country's economic growth, trade and decarbonisation over the next three decades and beyond. But capturing this opportunity is not assured, and Australia must act swiftly to claim its rightful place as a renewable energy superpower.

We would welcome the opportunity to discuss this submission in further detail with you. Please contact Anna Freeman, Policy Director – Decarbonisation at afreeman@cleanenergycouncil.org.au should you wish to arrange a meeting.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Kane Thornton', with a stylized flourish at the end.

Kane Thornton
Chief Executive