

Dear Ministers and advisors,

The Clean Energy Council (CEC) has prepared the below briefing to summarise some of our key policy focus areas.

We hope the insights we provide here will be of use to you in the lead up to the next Energy and Climate Change Ministerial Council on the 24th of November.

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ECMC meeting – 24th November

The CEC has provided the below summary of some of the key issues currently affecting the clean energy industry. We hope this summary is helpful to inform officials and Ministers in the lead up to the meeting.

We have structured our summary on the basis of the briefing provided by Department of Climate Change, Energy, the Environment and Water (DCEEW) on Monday 16th October, which included an indicative outline of the agenda for the ECMC meeting. We have added some other topics which we consider may be of relevance to the Ministers' considerations.

ITEM 1 - First Nations Clean Energy and Emissions Reduction Advisory Committee Update

Contact: Dr Nick Aberle, Director of Energy Generation and Storage –
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Indicative agenda item

- The FNCEERAC has held 3 face-to-face meetings to date and a series of virtual briefings with support from a secretariat in the department. The next meeting is the 14 November 2023.
- The committee is providing advice to the development of the First Nations Clean Energy Strategy and is regularly engaged by other clean energy and emissions reductions program areas for strategic input.

CEC input

- The CEC is in the process of developing Best Practice Guidelines for renewable energy projects for First Nations engagement, participation and benefit-sharing. This is being



undertaken in a partnership with First Nations Clean Energy Network, KPMG and Industry. We're aiming to release the guidelines in Feb 2024.

- The CEC's guidelines will be structured around the 10 principles developed by the First Nations Clean Energy Network, and set out both minimum practice and leading practice across a range of issues.

ITEM 2 – Consumer Energy Resources (CER)/Distributed Energy Resources (DER)

Contact: Con Hristodoulidis, Director of Distributed Energy, Clean Energy Council – christodoulidis@cleanenergycouncil.org.au

Indicative agenda item

- An inter-jurisdictional CER Working Group has been formed under the National Energy Transformation Partnership to deliver on ECMC priorities.
- Final report on the ESB's CER Implementation Plan will be presented to Ministers in November.

CEC Input

- Australian households have played a large and important role in driving the decarbonisation of our electricity system. This will need to continue if we are to meet our net zero goals by 2050
- To date, Australians have invested approximately \$20 billion in the energy transition by putting solar PV systems on their rooftops. Homes within the NEM now boast over 17 GW of capacity coming from rooftop solar. Total rooftop solar PV installed capacity in the NEM will need to climb to 37 GW by 2030 and 55 GW by 2040 in order to align with AEMO's Step Change scenario
- However, the distributed energy policy landscape has not had the necessary attention. Below we outlined the key policy areas we urge the ECMC to address at their meeting.

1. Setting a national target

The CEC recommends setting a national rooftop solar, distributed energy storage and flexible energy targets for 2030 and 2040, reflecting the AEMO ISP Step Change scenario.

- There is no 'one' national policy or CER integration policy objective
- To date different governments and market bodies look at distributed energy through different lenses based on their State or operational needs
- This makes policy development complex and disjointed
- It also puts at risk achieving AEMO's ISP Step change forecasts for distributed generation, storage and flexible demand
- Setting over-arching targets in line with AEMO forecasts will bring focus, direction and co-ordination

2. Small-scale Renewable Energy Scheme

CEC recommends supporting distributed battery installation and flexible energy uptake through an expansion of the Small-scale Renewable Energy Scheme (SRES), which will enable Australia to better exploit the immense value of rooftop solar, and support a more flexible and resilient system.

- AEMO’s latest ISP forecasts that by 2032, over half of the homes in the NEM are likely to have rooftop PV systems, rising to 65 per cent with 69 GW capacity by 2050. This will make rooftop PV the largest source of electricity generation in the NEM. The integration and management of that level of distributed generation is forecast to require almost 30GW of distributed storage and flexible demand.
- The next phase of solar PV generation is to make solar generation more flexible by allowing it to be stored and consumed at different times of the day. There are direct benefits for storing solar PV generation:
 - Bill impact: allows consumers to store energy and use it at different times of day, therefore reducing their overall energy costs and bill. ECA Stepping Up report^[1] found that households that install rooftop solar and a battery can save up to \$1,250 per annum by 2030, projected to rise to \$1,420 by 2040.
 - Wider distribution system operating benefits: by storing and shifting demand, storage can also ensure we better utilise the distribution network by shaving evening peaks and soaking solar generation in the middle of day to avoid minimum demand events.
 - Decreases the costs associated with large scale energy transition: AEMO states that duplicating 20 per cent of the assumed orchestrated fleet by 2040 with utility scale assets will result in an additional capital spend of \$1.8bn^[2].

3. Establishing a Technical Standards body

The CEC recommends that the ECMC prioritise the inter-jurisdictional CER Working Group under the National Energy Transformation Partnership to establish a National Technical Standards body to be set up under the Clean Energy Regulator

- The CEC recently surveyed industry leaders and experts in the rooftop solar and battery sector to find out the biggest barriers to accelerating uptake in rooftop solar and household batteries

AUGUST 2023

TOP BARRIERS TO THE ROOFTOP SOLAR & BATTERY SECTOR



WHAT FACTORS ARE CREATING THE GREATEST CHALLENGES FOR YOUR BUSINESS IN AUSTRALIA?

<p>1 Inconsistent regulation and compliance processes across States and Territories</p> <p>2 Unpredictable or unhelpful government intervention in the energy market</p> <p>3 Distribution networks' grid connection rules and processes, including zero export, other control functions / limitations</p>	<p>4 Uncertainty regarding up-front government rebates for rooftop solar and batteries (e.g. SRES, state government programs)</p> <p>5 Attracting and retaining skilled trades (electricians etc) and professional (engineers etc) workforces</p> <p>6 Uncertainty about future market design e.g. market access for Virtual Power Plants</p>	<p>7 Unscrupulous retailing practices which undermine the integrity of the industry</p> <p>8 Local content requirements in some tender processes</p> <p>9 Supply chain challenges impacting availability, timing and prices for key components</p> <p>10 Recruiting talent from overseas</p>
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- The most significant reform program for CEC members at the moment is the establishment of a National Technical Standards body to overcome inconsistent regulation and compliance processes across States and Territories.

- Lack of national oversight in setting technical standards is leading to jurisdictions imposing different technical standards solutions that fragment the CER supply industry unnecessarily driving up costs and complexity for consumers
- The AEMC released its final report on technical standards on 21 Sept 2023 that found national consistent standards can generate at least \$500m of benefits for consumers.
- The SRES is underpinned by a strong compliance installer and product accreditation program overseen by the Clean Energy Regulator:
 - The SRES program has established a legislative framework and processes that ensure the compliance of solar PV retailers and installers with their obligations under the scheme and protect consumers against inappropriate sales and installation practices through;
 - a formal accreditation process of installers, including ongoing compliance arrangements, to ensure systems are installed by persons who are appropriately trained, competent and operate with integrity; and
 - an approval process for key components (i.e. solar PV panels and inverters), including ongoing compliance arrangements, to ensure components comply with relevant product standards.
- Combined with the expansion of SRES to batteries and orchestration services, this compliance framework can be leveraged to build a National Technical Standards body to provide industry with national oversight and guidance on the role of and implementation of appropriate standards to support the growing distributed energy market.

^[1] [Stepping-Up-Report-Final.pdf \(energyconsumersaustralia.com.au\)](#), page 14

^[2] [Integrating price-responsive resources into the NEM - consultation paper \(aemc.gov.au\)](#), page ii

4. Emergency backstop arrangements

The CEC recommends that a nationally consistent emergency backstop mechanism be developed that has guard rails as to how often (hours) the mechanism can be used and that it leverages and recognises current communication protocols arrangements implemented in South Australia and being considered in Victoria (namely, CSIP-Aus)

- The CEC understands the need for a genuine last resort emergency backstop mechanism for possible future minimum demand events to ensure the reliability of the system.
- The CEC believes that a combination of storage, pricing and flexible exports for solar PV will be the leading solutions to addressing minimum demand conditions.
- As a result, CEC believes clearly defining an emergency backstop response with appropriate guard rails as to when it will be triggered will better complement these market-based solutions. Such an approach is consistent with the arrangements for large scale load shedding. The use of arrangement like Lack of Reserve (in this case, Demand) warnings can provide signals to the market to respond to a minimum demand event and potentially avoid triggering an emergency backstop response.
- This can also be supported with improved AEMO and network planning, as well as forecast information and a cap on maximum hours per annum the emergency backstop arrangement can be used.
- Defining, setting guardrails and improving market information on minimum demand events will assist to better integrate emergency backstop mechanism with the other market-based options. Specifically, it should provide certainty to market participants who offer solutions that reward consumers to shift and/or store energy that they can confidently provide their

services to market without the risk of the emergency backstop mechanism impairing them through increasing use of the arrangement over time.

- The final emergency backstop mechanism should also provide more clarity to States currently planning to introduce emergency backstop arrangement on the need to implement testing procedures and network interfaces that align to South Australia Power Network's approach. This will allow to 'fast track' inverters already tested and approved as per the [CEC's Inverters with Software Communication Clients](#).

ITEM 3 - Orderly Exit Management Framework

Contact: Christiaan Zuur, Director of Market, Investment and Grid, Clean Energy Council – czuur@cleanenergycouncil.org.au

Indicative agenda item

- NSW is leading the detailed design of the OEM Framework, with support from market bodies, for ECMC consideration in November.

CEC Input

- The CEC has consistently called for the development of clear processes for the controlled exit of coal generation, coupled with mechanisms to accelerate and bring forward replacement renewable capacity
- Clarity for the market on exit dates for coal units is essential. Any uncertainty as to the likely dates of exit will affect forward estimates of wholesale market prices. This will act to deter investment in replacement capacity.
- Mechanisms must therefore include hard dates for exit, with requirements for clear exit plans for affected workforces.
- The hard dates for coal exit must be coupled with mechanisms to bring forward investment in replacement renewable generation and storage, which should occur ahead of the planned exit dates. We consider that mechanisms such as the Capacity Investment Scheme and various state based programs can play a key role here, however we recommend that these programs be expanded in scope and ambition, to ensure that replacement capacity is available well in advance of the planned exit date of coal units

ITEM 4 - Renewable Energy Supply Chain Action Plan

Contact: Anita Talberg, Director of Workforce Development, Clean Energy Council – atalberg@cleanenergycouncil.org.au

Indicative agenda item

- The Action Plan will support Australia's access to resilient and secure supply chains to achieve its energy transformation, meet national, state and territory targets while capturing economic opportunities associated with the transformation.

CEC Input

- The CEC has been advising the Department of Climate Change, Energy, the Environment and Water on industry supply chain and procurement priorities and challenges. The CEC has facilitated a consultation process for the Department with relevant OEMs and developers.

- Key issues arising are:
 - The importance of stable and ambitious renewable energy policy to provide certainty in supply chain elements.
 - The challenges posed by slow planning and approval processes at the state level and impacts on procurement processes.
 - Inconsistent policy, regulatory and compliance landscape, over time and between jurisdictions creates challenges for OEMs, EPCs and developers.
 - Lack of domestic manufacturing capabilities leads to longer lead times, higher costs, and potential supply chain disruptions.
 - Lack of availability of skilled labour, and competent/capable contractors for Balance of Plant works associated with renewable energy projects disrupts supply chain.
 - A current lack of policy settings to manage recycling and end-of-life of clean energy infrastructure.
 - Systems for effective coordination and information sharing between projects in REZs are crucial for smooth project execution and achieving and maintaining social license
- A key priority for industry and crucial to success of the energy transition is a national strategy for supply chains rather than the fragmented state-based approaches
- A national supply chain strategy should also include offshore wind, and consideration of domestic supply chains and offshore installation vessels to support establishment of the nascent industry.

ITEM 5 - Transmission Access Reform

Contact: Christiaan Zuur, Director of Market, Investment and Grid, Clean Energy Council – czuur@cleanenergycouncil.org.au

Indicative agenda item

- Congestion management
- Congestion relief market with priority access
- Enhanced locational information

CEC Input

- The CEC recommends this work steam be paused at this time. Significant resources across government and industry have already been spent on trying to make the Transmission Access Reform (TAR) ‘hybrid model’ workable, resources which would be far better spent on more urgent matters such as connection, system strength, planning reform and social license. Significant problems remain with the model. These problems won’t be resolved within the next 6 months.
- The case for the reform has not been made. The system has changed significantly since the AEMC and ESB first started looking at TAR in 2016. In particular, jurisdictions have taken the lead by addressing the fundamental cause of congestion: lack of transmission investment. Furthermore, given the significant investment required for NEM carbonisation - over 120 GW, plus hydrogen export- a modest amount of congestion will be efficient and can help guide where new transmission investment can be developed “risk free”.
- The proposed hybrid model does not effectively complement this jurisdiction led reform. The hybrid model is primarily a punitive / blocking measure, and is therefore a poor

complement for jurisdictional measures which are intended to drive in new investment to maintain reliability of supply.

- Unfortunately, new investment is not tracking at levels it should be. The complexities associated with connection, planning, system strength and social license all make it harder to invest in Australia. This is worsened by the regulatory uncertainty created by the prospect of introduction of major and unnecessary reforms like TAR.
- Various problems have been identified with each half of the hybrid model:
 - Problems with the Priority Access model are well documented, and the CEC remains of the view that these problems cannot be meaningfully addressed. AEMO's modelling of priority access identifies material inefficiencies with the function of PA, including significant increases in wholesale prices.
 - As we have learned more about the hybrid model, we have also come to identify new issues with the CRM. In particular, major issues have been identified in terms of the impact of the CRM on contracting markets.
- Given the materiality of these problems, the CEC therefore recommends that Ministers direct the EAP and AEMC to:
 - pause the 'hybrid model' component of the TAR work program, until more urgent reforms are progressed and there is a turnaround in the levels of new investment
 - further develop an enhanced information model to facilitate more efficient investment decision making.
- However, in the event that Ministers do decide to direct the EAP and AEMC to continue work into 2024, we make the following recommendations:
 - that the AEMC and EAP be directed by Ministers to undertake detailed, full market modelling and testing of the hybrid model, including both the PA and the CRM operating together, to ensure there are no major risks associated with rollout. For the avoidance of doubt, this should include:
 - detailed analysis of the impact of the hybrid model on contracted positions, including proper engagement with industry to assess the real degree of contract reopening risk
 - actual trials where traders are engaged to test a detailed model of the hybrid, to identify any operational issues
 - effective cost benefit analysis must also be undertaken, with more realistic assumptions made than previous modelling undertaken by the ESB
 - that AEMO be tasked with providing Ministers with a detailed costing associated with the implementation of the hybrid model, including the extent to which this will result in specific other work programs being delayed or de-prioritised.
- The CEC's primary concern with the proposed hybrid model is that it will act to further disincentivise investment, in an environment where we are already seeing investment volumes trending far below where they need to be to meet our national targets. This is clearly illustrated in the graph below, taken from our Q2 quarterly investment report.

Figure 1: Projects reaching financial close have trended down since 2020



Chart 1. Financially committed generation projects and capacity, quarterly

- Unfortunately, significant uncertainty remains around the workability of the hybrid model. We are concerned this increases regulatory and financial uncertainty, further impacting investment markets. Several of these issues include:
 - **Impact on existing contract markets.** As the detail of the CRM has developed, many of our members have more fully assessed how it will impact their contracting positions. It is becoming increasingly apparent that the design of the CRM may lead to material instability in the contracting market.

Introduction of the CRM could result in the reopening of existing contracts. Currently, most renewable generation investment is underwritten by power purchase agreement (PPA) contracts. These contracts almost always include one, or more, clauses obligating the generator to maximise electricity generation (except for certain economic conditions such as negative prices). Therefore, an offtake party

could claim a generator must participate in the CRM, to fulfil their obligation to maximise generation output – even if this would mean the generator having to participate in the CRM at a lower price than in the energy market. This would nullify the voluntary nature of the CRM and would also likely result in a re-negotiation of the PPA. This is in turn likely to create uncertainty in the generation development market, as it creates a real possibility that contracts will be reopened – which in turn creates further risks of slowing down the already halting investment pipeline.

There may be ways to resolve this issue. The most obvious would be to ensure a long lead time for the introduction of a CRM, to ensure it is indeed entered into voluntarily, and to allow sufficient time for new contracts to be struck that account for this new market. A pause in implementation would be consistent with this. As discussed above, this would also allow sufficient time for proper market modelling to be undertaken to assess the value of the CRM.

- **Disproportionate impact on low queue position generators:** One of the key issues identified by the CEC and our members relates to the impact of outage and new constraints - such as the system strength limits that arose in the West Murray Zone. These kinds of constraints may arise again in future, given implementation issues with the system strength frameworks. Generators in a low queue position will face the entire impact of these new constraints. These constraints cannot be predicted and cannot be accounted for in investment decisions. This is likely to deter any investment, other than those generators who are able to secure very high queue positions. If repeated across the NEM, this will make it nearly impossible to deliver the volumes of investment needed to meet decarbonisation targets and maintain reliability. It will also likely result in significant under utilisation of transmission lines, further increasing costs for consumers.
- **Impact on regional reference prices and effectiveness of the hybrid model:** AEMO's initial analysis of the priority access model indicates that in many instances the model either results in unintended consequences – ie, it does not actually protect incumbent, high queue position generators – or acts to increase the wholesale regional prices. We understand that this effect is largely due to the dispatch inefficiencies created by the PA model. While we understand the modelling undertaken by AEMO is limited in scope and illustrative in nature, more detailed analysis would be required to be confident these outcomes would not occur should the model be implemented.
- Significant resources have already been expended on developing this model. This includes many hundreds of person hours and large consultant spends, across both the market bodies and industry. CEC members have committed significant resources, including engaging consultants and spending significant amounts of time working with the ESB/EAP/AEMC to try and find better solutions.
- Given the complexity and materiality of the issues remaining, the CEC considers it unlikely the market bodies will be able to reach an effective resolution in the medium term. This contributes to ongoing uncertainty in the market, further undermining investment cases.
- We also note the significant workload a continuation of the TAR program would create for AEMO. The CEC questions whether it makes sense for AEMO to allocate further resources to this reform process. Instead, we consider AEMO should focus on core operational and

planning issues related to the physical transition of the system, as well as issues related to generator connection.

- Finally, the material uncertainty remaining in regards to the hybrid model is contributing to a slowdown in generation investment. Our engagements with key members regularly identify uncertainty regarding regulatory and policy developments as a key impediment to closing on new projects. Given the magnitude of the investment challenges ahead, we cannot afford to waste limited resources on a reform area which is actually creating more investment uncertainty than it is intended to resolve.
- The CEC acknowledges the concerns raised by state jurisdictions regarding the need to protect REZ access rights holders. We appreciate this concern, and are committed to find a way that works for jurisdictions to deliver on these objectives.
However, it's our strong view that the introduction of the hybrid model at this time would be a disproportionate and ineffective response to this issue. We believe that less distortionary models can be developed that will address these underlying concerns more effectively.
- Finally, we also consider that more can be done in terms of improving planning and information provision processes to deliver more efficient outcomes. While the AEMC and ESB have previously released a package of work to improve information outcomes, industry considers these measures have been largely ineffective, doing little except repackaging existing information. More robust reporting and more granular information provision by NSPs and AEMO will do far more to driving efficient investment decisions than highly interventionist and uncertain models like the hybrid model.

ITEM 6 - Community Engagement

- The review is expected to be completed and provided to Minister Bowen for consideration by mid-December 2023.

CEC input

- The CEC has an existing Best Practice Charter that sets out high level principles for responsible renewable energy development. The Charter has been adopted by more than 50 of the leading project developers in the country.
- The CEC is now looking to establish a reporting structure around the Charter, to create more accountability in how signatories are adhering to the Charter and to create an evolving database of best practice approaches to community engagement and social licence.
- In our submission to the AEIC review, the CEC noted the importance of state governments proactively engaging with communities in Renewable Energy Zones – this level of engagement should not be left to individual project developers.

ITEM 7 – Offshore wind

CEC input

Australian Offshore Wind Taskforce

To coordinate the offshore wind industry in a timely manner and leverage existing resources, the Clean Energy Council, as the peak industry body for clean energy in Australia, is building on its existing role of leading the offshore wind industry through coordination of the Offshore Wind Taskforce. This is following recognition over the last 12 months of a gap in industry coordination and stakeholders



calling for a unified approach to enable Australia to maximise the offshore wind opportunity, including that:

- Industry and Governments do not have time and resources to waste by replicating work already underway and by being unclear who is doing what – the Taskforce will ensure all industry participants are on the same page.
- With projects in Commonwealth waters, connecting into States with varying policies, and communities with different perspectives, it is imperative Australia finds a way to sensibly speak to the world through a national lens to attract the much-needed investment and resources to enable the industry to grow.
- Through coordination and collaboration, we can increase investor confidence, strengthen supply chains, reduce environmental impacts, avoid duplication of activities, and empower communities – ultimately reducing costs and leading to clean offshore electrons being delivered into our grid sooner.

The Clean Energy Council has already engaged with some participants on the Offshore Renewables Working Group, as well as key departments at State and Federal levels with support for this outlined need to coordination.

The Establishment meeting will be held virtually on November 27th, followed by the first meeting to work through industry opportunities on February 13th