

CLEAN ENERGY
BRIEFING
AHEAD OF
COAG
ENERGY
COUNCIL
MEETING –
22 NOVEMBER
2019

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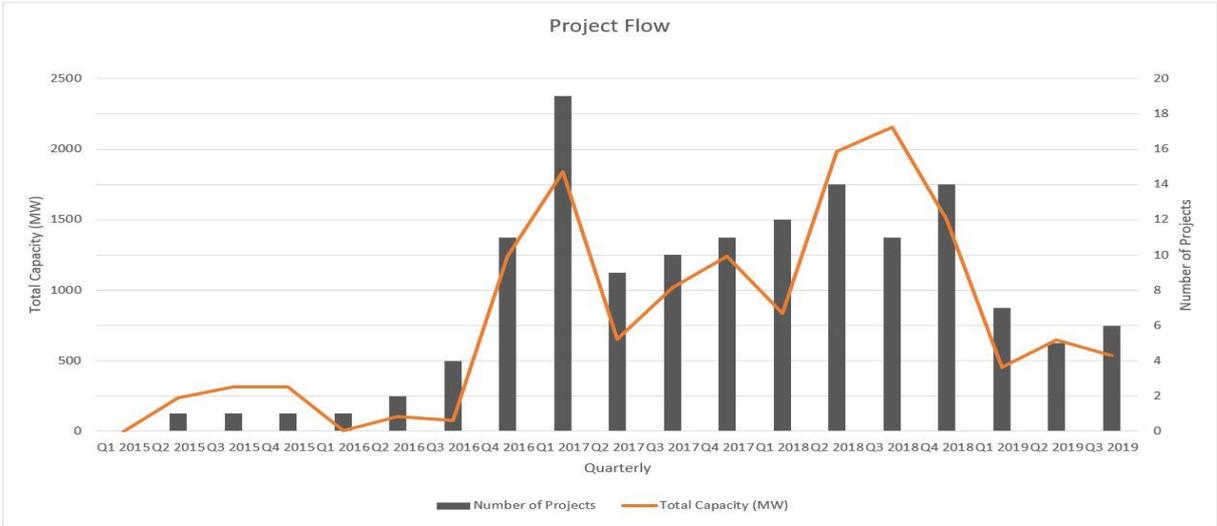
Context

The barriers and constraints have increased, risk premiums have risen and investment in new clean energy generation has slowed. Removing these barriers and lowering the risk to new investment is now crucial to delivering the new generation essential to replacing Australia’s ageing coal-fired generation fleet and managing the transition of Australia’s energy system to one that is affordable, reliable and clean. This must be the focus of COAG Energy Council when it holds its long overdue meeting on 22 November 2019.

The energy market is going through a significant transformation and it is imperative that governments show strong leadership and cooperation. Australia’s coal-fired generators continue to close and there is a clear need for policy and regulatory reform to support the continued deployment of renewable energy and energy storage. Only by doing so will we continue to reduce Australia’s energy sector carbon emissions, ensure system reliability and lower energy prices.

The current investment pipeline

The 2020 Large-Scale Renewable Energy Target (LRET) was a highly successful policy that drove unprecedented levels of investment in new utility-scale generation over the past two years. Some 15,700 MW of new capacity has been financially committed over the past two years, with that generation either under construction or recently commissioned. This new generation was predominantly in the form of wind and solar, which has been supported more recently by increased investment in energy storage. With the absence of policy certainty beyond the 2020 RET and a range of regulatory barriers to overcome, investment commitments in new generation have fallen substantially in 2019.



A sustained slow-down in the level of new large-scale generation will have a dramatic impact on Australia’s energy prices and reliability, as well as the ability to achieve future emissions reductions targets.

Investment risk is rising

The Clean Energy Council (CEC) undertakes a biannual survey of the CEOs of Australia's leading renewable energy companies to understand their confidence in the Australian market and the challenges they face. In addition to the absence of policy certainty, a range of regulatory barriers are adding uncertainty and risk for private investors. Grid connection processes for example are creating substantial uncertainty in timing, technical requirements and cost. Adding to this are the impacts of the current Marginal Loss Factor (MLF) regime, which is no longer fit-for-purpose for a 21st century energy system and causing much concern and unmanageable risk for investors. Increasing network constraints as a consequence of an underinvestment in transmission capacity are now compounded by policy proposals – such as the coordination of generation and transmission investment (COGATI) access model – that are complex, confusing and act to introduce even greater risk to investors in new generation.

Both MLFs and grid connection challenges are symptoms of an underlying condition: the urgent need to reform the energy system and build new transmission to support continued investment in renewable energy and storage projects.

The uncertainty created by a lack of policy has been further aggravated by recent unexpected and unjustified regulatory interventions, including the Queensland Government's (now rejected) regulations requiring solar panels only to be handled by electricians and the Australian Energy Regulator's recent decision to prosecute a collection of winds farms in relation to protection settings during the South Australian system black event. Further still, political distractions such as a Parliamentary Inquiry into nuclear power and a task force into extending the life of the Liddell Power Station undermine investor confidence in market dynamics and the outlook for sensible political and policy oversight of the energy transition.

TOP BUSINESS CHALLENGES

What factors are creating the greatest challenges for your business to develop clean energy projects in Australia?

<p>1 Concerns and challenges related to grid connection and network access</p>	<p>4 Concerns and uncertainty about MLFs</p>
<p>2 Lack of strong federal energy and climate policy</p>	<p>5 Attracting the right workforce (including finding workers with the right skills and in rural regions and achieving diversity in the workplace)</p>
<p>3 Substantial regulation changes and/or over regulation</p>	

If the risk of major policy changes or government intervention in the market continues, investors and private capital will shift to other countries around the world where there is greater policy certainty.

Coordination of generation and transmission investment (COGATI)

Throughout this year, the Australian Energy Market Commission (AEMC) has been developing a new access model as part of the COGATI review. The AEMC's recent discussion paper, released on 14 October 2019, presented a revised version of its dynamic regional pricing and financial transmission hedges model. Significantly, this model has removed the 'third pillar' whereby the purchase of transmission hedges by generators would fund and guide the development of new transmission assets.

A key impetus for the COGATI review was the pressing need for new transmission as a result of new generation looking to connect in more remote areas to take advantage of good quality solar and wind

resources. The AEMC is now presenting a very complex and still underdeveloped model that will not assist with transmission build. Instead, the model is focused on a range of second-order objectives, such as delivering more efficient dispatch and addressing race to the floor bidding.

The clean energy industry does not support the proposed access model.¹ We are concerned that the complex details of the model have not been sufficiently formed or assessed and will lead to increased generator costs with no commensurate benefit. We are also concerned that the model cannot be practically implemented in July 2022. This could lead to either a further slowdown in new generation investment at a time when this investment is critical to maintain reliability and put downwards pressure on prices as a number of coal-fired generators close, or a higher cost of capital for new generation which will be factored into higher wholesale prices. Neither outcome is in the long-term interest of consumers.

The AEMC intends that the detailed development of the proposed access model will occur through the rule change process next year.

Recommendation

The COAG Energy Council should not endorse the AEMC's approach to progressing its proposed access model (COGATI). Instead, it should task the AEMC to undertake quantitative analysis and further detailed design development to demonstrate the proposal delivers a net market benefit and ensure its practical implications are well understood and tested.

Given the strong case for further model development, more rigorous analytics and a revised implementation date, a more sensible approach would be to align the timing of this reform with the Energy Security Board's (ESB's) post-2025 design work.

Grid connections and MLFs

Grid connections and MLFs are pressing issues for the renewable energy sector now that far outweigh the current objectives being addressed by the COGATI access proposal.

The current process to connect large-scale generators to the grid is leading to increased costs and delays for new developments. Grid connection has been recognised as the number one business issue for the clean energy sector. CEC has been working with industry, networks and AEMO to better understand the grid connection issues and what improvements can be made to address these. Broadly, there are potential improvements that could be made around transparency and application process consistency, technical capability and modelling certainty, as well as injecting balance into the negotiation framework.

The current MLF regime is also very problematic for investors in new energy generation. The year-on-year volatility in MLFs has been challenging for both existing generators and investors and developers of new generation. The current MLF regime is no longer fit-for-purpose and represents an unmanageable risk that cannot be easily managed, predicted or hedged by industry. For existing generators, it is currently leading to refinancing requirements and financial distress and could lead to future default and supply disruption. For investors and developers of prospective generators, it is discouraging investment as it is being factored into higher risk premiums.

The AEMC has recently made a draft decision to maintain the current MLF methodology, in place of moving to an Average Loss Factor (ALF) approach. Significantly, it points to COGATI as the process to address generator investment concerns. The CEC supports the ALF approach as the preferred

¹ See the CEC's submission. Available at: <https://assets.cleanenergycouncil.org.au/documents/advocacy-initiatives/submissions/discussion-paper-cogati-proposed-access-model.pdf>

option that best supports investment certainty. We are concerned that maintaining the current MLF approach and deferring to the COGATI process is diverting attention away from addressing pressing priorities for the NEM and could stifle generation investment in Australia.

Recommendation

The COAG Energy Council should task the AEMC and Australian Energy Market Operator (AEMO) with pursuing reforms of the grid connection process and the MLF regime as a priority over COGATI.

Transmission

The pace at which the electricity generation mix is changing has been rapid. The transmission network is not keeping pace with this change with major constraints emerging throughout the network. The network should not be the limiting factor for future generation development and should play a critical role in delivering improved reliability and security across the energy system. Strategic, coordinated and timely transmission investment will also help to deliver affordable and reliable energy to consumers.

The Australian Energy Market Operator’s (AEMO’s) Integrated System Plan (ISP) outlines a pathway for future transmission network development. Key to ensuring new generation can connect and deliver electricity to meet the needs of Australian households and businesses is the effective actioning of the ISP. The clean energy industry has long supported of the development of the ISP and the ESB’s subsequent ISP action plan as the ISP endeavours to minimise costs while meeting the physical requirements of the system as ageing, large generators retire and new generation enters the system.

Recommendation

The COAG Energy Council should reaffirm its commitment to effectively actioning the ISP.

The COAG Energy Council should progress the two proposed funds to underwrite expenditures for Group 1 projects that are time critical and extend transmission assets to connect to Renewable Energy Zones.

The COAG Energy Council should encourage the ESB to release its consultation paper on advancing the governance framework and the system-wide planning model rule change proposals as soon as possible.

Market reform to recognise and encourage energy storage

Firmed renewable energy and stand-alone storage projects will become increasingly important as more wind and solar projects enter the system. A growing pipeline of battery and pumped hydro projects are being progressed throughout Australia. Over 500 MW of utility-scale battery projects have reached financial close over the past two years and there is a large pipeline of pumped hydro projects being investigated.

However, investment in energy storage is challenging without market reform and clear policy that can reduce uncertainty and recognise the value that these projects provide to the energy system and market.

The energy market can naturally provide a commercial incentive for energy storage (by way of arbitrage) in the form of lower wholesale spot prices during the daytime (corresponding with high solar output) and higher prices during shoulder and peak demand periods. The move to five-minute settlement from mid-2021 will further encourage energy storage solutions. However, more is required to assist the storage business case. Effective markets for grid services and arbitrage opportunities

need to be established to ensure energy storage is delivered as the natural accompaniment to variable renewable energy and to maximise the value of the energy generated.

Recommendation

The COAG Energy Council should task AEMO and the AEMC to develop clear ancillary services markets that recognise and monetise the value of services such as inertia, fast frequency response and voltage support.

Energy and climate policy

Australia's LRET has officially been met and the question now turns to what comes next. There is already clear evidence of a slowdown in new investment being committed. There is no shortage of potential new solar and wind projects, as well as pumped hydro and utility-scale battery projects, but potential developers and investors are concerned that the energy policy outlook is unclear.

While new investment in utility-scale renewable energy no longer needs subsidies, investors do need certainty about future policy settings and the anticipated timely and planned phase-out of old coal generation. This is critical to give greater certainty of future wholesale energy market dynamics and subsequent revenue that investors can expect from the electricity generated by these projects.

While it is not clear whether the drop in the flow of projects will be sustained, it has the potential to leave Australia exposed to higher power prices and risk system reliability. While there is a patchwork of state government approaches to filling the federal policy void, a nationally-coordinated response is becoming increasingly critical. In this context, a sensible national energy policy acts as insurance and can ensure new investment flows long into the future and ahead of further coal closure.

There remains a strong preference across all energy stakeholders for strong national policy.

Recommendation

The COAG Energy Council should support long term energy policy certainty, through a combination of harmonisation of state targets and schemes, refinement to existing policy measures (such as the Emissions Reduction Fund) to support new clean energy investment or progress new coordinated policy measures such as the NEG.

Hydrogen

Australia has enormous potential to become a global clean energy superpower, through the export of clean hydrogen to Asia and beyond. Developing Australia's leadership in this vast export opportunity will require a comprehensive strategic plan, strong leadership and collaboration between government, industry and customers. Unlocking this massive export opportunity will also require Australia to develop a strong domestic hydrogen industry.

The CEC has actively engaged with the National Hydrogen Strategy Taskforce over the past year and in recognition of the opportunities for clean hydrogen, we have formally expanded our policy scope to include clean hydrogen.

Recommendation

The COAG Energy Council should endorse the National Hydrogen Strategy. The COAG Energy Council should also consider a governance system that will ensure that the strategy is actively and

continuously called upon to guide policy and how funding support could be provided to accelerate the growth of clean hydrogen for domestic and international markets.

Distributed energy resources (DER)

Australia has enormous potential in rooftop solar and household batteries as well as other forms of DER such as electricity vehicles and embedded resources in the distribution system. DER solutions will play a critical role in empowering energy customers and supporting a more resilient and distributed energy system that can deliver lower power prices and increased reliability. There has been significant growth in DER such that there are now over two million Australian households with rooftop solar and forecasts suggest further future growth with the AEMC predicting that more than half of all houses will have solar PV systems and about a third of residential buildings will have energy storage by 2050.

The CEC believes we need to change the way we manage solar and battery systems and how they interact with the grid in order to accelerate the uptake of these solutions. This will require new rules to mandate technological capability and new markets to make best use of the capabilities already at our disposal. The Clean Energy Council's **The Distributed Energy Resources Revolution: A Roadmap for Australia's Enormous Rooftop Solar and Battery Potential**, addresses the challenges that Distribution Network Service Providers, regulators, governments and policy makers will face as we make the transition to a DER future and proposes recommendations to facilitate and unlock the enormous potential for DER.²

Recommendation

The COAG Energy Council should encourage their respective energy departments to work with the CEC to progress reform to unlock DER potential across Australia.

Energy sector workforce development

Skills shortage is a material and growing issue for the energy sector. In response, the CEC in partnership with the Institute for Sustainable Futures at the University of Technology Sydney is undertaking the first nationwide survey in order to accurately measure employment across the clean energy sector. Utilising the findings of this survey, industry is looking to consult and collaborate with governments on how we can ensure the sector is prepared to meet short and long-term skills needs over a period of unprecedented change.

Recommendation

The COAG Energy Council should establish an Energy Sector Skills Taskforce comprising governments, trade and educational bodies, and industry representatives. This is consistent with the approach to addressing similar skills and workforce challenges in other sectors, such as the agriculture and resources sectors.

² Available at: <https://www.cleanenergycouncil.org.au/advocacy-initiatives/energy-transformation/the-distributed-energy-resources-revolution>

Role of COAG Energy Council

The COAG Energy Council should play a critical role in overseeing and leading the transition of the Australian energy system. The pace and scale of change in the energy system is enormous. This requires higher levels of leadership, engagement and collaboration from COAG Energy Council than is currently occurring.

Recommendation

The COAG Energy Council should commit to quarterly meetings and ensure a more active and proactive approach to leading and overseeing the transition of the Australian energy sector. This should involve regular review of the key bodies and institutions and ensuring strategic alignment and high levels of collaboration across governments, agencies and industry.