

Dr John Tamblyn,
Chairman, Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

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By email: submissions@aemc.gov.au

Dear Dr Tamblyn,

Re : Review of Energy Market Frameworks in light of Climate Change Policies, 1st Interim Report

The Clean Energy Council (CEC) is the peak body representing Australia's clean energy and energy efficiency industries.

Its priorities are to:

- create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies;
- develop effective legislation and regulation to reduce energy demand and improve its efficient use; and
- work to reduce costs and remove all other barriers to accessing clean energy.

The CEC advocates policy development on behalf of its members at federal and state government levels and promotes understanding of the industry and its potential through channels such as industry events, forums, conferences, newsletters and publications.

The clean energy industry includes generation of electricity using wind, hydro, solar, biomass, geothermal and ocean energy as well as the emerging technologies and service providers in the energy efficiency sector, which includes solar hot water and cogeneration.

The CEC welcomes the opportunity to provide a submission in response to the 1st Interim Report and recognises this review as a critical element in the path towards assisting the energy industry to reduce carbon emissions. The CEC also notes that the Australian Energy Markets Commission (AEMC) has identified the importance of its other current work that is of particular relevance to this review, and is moving to consider them in parallel with this review.

Demand-side management and energy efficiency will play a key role in meeting Australia's climate change policy objectives. The CEC believes that it is critical that the *AEMC Review of Demand Side Participation (DSP) in the NEM* and the *Total Environment Centre Inc (TEC) Demand Management Rule Change* proposals are considered in parallel to this review. The CEC supports the AEMC's decision to align the timetable of these projects to that of this review.

Generation capacity in the short-term

While the 2008 NEMMCO Statement of Opportunities (SOO) shows a potential, short-term risk of insufficient generation, it must be recognised that this is not a forecast, but rather a view based on tight definitions of "committed generation". It should be noted that this situation could quickly change once the proposed new climate change legislation (particularly the Renewable Energy Target (RET)) is passed.

There is a huge backlog of generation, currently not defined as "committed" that is permitted and waiting for certainty so as to proceed.

Due to increasing use of air conditioners, the Australian electricity peak demand is growing more strongly than its average demand. Therefore, the potential shortfalls identified in the SOO are only likely to manifest themselves for a small number of hours per year.

Such a situation is ideally suited to demand management and embedded local generation. Short-term, further encouragement of DSP will overcome any shortfalls in generation.

Investing to meet reliability standards with increased use of renewables

The CEC sees no need to revisit the current market design. The market has delivered new generation and the CEC sees no reason to believe that this situation will change in the future.

Any major change to the market design would require time and effort, both to produce a new set of market rules, but also to educate the market and the financiers that sit behind the market participants. This will lead to a hiatus in new generation build and most likely will exacerbate the very problem that it is trying to address.

System operation and intermittent generation

Most developed countries are moving towards a much higher percentage of renewable energy generation. Australia is at the forefront of work to manage the differences that such generation brings and has a market design with five minute dispatch, well suited to intermittent generation.

The Australian Wind Energy Forecasting System is regarded as a cutting edge tool that is already delivering forecasts to allow the semi-dispatch of wind generators, allowing central management of variable energy sources.

Further development of this system will allow it to expand into other technologies such as large scale solar, solar thermal and ocean generators. The AEMC is urged to recommend the government allocate additional funds to this project to further enhance its capabilities and improve its accuracy.

As discussed above, there is significant opportunity for demand side response to assist in managing the system and balancing the variable customer demand and generation. The AEMC should work to identify and overcome the barriers to expand demand side participation in system operation.

Connection of remote generation

As Australia responds to climate change policies such as the expanded Renewable Energy Target, more generation will be built in areas that are currently remote from existing networks. Significant investment will be needed in transmission assets to get this new generation to market.

New generation such as wind, geothermal, solar thermal and ocean are likely to be clustered in specific geographic areas with the best energy resources. The CEC agrees that the existing model of bilateral negotiation for new connections will not cope efficiently in this environment when the multiple applicants are likely to be at different stages of their development with differing timing requirements. Added to this is the problem that Network Service Providers (NSPs) will face in managing the increased volume of applications.

The CEC supports the concept of investing in strategically planned transmission upgrades for renewable energy generators, subject to a revised planning and financing regime while continuing the current framework for the connection assets needed to connect individual generators.

It is noted that in the medium term, congestion between windy states such as South Australia, Tasmania and Victoria is likely to manifest itself as the large amount of wind resource in close proximity to existing transmission.

As such, reinforcement of interconnectors and the existing transmission network is likely to be the most effective means of bringing renewable resources to market. Only once existing constraints on the backbone transmission network and interconnectors are resolved will the grid be able to accept additional generation from remote sites.

The adjustment required from the energy industry is the most significant change in its long history and will no doubt have an enduring influence on the country.

The CEC believes this is the most critical issue in this review. The CEC therefore supports the concept that new generation is likely to cluster in geographic areas. Hence,

the framework should encourage an efficient level of network infrastructure to connect multiple generators to the existing network and customers.

The investment task in respect of each “cluster” can be separated into two parts;

1. A network extension to create a “hub” for each cluster; and
2. Connection assets to connect individual generators to the “hub”.

This would result in a variant of *option 2* (page 40 of the review paper). The CEC recommends that the AEMC holds a workshop on this issue to debate the pro and cons of the various funding options.

The CEC recommends that the work to determine the most efficient locations of these hubs and the networks required to connect them, be undertaken by the National Transmission Planner with appropriate public consultation and studies to confirm likely investment patterns and to ensure that a truly national view is taken.

Finally, there are currently significant barriers facing those wishing to connect small embedded generation. It is likely that small and embedded generators will form a significant part of the future generation mix. This is because generation located at or near the load centre has many climate change benefits including reduced losses, congestion management and better utilisation of the energy sources.

The CEC is currently undertaking a project to identify and address a number of the barriers that exist in order to assist the development of this sector of the industry. The CEC recommends that the AEMC consider this issue in the review and consider whether changes to the market rules will be required to further encourage local generation.

Congestion management

The Australian electricity market has grown up with very strong links from major generation centres to major load centres, with light (if any) interconnectors between regions.

Much of the pre-existing over-investment in transmission has been taken up. In response to the market, changes in generation have at times exposed the limits of the interconnectors. Further load growth in Australia will lead to additional congestion even if there were no climate change policies in place. The response to climate change is, however, likely to lead to generation in new locations exposing constraints.

The CEC believes that the current congestion regime needs to be revisited to ensure that it does not hinder the efficient development of new low carbon generation and energy efficiency. The AEMC should investigate mechanisms such as the Californian loading order for further investment. This could require NSPs to consider other options such as energy efficiency and demand management or contracting renewable generation prior to network augmentation as a means of managing constraints.

Careful planning of the new generation hubs including the network extension should lead to alternate network paths and hence act to reduce congestion. A further benefit is the reduction in the number of planning applications that will be required. The planning approvals process could easily be a significant barrier to timely renewables implementation.

As noted in the discussion regarding Connection of remote renewables above, it is important that congestion is dealt with on the shared network in a way that supports the delivery of generation to market. There is concern that the Regulatory Investment Test (RIT) will not adequately deliver investment to achieve this outcome.

Most CEC members note the importance of the generators' ability to have predictability of access to market in order to support their contracted obligations and justify future investments.

Retail

Currently only Victoria has full deregulation of retail energy prices which allows retailers to design cost-reflective tariffs for small consumers. If Australia is to meet the challenges of adapting its economy to climate change, it is critical that energy efficiency is fully encouraged.

A cap on retail energy prices significantly reduces the incentive for consumers to modify their behaviour by reducing energy consumption. Many studies have shown that energy efficiency is the cheapest form of adaption to climate change and Australia needs to encourage more efficient use of energy.

Retail price caps also discourage retailers from entering into long term contracts with low emission generators at prices which prohibits recovery of costs from customers.

The CEC recognises that retail price caps fall outside the jurisdiction of the AEMC, but we encourage the AEMC to recommend that the states and territories relax their current retail price caps.

Retailers also have a key role to play in encouraging energy efficiency and helping to overcome the current barriers to the uptake of cost effective energy efficiency measures.

The AEMC should investigate mechanisms that would allow both retailers and NSPs to uncouple their revenue from energy sales/flow and allow them to derive benefits for promoting additional energy efficiency.

The CEC looks forward to working with the AEMC in further developing the work to transition the Australian energy industry as we move towards a low carbon economy.

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If you are seeking clarification on any of the issues raised in this paper, please do not hesitate to contact me on (03) 9929 4105 or rjackson@cleanenergycouncil.org.au.

Yours sincerely,



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