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Our ref: 20-7154
1 June 2020

Brad Archer
Chief Executive
Climate Change Authority
CANBERRA ACT 2600

By email: submissions@climatechangeauthority.gov.au

Dear Mr Archer

AEMC submission on the 2020 review of the emissions reduction fund

The Australian Energy Market Commission (AEMC or Commission) welcomes the opportunity to make a submission on the consultation paper regarding the Climate Change Authority's 2020 review of the emissions reductions fund.

The AEMC is the rule maker for Australian electricity and gas markets. We make and amend the National Electricity Rules, National Gas Rules and National Energy Retail Rules. We also provide market development advice to governments.

The emissions reduction fund, and other elements of Australia's policy response to climate change link to the work of the AEMC. While the safeguard mechanism is not within scope of your review, the emissions reduction fund does link to the energy sector through energy efficiency methodologies to reduce greenhouse gas emissions.

In the consultation paper you note your recent report, *Prospering in a low-emissions world,* recommended government programs fully integrate climate risks into decision making and that this review will look broadly at the issue of climate risk to emission reduction fund abatement and how it can be managed.

This submission provides an example of how climate risk is considered by the AEMC in our work. A key issue that effects aspects of our work program is how the transition underway to higher levels of renewable energy in the electricity supply can best be managed so that it benefits the long-term interest of consumers. This submission does not comment on the specifics of emissions reduction fund operations.

Assessing climate change risk

The AEMC's work is guided by the national energy objectives. The national electricity, gas and energy retail objectives include a specific set of variables – price, quality, safety, reliability and security of supply. When assessing a rule change or a review, the Commission must consider how the outcome of a particular decision would impact on these variables, and therefore on energy consumers over the long term. Other variables may be relevant if they have indirect impacts on price, quality, safety, reliability and security of supply. Climate change is a policy issue that has material impacts on the electricity and gas sectors and is an example of this.

In its stakeholder guide on applying the national energy objectives, the Commission has outlined how it considers climate change risks when making rules and providing advice that will serve energy consumers over the long term. This guide underpins our work with our stakeholders to clearly identify the direct and indirect impacts of rule requests and reviews before making a decision.

Climate change manifests through two broad types of risk:

- how the physical world is changing or likely to change as a result of climate change (adaptation risk)
- how policy makers, consumers and investors are responding, or are likely to respond, to the risks presented by climate change (mitigation risk).

These risks are relevant to the AEMC's work in developing rules and policy settings for the electricity and gas market that will contribute to lower prices and secure and reliable energy services in the decades to come.

Reform can allow better management of climate change risks

The AEMC, as part of the Energy Security Board's post-2025 market design work, is currently progressing reforms to the National Electricity Market (NEM) through its Coordination of Generation and Transmission Investment (COGATI) project. This project will change the way in which market participants such as generators access the transmission network and is an example of how the AEMC's work program drives reforms which allow for the better management of climate change risk.

Transmission access reform is integral to Australia taking the cheapest, fastest and fairest path to a low-emissions energy future. It will integrate new technologies, including low emissions generation, into the NEM in a way that's reliable, secure and is in the long-term interest of consumers.

The existing transmission network was primarily designed around a small number of large generators, many of which are concentrated in specific parts of the network with good access to coal, water for cooling, gas pipelines, and so on. Areas of the country with good renewable resources – for example windy and sunny areas – tend not to be in close proximity to plentiful existing transmission infrastructure. The system of the future is likely to be characterised by many relatively small and geographically dispersed solar and wind generators and storage devices, many of which already are seeking to connect to the grid in parts of the country where there is limited or no existing transmission capacity.

This rapid shift to renewables has seen Australia outgrow the way it prices and delivers energy. Costs are higher than they should be because the system is not as efficient as it could be and congestion/access issues plague the grid and prevent the cheapest/lowest emissions combination of energy reaching the market.

Decisions on where to locate, and how to operate generation do not work closely enough with transmission investment decisions. This has the impact of slowing the pace of integrating renewables and other new technologies into the grid. It is crucial that the market is designed such that it sends improved price signals to for better locational operational and investment decisions. It is also important that investors are able to manage the risks associated with changing levels of transmission infrastructure available to them as other generators and storage devices connect around them.

The current market design is not fit for purpose in this context. All generators receive the same price (ignoring the effect of losses) regardless of where they are in each region (which correspond to the State boundaries), meaning that they are not incentivised to fully take into account the important differences between locations within a region which impact investment and operational decisions for the system as a whole. This is likely to lead to a generation, storage and transmission investment development path which is both higher cost and won't enable a lower cost integration of renewables into the system, thereby reducing emissions. The current market design also makes it difficult to manage risks for prospective generation and storage investors, increasing their financing costs and so delaying investment.

Consideration of reforms to address these problems will occur as part of the Energy Security Board's post-2025 market design project. In March 2019, the COAG Energy Council requested the Energy Security Board to advise on a long-term, fit for purpose market framework to support reliability, modifying the NEM as necessary to meet the needs of future diverse sources of non-dispatchable generation and flexible resources including demand side response, storage and distributed energy resource participation. The post 2025 program has been established to oversee and coordinate this program of work, bringing together multiple forward-looking reform initiatives to develop alternative market designs for recommendation to the COAG Energy Council. Changing the way market participants such as generators access the transmission network can lead to better coordination of generation and transmission investment, which can in turn allow more, low cost renewable generation to be utilised across the system, reducing prices for consumers and emissions.

We would be happy to provide more information on any matters that may assist the Authority in its review. Please do not hesitate to contact me directly on (02) 8295 7800 or benn.barr@aemc.gov.au

Yours sincerely

Benn Barr
Chief Executive