



10 June 2022

Ms Anna Collyer
Chair
Energy Security Board

Lodged via email to info@esb.org.au

Dear Ms Collyer,

Submission to Transmission access reform Consultation paper

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent over 1,000 of the leading businesses operating in renewable energy, energy storage and renewable hydrogen. We are committed to accelerating Australia's clean energy transformation.

In particular, we are focussed on developing regulatory frameworks to support efficient investment in the large number of new renewable generation and storage projects that are needed to deliver secure, reliable and zero emissions energy for consumers.

The CEC welcomes the opportunity to comment on the Energy Security Board's (ESB) Project Consultation paper for the next stage of the transmission access reform project.

Any changes to the current frameworks for transmission access must be assessed in light of how they impact efficient investment in renewable generation and storage. The scale of the investment challenge in the NEM is extraordinary; under the most likely Step Change scenario, AEMO is forecasting a ninefold increase in required capacity, with 170,000MW of renewables and storage to be connected to the NEM by 2050. These numbers are even larger if the more ambitious hydrogen superpower scenario eventuates.

Moreover, any change to the regulatory frameworks must be assessed in terms of how it will help or hinder the investment needed to deliver this transition. The effectiveness and efficiency of this investment process will be central to delivering a reliable supply of low cost, low carbon energy to customers.

We have welcomed the ESB's openness to consider different approaches and the time that has been spent engaging with industry in many formats. Any potential mechanisms for access protection should be as open and transparent as possible. This means that where they are implemented, new and existing participants have a clear understanding of how the mechanism will work.

Our submission, including this cover letter and subsequent supporting documents, sets out our thinking as follows:

- The dual challenge of access reform - being requirements in operational and investment timescale - requires a hybrid methodology whereby multiple models provide complementarity to provide clear market signals and congestion relief.
- The Modified Congestion Relief Market (CRM), which has built on the CRM model as originally proposed by Edify Energy, is the preferred model to enhance operational efficiencies and create additional revenue streams for generators to trade behind a constraint. The CEC led further development of this model has found that the Energy and CRM markets can be co-optimised as a single pass in NEMDE.
- In the investment timescale, an enhanced information approach should be taken to promote standardisation and consistency in flows of information between generators, transmission network service providers (TNSPs) and AEMO. This will allow high calibre information to be fed into the planning processes to deliver more efficient investment outcomes and market signals.
- The congestion management market (CMM) with universal rebates is likely to hinder efficient investment in renewables and storage and is not supported by the CEC. It creates material uncertainty for new investors and will prevent overall efficient investment in the power system. We consider these fundamental problems cannot be addressed through reforms to this model.
- Of all four models put forward for further development by the ESB, and including the Modified CRM, no model has been sufficiently developed to a point that the CEC can confidently see how it will be implemented and what impact they will have on the market. Further work is still required, and we would urge ample consideration for further development.

Operational access approach

As the ESB are aware, the CEC see great potential in the CRM and has sought to further develop this model with support of external consultants. The key priority of this work has been to determine if this model can be feasibly implemented alongside the energy market – which has been demonstrated in this submission.

The CRM supports better operational outcomes, both in terms of use of the network as well as of existing generation and storage assets. Coordinating generation and charging behaviours means the CRM can facilitate better overall use of these assets to supply energy to consumers over time, increasing the efficiency of network assets. For example, it would incentivise a battery to coordinate and consume excess energy produced by a solar generator when a constraint is binding, rather than competing against the generator to export power over the network to the RRN. This energy can then be exported to the network in the evening, when the solar generator is not operating, driving more efficient overall utilisation of the network.

At its core, the CRM model is preferable to the CMM because it is a market-based approach. Like all efficient markets, it allocates specific risks to those parties who can most appropriately bear it. Unlike the CMM, it provides investors with a choice as to whether or not they participate in the parallel congestion relief market. It also offers transparent and predictable price discovery – a critical characteristic that is missing from the CMM – which is central to efficient investment.

In its current formulation, the CMM remains a significantly inferior model to the CRM. The CEC does not support it and does not consider that tweaks to the CMM (such as through changing rebate allocation mechanisms) will change our view of this.

To be clear, the CMM, or any other form of centralised, non-market, regulatory locational marginal price (LMP), is **not equivalent to the CRM**, and will not be accepted by the CEC as a substitute as this will hinder efficient investment. The CEC see this as adding unnecessary unpredictability and volatility into an already constrained and complex market. By fundamentally weakening the dynamism and openness of the National Electricity Market, the CMM will stymie investment and ultimately drive-up costs for consumers.

Investment access approach

Current regulatory uncertainty and lengthy project timelines can create difficulty in generating clear market signals for investors that are aligned with planning decisions being made by TNSPs. The CEC believes there are information gaps which must be addressed in order to resolve this, which would improve proponents' ability to undertake early modelling and higher-calibre due diligence. This would promote timely and efficient investment.

This underpins our proposal for enhanced information sharing in response to the investment access timescale. Improved information flows in the network planning and development process will enable efficient risk allocation between TNSPs and generators and storage proponents. Better coordination of existing regulatory processes can also be used to deliver more efficient transmission investment.

The flow of information processes and planning from TNSPs will lead to better information to support the Integrated System Plan (ISP), coordination of system strength and REZ frameworks, and provide clear network modelling for new generators to understand investment opportunities. This will generate the availability for more robust modelling and information for private investors. In turn, this will enable generators to complete increased due diligence to avoid potential congestion on both themselves and their neighbours, support standardised development of information for incremental augmentations, and de-risk large scale transmission investment through clearer investment signals.

We would caution the ESB from further overcomplicating an already complicated system by introduction of an investment timescale mechanism which overlooks the existing capabilities of the energy market and its stakeholders. There is good opportunity to harness existing regulatory processes to streamline and increase transparency and generate efficient transmission investment.

In support of the above, the CEC have prepared the following supporting documents:

- 1. CEC Submission on Access reform:** This is the primary document outlining the CEC response to the latest ESB Consultation paper on Transmission access reform. It details our positions on preferred models in the operational and investment timescale.
- 2. Modified CRM Model report:** Prepared by an external consultant (MarketWise Solutions), this report details how the CRM could improve operational outcomes by creating economic incentives for market participants to act in ways that relieve constraints in the NEM. It also comprises of examples as developed through use of the CRM Demonstration Model (documents 3 and 4).

3. **CRM Demonstration Model – 2 Node Model (excel model):** Prepared by external consultant (SW Advisory), this excel model is designed to show how to co-optimize the CRM with the energy market, using full supply and demand curve curves for both CRM and energy markets. This model uses the framework of a 2 bus (node) model.
4. **CRM Demonstration Model – 4 Node Model (excel model):** This model is the same as document 3, however is a 4 bus (node) model.
5. **CRM Formulation and simple example models:** This document was prepared by SW Advisory to provide detailed notes on how to use the CRM demonstration model (attached files 3 and 4) including dispatch and pricing formulation, and examples generated from the excel models.

While we have proposed a Modified CRM model and an enhanced information approach as the basis of a workable and effective solution for access reform, we do not yet consider any of these models, or the other models in consideration by the ESB, to have yet reached maturity. We urge the ESB to prioritise further development and refinement so feasibility of each model can be better understood. Continued open and genuine collaboration with industry is critical to developing regulatory changes that will actually prove workable and deliver better outcomes for consumers. Though, we do appreciate the extensive balance of preferences that the ESB needs to work through to reach a quorum.

We look forward to seeing further developments achieved by the ESB in response to transmission access reform.

If you would like to discuss any of the issues raised in this submission, please contact me at czuur@cleanenergycouncil.org.au.

Yours sincerely,

Christiaan Zuur
Director Energy Transformation