

4 October 2022

Ms Anna Collyer  
Chair  
Energy Security Board  
Lodged by email to: [info@esb.org.au](mailto:info@esb.org.au)

Dear Ms Collyer,

**Response to *Transmission access reform - 3 Working papers (September 2022)***

The Clean Energy Investor Group (CEIG) welcomes the opportunity to provide feedback on the Energy Security Board (ESB)'s *Transmission access reform - 3 Working papers* published on 21 September 2022.

CEIG represents domestic and global renewable energy developers and investors, with more than 11GW of installed renewable energy capacity across more than 70 power stations and a combined portfolio value of around \$24 billion. CEIG members' project pipeline is estimated to be more than 18GW. CEIG strongly advocates for an efficient transition to a clean energy system from the perspective of the stakeholders who will provide the low-cost capital needed to achieve it.

**KEY POINTS**

**GENERAL COMMENTS**

**The ESB needs to genuinely turn its mind to reform in investment timeframes**

- The ESB's focus to-date has been mainly on operational timeframes. It needs to engage more meaningfully with reform in investment timeframes if it wants to capture the largest benefits for consumers.
- LMP-based access reforms need to be discarded. On top of allocating excessive risks to investors, it is becoming apparent that the Post-2025 energy market will remunerate not just energy but also flexibility and dispatchability. Basing transmission access reform on LMPs is not consistent with the broader direction of reform.

**CEIG concerns not yet addressed**

- Nine months after first submitting the TQM, CEIG is disappointed that there is hardly any evidence of the ESB's progress on TQM detailed design in investment timeframes.



- The ESB's style of engagement – long periods of silence, then distributing highly technical papers focused on narrow topics 1 day before a meeting – has not been conducive to genuine conversations and co-design.
- We continue to argue that the ESB should collaborate more deeply with Castalia and leverage their expertise to progress TQM detailed design.
- Modelling should include a detailed cost benefit analysis and an assessment by AEMO of potential impacts on grid reliability and system security for all four options, as well as advice on whether/ how the models could be implemented.
- CEIG is concerned with the ESB's main focus on dispatch efficiency. CEIG would like to see more thinking and discussion around the modelling of investment timeframe costs and benefits (i.e. avoiding congestion in the first place through improved locational signals).

#### **FEEDBACK ON TQM PAPER**

##### **The scope of the ESB's TQM paper is too narrow**

- The paper only assesses the TQM model against one of the ESB's objective (improve dispatch efficiency) and ignores the benefits of an improved longer-term locational signal and of lesser incidences of binding constraints in the first place.
- Castalia have quantified that those longer-term benefits would be far greater.

##### **The ESB's TQM paper does not use a realistic scenario**

- The ESB's reference scenario assumes that the unconstrained generator (Gen. 4) has a positive SRMC which is not realistic considering the Government's policy of 82% renewable energy by 2030, and it is reasonable to assume that Gen. 4 would also have zero SRMC in most instances.
  - This has implications for the ESB's conclusions on price outcomes for customers and on bidding behaviour.

#### **FEEDBACK ON CONGESTION ZONES PAPER**

- CEIG agrees with the ESB that the definition of congestion zones and the provision of additional information on transmission network availability is a no-regrets reform, and CEIG supports the development of this work.
- However, this reform alone is not sufficient to deliver improved revenue certainty for investors and reap the benefits of more fulsome investment timeframe reform.
- The ESB needs to be more impartial when it discusses topics that are common to all investment timeframe models (e.g. measurement of available transmission capacity) and present them as common issues (vs. link them to a specific model).

#### **FEEDBACK ON CONNECTION FEES PAPER**

##### **CEIG does not support the ESB's proposal to introduce a new connection fee as it does not deliver the upfront improvements to revenue certainty that investors need to lower the cost of capital:**

- despite paying the locational fee, generators would continue to be exposed to the risks of 'winner takes all';

- the fee would impose a new cost on generation projects without any concrete benefits;
- consumers would pay higher costs: increase in wholesale prices would exceed the upfront decrease in TuoS charges.
  - The connection fee increases the equilibrium price a new generator needs (i.e. all wholesale energy needs to be higher priced for those generators to connect). However, the TuoS savings are only on the subset of energy provided by the new generator – a much smaller amount.

## **GENERAL COMMENTS**

### **The ESB needs to genuinely turn its mind to reform in investment timeframes**

CEIG welcomes the opportunity for lasting reform on transmission access. Having a dedicated workstream has been well received by stakeholders who, in response, have been committing significant resources to support its efforts. However, the process ran by the ESB over the last nine months has been frustrating and it is not yet evident that significant progress has been made.

The ESB's focus has been mainly on operational timeframes as is evidenced by the literature submitted to its Technical Working Group. Even in its Working paper on CEIG's Transmission Queue Model (TQM), the topic covered only relates to operational timeframes.

The ESB needs to engage more meaningfully with the investment timeframe components of the reform and with the full TQM proposal. It needs to progress the detailed design of the TQM model in investment timeframes and to turn its mind to the full assessment of the shortlisted models across both investment and operational timeframes.

CEIG supports the importance of investment (vs. operational) timeframe reform:

- In a National Electricity Market (NEM) with 100% VRE, providing investors with greater certainty about their future ability to dispatch is critical; to lower the cost of capital, this needs to happen upfront, at the time they make their investment decision.
- To lower overall costs for consumers, the volume of capital also needs to be minimised (through better coordination of generation and transmission investment).

### **LMP-based reforms need to be discarded**

As CEIG has previously argued<sup>1</sup>, LMPs would create uncertainty and increase costs for consumers. CEIG does not support the ESB's CMM model as it retains key design features that allocate excessive risk to investors. The clean energy industry has also long been vocal against LMP-based reforms which do not have its support.

As reforms progress, it is becoming more evident that the Post-2025 energy market will remunerate not just energy but also flexibility and dispatchability. Basing transmission access reform on LMPs - a complex way to price energy - is not consistent with the broader direction of reform and simply does not make sense.

As a result, CEIG believes that LMP-based reforms need to be discarded.

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<sup>1</sup> [CEIG submission](#) (May-22)

**CEIG CONCERNS NOT YET ADDRESSED****The ESB needs to genuinely collaborate on model design**

CEIG first submitted its alternative transmission access model to the ESB in a meeting in January 2022. Nine months later, CEIG is disappointed that there is hardly any evidence of the ESB progressing the TQM detailed design in investment timeframes.

CEIG has found the process increasingly frustrating and is disappointed at the wasted opportunity for the ESB to genuinely work collaboratively with industry.

Based on our engagement with the ESB (through the ESB Technical Working Group and individual meetings), their style of engagement – long periods of silence, then distributing highly technical papers focused on narrow topics shortly before a meeting, followed by long periods of silence again – has not been conducive to genuine conversations and co-design. Those opportunities for discussion have also been too sporadic.

By way of example, the first version of the Working paper on TQM was discussed with CEIG and Castalia on 3 August 2022. The paper as recently published in late September still does not incorporate all of CEIG's and Castalia's feedback, and there have since been no engagements on further detailed design questions with CEIG. Considering this should be a busy time for TQM development, this behaviour is extremely disappointing.

Throughout 2022, CEIG has regularly expressed its concerns to the ESB at the lack of collaboration and co-design with CEIG as an alternative model owner. Despite those calls for more regular and more interactive co-design, the ESB has only recently started working with Castalia. It is still not clear to CEIG whether Castalia's deep expertise on the TQM (as 'intellectual property' owners of the model) is being tapped into to develop the TQM in a productive and collaborative way. We suggest the ESB should collaborate deeply with Castalia and leverage their expertise to progress detailed design of the TQM, particularly ahead of any public papers being released to avoid any misrepresentations of the TQM.

**CEIG welcomes a robust cost/benefit assessment of all four shortlisted models**

A robust cost benefit analysis of the four models being considered by the ESB is required to effectively compare and assess all reform options.

CEIG supports a robust, comparable and transparent modelling of outcomes across all models, including a detailed cost benefit analysis that incorporates costs for all market participants.

CEIG is concerned that the ESB appears to be focusing on dispatch efficiency and has therefore only commissioned to-date a narrow evaluation of operational timeframe benefits. CEIG would like to see more thinking and discussion around the modelling of investment timeframe benefits and quantify the costs/ benefits of avoiding congestion in the first place through improved locational signals.

**Modelling should include a detailed assessment of potential impacts on grid reliability and system security for all four shortlisted models.**

AEMO should provide detailed advice and modelling around:

- feasibility and implementation of the four shortlisted models in NEMDE;
- potential impacts on grid reliability and system security for all four shortlisted models.

The issues contemplated by the ESB and stakeholders can be extremely technical. It is difficult to have meaningful discussions without the benefit of detailed advice from AEMO's technical experts.

### **FEEDBACK ON 'TRANSMISSION QUEUE MODEL AS STAND-ALONE OPTION' PAPER** **The scope of the ESB's TQM paper is too narrow**

The ESB's TQM paper only assesses the TQM model against one of the ESB's objective (improve dispatch efficiency). CEIG continues to argue that this assessment is too narrow.

The ESB has also previously noted that not all models will address all ESB objectives (incl. ESB's acknowledgement that the CMM does not address investment timeframes).

It is unclear why the ESB continues to ignore the larger benefits of TQM in investment timeframe reform, even while it states that those are indeed more important,

*"The impact of the model in investment timeframes is arguably more important, as this is the timeframe that the TQM is designed for."*

and why it is so focused on dispatch efficiency outcomes for the TQM model.

CEIG does not agree with the ESB's conclusion that

*"Unless it can be demonstrated that the benefit of increased certainty to investors is greater than the cost of inefficient dispatch, then implementing TQM on the basis proposed would not meet the NEO."*

Instead, CEIG continues to encourage the ESB to continue detailed design of all models and perform a robust cost/ benefit analysis of all models.

TQM design focuses on providing stronger signals for new generators to locate in uncongested areas which by definition will reduce the incidence of congestion in the future. The ESB's assessment to-date of the TQM model ignores the benefits of an improved longer-term locational signal and of lesser incidences of binding constraints in the first place.

In any case, even if TQM did not improve the efficiency of dispatch (which the ESB could not reliably resolve through their paper), modelling of all costs/ benefits should quantify the overall net benefits, including from an improved longer-term signal.

Castalia<sup>2</sup> have indeed argued through a high-level quantification that the benefits of TQM in investment timeframes would far outweigh the minimal benefits to be gained from improved efficiency of dispatch.

### **The ESB's TQM paper does not use a realistic scenario**

The ESB's TQM paper uses a reference scenario (figure 2) which is not realistic since it assumes that Generator 4 has a positive SRMC. The Commonwealth Government's policy is currently for 82% renewable energy by 2030, so it is reasonable to assume that Generator 4 would also have zero SRMC in most instances.

CEIG continues to argue that the ESB needs to deliver reforms that account for the future NEM, not the NEM of the past where thermal generators set the price. Castalia have

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<sup>2</sup> Castalia, [Rethink of open access regime](#) (Feb-22)

detailed a vision of that future NEM in their report to CEIG; it outlines bidding and dispatch outcomes that can be expected in a world with near 100% VRE.

This has flow-on impacts for the conclusions that the ESB reaches, including on price outcomes for customers (ESB TQM paper pp.6-7) and on bidding behaviour (p.7).

### **Implementing TQM in dispatch**

CEIG continues to argue that technical advice from AEMO and/or NEMDE specialists should be obtained to enable a thorough and focused discussion on implementation issues.

### **FEEDBACK ON 'CONGESTION ZONES' PAPER**

CEIG agrees with the ESB that the definition of congestion zones and the provision of additional information on transmission network availability is a no-regrets reform, and CEIG supports the development of this work.

CEIG notes however that this reform alone is not sufficient to deliver improved revenue certainty for investors and reap the benefits of more fulsome investment timeframe reform.

Finally, the ESB needs to be more impartial when it discusses topics that are common to all investment timeframe models. For example, the problem of measuring the amount of available transmission capacity applies to all investment timeframe models, not just the 'Congestion Zones with connection fee' model. The ESB's language should reflect a more impartial approach to discussing those issues.

### **FEEDBACK ON 'CONNECTION FEES' PAPER**

CEIG does not support the ESB's proposal to introduce a new connection fee as it does not deliver the upfront improvements to revenue certainty that investors need to lower the cost of capital.

From an investor's perspective, the ESB's proposal has several critical downsides:

- The fee imposes a new cost on new generation projects without any concrete benefits: unlike the CEIG proposal, there is no guaranteed visibility on a project's curtailment risk over the life of the asset;
- Since the ESB is not proposing any physical solution to the 'winner takes all' problem, its model continues to leave generators exposed. A project that has paid the fee can still be congested by a nearby project with a coefficient 1/1000th better than theirs.
- The new fee would need to be recovered from consumers and would leave consumers to pay higher prices overall as the cost of higher wholesale prices would exceed the upfront decrease in transmission use of system (TuoS) charges.
  - The connection fee increases the equilibrium price a new generator needs (i.e. all wholesale energy needs to be higher priced for those generators to connect). However, the TuoS savings are only on the subset of energy provided by the new generator – a much smaller amount. Overall, this is not a zero-sum game and consumers end up paying higher prices.



- Even if the fee provides a locational signal, it is unclear that it would be followed. The extent of that would probably vary depending on how material the fee would be compared to the rest of a project's cost. The Victorian West Murray zone provides a recent example of a signal not followed. The ESB made this point in their earlier paper<sup>3</sup>:  
*"Recent experience in the NEM suggests that congestion will not necessarily stop investors from investing. For instance, the problems arising the West Murray Zone are well publicised and yet there are still a substantial number of connections in progress. (...)*

*We question whether it is prudent to design a market where efficient whole-of-system outcomes are dependent on the altruism of market participants to be willing to forego profitable opportunities."*

- Finally, the ESB has acknowledged that it would be difficult to calculate the fee accurately and that it also may be set too high or too low. This may negatively impact on the optimal NEM development outlined in AEMO's ISPs. There could also be unforeseen and unfair results (e.g. required fee payment, then unforeseen improvement in transmission availability a few years later).

CEIG thanks the ESB for the opportunity to provide feedback on the 3 Working papers and looks forward to improved engagement on those issues. Our Policy Director Ms. Marilynne Crestias can be contacted at [marilynne.crestias@ceig.org.au](mailto:marilynne.crestias@ceig.org.au) if you would like to further discuss any elements of this submission.

Yours sincerely,

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<sup>3</sup> ESB, [Transmission access reform - Consultation paper](#) (May-22)