



26 May 2023

Anna Collyer  
Chair, Energy Security Board  
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Sydney NSW 2000

Submitted via email: [info@esb.org.au](mailto:info@esb.org.au)

Dear Ms Collyer

### **Submission: Consultation Paper – Transmission Access Reform**

CS Energy welcomes the opportunity to provide a submission to the Energy Security Board's (**ESB's**) Consultation Paper on *Transmission Access Reform (Consultation Paper)*.

#### **About CS Energy**

CS Energy is a proudly Queensland-owned and based energy company that provides power to some of our state's biggest industries and employers. We employ almost 500 people who live and work in the Queensland communities where we operate. CS Energy owns and operates the Kogan Creek and Callide B coal-fired power stations and has a 50% share in the Callide C station (which it also operates). CS Energy sells electricity into the National Electricity Market (**NEM**) from these power stations, as well as electricity generated by Gladstone Power Station for which CS Energy holds the trading rights.

CS Energy also provides retail electricity services to large commercial and industrial customers throughout Queensland and has a retail joint venture with Alinta Energy to support household and small business customers in South-East Queensland.

CS Energy is creating a more diverse portfolio of energy sources as we transition to a new energy future and is committed to supporting regional Queensland through the development of clean energy hubs at our existing power system sites as part of the Queensland Energy and Jobs Plan (**QEJP**).

#### **Key recommendations**

The power system is undergoing unprecedented change with the uptake of new generation technology as the system transitions to a lower carbon footprint. Investment in new energy resources and transmission infrastructure will facilitate this transformation if underpinned by stable investment and planning frameworks.

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While CS Energy supports the promotion of investment certainty and maximising the operational efficiency of the power system, the ESB's proposed hybrid model of reform falls short of these objectives. The details outlined in the Consultation Paper highlight the complexities of the proposed reform even in its simplest incarnation which does not even really consider the physical and financial realities of the market. The Consultation Paper underplays these intricacies particularly in relation to the implementation challenges and potential unintended consequences. In CS Energy's opinion the proposed reforms are unworkable.

The hybrid model also contains elements that work against the intention of the other included elements. Priority access is posited to provide locational investment signals and subsequently greater certainty. These locational signals are offset by the Congestion Relief Market (**CRM**) which facilitates new entry in congested networks. The practicalities of implementing priority access may also have the perverse impact of increasing market uncertainty and affect the ability to finance new projects.

The CRM was originally proposed as a voluntary mechanism of bilateral trades between relevant parties ancillary to the market. The ESB's proposal is a complicated market embedded in the physical dispatch, the implementation of which will likely be costly and challenging. Furthermore, it relies on a large participation for it to not only be viable, but to "correct the dispatch inefficiencies created by priority access"<sup>1</sup>. Whilst the CRM is currently presented as voluntary, industry is concerned that it won't remain voluntary should it be implemented given its design and corrective objective. New entrant generators will be forced to participate based on the impacts of priority access while generators not participating will potentially be adversely affected given its design, establishing a forced incentive to participate. Moreover, the ESB has previously stated that participation greater than 80% is required for the CRM to be viable.<sup>2</sup> With close to full participation, it is reasonable to view the proposed CRM as similar to the previous ESB locational market design. Not only was this model opposed by industry, the Energy and Climate Change Ministerial Council's (**ECMC's**) directive<sup>3</sup> was clear that locational marginal pricing should not be pursued.

It is disappointing that, in articulating the challenge, the Consultation Paper is not adequately framed in the context of the evolving reform landscape. State and Federal governments have committed to delivering investment in new transmission infrastructure through policies such as *Rewiring the Nation* and the QEJP, driving benefits to connection access and investment certainty. Coupled with the enhanced information workstream, these initiatives will provide locational investment signals with plans expected to be enacted prior to the proposed 2027-28 implementation timeframe of access reform. It is unclear what the benefit of access reform will be in addition to these schemes and there is potential for the proposed reform to undermine the success of these schemes.

Against this backdrop, CS Energy questions the magnitude of the issues that the reform is seeking to address and whether these issues warrant the level and complexity of the proposed solution. The benefits of the hybrid model have not, in CS Energy's view, been successfully prosecuted. To date, the model has only been explored using simplistic models of the power system during normal system operations with only a limited integration of system security. It is unclear how sensitivities will be undertaken, how it will operate with interventions or during administered price periods or electrical separation events (to name a few). The potential benefits have been considered through the theoretical lens of solving for a single dispatch interval, ignoring the drivers of participant generation and contracting

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<sup>1</sup> ESB, *Transmission Access Reform Consultation Paper*, May 2023, p.17

<sup>2</sup> ESB, *Transmission Access Reform Directions Paper*, November 2022

<sup>3</sup> ECMC, [Meeting Communiqué](#), 24 February 2023, p.2

behaviour over time, and falsely assuming that the most efficient outcome is the dispatch of plant with lowest Short-Run Marginal Cost (**SRMC**). Dispatch efficiency cannot be reflected by SRMC alone and needs to properly incorporate the drivers, incentives and risk management strategies of participants. A plant may seek to be dispatched despite SRMC for many reasons including both contractual obligations and the desire to minimise potential exposure together with the operational characteristics of plant. Participants also bid based on their suite of assets and in order to optimise their portfolio and fuel availability over the financial year.

In referencing the benefits of the hybrid model, the Consultation Paper cites a cost-benefit analysis that was presented to the ECMC in February 2023.<sup>4</sup> Unfortunately, the ESB has provided its high-level summary of this analysis rather than making the full analysis available. Despite the lack of information, CS Energy questions the thoroughness and veracity of the cost-benefit analysis. The implementation costs are limited to IT and legal costs and, for market participants, are reliant on the assumptions made during the Coordination of Generation and Transmission Investment (**COGATI**) consultation. These inputs were widely criticised and disputed by industry during this process, with the ESB ignoring the impacts on the financial markets.<sup>5</sup> The analysis, however, does clearly demonstrate that only 11% of the total benefits of the hybrid model arise from the operational timeframe in which the CRM is active despite the CRM constituting the majority of the implementation costs.

Further concerns about the specific components of the hybrid model are as follows.

#### Priority access

There are many aspects of the priority access model that need to be explored before it could be progressed. Firstly, it is disconcerting that the priority access model is reliant on a voluntary market (CRM) to rectify the inefficiencies it creates. This is inefficient market design and places risks on all market participants and consumers. How priority access integrates with grid security has not been fully explored nor has the ESB considered how priority access would work under non-normal system conditions.

Regardless of the process for allocating dispatch priority, challenges in the connection process and accessing finance are likely to arise. There is no practical solution to manage the “rush to connect” in order to secure legacy status, and the implications for the broader connection process have not been explored. Being allocated a dispatch priority number may also deter financing as investors will be unsure of the impact on expected return on investment and may place different values on priority positions. Investment certainty may also be undermined by the number of policy levers underpinning the proposed access regime and the risk that these may change over time. Centrally determined tiers will likely deliver inconsistencies across jurisdictions, increasing market risk. The challenges of auctioning access were highlighted during the COGATI process.

Overall, priority access will likely remove or distort critical signals for investment in network infrastructure. The allocation of priority will also assign future generators with a disproportionate share of risk arising from emerging system conditions such as line de-rating or new system security constraints that can't be foreseen. In a system with a transitioning fleet, allocation of future risk needs to be considered carefully.

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<sup>4</sup> ESB, [Transmission Access Reform Cost-benefit Analysis](#), February 2023

<sup>5</sup> See for example, Baringa, [An independent assessment of the NERA report on the AEMC's proposed transmission access reforms](#), October 2020

## Congestion Relief Market

The CRM presented in the hybrid model introduces increased complexity in the dispatch and settlements processes. While intended to be voluntary opt-in, in reality the CRM will require the majority of market participants to be active otherwise it will be a stranded system and will not realise the benefits identified. Full participation will be required not only to attain market liquidity but, as per the ESB's admission, the CRM is essential for correcting the inefficiencies arising from priority access and it relies on the participation of a range of generators in order to balance the physical energy flows. It is difficult to see how participation will remain "voluntary", and the Consultation Paper confirms that once a participant has opted into the CRM then it cannot opt-out.<sup>6</sup>

The stated premise of the CRM is itself flawed, with the Consultation Paper citing its main objectives being to fix priority access and to increase opportunities for storage and flexible demand.<sup>7</sup> Introducing a market reform to correct the consequences of another proposed reform is paradoxical at best particularly when it also provides an avenue to offset the policy intent of that proposed reform. The CRM effectively encourages investment in congested areas and the trade of priority positions. It represents a complex and costly means of wealth transfer amongst participants, and would likely result in system cost impacts to consumers even where new transmission build is not required.

CS Energy has concerns with how the CRM will be integrated into the NEM Dispatch Engine (**NEMDE**), with the Consultation Paper highlighting the challenges that exist for the simple prototype. The CRM will effectively duplicate the Market Management System (**MMS**), doubling the amount of information that AEMO receives. There are already delay issues with NEMDE and this will be compounded by adding a sequential dispatch. Doubling dispatch processing will result in delays in receiving Automatic Generation Control (**AGC**) signals, will leave minimal time for trading response and potentially adversely impact Rules compliance.

It also appears that more intricate scenarios have not been considered in the modelling to date. For example, it is unclear how feedback constraints from intra-regional outages will be integrated into the CRM nor how information will be fed into the subsequent dispatch interval. From an operational perspective, what happens if a generator is stranded or trapped in its trapezium?

CS Energy is also concerned about the proposed data and information flows. Compliance frameworks will be arduous and, regardless of participation, all generators will need transparency in relation to the CRM outcomes. If not, the market is partially settling on a price that is unseen to all participants which makes it difficult to manage physical and financial risks in subsequent dispatch periods.

It is unclear how the implementation costs of CRM will not to some degree be borne by those who choose not to participate. Opt-out participants will still need to implement new systems to hold and analyse the additional market data. Surety would also need to be given that AEMO's implementation costs are not allocated to opt-out generators.

## **Conclusions and recommendations**

CS Energy remains unconvinced that the purported benefits of the hybrid model are commensurate to its complexity and the scale of the problem. The proposed model will be

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<sup>6</sup> ESB, *Transmission Access Reform Consultation Paper*, May 2023, p.64

<sup>7</sup> *Ibid*, p.21

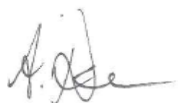
complicated, expensive to implement and likely to have perverse outcomes on investment and the market. Given the energy market is already in transformation, implementing a change of this nature on top of the other change and reform underway will likely be detrimental to system and market design with the cost borne by consumers.

The priority access component of the hybrid model introduces risk and complexity into the market and a reliance on the CRM to rectify its shortcomings. The CRM proposed is no longer ancillary to the market, complicates the dispatch process and is unlikely to deliver net benefits. Development of the hybrid model would ideally not continue.

CS Energy continues to support the acceleration of the enhanced information workstream which will assist developers make more informed investment decisions in the early development planning phase.

If you would like to discuss this submission, please contact myself on 0407 548 627 or [ademaria@csenergy.com.au](mailto:ademaria@csenergy.com.au).

Yours sincerely

A handwritten signature in black ink, appearing to read 'A. Demaria', with a long horizontal flourish extending to the right.

**Dr Alison Demaria**  
Head of Policy and Regulation