



21 December 2022

Ms Anna Collyer
Chair
Energy Security Board

Submitted via email to: info@esb.org.au

Dear Ms Collyer

Submission: Transmission Access Reform Directions Paper

CS Energy welcomes the opportunity to provide a submission to the Energy Security Board's (**ESB's**) Transmission Access Reform Directions Paper (**Directions 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 NEM is changing and will continue to do so as it transitions to a market with more variable renewable energy (**VRE**) and an overall lower carbon footprint. Investment in new energy sources and transmission infrastructure will facilitate this transformation if underpinned by stable investment and planning frameworks.

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While CS Energy concurs with the broad objective of promoting investment certainty and maximising operational efficiency, in CS Energy's view this will not be an outcome of the ESB's proposed transmission access reform. The Directions Paper presents a theoretic and simplistic approach to the NEM that does not encapsulate the realities of the physical and financial markets and underlying drivers of participant behaviour. This is despite clear feedback from industry over the course of this reform pathway. CS Energy is of the view that the proposed models will add a layer of complexity to the dispatch and settlement processes potentially adversely impacting market liquidity, increase investment risk, and will do little to address the purported issues. Ultimately, the access reform proposed is likely to deliver increased costs to consumers.

Furthermore, the Directions Paper requests that industry elect access reform pathways to be recommended to Energy Ministers in February 2023 without providing sufficient information for stakeholders about the proposed reforms. In addition:

- Reference is consistently made to NERA modelling of the proposed options, yet stakeholders have not been privy to this modelling despite numerous requests and the ESB's acknowledgement of its importance alongside the Directions Paper. The simplistic examples presented in the Directions Paper do not deliver any insight into the modelling;
- CS Energy's understanding is that it is not intended that stakeholders are to be consulted on the cost-benefit analyses, further quantitative assessment and other detail prior to draft recommendations being finalised. This is likely to be to the detriment of efficient outcomes and to the cost to consumers; and
- The Directions Paper references the parallel process in which the ESB and Senior Officials are assessing "*the full range of options for transmission access reform (including additional options that are not set out in the paper)*"¹. This process has not been transparent to stakeholders.

This measured approach also needs to consider the evolving reform landscape, something the Directions Paper has failed to adequately capture. State and federal governments have committed to delivering investment in new transmission infrastructure through policies such as *Rewiring the Nation* and the Queensland Energy and Jobs Plan (**QEJP**), driving benefits to connection access and investment certainty. Implementing the ESB's access reform in isolation of these initiatives could subdue their benefits as the increased market complexity may disincentivise investment and thus the success of these initiatives. At best, it would duplicate potential outcomes and represent a diminishing return for consumers at an increased cost.

Given the ESB objective was to bring together numerous reforms and apply a market design view, it is surprising that other reforms such as the potential introduction of an Operational Security Mechanism (**OSM**) or other mechanisms that value essential system services have not been considered by the ESB in developing the Directions Paper. Given one of the potential objective functions that has been mooted for the OSM is to maximise the value of energy trade including relieving constraints to unlock greater volumes of VRE in dispatch, how these potential reforms integrate with access reform is critical to understand. Any mechanism to value system services will change the operational incentives participants face and hence any operational access reform model.

¹ ESB, *Transmission Access Reform Directions Paper*, p.14

Given the reform environment, the Directions Paper does not provide adequate justification for the need for access reform. In addition, any benefits of access reform will be incremental to the benefits that will accrue from these Government initiatives. Furthermore, congestion is already factored into the assessment of new investment as participants leverage the locational signals of the Integrated System Plan (**ISP**) and undertake detailed studies on which to base locational decision-making of potential projects. The outcomes of these studies will be enhanced by the proposed increase in information.

The ESB has also been persistent in its argument that access reform is required to address 'race to the floor bidding', an issue only considered prominent by the ESB and certainly not commensurate to the complexity of access reform. Modelling by Baringa Partners of the prior Coordination of Generation and Transmission Investment (**COGATI**) model demonstrated the benefits from removing disorderly bidding were minimal and certainly did not justify the cost of implementing the reform.²

Given this, CS Energy considers that the ESB's work in relation to access reform should be suspended while other reforms are progressed. This would allow a stocktake of the residual need for the reform and a more fulsome assessment of the potential benefits and costs. Without this, CS Energy cannot support further consideration of the models proposed in the Directions Paper as they are likely to layer more complexity on the market without any demonstrable benefit. Furthermore, while the Congestion Relief Market (**CRM**) is based on a model proposed by industry, it is unclear how its consideration in the Directions Paper is more than in name only with many of the core aspects seemingly fundamentally different.

Market behaviour

The Directions Paper and supplementary information provided to date does not detail how the potential models will realistically integrate into the physical and financial markets of the NEM.

The theoretical lens of solving for a single dispatch interval ignores the drivers of participant generation and contracting behaviour over time and falsely assumes that the most efficient outcome is the dispatch of plant with lowest Short-Run Marginal Cost (**SRMC**).

There are many reasons why a plant may seek to be dispatched despite SRMC being greater than the spot price of the trading interval. These include both contractual obligations and the desire to minimise potential exposure as well as the operational characteristics of plant. Physical unit parameters such as minimum run times, minimum safe operation levels and ramping capability generally exceed a single trading interval and underpin bidding strategies for future intervals. Furthermore, the Directions Paper considers assets as stand-alone which falsely represents participant bidding behaviour. Participants bid based on their suite of assets and in order to optimise their portfolio and fuel availability over the financial year.

Dispatch efficiency cannot be reflected by SRMC alone and needs to properly incorporate the drivers, incentives and risk management strategies of participants. The simplistic application of SRMC-based bidding in the Directions Paper establishes a false premise that the commercial realities of the market are inefficient.

The other area that the Directions Paper fails to properly consider is the contracts market and the impact of the proposed reforms. The contracts market underpins the long-term economics of plant and any market reform needs to fully explore potential impacts. CS

² Baringa Partners, [An independent assessment of the NERA report on the AEMC's proposed transmission access reforms](#), October 2020

Energy echoes the concerns raised by other industry stakeholders including the requirement for adequate assessment of the impact on:

- Contract liquidity and the overall incentive to invest;
- Retailer hedging costs;
- Implementation costs particularly given the complexity of the reform;
- Costs of reopening contracts to reflect the shift to locational pricing; and
- Potential increases to the Weighted Average Cost of Capital (**WACC**).

These may affect generator viability (existing and new), disincentivise investment in new generation and likely increase costs to consumers.

The perils of ignoring the realistic impact of access reform on the financial markets was demonstrated during the development of COGATI. As part of this process, NERA was engaged to conduct a cost-benefit analysis which took a similarly theoretical and narrow focus on which industry was not consulted. Given concern about this approach, market modelling was commissioned by Baringa Partners which demonstrated that COGATI would deliver a net cost to consumers of over \$3 billion³. While CS Energy appreciates that the models in the Direction Paper are not the same reform as COGATI, the principles are relevant and highlight the importance of the proper assessment of potential costs to the financial market.

Operational timeframe models

The Directions Paper presents two options, a refined version of the CRM and the Congestion Management Model (**CMM**), the latter having had consistent and strong opposition from stakeholders. It is particularly disturbing that the ESB has stated that it will automatically default to the CMM despite its unpopularity if the CRM is considered not feasible, yet its detail is not the subject of this consultation. CS Energy believes that CMM should be removed from further consideration.

The CRM has been derived from a model suggested by a group of industry participants led by Edify Energy although it is unclear from the Directions Paper exactly how it has been operationalised by the ESB and whether it retains the features that were core to the industry design. Without further detail, CS Energy is concerned that the CRM reflects the industry proposal largely in name only.

The CRM model as proposed by Edify Energy focused on minimising market risk and maintaining voluntary participation. While the latter has been promoted in the two options in the Directions Paper, CS Energy is unclear how voluntary these options would be:

- In the public forums, the ESB has emphasised that Option 1 would require very high levels of participant opt-in for dispatch feasibility. It is unclear how this would operate practically; and
- Table 15 of the Directions Paper stipulates that in Option 2 all participants would be exposed to the Locational Marginal Price (**LMP**) regardless of whether they opted into

³ *Ibid*, p.39

the CRM and this would impact financial contracts. As per the concerns raised above, the ESB then dismisses this risk without substantiation.

Given the lack of detail and realistic examples in the Directions Paper and explanation in how the proposed model diverges from the original Edify Energy model, CS Energy is extremely concerned by the potential market risk that the CRM would introduce. It is particularly unclear the level of potential basis risk that would manifest from the existence of multiple prices (for example, LMP, RRP_{CRM} and RRP_{NEM} in Table 13 of the Directions Paper). It has been suggested that these prices are a natural consequence of integrating the CRM within the NEM dispatch engine (**NEMDE**) which not only furthers CS Energy's concern about the impact of other potential reforms such as the OSM but also undermines the foundational intent of the Edify Energy model. The latter purposely maintained separation between the CRM and the energy market so as to remove any basis risk between the spot and contract markets.

In the absence of adequate detail, it is CS Energy's opinion that the CRM introduced in the Directions Paper represents a fundamental departure from the key characteristics of the original industry model that cannot, at this stage, be supported.

CS Energy is further concerned by the ESB's comments that the CRM, if it were made mandatory, is a variant of CMM. The CMM has had near universal opposition as the introduction of LMP completely undermines the financial market and participants' ability to manage risk in the spot market. While LMP may be successfully applied in international markets, the NEM is unique and the introduction of LMP is discordant with its characteristics.

Investment timeframe models

CS Energy does not support either of the proposed investment timeframe models although considers the ESB's enhanced information options as a no-regrets reform. The investment timeframe models seem to continue the conversation about LMPs despite their incompatibility to the NEM and detrimental impact on investment:

- The priority access model appears to be closely aligned to COGATI with rights being implemented for a certain period and potentially auctioned. The Directions Paper acknowledges the role of grandfathering as an issue to be considered but does not seem to have progressed this discussion nor does it seem that the ESB has adopted the learnings from the COGATI process and the complexity of these challenges which were left unresolved; and
- It is unclear how the transmission fee model will be transparent, efficient and repeatable or why it is necessary for it to be embedded in an LMP-framework.

The Directions Paper also applies the same academic treatment to the implementation of the investment timeframe models as it did with the operational timeframe models. For example, the integration of priority queue positions in NEMDE will have adverse impacts on wholesale prices if it is implemented through higher priority participants bidding at the price floor. It is also unclear how the priority access will be integrated against system security needs.

CS Energy does support enhancements to existing frameworks and information, and considers this a no-regrets process that should be progressed as soon as practicable and separate to access reform. Through the existing ISP and Transmission Annual Planning Reports (**TAPRs**) AEMO and TNSPs are able to advise on the technical limits of the

transmission network. Increasing the granularity of this information and supporting modelling will assist investors in determining the commercial viability of prospective projects. This information could be utilised to inform investment decisions under the *Capacity Investment Scheme*.

Closing comments

CS Energy does not support further progression of any of the proposed models in the Directions Paper and considers that access reform should be suspended until the outcomes of the broader reform environment have been realised. CS Energy suspects that once these reforms have been appropriately considered, the residual need for access reform would not warrant its complexity and cost.

CS Energy remains concerned that reform decisions are sought based on theoretical propositions that do not reflect the realities of the physical and financial markets, and thus overlook the true costs of any scheme and misrepresent its operation. CS Energy remains perplexed by the ESB's intransigence to acknowledge that LMP is not suitable for the NEM and its insistence to base the investment timescale models against an LMP framework.

CS Energy does however support the development of enhanced information about network capacity for investors and considers it to be a low-cost option that can be progressed independently of access reform.

If you would like to discuss this submission, please contact myself on 0407 548 627 or ademaria@csenergy.com.au.

Yours sincerely



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