



Acciona Energy Australia Global Pty Ltd
Level 38, 360 Elizabeth St,
Melbourne Victoria Australia 3000
Tel: +61 3 90271000
Fax: +61 3 90271001
www.acciona.com.au

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Anna Collyer
Chair
Energy Security Board

Lodged by email to: info@esb.org.au

Submission to the ESB Transmission Access Reform Consultation paper

Who is ACCIONA?

ACCIONA Energía (ACCIONA) is the largest 100% renewable energy company with no fossil legacy in the world. It has 11GW of renewable energy in 16 countries. With 30 years of experience, ACCIONA offers a complete portfolio of tailor-made energy solutions for its corporate and institutional clients to meet their decarbonisation goals. ACCIONA is committed to the highest environmental, social, and corporate governance (ESG) standards. ACCIONA S.A., a leading global company in the provision of regenerative solutions for a decarbonized economy, is the reference shareholder of ACCIONA.

ACCIONA has been operating in Australia since 2002, where it has successfully developed its renewable energy, water, and infrastructure businesses.

ACCIONA develops, builds, and operates wind farms that produce clean energy for more than 285,000 Australian homes per year. It's installed capacity of 435 MW is distributed between Mt. Gellibrand (132 MW, VIC), Waubra (192 MW, VIC), Cathedral Rocks (64 MW, SA) and Gunning (46.5 MW, NSW). The company is currently building a wind farm south of Mortlake (157.5 MW, VIC) and has recently commenced construction on the MacIntyre Wind Farm Precinct (1,026MW, QLD).

ACCIONA has a strong development pipeline of over 3,000 MW of wind and solar projects to support Australia's transition to a low carbon energy supply over the coming years.

ACCIONA has also constructed major infrastructure projects such as the Legacy Way tunnel in Brisbane, a 41km bypass for the Toowoomba motorway, a desalination plant in Adelaide, the Mundaring water treatment plant east of Perth, and the Sydney Light Rail. ACCIONA is currently building two waste-to-energy plants in Western Australia among many other projects.

Introduction and summary of submission

ACCIONA welcomes the opportunity to participate in the ESB's ongoing consultation on Transmission Access Reform. ACCIONA understands that the ESB has been instructed to progress detailed design work and to submit a proposed rule change by December 2022. While ACCIONA continues to question the need for this reform and seeks the case for change to be clearly established, there are some 'no regrets' actions that could mitigate congestion risk in the National Electricity Market.

Transmission build should be the focus

The best solution to congestion is to fix its primary root cause – the inadequate pace of investment in transmission capacity relative to new generation investment. Given the new Federal Government's policy for \$20 billion of investment to "rebuild and modernise the grid" in line with AEMO's optimal pathway, this should be the primary policy focus which will reduce congestion risk amongst other outcomes.

The congestion risk present does not warrant the proposed reform

ACCIONA reiterates there is a continuing absence of evidence to demonstrate that major reform to manage congestion – further than ensuring adequate transmission investment – is required. Most of the proposals put forward involve significant reforms and will likely have far reaching consequences that need to be fully anticipated.

In the investment timeframe, more detailed and timely information on transmission and congestion will improve investment decisions

To the extent that the current framework does not support efficient investment decisions, this should be addressed. ACCIONA believes that opportunities to improve information sharing regarding transmission capacity and congestion have merit for all market participants and should be further pursued. With optimal information, better investment decisions will be made.

Other improvements to investment signals could be made to help relieve congestion by removing barriers to new storage investments, including: by exempting batteries from paying Transmission use of Service (TUoS) charges, and improving the registration flexibility for batteries to allow co-location with variable renewable generators.

ACCIONA does not support new connection fees based on congestion zones, nor does it support the proposal for transmission queues. These proposals are unworkable for reasons outlined below.

Operational timeframe proposals

ACCIONA cautiously supports the further investigation of the modified Congestion Relief Market (CRM) as proposed by the Clean Energy Council in its submission to this process. Whilst ACCIONA has concerns as to the implementation cost and effectiveness of the

proposal, the modified CRM warrants detailed analysis. In particular, the CRM is superior to the alternative Congestion Management Mechanism (CMM) under evaluation by the ESB. It is important to note that ACCIONA does not support the ESB pursuing the CMM proposal. We outline our reasons for this below.

Response to the ESB objectives

Locational signals for investment efficiency: The market already has signals – which are used by developers – to drive efficient locational decisions, such as Marginal Loss Factors. Additionally there is information on available network capacity through transmission providers’ annual planning reports, the AEMO Integrated System Plan and generators’ congestion modelling. ACCIONA disagrees that further (dis)incentives are needed to discourage generation being located in areas of congestion. However maximising access to timely and useful information on available transmission capacity and present and forecast congestion will enable generators to make more informed and efficient decisions. Investors will generally make efficient decisions, given the available information.

Past investments in congested areas, such as West Murray, have been in part due to information barriers – a misalignment in the available information regarding potential congestion compared to the timing of key decisions in projects’ development stage. Investors didn’t simply ignore locational signals –such are fundamental to the economic return of long-term generation investments. Rather information regarding aggregated congestion (prevailing and upcoming) was absent when required, prior to Final Investment Decisions or investing significant capital.

Manage access risk:

Enhancing the transmission access of generation projects while continuing to attract new investments in the NEM is a worthwhile objective. As a feature of the market construct generators do face a risk of curtailment. More so, over time congestion is forecast to become more frequent and a more material issue. The questions that should be addressed however are: what is the extent of congestion risk, what is the cause, and how best can surety of future transmission access be optimised?

Dispatch signals for operational efficiency:

The ESB objective of dispatch signals targets more efficient dispatch outcomes by removing incentives for non-cost reflective bidding – termed by the ESB as “disorderly bidding”.

ACCIONA does not support this reform objective and disagrees with the premise that bidding in the NEM is either disorderly or non-cost reflective. The ESB has not considered the myriad factors that play into generators’ bidding strategies aside from their short run marginal cost (SRMC). Generators generally bid rationally to maximise profit subject to cost, contractual and technical constraints.

Whilst there may be some marginal room for improvement in dispatch efficiency in the NEM, ACCIONA believes that this aspect has been significantly overstated in the ESB evaluations of the market.

Providing the right signals for alleviating congestion:

ACCIONA agrees that technologies that can help relieve congestion – such as storage and demand side responses – should be incentivised to locate and operate in the most efficient manner. However there needs to be a recognition of the economic drivers and objectives of such facilities. For instance, storage will naturally seek to discharge when market revenue opportunities are high, this is integral to its business case, and it may be contractually required to do so. Incentives should be designed to maintain flexibility to participants to manage their market offers according to the various opportunities, costs, and constraints they face.

Investment timeframe proposals

ACCIONA supports more transmission information availability

ACCIONA supports the provision of more information on transmission capacity and congestion to improve the efficiency of investments through optimal location decisions. The proposal for a Transmission Statement of Opportunities has strong merit. Such a report would include existing and forecast transmission capacity and congestion, with enough granularity to be useful to project developers. If regularly updated, this would also improve the timeliness of information availability. Ensuring that the AEMO connections database remains up to date would also support information sharing. Finally, AEMO could make available to developers a dynamic open access congestion model that would support developers to assess the congestion impact on their projects in a timelier manner.

The availability of timely and regularly updated transmission information will assist investors in their project development plans. The lengthy time (generally many years) taken to develop, construct and connect projects exacerbates the risk of poor locational decisions as congestion/forecast congestion may change significantly during this time.

Such information will support investors in evaluating opportunities and risks associated with projects and make efficient investment decisions based on the information available.

The connection fees and transmission queue proposals are not fit-for-purpose and do not meet the ESB objectives

While ACCIONA supports greater sharing of information to facilitate efficient investment decisions, ACCIONA does not support the proposal for new connection fees based on congestion modelling. Modelling can be useful to evaluate the impacts of changes over time, but inaccuracies in modelling long-run congestion forecasts are inevitable. New entrants, generation profiles, policy, and other fundamental modelling assumptions such

as cost assumptions will deviate from the long-run congestion modelling assumptions over time. Network issues previously unforeseen, including by AEMO, will arise. As such, while congestion modelling can be a useful input to generators investment decisions if used cautiously, an accurate valuation of the 'marginal cost of congestion' implied by a new entrant is not possible.

The ESB paper claims that only consumers bear the risk of inaccurate congestion modelling. However, ACCIONA notes that levying connection costs on generators based on a forecast marginal cost of congestion concept is fraught with risk for generation investments. Embedding these inaccuracies in fixed, lifetime connection costs imposed on generators at the time of connection leads to greater inefficiencies and inequity in the market.

Further, this proposal also risks further delays in the connection process, due to the lengthy process of modelling congestion and setting fees. The potential for these outcomes conflicts with the objectives of accurate investment signals and reducing risk.

ACCIONA does not support the transmission queue proposal. This proposal is overly complex – with EOIs and auctions for a queue position for an as-yet undefined right such as a financial right during congestion. The 'first come-first served' nature of the queue position is not efficient (as a more efficient projects may present later). This seems to be contrary to the intention of having more efficient dispatch. The EOI and auction aspect of the proposal suggests a significant level of complexity which has the potential to exacerbate cost, risk, and delays in the already risky, excessively long and costly connection process. As the use of the queue position (type of right it confers) has not yet been developed it is not possible to comment on that aspect. This proposal has no clear benefit, while likely imposing significant cost and risk on new generation.

Operational timeframe proposals

ACCIONA strongly believes that the most effective response to a forecast risk of congestion is to accelerate the pace of the significant transmission build that is required under the AEMO optimal development pathway. At present congestion risk is primarily due to underinvestment in transmission and transmission capacity not keeping pace with new investment in generation and in particular the new generation that is required to support the transition in the energy supply mix in the NEM.

The operational timeframe proposals put forward by the ESB aim to address two key objectives. While ACCIONA supports the objective to incentivise technologies (such as storage and loads) that can relieve congestion, as outlined above we do not believe that 'fixing dispatch signals' requires any intervention. The two proposals put forward should be viewed through their ability to address the first objective – incentivising congestion relieving technologies to reduce congestion, and secondly to manage the risks to generators associated with this.

Several market reforms could incentivise storage uptake

At present battery storage faces several barriers to its operational and economic potential, some of which are significant. Mitigating these barriers will each help the business case for storage and thereby increase storage investment. Actions to address these barriers could include:

- exempting batteries from paying TUoS charges
- better enabling battery co-location with variable renewable generation by allowing more flexibility in registration of the generating system. For example, allowing the variable renewable generator to register as semi-scheduled, rather than requiring it to be scheduled as well as the battery, and
- enabling storage to fully monetise the value of the grid services it provides.

There are other barriers to achieving the full benefits of batteries such as the rules which require generators to ramp linearly to their dispatch target. Particularly in a five-minute market, this rule limits a battery's ability to provide cap type services and ramp up quickly to capture high prices.

Incentives to encourage storage and loads to relieve congestion are worth pursuing

Under the current framework there is no incentive for storage to charge or loads to respond to relieve congestion. ACCIONA supports the investigation of reforms that can address this. However, such reform must:

- demonstrate greater operational efficiency, by alleviating congestion
- a net benefit in a cost benefit analysis, and
- not increase investment risk.

The modified Congestion Relief Market proposal warrants further investigation

In this submission we refer to the modified CRM, as proposed by the Clean Energy Council in their submission to this consultation round.

Like the Congestion Management Model (CMM) proposal, the CRM proposes a mechanism for storage and loads to face a local/nodal price, which may incentivise congestion relieving responses from participants during times of high RRP. There are however *significant advantages* to the CMM proposal, these being:

- the CRM would be an ancillary market and participation would be optional – i.e. participants could bid the same prices into the energy market and the CRM
- participants would have control over their CRM market offers (bids) in the same way as for the energy market, enabling them to optimise these at all times according to their costs and incentives. For instance, during congestion, storage would maintain the option to charge (which depends on the capacity available) or to generate and potentially capture a high RRP. Participants would also have the flexibility to bid contracted capacity and uncontracted capacity differently, to reflect different economic incentives.

- the CRM would be co-optimised with the energy and other ancillary markets, delivering the most efficient overall dispatch (assuming bids represent costs) and within the technical constraints of the system.

The optional nature of this market, the fact that all generators, storage, and scheduled loads would retain control over their participation and market offers, is very important.

However, the development of this proposal is in its early days, and many questions remain. ACCIONA recommends the ESB carry out a detailed investigation of the modified CRM, with respect to:

- worked examples of how it will benefit storage and loads and how it will allow a more efficient dispatch during congestion
- modelling the co-optimisation process and nodal prices, and
- a cost benefit analysis, including a reasonable implementation costing.

ACCIONA’s reservations regarding the CRM relate primarily to whether the value of the CRM outweighs its cost:

- How much additional value would the CRM allow storage/loads to capture?
 - What is the additional value of nodal prices for arbitrage (daily price spread)
 - Under the CRM, how much of this additional value can be captured by storage/loads, and
 - Will this create more value for storage compared to the status quo? Storage is already often paid to charge at negative prices, or only needs pay low prices.
- Will this incentivise storage to locate in an area of congestion for the purpose of providing these services, given the uncertainty of the revenues?
- The cost could be material considering the need to design and implement a new ancillary market.

In summary, with reference to the ESB objectives the CRM has some potential to:

- **help alleviate congestion** – the extent to which this is achieved will depend on the value to storage and loads, and whether it influences investment decisions re location and/or how it submits market offers in real time
- **reduce access risk** – by providing participants with options to manage commitment decisions during periods of congestion.

The CMM as currently drafted will increase risk and complexity without significantly alleviating congestion

ACCIONA does not support the CMM proposal. While the CMM may create some congestion relief through creating an incentive for – or forcing – storage to charge during congestion (like the CRM), the proposal is complex and inflexible, and overall the CMM does not satisfy the objectives set by the ESB. Its performance relating to the other ESB objectives is outlined below.

Investment efficiency (locational signals): Because of the inflexibility of the proposed mechanism, the CMM could further deter storage investment from congestion regions, where it would have little choice as to how to optimise its management during congestion.

Operational efficiency (dispatch signals): The CMM aims to change bidding behaviour. As highlighted earlier, this is not a major issue that warrants intervention.

Risk: The CMM may result in some reduction in congestion – and therefore reduced access risk – from storage charging during periods of congestion (rather than discharging). However as identified in the consultation paper, the CMM creates a new basis risk for all generators including new investments. The rebates that generators will receive will to some extent bridge the difference between the LMP and RRP, but are unhedgeable, and are applied across all generation.

- Rather than a manageable volume risk during congestion (with revenues able to be hedged) generators would have an unhedgeable price risk across all their generation behind a constraint during congestion.
- The restrictions on storage operational decisions impacts revenue optimisation – i.e. if storage is restricted in its commitment decisions during periods of congestion. Participants have no control over whether they participate in the mechanism, or flexibility/control over their final settled prices they are willing to pay/accept. Furthermore, a previous paper suggested storage would be paid congestion charges for charging, but not able to access rebates for discharging during congestion. It is not clear if this remains the proposed design.

Conclusion

ACCIONA thanks the ESB for the opportunity to participate in the Transmission Access Reform consultation.

We look forward to further detail about how information on transmission capacity and congestion for investors could be improved and a detailed investigation of the CRM.

If you have any questions in relation to our submission or areas you would like to discuss further, please contact Melanie Sutton, General Manager of Markets and Policy on melanie.sutton@acciona.com.

Yours sincerely



Brett Wickham

Managing Director, Energy, Australia

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