

# NEOEN



## NEOEN RESPONSE

ESB Capacity Mechanism Project Initiation Paper

Response Date: 14 February 2022

## About Neoen

Neoen is one of the world's leading and fastest growing independent producers of exclusively renewable energy. We design and implement the means to produce the most competitive renewable electricity, sustainable and on a large scale. Our total capacity in operation or under construction is currently over 5 GW, and we are aiming for more than 10 GW by end 2025.

As of January 2022, Neoen has over 2.5 GW of renewable assets in operation or under construction in Australia, spanning across Wind (1072 MW), Solar (918 MW) and Storage (576 MW / 910MWh). This represents over \$3.5 billion Australian dollars in investment. Neoen intends to reach 5GW in Australia by 2025.

## Summary

Neoen is pleased to provide this submission on the Energy Security Board's (ESB) Capacity Mechanism Project Initiation Paper, and thanks the ESB for providing an opportunity to comment.

Neoen is generally supportive of the ESB's pursuit to address the reliability issues that could arise in the future power network.

However, Neoen has several key concerns with the ESB's Capacity Mechanism Project Initiation Paper that are highlighted in this letter.

1. *The capacity mechanism does not target existing or medium-term reliability issues* – it is designed to primarily solve reliability issues associated with extended renewable drought periods. The ESB does not provide sufficient evidence for an immediate need to solve this issue.
2. *Capacity mechanism does not manage coal closures* – it may provide some financial relief to coal power plants but does not present a mechanism to manage their controlled exit from the grid.
3. *Does not create incentive for investment in new generation firming capacity* – it does not create signals for long term investment in generation capacity and has the potential to undermine the value of existing assets and be a hurdle for new projects in the contracts market.
4. *Will be costly for electricity consumers* – it has the potential to significantly increase the cost of electricity for consumers.

Date: 14 February 2022

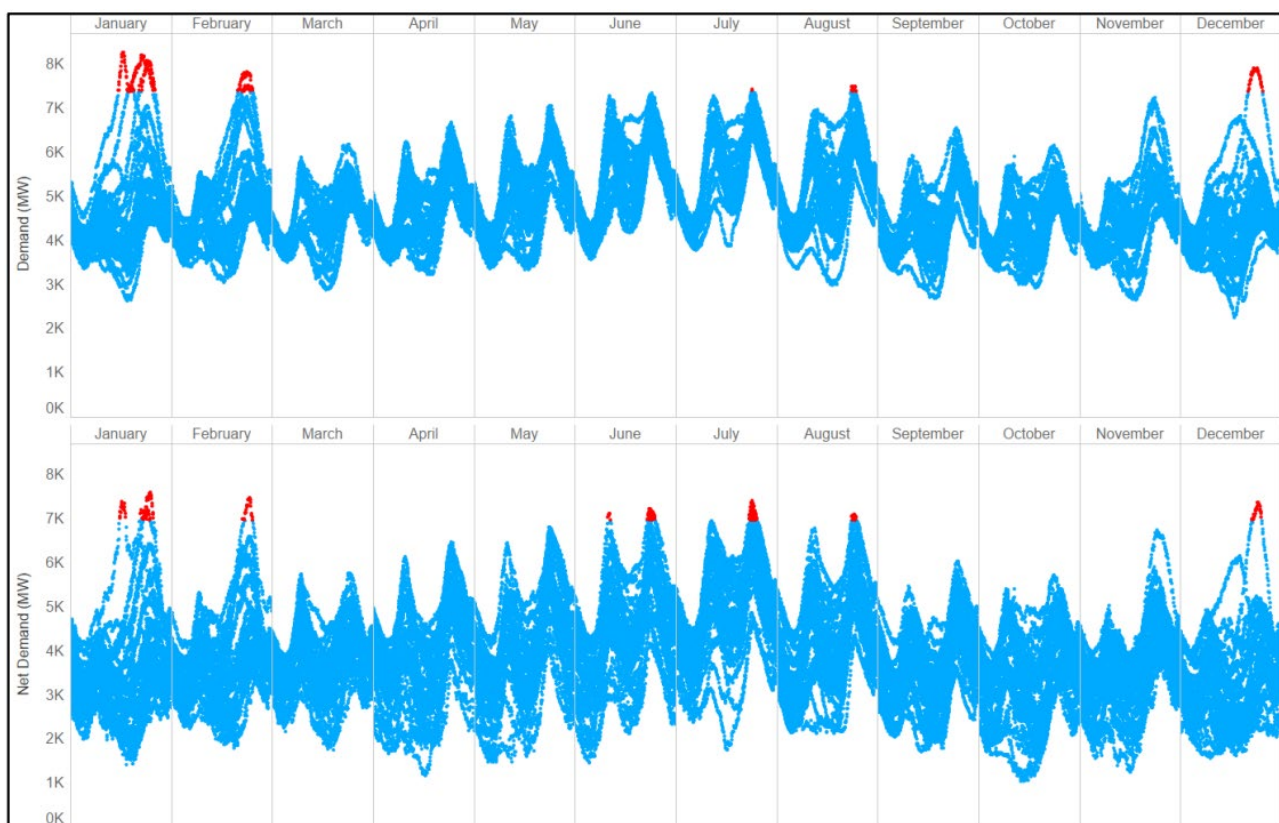
## Reliability Issues

The ESB has itself conceded that as per AEMO's analysis there will be no clear reliability problem under the existing frameworks but still considers reliability as a problem to be solved by the Capacity Mechanism.

As per AEMO's Electricity Statement of Opportunities (ESOO), the investment in new thermal projects, together with significant renewable generation and storage capacity in the pipeline, implies that there will be no reliability shortfall in the NEM over the next decade. However, the ESB insists that there will be long-term reliability issues, associated with participants not having enough incentive to manage long-term capacity risks.

The ESB considers prolonged renewable resource droughts, which may require the remaining thermal and storage fleet to provide sustained backup, as a reliability risk. However, the ESB has not presented sufficient evidence for this.

For example, in the Project Initiation Paper, the ESB presents reliability challenges pertinent to daily demand peaks, but no evidence has been provided for reliability challenges associated with prolonged renewable resource droughts. Figure 3 in the Capacity Mechanism Project Initiation Paper merely represent peaks of one day duration for Victoria, these could be managed by short duration storage systems.



It is important to assess the extended renewable resource droughts problem in detail and find if there is an immediate need to address it. Neoen suggests that the ESB should assess if there is any correlation between renewable resources in different regions considering that dunkelflaute or prolonged renewable resource drought could be limited to a geographical region. The optimal development path under AEMO's ISP may turn out to be sufficient to address the reliability issues associated with prolonged renewable resource droughts.

The ESB also considered daily periods – associated with fast rate of change in net supply – to be at risk periods as these may require considerable amount of ramping capacity in the system. However, Neoen understands that the existing regulatory FCAS market for fast ramping reserves is capable of addressing the reliability issues attached to these daily periods.

Date: 14 February 2022

Neoen suggests that instead of designing a capacity mechanism, the ESB should focus on key physical changes in the system and the challenges and risks for market participants that will be created by these physical changes. In particular, Neoen invites the ESB to focus on traditional peak demand periods or on the minimum demand issue.

Neoen would like to highlight that the degree of uncertainty currently affecting the market is significant and physical changes in the system are giving birth to new risks with which the participants are still getting abreast. Adding more market reforms in shape of a complete redesign will create significant new risks and regulatory complexity for the participants.

In case the ESB deems that capacity mechanism is needed, Neoen recommends that the ESB and the Reliability Panel undertake detailed analyses to quantify the magnitude and nature of the aforementioned regulatory and operational risks that will come with capacity mechanism as these will be a roadblock to efficient investment, and clean energy transition.

## Cost to Consumers

Neoen was unable to find any details provided by the ESB on the quantitative assessment of the likely cost of paying power plants based on their installed capacity, in addition to paying them for their energy.

As per Neoen's understanding capacity mechanism has the potential to significantly increase the cost of electricity in Australia. We don't have to look beyond our borders for an example of this, if Western Australia's centralised capacity market is applied to the NEM, the electricity consumers will end up paying annual capacity payments of \$2.9 billion to \$6.9 billion to generators. This would entail an additional \$182 to \$430 on the annual power bill of households<sup>1</sup>. Neoen recommends the ESB to assess in detail the financial burden that will be created by capacity mechanism on electricity consumers.

The decentralised model where retailers are required to forecast their own load and procure capacity certificates based on that, may create oligopsony. Large retailers that are vertically integrated and have generators on their portfolio may surge the certificate prices. This will expose small retailers without generation on their portfolio to huge financial risks. Moreover, higher certificate prices will increase cost for electricity consumers.

In case of a centralised system – where AEMO would forecast and procure capacity – Neoen expects that a market operator's approach would be weighted towards system security at any cost. As such the cost for electricity consumer will increase.

Neoen understands that the ESB is considering recalibrating the reliability settings like market price cap (MPC) to reduce the financial burden on electricity consumers. However, it is evident from the Western Australia market – where energy market price cap is \$300 – that total electricity costs for consumers would still be expensive.

Moreover, any reduction in MPC will significantly reduce the valuation of current assets and create a hurdle for new projects in the contracts market.

## Managing Coal Closure

Neoen realises that abrupt coal closures will be a reliability threat for electricity grid. Considering that 23 GW of the existing 43 GW firming capacity comes from coal, and under the most likely step change scenario from AEMO's draft ISP 2022, around 60 GW of firming capacity would be needed in a future grid, it is important for the ESB to develop a mechanism that can manage a controlled exit of coal power plants from the grid and attract investment in new firming capacity.

---

<sup>1</sup> IEEFA. Energy Security Board's Capacity Payment: Burden on Households. August 2021.

Date: 14 February 2022

The proposed capacity mechanism may relieve some of the financial burden on coal power plants, but it does not address the problem of abrupt coal closures as in the case of Callide power station explosion. For coal power plants such incidents may take years to repairs along with hundreds of millions of dollars. For old coal power plants that are unprofitable in the current market, such incidences along with accumulated maintenance costs can lead to early and abrupt closures.

Considering the risks involved with early coal closures even with capacity mechanism payments, it is important for the ESB to develop a mechanism to drive investment in the new firming capacity. Neoen believes that the proposed capacity mechanism does not create long term signals for proponents to invest in generation firming capacity.

The ESB should target long term contracts and bringing forward transmission projects identified in AEMO's draft ISP 2022 to develop new generation firming capacity.

## Recommendations


Neoen recommends that the ESB should manage controlled closure coal power plants by bringing more certainty to their scheduled closure dates. Payments to coal power plants through capacity mechanism may reduce their financial burden, but this does nothing to reduce the risks of abrupt closures and increases cost to consumers.

Investment in new generation firming capacity should be ESB's main target to solve reliability risks pertinent to coal closures. Transmission projects identified in AEMO's draft ISP 2022 must be brought forward as the benefits of bringing them forward outweighs the reliability risks and costs associated with delays.

If a capacity mechanism is implemented, cost to consumers will likely increase, it is important for ESB to balance it without hurting investment in new generation capacity. Reduction in MPC must be carefully considered as it may undermine the value of current assets and create hurdles in the contracts market for new projects without reducing cost to electricity consumers.

Neoen is available at your convenience to discuss these topics further.

Yours sincerely,



---

Hassan Ali,  
Senior Market Analyst,  
Neoen Australia