Dr Kerry Schott AO
Energy Security Board
By email: info@esb.org.au

RWE Renewables Australia Pty Ltd

Suite 5, Level 9
350 Collins Street
Melbourne, VIC 3000
Australia

+61 (0) 3 9600 2698
www.rwe.com

ABN 72 626 156 894
ACN 626 156 894

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Post 2025 Market Design Options Paper (30 April 2021)

Dear Dr Schott,

Thank you for the opportunity to provide feedback on the Energy Security Board's (ESB) post-2025 options paper.

RWE is a global renewable energy company with 10GW of installed renewable energy capacity across our core technologies and markets. Its global renewable energy development pipeline exceeds 20GW. RWE operates across core markets including the Americas, Europe and Asia Pacific with operations in 18 countries.

RWE's first Australian project is the 249 MW Limondale solar farm in Balranald, south-west NSW and we want to deploy more capacity, provided the market settings are appropriate.

Introduction

We commend the ESB on its continued progress in tackling such a large suite of reforms across the areas of resource adequacy, system services, distributed energy resources and transmission/access. Of those four workstreams, RWE is particularly interested in commenting on the transmission and access reforms. In February we submitted to the ESB about the problems with restricting access within REZs but not changing the open access regime in the shared network. We are pleased to see the ESB now trying to address those problems in the options paper. While we stand by the previous options we put forward to solve this issue, we have devoted this paper to commenting on the most promising of the ESB's proposed solutions – the congestion management model.

The congestion management model could complement REZ policy

We are generally supportive of the ESB's work in the transmission and access workstream and think that a version of the congestion management model could be a suitable complement to the renewable energy zone (REZ) model that is being developed and rolled out by the ESB and the States.

Without some form of restrictions to open access, we think the REZ model falls down, because it does not disincentivise new projects which choose to locate outside REZs or new transmission upgrades, thereby reducing the certainty of access for REZ investors.

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Investors will pay to locate in a REZ when they can have greater certainty about losses and curtailments than under the current open access regime. A REZ access regime which limits generation capacity that can connect within a REZ (whether directly or through financial disincentives) is welcome, but insufficient on its own, as it suffers from a leakage problem. Degradation of grid access outside the REZ will still impact investors within the REZ, so for the REZ model to work, there needs to be limits (again either directly or through disincentives) to generation that can connect outside a REZ, where such additional generation would impact the ability of REZ investors to deliver their electricity to market.

The congestion management model has significant improvements over COGATI

We have never been ideologically opposed to a move to locational marginal pricing (LMP), but all LMP models to date (i.e. COGATI) have punished historical locational decisions for existing projects. COGATI had only short-term grandfathering, exposing existing generators to additional price risk (through LMPs) and/or costs (through FTRs) which were not taken into account when the investments were made under the current regional pricing regime. The ESB's congestion management model would provide existing generators a rebate to keep them whole, so that, while they face their LMP, they have a proxy grandfathering under the regional pricing model. We note that such a change would address the disorderly bidding issue which, although it hasn't been proven to be a significant problem for the NEM to date, has concerned the Australian Energy Market Commission (AEMC) for some time. If an existing generator receives the rebate based on their available capacity rather than on their dispatch quantity, then there will no longer be an incentive to maximise dispatch quantity during times of congestion. So a congestion management model would, if designed and implemented well, leave existing generators neutral, while also solving a key issue for the AEMC.

But where we see the major advantage of a congestion management model is in complementing the REZ regime, by disincentivising new generation build outside REZs or new interconnectors, thereby increasing certainty for REZ investors. Aside from the limited grandfathering, COGATI's other major flaw was it provided new projects no greater certainty about curtailment and loss risks over project lifetimes. There was no option to pay upfront to de-risk congestion and loss impacts. While COGATI would make hedges (FTRs) available, these were short-term and so costs could not be accurately forecasted at project FID.

We are happy to take risks that we can control and manage, but subsequent generators' locational decisions are not a risk that we can control. And we cannot choose to re-locate a solar farm or wind farm once established. When we make our initial locational decision, we are happy to pay to increase the certainty of our grid access over the project lifetime. Indeed, we would prefer to pay upfront for more certainty, than to pay nothing and face the uncertainty of the current open access regime.

The congestion management model can send strong locational signals for new generation investment

If new projects outside REZs did not receive rebates, then those projects would face their LMP with no hedge available to them. Developers would not be prohibited from locating anywhere across the grid, but the exposure to unhedged LMPs over a 25 year project life

would be a very difficult risk to quantify at FID, and therefore be a significant disincentive to locate outside REZs.

In this way, a congestion management model would provide REZ investors greater certainty that the shared network will not be significantly impacted over time. REZ capacity auctions would then be more competitive, as participants would be bidding for the combined value of the REZ access regime (which limits local development), plus the congestion rebates (which, because unavailable outside a REZ, limit wider development across the shared network). Most importantly, REZ investors should know capacity auction outcomes and hence their access fees for project life at FID.

We are also attracted to the ESB's idea of extending the rebate regime to all generators that chose to pay for capacity on any new grid augmentations, whether they are formally designated a "REZ" or not. The key thing though is that you need to pay to play. If there are parts of the grid where you can connect without access fees and still get the benefits of rebates, then there will be leakage, and the REZ concept will deflate like a balloon.

COGATI will be counter-productive and unnecessary

The other way the REZ concept will deflate is if COGATI continues to be held over the industry as a preferred end-state. The congestion management model has some support, primarily because it grandfathers existing projects and gives long-term rebates to new projects that are prepared to pay access fees. Projects committing to access payments in a capacity auction need certainty over project lifetimes about what they're getting in return. If all that participants get is 5-10 years of increased certainty about access rights, the locational signal is weak, and new projects will continue to locate anywhere across the grid.

In any event, if a congestion management model is implemented, COGATI becomes unnecessary. There will already be strong locational signals, we will have generators contributing to grid-build and in return getting greater certainty about access over time, even disorderly bidding will have been solved. Having COGATI as a preferred end-state is actually counter-productive to the congestion management model – the CMM can be the short, medium and long-term solution.

RIT-T reform is welcome

RWE also supports the ESB's work to improve the RIT-T process. RWE agrees with the ESB that the RIT-T's timeliness could be improved and that broader considerations, such as regional economic development, local employment and community should be factored into the RIT-T to fully capture the benefits of investment in transmission capacity.

The ESB's focus through 2018-19 on actioning the Integrated System Plan (ISP) brought welcome reform, however even if the expected halving of the timeline for large transmission project development from 14 years to 7 years plays out, that is still too long from a constrained generator's risk perspective. As an example, new system stability constraints in south-west NSW that were first identified in 2020 will not be resolved before 2025 at the earliest. That is a weaker part of the grid than where REZs would be expected to connect into, but the principle is the same – outside of the actionable ISP framework, the RIT-

T process is reactive and generators can face years of heavy curtailment between a RIT-T trigger event and a solution.

Resource adequacy, system services, and distributed energy resources workstreams
The system services workstream is of much interest to us also, and we are in principle pleased with the ESB's and AEMC's direction on the system strength, fast frequency response and primary frequency response rule changes, so will not comment further on that workstream in this paper, other than to encourage continued efficient development and implementation of those reforms.

On the resource adequacy workstream, we still think the case needs to be made for reforms to the retailer reliability obligation. In our view, given there is no clear resource adequacy "problem" right now, it makes sense to gauge the impact of the 5-minute settlement rule plus a number of the reforms in the other post 2025 workstreams before re-evaluating if there are reliability issues demanding reform.

In the DER workstream, the main issue we are keen to see concluded is reform to TUOS and DUOS arrangements as part of the Integrating Energy Storage Systems rule change. TUOS and DUOS charges are materially hampering the business cases for many storage projects, and given the services that storage can provide to the grid, it seems to us illogical that use of system charges should apply to storage anywhere across the NEM.

We would welcome further discussion on this submission.

Yours sincerely,

Matthew Dickie
Senior Regulatory Affairs Manager, APAC Region Lead
RWE Renewables
0438 118 861
matthew.dickie@rwe.com