29 September 2022 **Our Ref: CWF-20220929**

Mr Jai Thomas
Acting Coordinator of Energy
Energy Policy WA
Level 1, 66 St Georges Terrace
PERTH WA 6000

Dear Mr Thomas

RE: COMMENTS ON RESERVE CAPACITY MECHANISM CONSULTATION PAPER

Thank you for the opportunity to comment on the Reserve Capacity Mechanism (RCM) Consultation Paper (the Consultation Paper). This is a very important and timely review given it is imperative that appropriate market frameworks are in place to support investment in the renewable energy and storage technologies needed for the energy transition and to enable energy users to meet their decarbonisation targets.

Collgar Wind Farm (Collgar) generally supports the proposed design outlined in the consultation paper. It has the following comments on specific design proposals.

Design proposals 1 - 3: Capacity Products

Collgar supports retaining the existing peak capacity product. Despite changing generation and load profiles, it very likely that peak demand periods will remain, at least for the foreseeable future.

It is essential that AEMO has the right tools to manage low load situations. Collgar agrees that, at present, minimum demand can be most effectively managed through other means, including Distributed Energy Resources (DER) management. Therefore, Collgar supports not introducing a minimum demand capacity product at this time.

Collgar supports the introduction of a new capacity product to complement the existing peak capacity product. As outlined in the Economic Regulation Authority's (ERA) recent paper on the effectiveness of the WEM, there are currently not sufficient incentives to invest in flexible technologies that will be increasingly needed for system security. The new capacity product will send price signals for investment in such technologies (providing the pricing of such a product is appropriate).

Design proposals 4 - 8: Planning Criterion and Reserve Margin

Collgar supports retaining the two limbs of the Planning Criterion and adding a third limb requiring AEMO to procure sufficient flexible capacity to meet the steepest ramp. It agrees that the Planning Criterion does not need to reference the volatility of intermittent generators because this can be effectively managed through Essential System Services (as long as sufficient flexible capacity is procured through the third limb).

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Collgar also supports amending the Reserve Margin as proposed.

However, Collgar notes that the Value of Customer Reliability (VCR) used was from the National Electricity Market. Ideally, a local VCR would be used if it could be cost-effectively obtained.

Design proposal 9 - 12: Benchmark Reserve Capacity Price

Collgar supports separate Benchmark Reserve Capacity Prices (BRCP) calculations, and hence Reserve Capacity Prices (RCP), for the peak and flexible capacity products. This is essential to provide an appropriate return on investment given the different costs of technologies able to provide peak and flexible capacity products. An appropriate reference technology should be used for each capacity product, which may at times be the same reference technology.

It is necessary for the WEM Rules to provide guidance on the matters to be considered in setting the BRCP to balance flexibility and certainty. A five-year review period is appropriate providing there is the opportunity for interim reviews to be triggered by the ERA, Coordinator of Energy or a Market Participant (providing the request isn't frivolous).

Collgar does not support the use of the Net Cost of New Entry (Net CONE) to calculate the BRCP as there is a risk a Market Participant will not be made 'whole'. Market Participants may bid below their short run marginal cost (SRMC) in real-time markets to meet their commercial obligations, meaning that clearing prices may not be reflective of the SRCM of the facility. For example, if a facility bids lower than their SRMC to ensure it is dispatched, the market may clear at a price lower than the SRMC of the RCM reference technology. This occurring frequently will reduce, or potentially totally erode, the energy market surplus ("producer surplus") that was supposed to make that reference technology whole. The facility is at risk of not having sufficient revenues to make an appropriate return. This is a disincentive for investment, which will be exacerbated as more Capability Class 3 facilities are connected and become the marginal plant to set prices in the energy market.

If the Net CONE approach is adopted, it is likely that a 'top up' payment through the RCM would be required to make Market Participants whole in the case of zero or negative energy prices. This adds complexity (and cost) to an already complex mechanism and for this reason Collgar prefers the Gross CONE approach.

Design proposal 13 – 17: Capacity Certification

Expert report

Collgar does not support AEMO procuring expert reports on behalf of Market Participants. While Collgar understands the policy intent, there are several practical considerations limiting the suitability of this approach. These include:

- How cost will be controlled, noting that AEMO will not have the same fiscal pressure as Market Participants given it will not be incurring the cost.
- How additional scope can be added to the report. For example, some Market Participants may procure the report with a broader scope than is needed for AEMO's CRC application as it is more efficient and cost effective to have a single scope of works/engagements.
- How conflicts of interest will be managed. For example, some Market Participants may not want to use a particular consultant given it may have a conflict of interest (i.e., does a lot of work for a key competitor or contract off-taker).

- How consultant performance will be managed, including how the Market Participant can provide feedback if they are not satisfied with the quality of work of the consultant.
- What happens if the consultant does not prepare the report within the required deadline and the Market Participant does not meet the CRC application deadline or incurs additional cost in doing so.
- How intellectual property rights will be assigned. It would not be appropriate for these to be allocated to AEMO given the Market Participant is paying for the report.

Collgar suggests that a more practical approach would be for AEMO to discuss any material deviations from the expert report and actual performance directly with the Market Participant. This would be more cost effective and directly targeted at the addressing the perceived problem.

Capability Classes

Collgar supports, in principle, the adoption of Capability Classes and amending allocation methods to consider hybrid facilities as a single entity.

Collgar suggests the following matters need further consideration:

- It is unclear that the priority order is needed given the price signals from the two reserve capacity products will incentivise investment in the 'right' facility types. Further, the prioritisation order is likely directly opposed to any new WEM objective to decrease carbon emissions.
- It may be appropriate for longer duration storage to be in Capability Class 1, using a performance-based approach.
- It is unclear that retaining the 14-hour fuel requirement is appropriate, noting the outputs of the Robinson Bowmaker Paul modelling and concerns raised by other Market Participants. Further, the proposed arrangements may encourage existing facilities to register in Capability Class 2, which could mean there is substantially lower availability of these facilities. Further consideration of the availability duration for Capability Class 1 is needed to ensure that is not too onerous and/or exceeds what can be reasonable achieved by lower carbon technologies.

Availability Duration

Collgar understands the policy intent to increase the availability duration over time. However, as outlined in the Consultation Paper, this potential policy change creates investment uncertainty given different technologies are best placed to provide longer duration storage. A five-year 'grandfathering' arrangement will likely not address this uncertainty. EPWA suggested in the Reserve Capacity Mechanism Review Working Group that this period was sufficient to recover the capital cost of the investment, however this same five-year period has not been applied in calculating the BRCP. It is unclear why inconsistent facility pay back periods are being used. Longer-term contractual 'fixed price' arrangements may be a solution to provide investment certainty as market frameworks evolve, however Collgar recommends EPWA also considers other, market-based options.

Assigning Reserve Capacity to Intermittent Generators (Capability Class 3)

Collgar agrees that the current Relevant Level Method (RLM) does not appropriately assess performance in system stress periods and that its deficiencies will be accentuated as more

intermittent generation is connected. Collgar also agrees with the principles[1] an allocation method ought to demonstrate.

In practice, there is a trade-off between the method that captures the few most peak/system stress events and ensuring that volatility over time is minimised to provide sufficient certainty to support investment. A method that uses too few intervals will not only be more volatile, but also places too much weighting on individual events and is therefore not a good reflection of facility performance in periods of system stress (sample size is too low for meaningful statistical analysis).

The previously proposed Delta method does not appropriately balance the principles. It takes too small a sample size and it has a high level of volatility. Through the Market Advisory Committee (MAC) I proposed an alternative method that has a similar calculation approach with some amendments to decrease volatility (hybrid method). This includes increasing the number of intervals where performance is measured and averaging to minimise year-on-year volatility.

Collgar considers this method balances the principles such that it suitably measures performance while providing a sufficiently stable revenue stream to support investment. This is demonstrated in Figure 1 below, which shows that while the Delta and Hybrid methods have similar fleet-level Certified Reserve Capacity (CRC) allocation, the volatility of the Hybrid method is substantially lower.

Collgar does not support EPWA's proposed amendments to the Hybrid method because these decrease the integrity of the calculation, including the approach to determine peak intervals based on the sum of scheduled generation and the subject intermittent facility. Collgar prefers a method that ranks based on total demand or the demand to me met by intermittent facilities. Other changes include removing the averaging feature and decreasing the number of years from seven to five when calculating the fleet Effective Load Carrying Capability (ELCC).

The Hybrid-EPWA method also has to the volatility of the Delta method, mitigating some of the benefits of the original Hybrid method.

Entry of new facilities

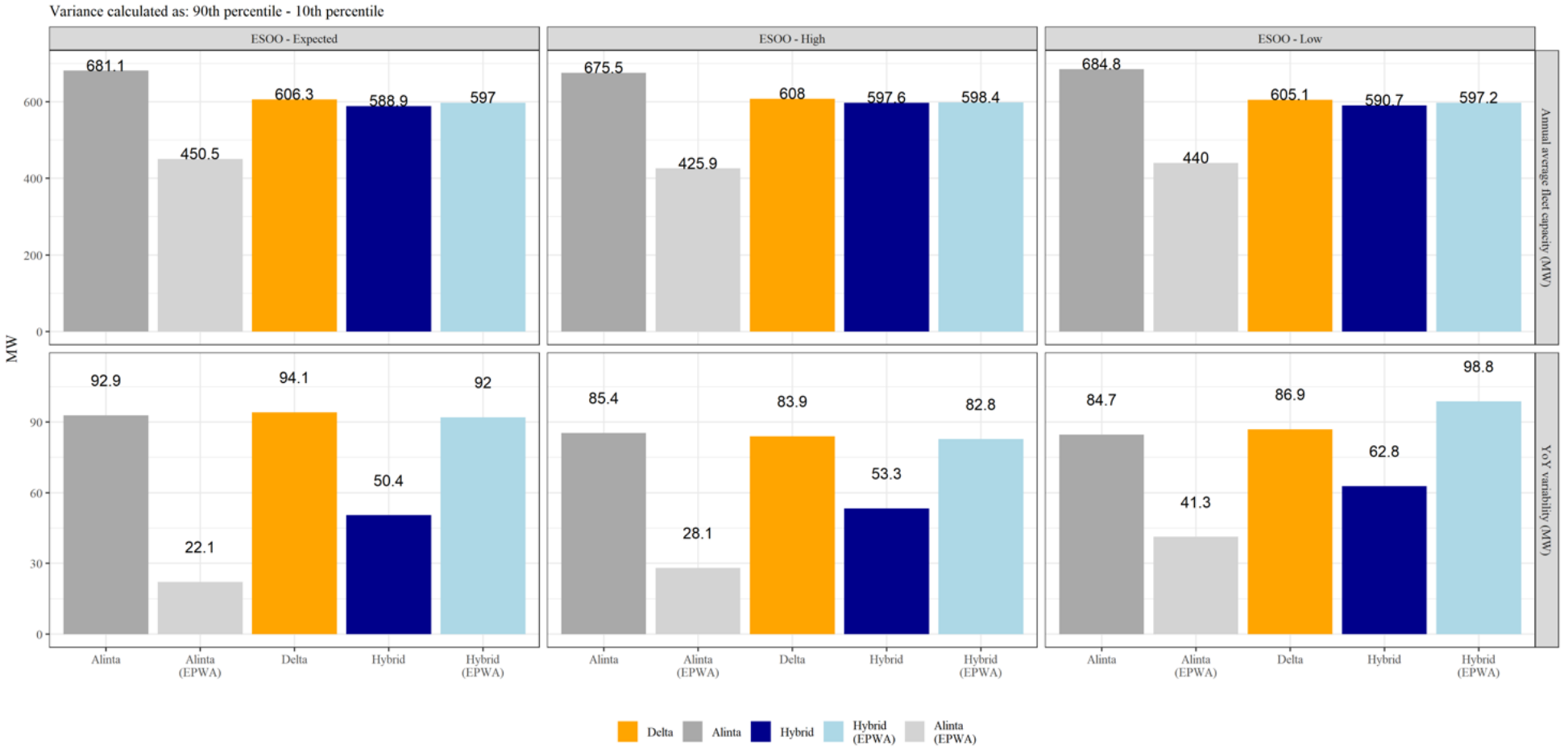
The nature of the original Hybrid calculation method maintains CRC allocation to existing generators when new facilities enter (the size of the fleet CRC appropriately increases), marginally increasing as scheduled generation retires and intermittent facilities make a greater contribution to meeting system demand. In contrast, the Delta and most notably Hybrid-EPWA methods decrease the allocation to existing intermittent facilities as new facilities enter. This is not aligned with the purpose of the RCM, as it neither appropriately compensates facilities for their capacity nor supports investment in said capacity. Both are needed to ensure that capacity is developed and available when required.

Figure 2 shows the allocation of CRC to existing and new facilities to 2031, modelled based on 1,700MW of new capacity entering at various years and regions (see Attachment 1 for assumptions). This demonstrates that as new facilities enter, the allocation to existing facilities is maintained for the Hybrid Method but is eroded for the Delta and Hybrid-EPWA methods.

Figure 3 shows the average annual Fleet-level allocation with and without facility entry. A summary of modelling outputs for select wind facilities is in Figure 4.

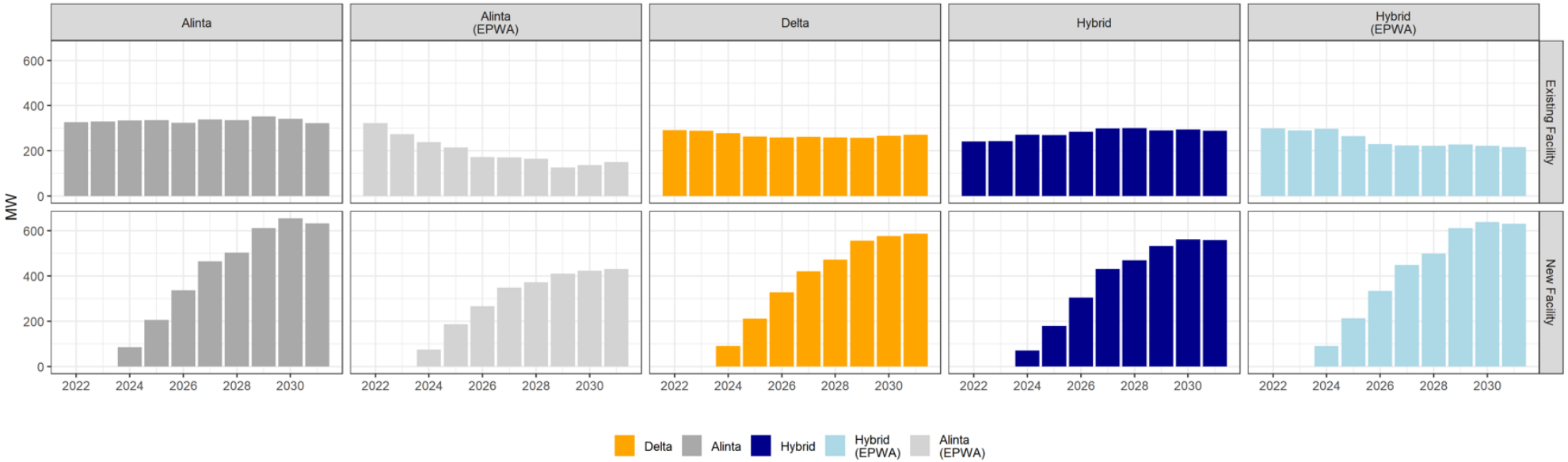
[1] RCM Consultation Paper, page 44

Figure 1: Average Annual Fleet CRC Allocation and Variability by calculation method



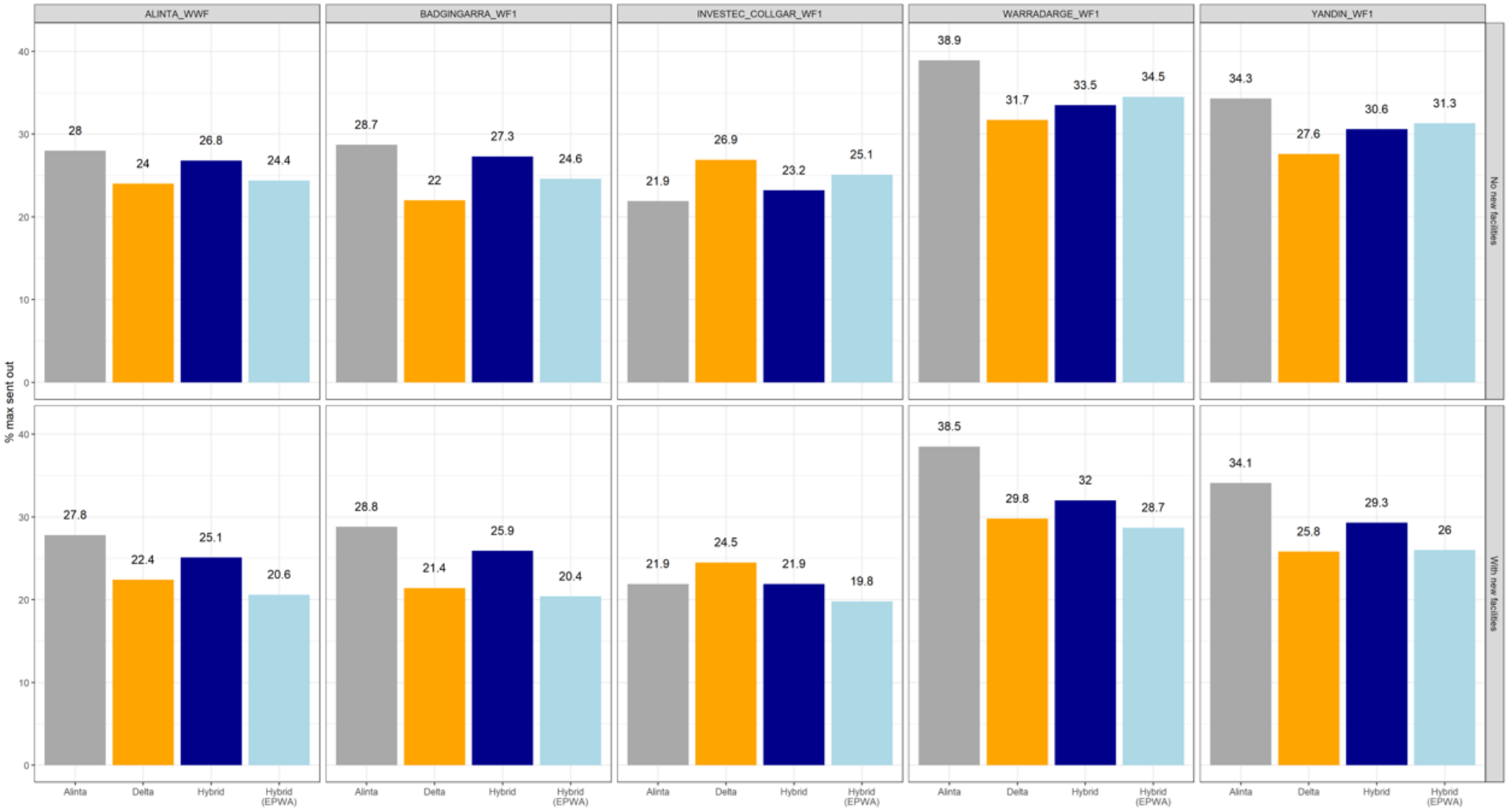
Source: Analytics and Data Science Australia for Collgar Wind Farm

Figure 2: Certified Reserve Capacity Allocation to Existing and New Facility Fleets



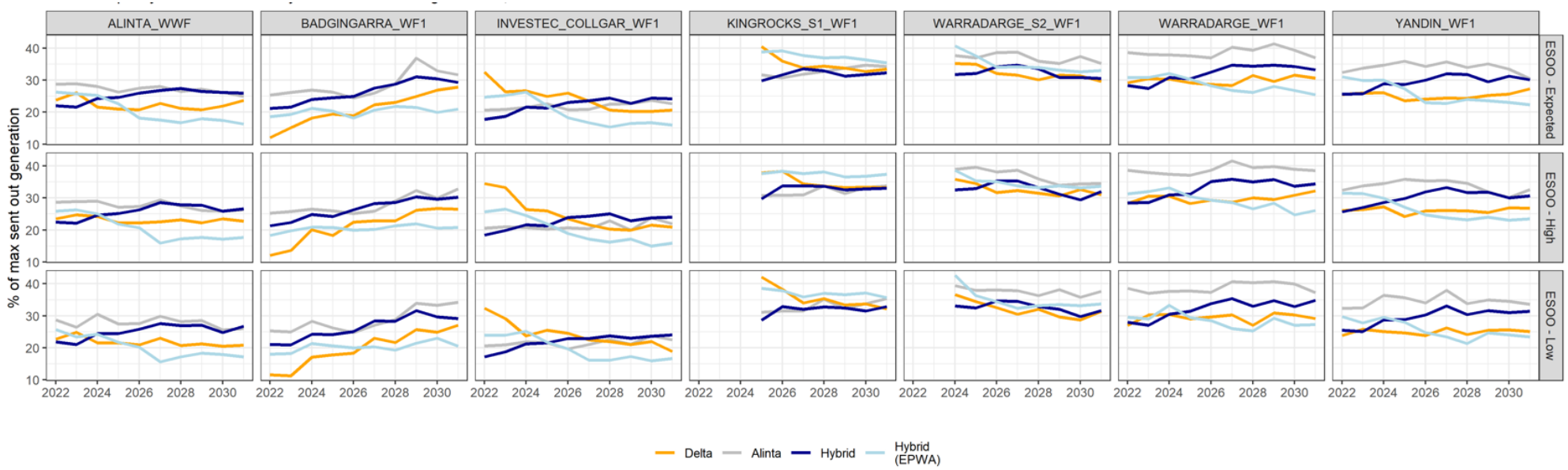
Source: Analytics and Data Science Australia for Collgar Wind Farm

Figure 3: Average Annual Fleet Certified Reserve Capacity Allocation, Comparison of No New Facility and New Facility Entry Scenarios



Source: Analytics and Data Science Australia for Collgar Wind Farm

Figure 4: Certified Reserve Capacity Allocation for Select Facilities, New Entry Scenario



Source: Analytics and Data Science Australia for Collgar Wind Farm

Further modelling

Collgar understands that EPWA prefers to validate industry analysis with its own modelling. Collgar strongly encourages this modelling to include the Hybrid Method (without the EPWA amendments) to provide a comparison with the other three methods EPWA proposes to model.

Collgar also emphasises the need to have a new method to allocate CRC to intermittent facilities in place as soon as possible. It is unlikely investment decisions will be made until a new method is adopted. That new method should also be used to allocate Network Access Quantities (NAQ) to existing facilities as doing so using the existing, substantially flawed RLM would be inappropriate and inequitable.

Collgar appreciates the opportunity to comment on this very important review and is available to discuss any of the above as required.

Yours sincerely

REBECCA WHITE

REGULATORY AND TRADING MANAGER

ATTACHMENT 1: NEW ENTRY SCENARIO

The New Entry Scenario was modelled based on entry of the following facilities. This does not represent Collgar's forecast but rather is a set of assumptions to demonstrate how the CRC allocation is affected if additional wind facilities are connected across the SWIS.

Facility	Location	Entry Year	Max MW
Warradarge Stage 2	Co-located with existing facility	2024	150
King Rocks	Hyden	2025	150
Goldfields Stage 1	Goldfields	2026	150
Goldfields Stage 2	Goldfields	2028	150
North Country Phase 1	Co-located Warradarge	2025	200
North Country Phase 2	Co-located Warradarge	2027	150
North Country Phase 3	Co-located Warradarge	2029	100
South West Offshore 1	Perth Offshore	2026	150
South West Offshore 1	Perth Offshore	2030	100
Southeast Phase 1	Southeast - Co-located King Rock	2027	200
Southeast Phase 2	Southeast - Co-located King Rock	2029	200
Total			***1,700***