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Level 24



The second major change is that the risk associated with investment in conventional plant has increased substantially due to various changes in the market rules. The basis of calculating the reserve capacity price (RCP) has changed several times. The most significant effect is that the risk of excess capacity is placed on existing generators who cannot hedge this in any way.

Perth Energy notes that no new dispatchable generation has been installed in the WEM for around a decade which, we believe, is in large part due to the uncertainty surrounding returns available to investors.

The third main reason for this review is the major transition planned for the wholesale market with the FORVXUH RI 6\QH UJ \ and for the installation of new renewable plant and storage.

At the same time we will see the establishment of markets for essential system services (ESS), introduction of electric vehicles and increased, or possibly saturation, of solar PV systems. All of this uncertainty will require the RCM to draw the optimum mix of new plant onto the system in an efficient and timely manner if we are to avoid electricity shortfalls or over expenditure.

Perth Energy has addressed the questions posed in the Consultation Paper and added some additional commentary.

Response to questions posed in the Consultation Paper

1. *Do stakeholders support the retention of the existing peak capacity product?*

Yes. Perth Energy notes that peak demand will most likely continue to be a time of system





9b. Do stakeholders support providing guidance to the ERA in the WEM Rules on the factors to consider in setting the BRCP?

Yes. It is appropriate that guidance be provided.

10a. Do stakeholders support the proposed approach to the BRCP?

Yes

10b. Do stakeholders support the calculation of separate BRCPs for the peak and flexible capacity products?

Yes.

10c. Do stakeholders support the proposed factors for the ERA to consider in reviewing the BRCPs?

In principle, yes.



13b. Do stakeholders support the conceptual design proposal for the Capability Classes?

In principle, yes. Our hesitation relates to the 14-hour fuel obligation. Assuming that this remains unchanged then generators that cannot demonstrate that they meet this obligation can move from Capability Class 1 to Class 2.



One unintended consequence of the current approach is that it forces an operator with limited generation capacity to build that as dual-fuel, certify it on diesel and hold diesel on site. This is probably also true for a plant using green hydrogen as its primary fuel which adds another barrier to such developments, and may unnecessarily skew any carbon targets.



owner misses out on revenue at the time when prices are highest. For contracted plant an outage when reserves are low means buying from the market at high prices.

We understand the motive behind the threat of losing capacity credits if forced outages exceed a certain target, but note that as a performance motivator, it is third in line behind the incentives of lost revenue and reserve capacity refunds. As such, while it is a weak driver of behaviour for an operational perspective, it is still perceived by investors and bankers as a significant investment risk. As such, it is actually a disincentive for the installation of adequate reserve capacity.

The Paper states that the details of the capacity credit reduction process will be considered in Stage 2. As part of this review, we ask that EPWA notes the significant impact on plant maintenance caused by covid restrictions preventing technical support staff coming to WA. The past two years are not a good indication of likely plant performance without these restrictions in place and suggest that the pre-covid experience is more relevant.

16. Do stakeholders support requiring AEMO to procure expert reports on behalf of participants?

No. The expert report is a critical part of the project development, approval and financing process. An investor needs to be fully confident in their consultant which, in turn, requires careful assessment of the potential service providers. We question whether AEMO has the competency, or the underlying level of incentive, to undertake this work. It would also place AEMO in a position of conflict of interest. The complexity of the challenge has led to a number of reports being produced, but none of which have been accurate or useful.

Figure 24 in the Paper does indicate that the expert reports are not necessarily a good guide to future wind farm output. It is hard to say whether this is due to inadequate data or over-estimation of output. The complexity of the challenge has led to a number of reports being produced, but none of which have been accurate or useful. It is difficult to estimate output in the face of climate change impacting weather and wind patterns. If it is the latter, then a consultant appointed by AEMO to produce such reports would be in a position of conflict of interest.

17a. Do stakeholders support using a different methodology to assign CRC to facilities in each Capability Class?

Yes.

17b. Do stakeholders support the proposed methodology to assign CRC to facilities in Capability Class 1?

Yes

17c. Do stakeholders support the proposed methodology to assign CRC to facilities in Capability Class 2?

For a facility with limited fuel availability it would be equitable for this period to be the same as for a storage system, currently four hours. However, this is a substantial reduction on the Class 1 obligation and may not be optimal for the power system.







Perth Energy suggests that a more appropriate approach would be to treat new generation in a similar fashion to a regulated asset, such as a network asset, and set a regulated rate of return over an appropriate depreciation life. This would allow recognition of the different functions of various plant types in the transitioning market, differing plant lives and different fixed capital and operating costs.

The fundamental concepts of using such an approach to establish an asset return are well understood by regulators, however, some analysis would be required if it was to be used within a market process, such as the RCM payments. Nevertheless, we consider that this would be worthwhile in terms of meeting the requirements of both electricity users and generation investors.

Additional targets

One point raised by the consultants during Working Group meetings was that there is a potential trade-off between installation of wind farms and installation of storage. This is not necessarily on a one-to-one basis. Perth Energy suggests that this should be assessed further to determine whether a single MW capacity target is appropriate. Higher, or lower, levels of storage relative to wind may give a lower overall electricity price.

The appropriate mix of wind and storage could be encouraged by setting different RCPs for each, in a similar way to having different RCPs for capacity plant and flexible capacity. Given the extent and breadth of the forthcoming transition, consideration could even be given to setting a storage target to be applied over the coming 5-7 years as an interim arrangement.

Bidding storage into the energy market

The RCM paper indicates that battery storage may become the benchmark technology, due to its price falling below that of regional gas-fired, in each case its potential revenue may need to be considered in setting the BRCP. In assessing this, the ERA will need to consider how storage systems will bid into the energy market.

It is assumed in the paper that storage will purchase energy when this is cheap and then sell it back into the market when prices are high. There is also the assumption, by way of having AEMO set the duration



Summary

Overall,