Economic Regulation Authority

Our ref: D307891
Contact: Lipakshi Dhar

12 March 2026

[redacted]
Perth WA 6000

Sent by email to [redacted]

Dear [redacted]

Response to request for guidance on the Offer Construction Guideline

I refer to your request for guidance on the Offer Construction Guideline (**Guideline**) dated 10 December 2025, and the additional information you provided on 12 February 2026, on behalf of [redacted].

The Economic Regulation Authority's (**ERA**) interpretation of your request is to provide guidance on the specific cost components that are allowable when calculating opportunity cost in situations where the existence or duration of scarcity of a physical generation input is uncertain. The cost components you identified are:

- Foregone market sales (or purchases) in future intervals
- Operational wear and tear due to generation volatility resulting from managing scarcity
- Forced outage refunds due to running out of the scarce resource.

Further guidance

The guidance provided in this letter is based on the ERA's consideration of the information provided in your request.

The opportunity cost of a scarce resource can be a component of a Market Participant's Efficient Variable Cost (EVC) of producing a market service.

Opportunity cost pricing is efficient for a Market Participant with a thermal generator if there is a shortage of a critical input (not reflected in its price) that limits generation of electricity over a period compared to the amount of electricity that the generator would usually price and produce when conditions are 'business-as-usual'.

In such a case, generation in one dispatch interval may prevent generation in a future dispatch interval. Therefore, a scarce resource's opportunity cost is the value received by its use in the future dispatch interval.

Opportunity cost pricing can occur when a Market Participant's total EVC exceeds the equivalent cost calculated from business-as-usual input costs. That is, a Market Participant's EVC is the maximum of its opportunity cost-based EVC versus its business-as-usual EVC.

Section 3.2.5 of the Guideline outlines how opportunity costs can be accounted for in a participant's EVC when there is an unexpected disruption to its fuel supply, including examples of how these offers will be assessed to be compliant with the ESM Rules. The ERA acknowledges your view that this guidance does not address long-term disruptions to resources.

Section 2.1.1 of the Guideline explains that a Market Participant should forecast the costs it reasonably expects to incur. The forecast made in Example 12 of the Guideline is illustrative, but the principles contained can be applied to more complex situations.

Accordingly, a Market Participant that does not know the duration of a scarcity is expected to make a reasonable projection of the scarcity's duration based on information available and update this projection as new information becomes available.

While there is not one set method to calculate the opportunity cost of a scarce input resource, a Market Participant could:

- Estimate the price that the affected Facility's service could receive in the relevant market/s (e.g. Real-Time Market for energy) over the time in question (e.g. each Dispatch Interval for 12 months) if it were to produce during that time. It is reasonable for a Market Participant to assume they are a price-taker in the market.

- Make a reasonable projection of the total generation possible during the scarcity's duration.

- Estimate the generation profile that would receive the most surplus (market revenues net of costs associated with generation – these might include variable costs, start-up and shut-down costs and penalties such as forced outage and capacity refunds) for the Market Participant's affected Facility, accounting for that Facility's technical limits (e.g. minimum up or down times).

This strategy will maximise operation when prices are high and minimise operation when prices are low, subject to generation allowed by the scarce resource.

A Market Participant can conduct risk or sensitivity analysis around deviations from its forecast and adjust its optimal offer price accordingly. However, conducting a risk analysis does not mean a Market Participant is permitted to include a risk margin in its offers.

The optimal set of offers for a Market Participant is that which aligns with the optimal generation profile.

For example, a Market Participant with a flexible generation profile and no start-up costs might calculate that its optimal level of generation occurs when it is dispatched only when the Real-Time Market for energy price is at least $80/MWh. Its optimal offer structure is a single offer for its entire capacity priced at $80/MWh.

A Market Participant is expected to adjust its forecast as the period of scarcity continues and the availability of the input is either better or worse than originally forecast. The core principle remains that Market Participants are expected to review their forecasts regularly to ensure

they are not making systematic gains in the STEM or Real-Time Market for energy or FCESS over long periods.[1]

If a market participant bases its EVC on a business-as-usual basis, it may take into consideration any cost component that is both variable and efficient. Therefore, [redacted] may include additional wear and tear, provided it can substantiate that the impacted cost components are both variable and efficient. Section 2.1.2 of the Guideline explains how to determine whether a cost is an EVC.

However, there is no basis to add such costs to an opportunity cost-based EVC as they do not affect the trade-off between generation now and generation in the future.

The ERA considers that contractual arrangements for the sale of electricity are irrelevant to a Facility's opportunity cost-based EVC and should not affect price offers.

A Market Participant must maintain adequate records (that are capable of independent verification) of the methods, assumptions and cost inputs used to develop its prices (ESM Rule 2.16C.3). This responsibility is particularly critical for shortage-based prices from Market Participants so that the prices and the underlying analysis are replicable if reconciliation is required by the ERA. Section 8 of the Guideline provides further guidance on the types of records Market Participants are expected to maintain.

Guidance is not binding

Under ESM Rule 2.16D.11, except in relation to ERA's investigations under ESM Rules 2.16C.6 or 2.16C.7, any guidance provided by the ERA is not binding on the ERA, [redacted] or any other person; and the ERA may, at any time, reconsider, revise or withdraw any guidance provided.

The ERA must publish guidance

Under ESM Rule 2.16D.14, the ERA must publish on its website a public version of this guidance, with any confidential information redacted.

The ERA is *not* required to publish the guidance if it considers that this guidance cannot be redacted to ensure that [redacted] identity remains confidential.

The ERA requests you to, within 15 business days of this letter:

1. Identify what matters, if any, you consider must be redacted, including why a matter is confidential or commercially sensitive.

2. Inform the ERA if you consider that [redacted] identity cannot remain confidential even after redaction, and why.

Please refer to the ERA's confidential information policy for guidance on the types of information the ERA considers can be confidential. If you require additional time to identify the confidential matters as outlined above, please inform the ERA within 15 business days of this letter to discuss alternative arrangements.

Pursuant to ESM Rule 2.16D.13, the ERA will also consider whether the Guideline should be amended to reflect this guidance.

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1 ERA, 1 February 2025, *Offer Construction Guideline*, page 9, section 2.1.1.1, (online).

Please direct any correspondence related to this matter to Market.Monitoring@erawa.com.au.

Yours sincerely

Nathan Viles
A/Executive Director, Energy Markets Division