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Dear Bruce

## **CONSULTATION – DRAFT REPORT – OFFER CONSTRUCTION GUIDELINE**

Synergy welcomes the opportunity to provide a submission on the Economic Regulation Authority's (**ERA's**) *Offer construction guideline – Draft Offer construction guideline – Draft report (Draft Report)* which is intended to provide guidance to Market Participants on their offer price obligations under clause 2.16A.1 of the draft Wholesale Electricity Market Rules published by Energy Policy WA (**EPWA**) on 10 November 2022 (**Draft MPM Rules**).

### **EXECUTIVE SUMMARY**

Synergy considers that the Draft Report is a critical element of EPWA's Market Power Mitigation (**MPM**) framework incorporated into the Draft MPM Rules.

At a high-level, Synergy is concerned that, without further information being included in the *Market Power Mitigation offer construction guideline – Draft for consultation*" (**Offer Construction Guideline**)<sup>1</sup>, Market Participants do not have sufficient guidance to give effect to EPWA's policy intentions with respect to the MPM framework, including that it be calibrated to ensure it does not constrain the recovery of efficient costs by energy producers.<sup>2</sup>

To better achieve these policy objectives, Synergy considers the Offer Construction Guideline should include guidance on more of the 'real-world' issues that Market Participants are likely to deal with when determining their offer prices, including how to account for the varied range of circumstances likely to arise that can affect costs, risks and/or the rational behaviour of the hypothetical 'profit maximising' firm.

Unless these issues are addressed, Synergy considers there is a real risk that the Offer Construction Guideline, when considered in the context of the WEM as a whole and for 'real-world' scenarios, will have the effect of creating a structural issue by reason that the prices in the WEM markets will not be sufficient to enable the recovery of participants' reasonable costs which will, ultimately, increase system security risks. For example, if in reality Market Participants pay a premium for the increased certainty and flexibility of fuel supply provided

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<sup>1</sup> Appendix 1 of the Draft Report, pages 12-39.

<sup>2</sup> 'Guiding Principles' in EPWA's *Market Power Mitigation Strategy - Information Paper* (10 November 2022) at page 4.

by long-term firm contracts (relative to spot market prices) or include a 'take-or-pay' component, but the Offer Construction Guideline does not allow the costs of those contracts to be included in market offers, the Offer Construction Guideline will incentivise more facilities to be certified on the basis of, and consume, diesel fuels and only use gas on an opportunistic basis. In the long term, this is likely to result in a higher reliance on high-cost diesel fuels, leading to increased energy prices. Given the role of long-term take-or-pay gas contracts in assisting to underwrite upstream gas projects, a shift away from these contracts may adversely affect development of future gas supply projects within WA, ultimately increasing the risk of electricity supply shortages.

## **Responses to ERA Questions and Key Concerns**

Synergy sets out **below** its responses to the ERA's questions (on page 6 of the Draft Report) and its key concerns with the Offer Construction Guideline. In addition, Synergy proposes further examples that should be considered for inclusion in the Offer Construction Guideline within **Annexure 1** of this letter, and Synergy's more detailed questions, concerns and proposed alternative drafting are set out in table form in **Annexure 2**.

1 *What additional information would market participants need to inform their offer construction?*

(a) Ex ante guidance

Synergy understands that a key purpose of the Offer Construction Guideline is to provide guidance to Market Participants on how to construct their offers in compliance with clause 2.16A.1 of the Draft MPM Rules, with a view to preventing harmful pricing conduct from occurring. To achieve this purpose, the Offer Construction Guideline needs to provide *ex ante* guidance to Market Participants, telling them what the ERA expects Market Participants to do or how Market Participants should approach offer construction in specific factual scenarios in order to comply with the Draft MPM Rules.

However, the Offer Construction Guideline, and most of the examples in it, are drafted from an *ex post* perspective, assuming certain offer construction decisions have been made and setting out how the ERA will assess the offer construction conduct after it has occurred, meaning it provides limited practical benefit to Market Participants at the time they are constructing their offers.

(b) Offers must be at efficient costs

It appears from the Offer Construction Guideline that, to comply with clause 2.16A.1, Market Participants must offer prices that are effectively 'at' their efficient costs, rather than 'at or *below*' their efficient costs.

Assuming this is the case, it would be useful for the Offer Construction Guideline to explain how Market Participants can compliantly offer inflexible capacity into the new markets in a manner that will not result in infeasible dispatch outcomes. For example, how can a Market Participant captured by the gateway test compliantly offer energy into the Real Time Market in circumstances where, if it offers its facility at a compliant price (as per the Offer Construction Guideline), its facility will be forecast to be marginal and to clear for a quantity that is less than its minimum stable generation level. That is, the facility cannot physically generate at a level *below* its minimum stable

generation level, but, because the Market Participant must offer 'at' the price required, it cannot avoid clearing for a quantity that it is impossible for it to generate.

Alternatively, if there are limited circumstances where offer prices can be above or below the efficient costs, Synergy suggests that the Offer Construction Guideline clearly set these out these circumstances.

**Refer to Example 2 in Annexure 1.**

(c) Market price of fuel

Market Participants would benefit from more detailed guidance in the Offer Construction Guideline on how to determine the market price of fuel. With respect to the gas market, the Offer Construction Guideline suggests that it "refers to all trades in spot markets and bespoke contracts in Western Australia"<sup>3</sup>. Synergy notes that the spot market in the WEM is generally shallow and may not reliably provide the quantities of gas needed for electricity generation. Further, given the opaque nature of the contract market, without more guidance, there is a real risk that Market Participants and the ERA will individually determine very different values for the market price of fuel during the same period based on a reasonable consideration of the different information available to each of them.

Synergy submits that, without specifying a methodology for Market Participants to apply to determine reasonable and generally consistent estimated market prices for different volumes of different types of fuel under usual terms for spot, short-term and long-term contracts, and the timeframe when Market Participants are expected to undertake these assessments, the Offer Construction Guideline does not comply with the requirements of clauses 2.16D.1(a)(i)2, and/or 2.16D.1(a)(iii) of the Draft MPM Rules. That is, the current Offer Construction Guideline does not:

- "provide guidance... on how the [ERA] will assess prices offered...including... fuel and opportunity costs..."; nor
- the records Market Participants are required to maintain in relation to market prices in order to not contravene clause 2.16C.<sup>3</sup>

(d) Trading Conduct Guideline and Market Power Monitoring Protocol

Synergy notes that the MPM framework also includes the Trading Conduct Guideline and the Market Power Monitoring Protocol which are still to be developed. Further, the WEM Rules relating to the MPM framework are still being finalised by EPWA. As such, Market Participants are currently unable to fully comprehend and assess the MPM framework and its components until all the required documentation and information have been provided. Synergy proposes that further consultation and review should be undertaken once this has occurred.

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<sup>3</sup> Offer Construction Guideline at page 10, footnote 20.

(e) Pricing to give effect to physical dispatch

Synergy notes that a Market Participants' offers into the real-time energy markets are currently used in two different ways.

The first is to facilitate economic dispatch of facilities. The offers provide the market a price at which the participant is prepared to change its facility's output, which is then used by AEMO to determine economic dispatch.

The second is to facilitate physical dispatch of facilities to address physical and operational matters; the offers are used to ensure that particular facilities are dispatched in certain ways that would or could otherwise not occur based on maximising short-term economic dispatch. Whilst this is not currently addressed as comprehensively in the WEM Rules as it could be, it is clear that a Market Participant is required to consider these physical and operational issues in making its offers. For example, in certain circumstances a Market Participant is required to price lower than other facilities' offers in order to ensure AEMO synchronises the facility or to price higher than other facilities' offers in order to ensure AEMO de-synchronises the facility.

The aspect of the WEM Rules that, in Synergy's view, currently is not as clear as it could be, are the circumstances in which a Market Participant must ensure that a facility is either not dispatched or is only dispatched during a system event as a matter of last resort. This is currently managed by Market Participants and AEMO in the following ways:

1. Market Participants price high in the merit order to signal to AEMO that a facility is only to be dispatched as a last resort; and
2. logging an outage, noting these provisions have limitations.

Synergy notes that, at under the current WEM Rules, a partial divorce exists between Synergy's efficient market pricing and actual physical dispatch by AEMO. That is, Synergy and AEMO have additional flexibility for the dispatch of Synergy's portfolio via the Synergy/AEMO dispatch arrangements. These arrangements provide an additional mechanism to address, to some extent, these issues, as well as ancillary services. Synergy notes this will not be the case under the new market arrangements, which is likely to mean an increased reliance on the pricing and outage mechanism to address these issues.

Synergy suggests that the Offer Construction Guideline does not adequately factor in and account for these physical and operational matters. In particular, the Offer Construction Guideline does not:

1. expressly acknowledge the circumstances in which a Market Participant would offer prices to address these issues and that such prices may be different to the prices the participant would otherwise offer based solely on its estimation of the short-term 'efficient costs'; and
2. provide guidance on the circumstances where such offers are compliant with clause 2.16A.1 and how such offers can be made in a manner that is compliant with clause 2.16A.1.

Synergy considers these physical and operational circumstances fall into three broad categories, noting that there is overlap for some circumstances.

### **CATEGORY 1 – Maximise facility availability beyond short-term**

Dispatch decisions that are reasonable and prudent based on longer-term and/or risk-based assessments, where that dispatch may not be consistent with dispatch based solely on the short-term 'efficient' prices.

**Refer to Example 2A in Annexure 1.**

### **CATEGORY 2 – Energy market pricing required to conduct facility testing**

Generators regularly perform mandatory and discretionary facility testing to meet market obligations and to comply with good industry practice. Facility testing may be undertaken for numerous reasons, such as testing or commissioning equipment, diagnosing plant performance issues, demonstrating environmental performance, operator training and to ensure protection systems are in good working order. Conducting this testing often requires that a facility is dispatched, even when it is out of merit. To achieve this outcome, Market Participants may be required to deviate from normal pricing strategies to achieve the desired rigid dispatch outcomes for the testing. Synergy requests that the Offer Construction Guideline consider and provide guidance to Market Participants regarding allowable pricing to undertake testing, as required.

**Refer to Example 2B in Annexure 1.**

### **CATEGORY 3 – Avoiding infeasible dispatch outcomes**

See comments about this issue in section 1(b) above.

2 *What other costs are valid to include in the efficient cost for a generator or electric storage resource?*

(a) Efficient contract costs

Synergy remains concerned that the Offer Construction Guideline does not entitle Market Participants to recover their efficient costs from the energy markets together with a reasonable return on investment. In particular, Synergy is concerned that the ERA's approach to long term take-or-pay fuel contracts, as illustrated in Example 3 of the Offer Construction Guideline, requires Market Participants to make offers based on prevailing market prices for fuel instead of reflecting their efficient long-term fuel contract prices in their offers. This will disincentivise Market Participants from entering long-term fuel contracts, even when this results in lower over-all prices, and instead certify more facilities on the basis of, and operate on, diesel except when it is opportunistic to use gas. Alternatively, future gas contracts will be entered into for shorter periods, with low take-or-pay volumes and larger variable volumes at higher prices. In the long term, this appears likely to result in higher energy market prices, with increased reliance on higher cost fuels.

(b) Risk margin

Synergy welcomes the acknowledgement in the Offer Construction Guideline that it may be acceptable for Market Participants to include a risk margin in their offers in some circumstances to cover extended runs of losses. However, the Offer Construction Guideline also suggests that a Market Participant would need to *demonstrate* why such a loss cannot be rectified by a Market Participant improving its forecasting methods. It would be of assistance to Market Participants if the Offer Construction Guideline provided further information on the types of circumstances when it would be appropriate to include a risk margin and what sort of information would be required to substantiate the margin.

Synergy notes that offers into the Short Term Energy Market (**STEM**) are made well in advance of the actual trading interval and that the most critical variables affecting forecast demand are the forecasts of cloud cover and maximum and minimum temperatures which are based on forecast information published by the Bureau of Meteorology (**BOM**). As Market Participants are not likely to be able to produce more accurate weather forecasts than BOM, Synergy is concerned that Market Participants are often not able to make reasonably accurate predictions of the market prices and demand, or the dispatch run times and volumes for their facilities. Further, the inability to accurately forecast demand and dispatch volumes will become increasingly more difficult as the penetration of Distributed Energy Resources and intermittent generation continues to increase. It would assist Market Participants if the Offer Construction Guideline clarified whether a margin for this type of risk is appropriate to be included in STEM offers and, if so, what type of documentation would need to be produced to support cost recovery?

(c) Gas transport

The Offer Construction Guideline indicates that the recovery of capacity and commodity transport charges for small generators on short-term contracts is consistent with efficient cost recovery but does not address the position for larger generators with long-term transport contracts. Given that the Offer Construction Guideline will more likely apply to larger generators, Synergy suggests that it should expressly address the recovery of transport capacity charges and volume-based commodity transport costs for larger generators. Synergy understands that volume-based commodity transport charges are permitted to be included in an offer but seeks clarity on if, and when, transport capacity charges can be included in an offer.

(d) Enablement losses

Synergy considers that the Offer Construction Guideline should allow for the recovery of enablement losses that are not recoverable under the Draft MPM Rules. A facility could rationally be committed for the provision of energy or Essential System Services (**ESS**) in a near-future trading interval. However, during the period a facility is starting up it is inflexible: that is, the output of the facility is dictated by the requirements to bring it safely to its minimum stable level. If the Energy Market Clearing Price is expected to be below the facility's variable cost of production during this period, then an energy market loss is incurred.

Synergy considers a profit-maximising Market Participant without market power would include the recovery of such losses in its energy and ESS offers, because otherwise it will be dispatching at a loss.

Synergy requests that guidance is provided on the extent to which such losses can be compliantly reflected in energy market and/or ESS offers, noting that enablement losses will often arise in the context of commitment and decommitment for providing both energy and/or ESS and that Market Participants do not know their final dispatch volumes in either of the markets at the time the relevant offer is made.

**Refer to Examples 3 and 4 in Annexure 1.**

3 *What other offer construction examples would stakeholders find useful to include in the guideline?*

(a) Failure to consider contract positions

A significant omission from the Offer Construction Guideline is that it does not consider the effect of a Market Participant's contract position, including the extent to which a Market Participant can take into account the opportunity cost of its exposure to buying from the energy markets, in determining its profit-maximising offers. Synergy requests that guidance is provided on the contractual considerations that are permitted in the construction of market offers.

(b) STEM guidance

The Offer Construction Guideline does not currently provide sufficient guidance to Market Participants on how to construct compliant offers for the STEM. Further, Market Participants need to understand how a compliant offer for the same facility may vary between the STEM and the Real Time Markets. The STEM differs significantly to the Real Time Markets, and the Offer Construction Guideline needs to explain how a compliant offer can account for these differences. Synergy considers that the guideline should recognise that Market Participants offering into the STEM need to be able to account for the following in their STEM offers:

1. the increased forecasting and uncertainty risks of the STEM, especially in relation to weather forecast-driven variance between a Market Participant's own expectation of demand in its STEM offers versus its actual demand;
2. the STEM is not equivalent to the energy market in design, function or outcome. In particular, STEM participation obligations do not apply to all generators or loads;
3. clearing in the STEM does not provide certainty of dispatch in the Real Time Markets (e.g. real time physical constraints such as minimum stable operating levels remain notional in the STEM);
4. STEM offers are determined by assessing a Market Participant's supply, demand *and* bilateral contract position; and
5. the opportunity costs associated with the lost ability to be able to sell/purchase energy in the Real Time Markets at a price that differs to the STEM price.

Contrary to the expected actions of a profit-maximising participant without market power, by design, the STEM denies to generators and gentailers, with mandatory bidding and participation obligations, a legitimate opportunity to elect to settle demand exposure or supply exposure in the energy market instead of the STEM when it is expected to be beneficial to do so.

**Refer to Example 5 in Annexure 1.**

(c) Averaging start costs

When addressing the allocation of start-up and shutdown costs across a series of dispatch intervals, the Offer Construction Guideline assumes that the forecast run-time will match the actual run-time. In this situation, the Offer Construction Guideline contemplates that a generator will smear (average) start costs equally across a series of trading intervals on a \$/hr or \$/trading interval basis.

While Synergy acknowledges that this is a potentially valid approach, it can lead to 'lumpy' cost allocations in circumstances where the unit output varies across intervals. Significantly, it also generally results in higher offer prices in lower demand intervals. An alternate approach is to average start costs of the forecast generator output over the run-time i.e. on a \$/MWh basis, which has the benefit of better offer price-smoothing, with the same uplift being applied across all intervals. It would be useful for the Offer Construction Guideline to confirm that this is also a valid approach for Market Participants to apply.

**Refer to Example 6 in Annexure 1.**

(d) Managing uncertainty of run time

On the issue of how generators should manage uncertainty relating to generator run time, the Offer Construction Guideline indicates that Market Participants are expected to calculate their efficient cost *ex ante* using a "simple, repeatable and mechanistic method<sup>4</sup>." The Offer Construction Guideline indicates that, over time, the weighted average of a generator's offers over a particular period should approximate its "*ex post* efficient cost over that same period. The time period over which this may occur will be dependent on the circumstances of the individual generator.<sup>5</sup>"

It would be useful for the Offer Construction Guideline to confirm whether it is consistent with clause 2.16A.1 of the Draft MPM Rules for a generator to simply average costs over the "expected" run as forecast by the WEM Dispatch Engine. This should be relatively simple for Market Participants to systemise and implement but it could lead to under or over recovery if there is bias in possible dispatch outcomes.

(e) FCESS Services

The Offer Construction Guideline does not address construction of offers for Frequency Control Essential System Services (**FCESS**). As there is no obvious single way to allocate start-up and 'no load' costs for provision of FCESS (as opposed to provision of energy), Synergy submits that it would be helpful for the position to be addressed expressly in the Offer Construction Guideline.

**Refer to Example 7 in Annexure 1.**

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<sup>4</sup> Offer Construction Guideline at page 15.

<sup>5</sup> Offer Construction Guideline at page 17.



(f) Consideration of power purchase agreements

The Offer Construction Guideline does not consider any contractual prices or obligations that a Market Participant may have and how contracts may affect the offer construction such Market Participants would include in their “profit maximising” offers. Synergy requests that the Offer Construction Guideline provide guidance as to how contractual arrangements may be considered in the construction of market offers, especially where contractual arrangements create direct opportunity costs.

**Refer to Example 8 in Annexure 1.**

4 *What specific questions do stakeholders have on how offer construction by electricity storage resources will be viewed by the ERA?*

Synergy provides detailed commentary in Annexure 2 outlining several matters on which further guidance is required for the Offer Construction Guideline to meet EPWA’s ‘Guiding Principles’ for the new MPM framework in relation to compliant offer prices for electricity storage resources (**ESR**).

The relevant matters that require further guidance are summarised below:

1. in addition to ESR offer prices including the opportunity cost associated with the likely future value of the energy stored in the ESR, compliant offer prices for ESR may also include: ESR degradation costs, variable operating and maintenance costs (VO&M), Contingency Reserve costs, Market fees and charge and discharge losses;
2. clarification of compliant estimates of the ‘look forward’ time horizon over which a Market Participant can estimate the ESR opportunity costs;
3. identification of valid and compliant intervals during which a Market Participant offers an ESR’s capacity prior to the battery being allocated Capacity Credits and confirmation of circumstances under which a battery can be offered at the Energy Offer Price Floor and the Energy Offer Price Ceiling (e.g. to reflect any physical or operational constraints and/or to reserve capacity required to provide ESS); and
4. confirmation that a Market Participant may validly use direct costs to set the ‘bounds’ for its ESR bid and offer prices.

**Refer to Example 7 in Annexure 1.**

5 *Does the guideline provide sufficient clarity on the records required and how the ERA will verify market participants records? If not, what additional information would stakeholders find useful in the guideline?*

Synergy notes that much of the information and records referred to in section 7.1 of the Offer Construction Guideline that Market Participants are required to maintain appear to relate to subjective aspects of decisions made by Market Participants to offer particular prices (i.e. whether the assumptions used, and the resultant offer prices, were ‘reasonable’). However, unlike the current SRMC provisions in the WEM Rules,

clause 2.16A.1 of the Draft MPM Rules is an entirely *objective* test, so Market Participants' subjective reasons for their offer prices would not appear to be relevant to this test. Can the ERA please clarify how the items of information specified in this section are relevant to the determination of such objective prices?

Synergy considers the use of an objective test in clause 2.16A.1 means that the only documents that are relevant, and therefore the only documents that a Market Participant should be required to retain, are the documents that record a particular price being offered. That is, as written, there is not a clear link between all records listed in section 7.1 and offer construction. Synergy does not understand why documents that record the factors a Market Participant considered, the weight a Market Participant gave to different factors and/or the Market Participant's intentions associated with deciding to offer any particular price are relevant to objective question of what is the market price at a relevant time.

Under such an objective regime, Synergy queries the relevance of the requirement to maintain records of "any major company or portfolio review, such as a strategic review, that are not directly relevant to the construction of offers into the real-time market and/or STEM, but lead to reviews of pricing strategies".<sup>6</sup>

Additionally, Synergy is concerned that the statement "*These records include, **but are not limited to***."<sup>7</sup> (**emphasis** added), which is used in both sections 7.1 and 7.2 of the Offer Construction Guideline, imposes open-ended and uncertain record-keeping obligations on Market Participants.


Synergy requests that the ERA:

1. review the existing list of records and confirm their relevance to the objective test in clause 2.16A.1; and
2. provide further clarification regarding what, if any, additional information it requires. In providing this clarification, Synergy requests the ERA recognise the regulatory burden and costs of any such additional obligations.

## **Conclusion**

Synergy thanks the ERA for its work on the Draft Report and looks forward to ERA's continued consultation on the Offer Construction Guideline and other elements of the MPM framework. Should the ERA consider it would be of assistance, Synergy would be happy to meet with the ERA to discuss any aspect of this submission.

Yours sincerely



**MARK CHAMBERS**  
**GENERAL MANAGER WHOLESAL**

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<sup>6</sup> Offer Construction Guideline at page 23.

<sup>7</sup> Offer Construction Guideline at pages 22 and 23.

## **Annexure 1**

### **Examples for Consideration to be included in the “Market Power Mitigation offer construction guideline – Draft for consultation”<sup>8</sup> (Offer Construction Guideline)**

Synergy provides the following examples and commentary for consideration by to be included in the Offer Construction Guideline.

In the response to each of the examples in this Annexure 1, Synergy would appreciate guidance from the ERA as to what, if any, additional information a Market Participant should retain to support recovery of the specific costs relevant to the circumstances of each example.

#### **Example 1: Infeasible Dispatch [1(b) in main letter]**

##### **Example 1A: Infeasible Dispatch Below Facility Minimum Stable Level**

It is not clear from the Offer Construction Guideline how a Market Participant captured by the gateway test can compliantly offer energy into the Real Time Market in circumstances where, if it offers its facility at a compliant price (as per the Offer Construction Guideline), its facility will be forecast to be marginal, and it will clear for a quantity that is less than its minimum stable generation level.

The ERA’s analysis in ‘Example 8: Avoided cost for a coal fired generator’ suggests a compliant offer could include minimum generation (100MW) at -\$127/MWh based on amortised avoided cost of 4 hours. If a facility bid in this way and the Energy Market Clearing Price fell to -\$127/MWh in an interval, the facility could become marginal and clear for say 80MW.

As this is below the facility’s minimum generation level, the facility would have to:

1. should time permit, rebid with a different (and potentially non-conforming) offer construction,
2. shut down, be non-compliant with Dispatch Instructions in Interval 4 onwards and log a Forced Outage (incurring Capacity Refund costs), or
3. run through Interval 4 at 100MW and be non-compliant with the Dispatch Instruction.

It should be noted that, if the facility did shut down in this case, it would likely have incurred cycling costs well in excess of its run though costs.

To avoid the above issues relating to infeasible dispatch instructions, once the economic merit of staying online has been determined, individual generators typically make binary offers to remain online. Generator minimum generation levels are bid at the Energy Offer Price Floor up to the point where a decommitment decision is made. This ensures the generator can compliantly generate its cleared market quantity and allows decommitment activities to be performed in an appropriately planned manner.

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<sup>8</sup> Appendix 1 of the Draft Offer Guideline, pages 12-39.

Interval	Energy Market Clearing Price (\$/MWh)	Cleared MW
1	\$50.00	200
2	\$0.00	100
3	-\$100.00	100
4	-\$127.00	80
5	-\$100.00	100
6	\$0.00	100
7	\$50.00	100

Example 1B: Infeasible Dispatch During Start-up and Shutdown

Synergy also notes that as daytime loads fall, slow start unit commitment will increasingly be required during or immediately after periods of very low SWIS demand and may overlap periods of deeply negative prices. ERA guidance on minimum pricing levels during inflexible unit commitment and decommitment profiles is required to ensure Market Participants can compliantly construct offers to avoid infeasible dispatch instructions.

Example 1C: Infeasible Dispatch When In Restricted Operating Ranges

Some facilities have regions of restricted operation within their dispatchable range or need time to transition from one operating mode to another. For example, a 300MW facility may be able to operate unrestricted between 140MW and 300MW or transition to a ‘low-load’ operating mode and be dispatchable between 90MW and 130MW. When transitioning between the two operating ranges, the facility must follow a defined profile, potentially spanning multiple dispatch intervals, and cannot dispatch to arbitrary levels within the 130MW to 140MW ‘non-dispatchable’ range.

To avoid unexpected or potentially infeasible dispatch within the ‘non-dispatchable’ range, Synergy considers a prudent ‘profit maximising’ participant without market power would make a binary decision as to which operating mode was economically efficient and then bid:

1. Capacity below 140MW at the Market Floor price, if intending to operate above 140MW,
2. Capacity above 130MW at the Market Cap or ‘Available but not in service’, if intending to operate below 130MW, or
3. Cap and Floor around profile volumes when transitioning between 130MW and 140MW.

In service coal fired generators may also be exposed to infeasible dispatch outcomes around coal mill transition points. For example, assume a 200MW facility with a 5MW/min ramp rate can operate up to 130MW with two coal mills in service and between 120MW and 200MW with three coal mills in service, with a mill taking up to 30 minutes to place in service.

If the facility is operating at 125MW with 3 mills in service and offers at a compliant price (as per the Offer Construction Guideline), it could become marginal and for 115MW in Dispatch Interval 1, 140MW in Dispatch Interval 2, 165MW in Dispatch Interval 3 and 190MW in Dispatch Interval 4.

The Market Participant could achieve compliant dispatch in Dispatch Interval 1 by removing one coal mill from service and operating at 115MW with coal two mills but would be non-

compliant in Dispatch Intervals 2, 3 and 4 as maximum capacity would be limited to 130MW until the third mill could be returned in 30 minutes time. Tolerance ranges notwithstanding, the Market Participant would also be non-compliant with Dispatch Instructions if it kept three mills in service and dispatched to 120MW in Dispatch Interval 1 so as to be able to comply with expected dispatch in Dispatch Intervals 2, 3 and 4.

## **Example 2: Pricing to give effect to Physical Dispatch [1(e) in main letter]**

### Example 2A: Maximise facility availability beyond short term

Consider the following scenario.

- a) A Market Participant, in accordance with the WEM Rules, has applied for and organised for its facility to undergo mandatory major maintenance two years in advance.
- b) The mandatory maintenance is required based on the number of times the facility starts.
- c) After one year the facility has started and operated more than anticipated and there are only 10 more starts remaining before the facility is required to undertake the mandatory maintenance.
- d) If the participant offers the facility based on short-term 'efficient costs' (as set out in the Offer Construction Guideline), these starts would occur in the next six months, after which the facility would be required to go on forced outage until the time it has scheduled the major maintenance (e.g. because of limited access to international experts that are required to perform the mandatory maintenance, the maintenance cannot be brought forward).
- e) Alternatively, the participant could offer the facility based on the longer-term efficient costs to reduce how often the facility clears in the market in a manner that requires it to be synchronised. This would 'conserve' the facility's starts so those starts are not 'wasted' during periods where there are other facilities available to meet system demand.
- f) Once online, to further preserve against additional starts, the facility is likely to offer such that it remains online longer than if the facility offered based on short-term 'efficient costs'.

Synergy considers that a prudent 'profit maximising' participant without market power would limit the operation of the facility consistent with the outcome in paragraph (e) and (f). Synergy also considers this outcome is the best outcome for the market as a whole and the most consistent with the WEM Objectives. However, unless the Offer Construction Guideline is amended, it appears it would require the outcome in paragraph (d) to eventuate.<sup>9</sup>

### Example 2B: Limited/scarce remaining number of dispatches

Consider the following scenario:

- a) A Market Participant becomes aware of a relatively sudden risk associated with the ongoing operation of its facility (e.g. there is a potential, albeit relatively unlikely, risk of major outage if its facility continues to be operated, and this risk increases the more the facility is operated).
- b) The risk can be remediated via a short planned outage, but the first opportunity to do so is in one weeks' time.

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<sup>9</sup> It is unclear to Synergy whether the WEM Rules provide AEMO with any discretion to deviate from the market offer based merit order when the deviation is *not* required for, or at least connected with, relative immediate system security issues. Synergy would appreciate the ERA's views on this).

- c) The Market Participant is unable to reasonably estimate the probability or quantity of the cost associated with the risk eventuating. However, if the relatively unlikely major outage eventuates, it would certainly result in very long forced outage. This long-term outage would have obvious and potentially extreme negative financial repercussions, however until the outage eventuates, this quantity is unquantifiable and, in any event, it is unquantifiable in the immediate term following the participant first becoming aware of the risk.
- d) The facility is likely available for dispatch in the immediate term, particularly if high system load were to eventuate, but dispatching the facility now increases the risk of the major outage eventuating to a degree not capable of exact estimation.
- e) If the participant offers the facility based on the basis of the facility's short-term 'efficient costs', the facility is expected to be dispatched for a material quantity of energy everyday (i.e. increased risk of major outage occurring). The only way to avoid this would be to put the facility on a forced outage until the preventative maintenance can be undertaken and the facility would be unavailable to AEMO for dispatch when needed to meet system demand.
- f) Alternatively, the facility could offer in a manner that reduces the quantity of energy the facility is cleared to provide through the market each day until such a time as it has been able to perform preventative maintenance.

Similar to Example 2A, Synergy considers that a prudent 'profit maximising' participant without market power would limit the operation of the facility in a manner to achieve the outcome in paragraph (f). Synergy again considers this outcome is the best outcome for the market as a whole and the most consistent with the WEM Objectives. However, unless the Offer Construction Guideline is amended, it appears it would require the outcome in paragraph (e) to eventuate.

Example 2C: Portfolio Dispatch for Similar Facilities

Synergy seeks clarity on how a Market Participant with a portfolio of similar facilities can compliantly construct offers to ensure that its facilities are dispatched in a manner to retain efficient dispatch across *all* of its similar units, rather than one unit consistently being dispatched in preference to the others due to a minimal cost differential (such as minor heat rate benefits, VOM variances, or genset capacity).

Synergy is concerned that the drafting of the Offer Construction Guideline may result in a Market Participant being unable to effectively manage the dispatch of similar facilities to ensure that starts, shutdowns, run time and general wear and tear are balanced across very similar facilities. Synergy considers that the potential lack of freedom to subtly offer units different to their actual perceived costs to best optimise the expected life of very similar facilities poses a system security risk as it could result in a facility retiring significantly earlier (or later) than the original expectation of the facility life. Further, this poses a concern in relation to planned maintenance outages and Market Participants will not have the ability to align (as best as possible) the number of starts with that expected at the time of planning the maintenance (noting that this is generally planned well in advance of the actual event of the maintenance outage).

**Example 3: Enablement Losses – Energy Market** [2(d) in main letter]

Consider a hypothetical slow-starting 100MW generator with a minimum generation of 20MW, a nominal Average Operating Cost (**AOC**) of \$40/MWh and a ramp rate of 5MW/ interval to its minimum generation and 20MW / interval thereafter.

In the below table, if the generator were efficiently required at 100MW for Interval 8, the generator would need to synchronise in Interval 1 and inject energy below its AOC in Interval 1 through to Interval 4. In doing so the generator would incur losses of \$1,750.

Synergy considers a profit-maximising Market Participant without market power would include the recovery of such losses in its energy offer prices. It would be helpful if the ERA could provide guidance on whether such costs form a valid component of generator costs and, if so, which type of cost component in Table 1 of the Offer Construction Guideline they fall within.

Interval	Expected MW / MWh	Energy Market Clearing Price (\$/MWh)	Facility AOC	Loss (\$/interval)
1	5 / 2.5	-\$50.00	\$40.00	\$225
2	10 / 5	-\$50.00	\$40.00	\$450
3	15 / 7.5	-\$50.00	\$40.00	\$675
4	20 / 10	\$0.00	\$40.00	\$400
5	40 / 20	\$40.00	\$40.00	\$0
6	60 / 30	\$40.00	\$40.00	\$0
7	80 / 40	\$40.00	\$40.00	\$0
8	100 / 50	\$100.00	\$40.00	\$0
<b>Total Losses</b>				<b>\$1,750.00</b>

\*an interval is assumed to be 30min in this example.

**Example 4: Enablement Losses – ESS [2(d) in main letter]**

Consider a hypothetical combined cycle gas turbine, which has a material inflexible ramp profile before it reaches its minimum generation level, which is offline but is required for ESS in future intervals. The Energy Market Clearing Price during start-up is below the facility’s AOC (or even negative). During the inflexible start-up profile, the facility is loss-making in the energy market.

Can the facility include the energy market losses incurred during start-up in its ESS offer construction in the intervals following the start profile?

**Example 5: STEM Guidance [3(b) in main letter]**

Consider a gentailer with a mandatory obligation to participate in the STEM, no bilateral contracts, two facilities and a temperature dependant retail demand. The gentailer’s first facility is a wind farm with an efficient offer price around the inverse of an LGC, for this example -\$40/MWh. The gentailer’s second facility is a peaking open cycle gas turbine (**OCGT**) with an efficient offer price of \$80/MWh.

For simplicity in this example, OCGT start costs are excluded. Further we consider a single day ahead interval for which, at the time STEM submissions are made, the energy market clearing price is expected to be set by another Market Participants’ coal facility at \$40/MWh.

In the STEM, this gentailer’s portfolio supply curve for this interval will have two price / quantity pairs. The first price / quantity pair is a highly variable quantity at -\$40/MWh based on the day ahead expected wind resource in the interval. The second price / quantity pair is a static quantity of the OCGT capacity at \$80/MWh.

This gentailer’s first STEM bid and first STEM offer is determined by the point at which its own demand intersects its portfolio price / quantity pairs.

Should temperatures be mild and the gentailer’s own demand be low, its demand may intersect with its wind price / quantity pair. Absent risk margins, its first bid (for quantities up to its own demand) and its first offer (for quantities above its own demand and up to the expected wind resource in the interval) will be -\$40/MWh. That is, in this interval its first offer forgoes \$80/MWh inframarginal rent relative to the expected energy market clearing price.

Given that STEM participation for retailers is discretionary, it is highly likely that retailer STEM bids will be below the expected energy market price. The gentailer’s first offer into the STEM is likely to clear and that the gentailer will forgo the opportunity for higher inframarginal rent in the energy market.

Conversely, should temperatures be extreme and the gentailer’s own demand be high, its demand may intersect with its second price / quantity pair being that of the OCGT. Absent risk margins, its first bid (for quantities of its own demand above its first price / quantity pair and up to its demand) and its first offer (for quantities above its own demand and up to the capacity of the OCGT) will be \$80/MWh. That is, in this interval its first bid is at a \$40/MWh premium relative to the expected energy market clearing price.

Given pricing flexibility afforded to participants who are not captured by the Offer Construction Guideline, it is highly likely that these participants will opportunistically bid to sell energy above the expected energy market price and that the gentailer will forgo the opportunity to make lower cost purchases in the energy market.

**Example 6: Averaging of Start Costs (\$/hour vs \$/MWh approach) [3(c) in main letter]**

In the Offer Construction Guideline, under the heading “Calculating a generator’s expected AOC over a series of dispatch intervals”<sup>10</sup>, Synergy suggests that an equally valid methodology is for averaging (smearing) of the Start-Up Cost Component to occur on the basis of expected total dispatch MWh, rather than time. The method proposed in the Offer Construction Guideline may result in “lumpy” pricing across the dispatch intervals due to variations in expected dispatched MWhs per interval.

The proposed alternate method (in mark-up) is as follows:

$$AOC_{g,i} = [FC_{g,i} + VOM_{g,i} + AFC_{g,i} + \frac{SUC_g}{TotalTradingDispatchRun}] / MWh_{g,i} + SUC_g / TotalRunMWh_g$$

Where: ....

~~TotalTradingDispatchRun is the total number of dispatch intervals for which the generator is expected to operate.~~

TotalRunMWh<sub>g</sub> is the total electricity expected to be generated by generator g in MWh across all intervals for which generator g is expecting to be dispatched in for the dispatch run.

The table below shows the calculation for the start-up costs component per interval under the Offer Construction Guideline method (as proposed on page 8), compared to the above alternate approach. Using the same baseline assumptions as in the example in the Offer Construction Guideline, assume a facility has a start-up cost of \$3,000 (and no shutdown costs) and the facility runs for ten dispatch intervals. In addition, the expected total dispatch energy for the ten intervals is 500MWh, with the per interval breakdown as outlined in the table.

<sup>10</sup> Offer Construction Guideline, page 8.



Interval #	Expected MWh	Guideline method	Alternate Method
1	20	=3000/10 /20 = \$15/MWh	=3000 / 500 = \$6/MWh
2	40	=3000/10 /40 = \$7.50/MWh	=3000 / 500 = \$6/MWh
3	50	=3000/10 /50 = \$6/MWh	=3000 / 500 = \$6/MWh
4	60	=3000/10 /60 = \$5/MWh	=3000 / 500 = \$6/MWh
5	70	=3000/10 /70 = \$5/MWh	=3000 / 500 = \$6/MWh
6	70	=3000/10 /70 = \$5/MWh	=3000 / 500 = \$6/MWh
7	70	=3000/10 /70 = \$5/MWh	=3000 / 500 = \$6/MWh
8	50	=3000/10 /50 = \$6/MWh	=3000 / 500 = \$6/MWh
9	50	=3000/10 /50 = \$6/MWh	=3000 / 500 = \$6/MWh
10	20	=3000/10 /20 = \$15/MWh	=3000 / 500 = \$6/MWh

As can be seen from the table, the current Offer Construction Guideline method results in “lumpy” \$/MWh values for the start-up costs for the intervals, whereas the alternate method has a static value. Synergy considers that this method is an equally valid approach and Market Participants should be able to apply either method in the construction of their offers.

**Example 7: Construction of ESS offers** [3(e) in main letter]

The Offer Construction Guideline provides little guidance to Market Participants regarding the compliant construction of facility ESS market bids and is silent on allowable allocation of costs between markets. Further guidance is required by Market Participants including, but not limited to:

1. compliant allocation of start, VOM and no-load costs between energy and ESS services. Relying on a ‘trapped on’ status in ESS markets could at times be very risky for Market Participants. Where Market Participants are not relying on being trapped on to provide ESS services, guidance with respect to what costs can legitimately be included in ESS bids is required;
2. as outlined in Example 3, guidance is required regarding the recovery of enablement losses and ‘run-through’ energy market losses in ESS markets, particularly where a unit is not trapped on;
3. pricing uncertainty with respect to expected ESS facility clearing volumes;
4. allocation of energy markets costs that would otherwise not be included in relevant Market Clearing Prices into ESS pricing; and
5. pricing upward / downward regulation services where there is a direction bias in the actual consumption of ESS regulation services. For example, regular provision of upward regulation services where the service is consumed and the Energy Market Clearing Price is below the facility’s AOC / opportunity cost. Synergy understands that no energy market constrained on payments would be received leading to energy market losses. Could these losses be recovered via future interval ESS pricing?

In addition to guidance on ESS pricing levels, Market Participants would benefit from guidance on when it is appropriate or inappropriate to not offer an online ESS capable facility as ‘in service’ and provide pricing into ESS markets.

**Example 8: Consideration of Power Purchase Agreements [3(a) and (f) in main letter]**

Synergy considers that it is reasonable for Market Participants to consider their contractual arrangements in their determination of their offers. None of the examples within the Offer Construction Guideline provides guidance as to how Market Participants with a Power Purchase Agreement (**PPA**) can compliantly offer into the market, taking into account their contractual obligations and revenues. The Offer Construction Guideline needs to allow Market Participants to offer in a manner that reflects the contractual obligations and the opportunity cost of their PPA revenues.

Using a renewable facility as an example, a PPA for a wind farm may include items such as (but not limited to):

1. a revenue price that is tied directly to the production of the facility that is greater than the LGC price (i.e. that the facility won't be paid unless it produces);
2. minimum energy and LGC supply obligations (tied directly to the facility), further the off-taker (or more likely the off-taker's customers) may have a preference for SWIS based LGCs;
3. contractual penalties for not meeting supply obligations; and
4. bidding obligations related to the expected Energy Market Clearing Price.

Synergy requests that the Offer Construction Guideline recognises contractual arrangements and provides guidance to Market Participants as to how they are able to consider these in their offers.

**Example 9: Supplementary Capacity available but at higher costs [2 in main letter]**

It is not clear from the Offer Construction Guideline how a Market Participant can compliantly offer facility capacity into the markets where additional facility costs (due to the use of supplementary fuel, materially higher heat rates, material changes in avoidable fixed costs or materially higher VOM costs) are incurred to generate at the upward extreme of a facility's capacity. Can a Market Participant offer a single facility as multiple price / quantity pairs at different offer prices to reflect the step change in the facility costs incurred? Synergy requests that the Offer Construction Guideline provides clarity on these concerns. Synergy provides the follow examples for further illustration.

Example 9A: Supplementary Fuel

For illustration, assume a 120 MW coal facility (ignoring all other cost components) with a heat rate of 10GJ/MWh. Assume that the first 100MW of output can be provided solely based on coal fuel (at \$5/GJ), and the last 20 MW of capacity requires oil firing (at \$20/GJ). In constructing offers solely on these cost components (all other cost elements are ignored for simplicity), can the facility be offered based on the marginal fuel costs per tranche, or does the facility need to offer all capacity based on the average fuel cost?

Offered MW	Tranched Fuel Cost Component of the Offer Construction	Average Fuel Cost Component of the Offer Construction
0MW to 100MW	= Fuel x HR = \$5 x 10 = \$50/MWh	= Avg Fuel x HR = (5 x 100 + 20 x 20) / 120 x 10 = 7.5 x 10 = \$75/MWh
100 MW to 120 MW	= Fuel x HR = \$20 x 10 = \$200/MWh	= Avg Fuel x HR = (5 x 100 + 20 x 20) / 120 x 10 = 7.5 x 10 = \$75/MWh

### Example 9B: Material Changes in Avoidable Fixed Costs

For illustration, assume a 110 MW gas facility, that can operate 100 MW in baseload mode and the remaining 10 MW in peak mode. The Avoidable Fixed Costs incurred in baseload mode are \$500/h, whereas when operating in the peak mode the Average Fixed Costs increase to \$750/h (as the maintenance requirements increase in this operation mode). Again, ignoring all other cost components of the facility, can the capacity be offered based on the marginal Avoidable Fixed Costs of the capacity per tranche, or does the facility need to offer all capacity based on the average Avoidable Fixed Costs of *all* capacity?

For example, can the first 100 MW be offered based on an AFC of \$500/h, and the last 10 MW be offered based on \$250/h?

## Annexure 2

### Detailed Comments and Request for Clarity on the “Market Power Mitigation offer construction guideline – Draft for consultation”<sup>11</sup>

Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)					
#	Section Ref	Page ref	Classification	Issue	Suggestion
1.	General	Various	Major	<p>Throughout the Offer Construction Guideline, it is stated numerous times that a number of costs are not deemed to be variable costs and are therefore not able to be included in the offer construction for bids.</p> <p>If Market Participants cannot reasonably recover these costs (provided that they are efficient) within their energy and ESS offers, Synergy considers that the BRCP and resulting RCP needs to include these “non-variable costs”.</p> <p>Synergy notes that revenue adequacy concerns in relation to the WEM have been raised numerous times by industry in relation to the MPM framework and suggests that further work is undertaken by the ERA to ensure that its Offer Construction Guideline actually allows for the recovery of efficient costs in line with the Taskforce’s guiding principles for MPM.</p> <p>The Taskforce Paper states “<i>The objective is to avoid narrow interpretations of the SRMC rules, for example that marginal cost is extremely short run</i>”<sup>12</sup>.</p>	A further review is undertaken (in consultation with Market Participants) to ensure that the Offer Construction Guideline allows for the recovery of efficient costs in line with the Taskforce’s principles.
2.	3.1	Pg 4	Major	<p>As noted by the ERA, “efficient cost” has not been defined by EPWA within their MPM framework information paper and the ERA has made its own determination of what is meant by “efficient costs” within the Offer Construction Guideline.<sup>13</sup></p> <p>The definition and the intent of the term “efficient cost” is critical in regard to the MPM framework. Synergy considers that EPWA should provide more guidance as to the intent of this term, and potentially provide examples of what EPWA considers to be “efficient costs”.</p>	EPWA to provide guidance on intent of the term “efficient costs” within the WEM Rules.
3.	3.2	Pg 4	Major	<p>Synergy does not consider that the price of gas in the WEM spot market is a reasonable measure of the market price for gas. The spot market is generally shallow, with the spot market accounting for only</p>	

<sup>11</sup> Appendix 1 of the Offer Construction Guideline, pages 12-39.

<sup>12</sup> [Improvements to Market Power Mitigation Mechanism \(www.wa.gov.au\)](http://www.wa.gov.au), page 19.

<sup>13</sup> “EPWA’s information paper did not define efficient cost, but the ERA takes it to mean the costs, efficiently incurred, to dispatch or discharge an amount of electricity into the market. These can be costs associated with electricity production or the opportunity cost of selling stored electricity into a dispatch interval.”, Offer Construction Guideline, page 4.

**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

#	Section Ref	Page ref	Classification	Issue	Suggestion
				<p>1-2% of WA's gas consumption.<sup>14</sup> As Market Participants cannot confidently rely solely on purchasing spot gas for dispatching their facilities, Synergy considers that it is also unreasonable for the Offer Construction Guideline to suggest that prevailing prices in the spot market are a true indication of opportunity costs for gas.</p> <p>Further, this approach is inconsistent with the approach used for other fuel sources, noting that the opportunity costs for diesel fuel are generally set based on international diesel prices.</p>	
4.	3.2	Pg 4	Clarity	Synergy seeks clarity as to how fuel storage is taken into consideration in the determination of opportunity costs. If a Market Participant has the ability to store fuel rather than use it, can they incorporate the storage costs and future opportunity costs into their offers?	
5.	4.1	Pg 5	Clarity	Synergy seeks clarity as to whether Market Participants are permitted to construct offers based on the facility's marginal heat rate, or are they restricted to use the average heat rate under all circumstances?	
6.	4.1, Table 1	Pg 5	Moderate	For the Offer Construction Guideline to meet EPWA's 'Guiding Principles' for the new MPM framework, it requires further guidance regarding what information can and cannot be included as 'Avoidable fixed costs (non-start-up and shut-down' costs)' ( <b>AFC</b> ). This is so for coal-fired power stations, combined cycle gas turbines, open cycle gas turbines and ESR facilities.	Include examples in the Offer Construction Guideline of costs that can, and costs that cannot, be validly included in offer prices as AFCs.
7.	4.1	Pg 5	Moderate	Synergy notes that generators will incur costs due to the contingency reserve charges based on the Facility's operating level. The Offer Construction Guideline does not provide any guidance on the inclusion of these costs within the Market Participant's offer construction. Synergy considers that these costs are variable costs and that they should be able to be included in the offer construction and suggests that the Offer Construction Guideline provides clarity as to where contingency reserve charges and other direct ESS costs form a valid component of energy market offers.	Suggest that the Offer Construction Guideline provides clarity to Market Participants on the ability to include market costs (such as contingency reserve costs) in their offer construction.
8.	4.3.1	Pg 10	Typographical	Suggest the unit of measure in Example 2 should be TJ/day and not PJ/day	
9.	4.3.1, Example 4	Pg 11	Major	As discussed in item 3 above, Synergy does not consider that the WA gas spot market is deep enough to allow for generators to solely source gas from spot for dispatch. Synergy does not consider that the assumption that "the generator can source lower-cost gas from the	Further consideration is needed in determine what is a true alternative gas supply is for the WEM, noting that the source/market has to be able to supply sufficient quantities of gas to meet the dispatch requirements for the

<sup>14</sup> "AEMO estimates that approximately 1-2%<sup>134</sup> of total gas consumption in WA is traded on a short-term basis" Western Australia Gas Statement of Opportunities, page 79, [2022-wa-gas-statement-of-opportunities.pdf \(aemo.com.au\)](https://www.aemo.com.au/2022-wa-gas-statement-of-opportunities.pdf).

**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

#	Section Ref	Page ref	Classification	Issue	Suggestion
				market in quantities it needs” is a valid assumption to be used in this example.	WEM and the objective test in clause 2.16A.1 effectively requires that all Market Participants must be able to identify the relevant market and associated market price (where the market and market price should be the same for all Market Participants).
10.	4.3.2	P11	Major	Synergy notes that generators are likely to have utilise multiple DBNGP gas transport services. The different gas transport services will generally have differential charges for the capacity and commodity volume-based transport components. Further, the costs of the gas transport services are not necessarily monotonically increasing, and a Market Participant may be required to utilise a minimum volume of one gas transport service before being able to access another lower costs gas transport service. In a similar manner to fuel costs, the Offer Construction Guideline should provide guidance in regards to the offer construction for transport costs. Specifically for large generators, Synergy seeks clarity as to whether a compliant offer can be constructed based on the average variable transport cost, the average fixed and variable transport cost, the marginal variable transport cost, or the marginal fixed and variable transport cost. Synergy acknowledges that this not a straight forward matter, however it considers that there are various compliant offer construction options regarding the inclusion of these costs in market offers, and seeks guidance as to what options are consider compliant with the Offer Construction Guideline.	Suggest the Offer Construction Guideline provides guidance on the construction of compliant offers with consideration of various gas transport options.
11.	4.4.1	P12-13	Major	<p>The Offer Construction Guideline appears to require that a Market Participant depreciate its start-up costs in order for it to be compliant with clause 2.16A.1.</p> <p>Synergy notes that, in WA ERB Application No. 1 of 2019, Decision (<b>ERB Decision</b>), the ERA submitted to the ERB that a Market Participant should be considered to have offered at above SRMC if it does not depreciate its start-up costs.</p> <p>The ERB did not find that Synergy had offered prices at above SRMC as a result of it not depreciating its start-up costs.</p> <p>Synergy does not consider that there are reasonable grounds to differentiate between the treatment of depreciation costs under the current SRMC provision and under proposed clause 2.16A.1. This is because the flaws with this approach raised in Synergy’s submissions to the ERB appear to equally apply to the requirement in clause</p>	Remove the requirement to depreciate start-up costs from the Offer Construction Guideline, or otherwise advise how Market Participants are able to resolve the issues associated with depreciation of these costs (as raised in the Synergy submissions made to the ERB in the ERB Decision).

**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

#	Section Ref	Page ref	Classification	Issue	Suggestion
12.	4.4	Pg 11-14	Major	<p>2.16A.1 and the approach suggested in the Offer Construction Guideline.</p> <p>Synergy notes that the Offer Construction Guideline allows for the 'smearing' of start-up costs across the expected number of starts associated with each relevant cost item, where such cost items are generally capital parts or major inspections/overhauls (e.g. can smear the cost of a rotor over the 5,000 starts expected between rotor replacements).</p> <p>Synergy considers there is an asymmetric risk associated with the early incurrence of such cost items. For example, there is likely a much greater risk of a rotor failing 100s or 1000s of starts early relative to the risk of a Market Participant not replacing a rotor after the time the manufacturer suggests it must be replaced.</p> <p>Synergy also notes there is an asymmetric risk associated with the requirement to account for 'factored' starts. A 'factored start' is when a facility performs an unusual start (or a trip) and this results in the facility needing to incur the costs of a start-based cost item earlier. E.g. if a trip has a 'factored start' equal to 2 starts, and a facility trips 100 times during the life of a rotor, the rotor would need replacing at 4,900 starts instead of 5,000 starts. There is no type of start that increases the number of starts allowed between rotor replacements.</p> <p>Synergy considers there are two ways a Market Participant without market power could account for the above asymmetric risks when calculating start-up costs:</p> <ul style="list-style-type: none"> <li>- <b>Option 1:</b> smear the cost items' across a lesser number of starts, calculated based on observed or expected risk of incurring the cost item early, and once the cost is recovered, remove the cost item from the start-up cost estimate until the relevant cost is incurred; and</li> <li>- <b>Option 2:</b> include a risk margin in the estimated total start-up cost value that reflects any observed or expected risk of incurring the cost item early.</li> </ul>	<p>Amend the Offer Construction Guideline to clarify that option 1 and option 2 are both valid ways of accounting for this asymmetric risk in estimates of start-up costs in a manner that is compliant with clause 2.16A.1.</p> <p>Include an example of each of the above options in the Offer Construction Guideline.</p> <p>Provide guidance on the types of records and evidence that a Market Participant must retain depending on which option it applies.</p>
13.	4.4	Pg 11-14	Moderate	<p>In the ERB Decision, the ERB appeared to accept that the SRMC provisions permit Market Participants to 'average' their start-up costs across the number of starts reasonably expected between the incurrence of the cost item, rather than just basing this number on the manufacturer's recommendation. In effect, this requires Market Participants to take into account any expected optimisation of</p>	<p>Amend the Offer Construction Guideline to explain the circumstances in which Market Participants can compliantly account for their actual expected maintenance activities even if those activities do not align with the</p>



**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

#	Section Ref	Page ref	Classification	Issue	Suggestion
				<p>maintenance activities across its fleet. Eg. a Market Participant with two facilities that will both require their rotors to be replaced in the near future may find it cheaper to replace both rotors at the same time. This might mean, for one facility, it waits until 5,010 starts before it replaces a rotor and replaces the other facility's rotor at the same time, even if this means replacing the second rotor at 4,095 starts.</p> <p>Synergy also notes there are other factors that influence when and how Market Participants will optimise their maintenance activities, including the requirements in the Reserve Capacity Mechanism for Market Participants to keep their facilities Forced Outage rates below 20%.</p>	<p>manufacturer recommendations (e.g. optimisation of its maintenance activities).</p> <p>Include an example of how a Market Participant can compliantly account for its actual expected maintenance activities when those activities do not align with the manufacturer recommendations.</p> <p>Provide guidance on the types of records and evidence that a Market Participant must retain in relation to this matter.</p>
14.	4.4.1, Example 6	Pg 13	Clarity	Synergy seeks clarity as to whether a Market Participant is able to change its assumptions in relation to costs of replacement parts etc over time.	
15.	4.4.1, Example 7	Pg 13	Typographical	Synergy notes that the example contains a typographical error and suggests that "500 starts" should instead be "5,000 starts".	
16.	4.4.2	Pg 13	Moderate	<p>Synergy raised concerns in its submission on the Market Power Mitigation Draft Rules in relation to the recovery of "efficient" ride-through costs and suggested that these costs (where they resulted in the same or lower costs to the market) should be recoverable in the energy (or ESS) offers for later intervals. However, the Offer Construction Guideline does not currently provide any guidance as to the ability for a Market Participant to be able to recover these efficient costs. Synergy considers that where energy market losses are incurred due to a generators 'riding through' periods of market prices below their average operating costs, and this results in a more efficient outcome, the cost should be allowable in the offer construction, and the Offer Construction Guidelines need to provide clarity on the inclusion of these costs in the offer construction. Synergy acknowledges that these costs should only be recoverable where the ride-through results in an equal or more efficient outcome to the market overall and proposes that the recovery of ride-through costs is limited to the to the extent that the losses recovered does not exceed the avoided generator start cost.</p> <p>Synergy notes that if a generator is unable to include the recovery of "efficient" ride-through in its offer construction, it may result in Marker Participant instead deciding to take the generator offline when prices fall below their average operating cost, and to recommit at a later time when the Market Participant can fully recover the generators start</p>	Suggest the Offer Construction Guideline provides guidance on the allowable inclusion of "efficient" 'ride through' costs in a Market Participant's offer construction.



**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

#	Section Ref	Page ref	Classification	Issue	Suggestion
				<p>costs. This outcome may result in the perverse outcome where the Market Participant is “kept whole” however the costs incurred by the market are in excess of those that would have been incurred if the generator had ridden through the low prices rather than decommitting at low prices and recommitting when the prices are higher.</p> <p>Allowing market participants to recover ‘ride through’ costs via future energy market offers (to the extent that these never exceed the generators start cost) is likely to reduce overall market costs and ensures efficient ride through losses are recovered.</p>	
17.	4.5, last sentence	Pg 15	Clarity	Synergy seeks clarity as to whether Market Participants are able to provide information from their models, noting these are necessarily complex and simplification would increase regulatory burden and may at times render results unfit for purpose of explaining the complex model outcomes?	
18.	4.5. Example 9	Pg 16	Clarity	Synergy notes that the example states that the generator’s AFC costs have been “verified by the ERA” <sup>15</sup> . Is the ERA’s intention that Market Participants will have to have their AFC costs verified by the ERA?, Synergy notes that the ERA guidance is non-binding and does not therefore provide any assurances to Market Participants that any “ERA verified costs” won’t be later scrutinised by the ERA.	
19.	5	Pg 18	Major	<p>Synergy considers that the guidance provided for renewable generation plant in section 5 of the Offer Construction Guideline does not fairly capture the complexities faced by renewable facilities in their offers.</p> <p>As the WEM transitions towards net zero emissions, the demand for electricity generated by renewable resources will increase and there are likely to be a number of factors other than VOM and LGC prices that need to be considered.</p> <p>Synergy considers that the Offer Construction Guideline needs to consider the following factors and how they may effect offers:</p> <ul style="list-style-type: none"> <li>contractual arrangements for renewable energy (noting that majority of the SWIS renewable facilities have PPAs<sup>16</sup>);</li> <li>how are offers constructed for hybrid facilities; and</li> <li>Renewable facilities may want to participate in the ESS markets, how will this impact their offer construction?</li> </ul>	<p>Suggest the Offer Construction Guideline provides guidance on the following:</p> <ul style="list-style-type: none"> <li>the compliant construction of offers for hybrid facilities (considering hybrid facilities that consists of different renewable types, as well as hybrid facilities consisting of a renewable with an ESR), and how the offer for a hybrid facility may differ to the offer for each of the individual components; and</li> <li>compliant offer construction for renewable facilities with PPAs (and consideration of the matters raised in Synergy’s Example 8 in Annexure 1); and</li> </ul>

<sup>15</sup> Offer Construction Guideline, page 16.

<sup>16</sup> Refer to Example 6 in Annexure 1 for further details on PPA considerations.

**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

#	Section Ref	Page ref	Classification	Issue	Suggestion
				<p>Additionally, Synergy notes that. this list is not exhaustive, and there will be a requirement to for additional guidance to be provided as new items arise (e.g. for example for post 2030 when the LGC scheme ends).</p>	<ul style="list-style-type: none"> <li>compliant offer construction for renewable facilities wanting to participate in the provision of ESS.</li> </ul> <p>Further the Offer Construction Guideline, should provide an outline of known matters that will require guidance when the concerns arise.</p>
20.	6.2	Pg 19	Moderate	<p>Synergy would like clarity as to whether an Electricity Storage Resource (<b>ESR</b>) can include any other costs in its offers, or is an ESR facility solely restricted to only being able to price at opportunity costs?</p> <p>Synergy considers that Market Participants should be allowed to include VOM, degradation costs, Contingency Reserve costs, Market fees and charges and discharge losses in their compliant offer prices.</p>	<p>Suggest that the Offer Construction Guideline states that, in addition to opportunity costs, ESRs can include VOM degradation costs Contingency Reserve costs, Market fees and charge and discharge losses in their offer prices.</p> <p>Include an example of how a Market Participant can compliantly include the above costs in their offer construction.</p> <p>Provide guidance on the types of records and evidence that a Market Participant must retain in relation to each relevant additional cost.</p>
21.	6.2	Pg 19	Clarity	<p>Synergy seeks clarity as to why the Offer Construction Guideline assumes that offers for an ESR would differ if it were a price-setter compared to a price-taker. Further, if there are any expected differences in the offer construction, the ERA should provide examples and reasoning for the different offer constructions.</p>	<p>Suggest the Offer Construction Guideline provides reasoning as to why the ESR offers should differ if an ESR facility is a price setter or a price taker. Further, guidance is needed on the offer construction for both circumstances, as well how the ESR facility should bid if it is uncertain ex ante whether it will be a price-setter or a price-taker.</p>
22.	6.2	Pg 19	Moderate	<p>When evaluating expected future prices to determine opportunity costs, Synergy considers a profit maximising Market Participant without market power may not always look further into the future than the period for which the ESR is likely to face the relevant constraint: the ESR can discharge in order to charge again, or vice versa.</p> <p>Therefore, Synergy considers the Offer Construction Guideline should confirm that a Market Participant is also compliant with clause 2.16A.1 if:</p> <ul style="list-style-type: none"> <li>when determining the highest-priced intervals, it looks forward only as far as the next predicted charge period; and</li> </ul>	<p>Suggest that the Offer Construction Guideline states whether there are any compliant or non-compliant 'look forward' horizons that must be considered when determining an ESR's offer price.</p> <p>Also include examples and guidance on the types of records and evidence that a Market Participant must retain in relation to its determination of each relevant 'look forward' horizon.</p>

**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

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				- when determining the lowest-priced intervals, it looks forward only as far as the next predicted discharge.	
23.	6.2	Pg 19	Moderate	<p>Synergy considers that, if an ESR has marginal costs other than opportunity costs, then a profit maximising Market Participant without market power may use the expectation of recovery of those costs over the subsequent cycle as putting a limit on the ESR's offers (a minimum) and bids (a maximum).</p> <p>Synergy therefore considers it would also be compliant with clause 2.16A.1 if a Market Participant to apply such bounds to its offer prices, calculated from the combination of the ESR's exposure to costs and its likely offer and bid curves.</p>	<p>Suggest that the Offer Construction Guideline states that, if an ESR's offer prices are bounded as suggested here, the resultant offer price would also be compliant with clause 2.16A.1.</p> <p>Also include examples and guidance on the types of records and evidence that a Market Participant must retain in relation to this matter.</p>
24.	6.2	Pg 19	Moderate	<p>The Offer Construction Guideline addresses itself solely to offer formation in the electric storage obligation duration intervals (<b>ESODI</b>) on the basis that (among other things) opportunities for market power to be exercised outside those periods will be limited.</p> <p>However, Synergy notes that ESR development times may mean that ESRs are operational before the period during which the ESR has capacity obligations (i.e. will not initially be subject to the ESODI provisions as it does not have any capacity credits for the current capacity year).</p>	<p>Suggest that the Offer Construction Guideline confirms whether, in order for an offer to comply with clause 2.16A.1 there are restrictions on the ERS's offer prices:</p> <ul style="list-style-type: none"> <li>- if an ESR is not subject to ESODI provisions, in the ESODIs; and</li> <li>- irrespective of whether an ESR is subject to ESODI provisions, in any trading intervals outside of the OSODIs.</li> </ul> <p>Alternatively, expand the Offer Construction Guideline to provide guidance about how ESRs must price their offers in all trading intervals in order to be compliant with clause 2.16A.1, including how the Market Participant is to identify the trading intervals during which the ESR will offer to discharge.</p>
25.	6.2	Pg 19	Moderate	<p>Synergy sets out in section 1(b) and (e) of its submission letter some of the matters where it requests further guidance regarding the circumstances where it might be compliant to construct an offer other than at its short term 'efficient cost', e.g. bidding at the Energy Offer Caps to avoid 'infeasible dispatch outcomes'.</p> <p>Synergy considers similar issues arise in relation to when to construct an offer regarding an ESR other than 'at' its efficient costs.</p>	<p>Amend the Offer Construction Guideline to confirm the circumstances under which an ESR can be priced at the Energy Offers Caps (e.g. to reflect any physical or operational constraints and/or to reserve capacity required to provide ESS).</p> <p>Also include examples and guidance on the types of records and evidence that a Market Participant must retain in relation to each relevant circumstance.</p>
26.	6.3, last two paragraphs	Pg 21	Clarity	Synergy seeks clarity as to when the ERA expects to amend the Offer Construction Guideline to provide guidance on how to determine	

**Market Power Mitigation offer construction guideline – Draft for consultation (Offer Construction Guideline)**

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				<p>compliant offer prices for co-located and hybrid ESRs, and would like to understand the likely trigger for these measures to be implemented (i.e once the number (or MWs) of these facilities exceeds a threshold?)</p> <p>Further, Synergy would like to understand the procedural process for investigations into ESR hybrids prior to any official bidding guidance being released.</p>	