



3 January 2023

Economic Regulation Authority
Level 4, Albert Facey House,
469 Wellington St, Perth WA 6000

Submitted via: www.erawa.com.au/consultation

Energy Price Limits 2022 – Draft determination

Alinta Energy appreciates the opportunity to provide feedback on the *Energy price limits 2022 – Draft determination*.

We consider that the draft determination would cause generators to under-recover their costs because it assumes run times and capacity factors that are higher than those observed in substantial proportions of historical “short duration cycles”. We note that cycle durations and capacity factors are likely to continue to decrease and exacerbate this issue as increasing DPV continues to sharpen the SWIS load profile.¹ To avoid under-recovery and improve consistency with the principle that the price limit should “high enough so that high-cost generators can recover their costs of electricity supply in the presence of highly variable market condition”, we recommend that ERA assume a run time and capacity factor equal to the minimums observed in the past year.

We support ERA's forecast that gas prices will increase due to the unavailability of coal-fired generation. However, we are concerned that the increase will be higher and sharper than the forecast trajectory, noting that:

- the forecast commodity price mean is only marginally higher (1.5%) than the naïve forecast mean;
- the monthly average gas trading price has already increased above the current forecast of \$6.70/GJ, (\$6.88/GJ in December 2022); and
- the forecast only goes to July 2023, omitting the higher price points likely to occur up until the limit is replaced under the new rules on 1 February 2024.
- besides coal supply issues, many other factors will likely accelerate and perpetuate the gas supply increase, including the forecast shortfall, outages, and suppliers withholding supply their capacity.

We recommend that ERA consider methods to address these matters in its gas price forecast, including extending the forecast to February 2024, appropriately weighting the figures forecast in the latter part of the pricing period, or using the end point of the regression line.

Finally, in finalising its determination and addressing the above issues, we recommend ERA

¹ EPWA's forecasts of a sharper profile and more volatile supply was the rationale behind the flexibility product, which the ERA supported in its 2022 WEM effectiveness review.

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prioritise the objective of allowing generators to recover their costs over the inferred objective of using the price limit to manage market power, considering that:

- Setting a price limit which risks causing under-recovery is not an efficient way to address market power. For the price limit to reduce the misuse of market power, it must be assumed that the price limit is the only measure keeping the most expensive generators from bidding above their reasonable expectation of SRMC, despite the strict SRMC bidding obligations and compliance monitoring regime.
- It is crucial that the price limit permits generators to recover their costs, given that the WEM urgently requires new investment and must retain existing capacity to avoid the current shortfall recurring. However, per ERA's 2022 WEM effectiveness review, current revenue streams appear inadequate to attract this investment. The ERA's chief economist also noted that the current SRMC bidding obligations can be too legalistic and force generators into loss-making positions.²
- The new market power mitigation framework prioritises cost recovery and aims to reduce the risk of understating the price limit by implementing a single price cap based on the most expensive technology (e.g. diesel-fuelled generation) and rounding to the nearest \$100/MWh. An overly conservative price limit would be inconsistent with this approach.

Assumed run times and capacity factors would cause under-recovery

The method assumes a distribution of "short dispatch cycle durations" (that is cycles with a duration between 0.5 and 4 hours) and capacity factors over these cycles based on historical data. For the Parkeston units setting the draft price limit, these distributions have a mean of 2.6 hours³ and 42.6%⁴, respectively and are used in a Monte Carlo simulation to produce a distribution of potential VOM costs.

We are concerned that the run times and capacity factors will be much lower than these figures over the period (~1 February 2023 – ~1 February 2024) and cause under-recovery.⁵

Figure 15 highlights that in ~50% of short duration cycles, the Parkeston units were dispatched for less than the average of the forecast distribution run time of 2.6 hours.

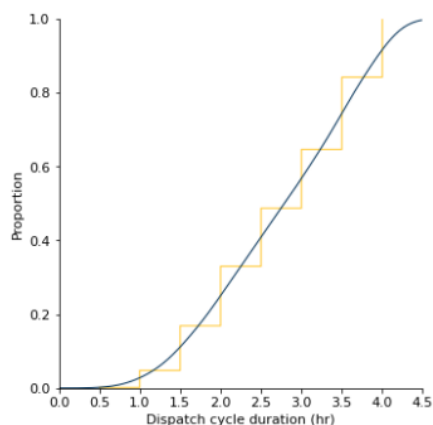
² Paraphrased from comments made at ERA's 2022 Energy Markets workshop.

³ ERA, *Energy price limits 2022 Draft determination*, p.35.

⁴ As above, p.36.

⁵ We understand that the Parkeston run time duration and capacity factor which is effectively assumed in the final price limit determination will be marginally higher than the average of the distributions because the method uses the 80th percentile of the model outputs (by adding a reserve margin equal to the difference between the 80th percentile and the mean). However, because we cannot derive what these assumptions are, we consider the average of the distributions are reasonable, albeit marginally understated, proxies.

Figure 15: Empirical cumulative distribution, duration of short dispatch cycles, Parkeston units

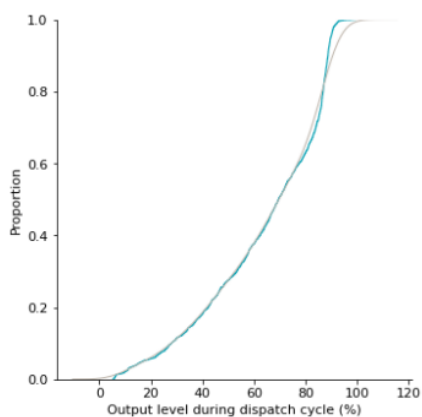


Source: ERA's analysis based on SCADA data provided by Goldfields Power.

Note: the teal step curve shows the empirical cumulative distribution of dispatch cycle duration. The grey line shows the cumulative kernel-density estimate of the empirical distribution.

Figure 20 highlights that the Parkeston units have a capacity factor less than the average of the distribution in ~20% of short duration cycles.

Figure 20: Empirical cumulative distribution for output level (capacity factor) reached during short dispatch cycles, Parkeston units



Source: ERA's analysis based on confidential data provided by Goldfields Power.

This analysis indicates that the draft price limit would almost certainly cause Parkeston to under-recover its costs in a significant number of intervals, especially considering the substantial impact run times and capacity factors typically have on an OCGT's costs per MWh at the margins. To avoid under-recovery, the duration of Parkeston's cycles and short cycle capacity factors would need to significantly increase.

However, these are very likely to continue to decrease, exacerbating the under-recovery by increasing the proportion of short duration cycles and capacity factors that are lower than the assumed averages. The ERA notes that, "A decrease in the observed duration of the daily peak in electricity demand resulted in a decrease in the average quantity of dispatch, which leads to an increase in the average VOM cost of the Parkeston as the costs are spread over fewer dispatch quantities." We consider this trend will likely continue because we understand that it would be partially driven by increasing DPV, further sharpening the load profile, and increasing intermittent generation making cycle durations more volatile and unpredictable. This is consistent with EPWA's analysis underpinning its proposal to implement an RCM flexibility product, which the ERA supported in its 2022 review of the effectiveness of the WEM.

Forecast fuel costs appear understated.

We support ERA's finding that gas prices will continue to increase with decreasing coal availability,⁶ and the departure from the 'naïve' approach to capture this trend in the forecast.

However, we are concerned that the increase may be much sharper and higher than the forecast because:

- The average of the distribution of forecast gas prices is only 1.5% higher than the average derived using the naïve forecast and has already been exceeded (the monthly average [gas trading price was \\$6.88/GJ in December 2022](#)).
- Using a distribution of variables when prices are expected to consistently increase over the period can understate prices by giving too much weight to prices which may occur at the start of the period and be very unlikely to reoccur in the latter part of the period as prices increase.
- The forecast appears to extend only to July 2023, yet the upward trend is very likely to continue throughout the pricing period which we understand could last until 1 February 2024, based on the transitional provisions of the [draft market power mitigation rules](#).
- AEMO's latest GSOO forecasts a worsening shortfall during 2023, peaking in 2024 at 49TJ/day before new capacity arrives.⁷
- Since the WEM GSOO, major suppliers stated their intention to withhold supply in response to the federal government's announcement to introduce price caps.⁸
- The current tight supply and forecast shortfall make the price very sensitive to outages (like the recent outage at the Varanus Island facility).
- As noted by AEMO's WEM GSOO, supply from the Reindeer gas field and Devil Creek production facilities is expected to naturally decline through 2023 before ceasing. Supply from this facility may become more volatile as it nears end of life.

To avoid understating gas prices, which would cause generators to under-recover costs, we recommend that the ERA consider methods to address the above matters, including:

- Extending the gas price forecast to at least February 2024.
- Using the maximum price reached by the regression line, or otherwise, appropriately weighting the prices forecast in the latter part of the forecast period (for example, disregard variables in the earlier part of the period).

The need for the price limit to allow generators to recover costs is more important than its inferred role in managing market power, especially considering the current context of the WEM.

We recommend that ERA prioritise the objective of allowing generators to recover their costs over the inferred objective of using the price limit to manage market power.

We consider that implementing a price limit that is likely to cause generators to under-recover

⁶ ERA, *Energy price limits 2022 Draft determination*, p.4.

⁷ AEMO, [2022 WA GSOO](#), p.3.

⁸ AFR, [Gas market grinds to halt as Woodside, Shell suspend sales talks](#), Dec 2022

their costs in a material number of intervals (for example, by not addressing the VOM and fuel prices issues we have raised) is not an efficient way to manage market power because it could result in negative outcomes for customers overall. It could discourage availability and new investment. Meanwhile, for this approach to reduce the misuse of market power, it must be assumed that the primary market power mitigation measures – the SRMC bidding obligations – are ineffective, such that a generator would exercise market power and not bid at its reasonable expectation of SRMC if the price limit was increased above this level. We note that this logic would only be relevant for a theoretical subset of generators that are currently prevented from bidding above their SRMC due to the price cap. We also doubt the likelihood of this occurring (especially without recourse) should the cap be increased above these generators' potential SRMC, given the SRMC bidding obligations and monitoring regime, substantial penalties for breaching them, and significant reputational damage in being the subject of public allegations alone.

It is particularly important that the price limit permits generators to recover their costs in the current context of the WEM. The WEM urgently requires new investment and to retain existing capacity to avoid the current shortfall recurring. However current revenue streams appear inadequate to attract this investment. The ERA's 2022 WEM effectiveness review found that the WEM does not provide adequate revenue to support new investment. The ERA's chief economist also noted that the current SRMC bidding obligations can be too legalistic and force generators into loss-making positions.

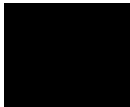
Finally, we note that setting a price limit which creates a strong likelihood that generators cannot recover their costs in numerous instances to manage market power is inconsistent with the new market power mitigation strategy. This strategy would prioritise cost recovery and reduce the risk of understating the price limit by implementing a single price cap based on the most expensive technology (e.g. diesel-fuelled generation) and rounding to the nearest \$100/MWh.

Conclusion

We consider that the distribution of short run duration cycles, capacity factors and gas prices used in the draft determination would cause generators to under-recover their costs. We recommend methods for the ERA to address these matters. Finally, we consider that cost recovery should be prioritised in the setting the price limit given that an overly conservative limit is unlikely to reduce the misuse of market power, could dissuade investment and retaining capacity when the WEM is facing shortfalls and has revenue inadequacy issues, and would be inconsistent with the forthcoming market reforms.

If you would like to discuss further please contact me at oscar.carlberg@alintaenergy.com.au or on 0409 501 570.

Yours sincerely



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