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Rebecca Holland
A/g General Manager, Compliance & Enforcement
Australian Energy Regulator
GPO Box 520 Melbourne
VIC, 3001, Australia

31 March 2026

Dear Rebecca,

Fluence Energy Pty Ltd (Fluence) welcomes the opportunity to respond to the AER's consultation on amendments to the Rebidding and Technical Parameters Guideline. We appreciate the AER's future focused approach to providing guidance and expectations on rebidding and technical parameters.

Fluence is a leading battery energy storage solutions provider

Fluence Energy Pty Ltd is an indirect subsidiary of Fluence Energy, Inc. (Nasdaq: FLNC). Fluence is a global market leader in energy storage products and services, and digital applications for renewables and storage. As of 30 September 2025, Fluence had deployed or contracted over 46 GWh of energy storage across 273 projects in 48 markets globally, and optimised or contracted 16 GW of wind, solar, and storage assets using Fluence's Mosaic™ bidding system.

Fluence is not a project owner or Market Participant. Fluence provides technology, software, and services that help its customers – typically Market Participants – build, operate and trade assets in wholesale electricity markets. Australia is one of the core markets for Fluence, with high levels of renewable penetration requiring significant volumes of energy storage. Fluence has supported customers to deploy energy storage assets and bidding systems across multiple NEM regions.

Fluence also has a strong track record of delivering market leading solutions to tackle some of the biggest challenges faced by our energy systems. We have delivered Storage-As-Transmission-Assets for our customers in the German market and are contracted to deliver projects under the Stability Pathfinders programme for our customers in Great Britain.

In the NEM, Fluence has pioneered innovation in the storage industry and has previously worked with customers to secure Australian Renewable Energy Agency (ARENA) funding to deploy grid-forming capabilities. Fluence's Mosaic bidding system helps our customers manage their obligations under critical system security contracts including system integrity protections schemes (SIPS).

In this submission, we offer our perspectives on the role of AI and automation in the bidding process, from our unique vantage point as the supplier of one of the NEM's most widely adopted bidding systems.

We would like to thank the AER for the opportunity to provide feedback on the consultation paper. We are available to discuss any of the comments in this submission in more detail, on request. Please direct any inquiries about this submission to [redacted].

Regards,

Sam Markham - Manager, Policy and Market Growth

Matt Grover – Director, Energy Markets

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Fluence responses to AER's consultation questions

Question 6. What additional guidance on ramp rates would be of use? Do you think the Guideline clearly explains that ramp rates should not be utilised to manage the commercial impacts of network constraints?

Fluence supports additional guidance from the AER on its expectations regarding ramp rates. It would be useful for industry if the AER explicitly outlined the undesirable behaviour that should be avoided, particularly for instances where Market Participants would be unfavourably impacted by network constraints. In addition to guidance relating to the appropriate use of zero ramp rates for managing MSOL, we suggest this guidance should extend to the appropriate use of ramp rates set lower than the maximum technical capabilities of the plant, including to the minimum ramp rate.

Question 8. Do you consider additional guidance relating to the expectations for Market Participants utilising Auto-bidding software (including third party software), and for the third-party providers would be useful? If so, what guidance would be of assistance?

Fluence generally supports additional guidance from the AER on its expectations for all Market Participants (not just those *utilising Auto-bidding software*), where that guidance is specific, accurate, actionable, linked to specific market Rules and Laws, and aligned with the purpose and objective of the Guideline. We do not consider that bullet points 2-4 as set out in the AER's Consultation Paper meet these criteria in full, thus we do not consider them appropriate for inclusion in the Guideline. For example, stating that Market Participants must ensure "appropriate" internal management processes without characterizing the criteria for "appropriate", and without reference to Market Participants' specific obligations under the market Rules or Laws, is not specific, not actionable, and not consistent with the purpose and objective of the Guideline.

Questions 9 & 10.

- Do you consider there would be any benefit from adding additional transparency on the utilisation of Auto-bidding in a rebid reason? Why?
- Explain whether the proposed methodology for receiving this information listed above would be effective in providing market transparency.

At this time, Fluence does not consider there would be improved market outcomes from requiring Market Participants to disclose "*whether submitted rebids have been made by an Auto-bidder*"[1], for the following reasons (which are further explained in detail in response to question 13):

All bidding systems – including those that utilise automation - are simply tools for executing the commercial trading strategy set by the Market Participant overseeing the bidding system. Often, rebids will be triggered by a software setting change initiated by a human trader, with the rebid 'auto' executed and submitted by an algorithm. In this sense, most (BDU) rebids reflect a combination of human input and intention, with algorithmic execution.

If the AER's proposal were implemented, a likely result would be that many Market Participants would simply include "AB" on all bids and rebids, since many Market Participants use automated tools to aid their preparation and submission of bids and rebids.

[1] AER Consultation Paper, p12

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It is not clear to us how including a new rebid code indicating whether an algorithmic bidding system was used in the formation of the rebid would enhance competition, market efficiency or compliance with the NER. This information is already contained in the contemporaneous records maintained by Market Participants and could be requested and assessed by the AER in any instance where the AER deemed a rebid worthy of scrutiny.

Question 11. How could the volume of battery rebids (particularly when we are seeing numerous rebids within the same dispatch interval) be reduced, whilst maintaining the necessary market integrity?

Fluence supports further guidance from the AER relating to its preferences concerning the volume of rebids submitted within a single trading interval. Any guidance should set out an articulation of the perceived problem, as well as evidence to substantiate claims. The AER's consultation paper states that *"the sheer volume of rebids that are being submitted by batteries… increases the risks to the market"*[2] but has not provided any supporting evidence, data, or description of what these risks are, and how they are increased. The AER should also clarify why it has singled out "batteries" specifically in the consultation paper, when there are many classifications of dispatchable units that rebid frequently, and as the Guideline seeks to be technologically neutral.

We caution the AER against seeking to effect any prohibitions on making multiple rebids within a single trading interval. Fluence considers there can be some circumstances where multiple rebids are necessary to communicate the latest available information to AEMO, including to correct a rebid that contains an error or was submitted in error, and to remain compliant with the market Rules.

We provide additional commentary on this topic in our response to question #13 below.

Question 12. Do you consider there are any changes to the requirements for the recording of contemporaneous notes for battery rebids that could be implemented to help to reduce regulatory burden whilst still providing necessary integrity?

Fluence considers that the existing requirements for recording contemporaneous records are rigorous and clear, and that Market Participants have already designed their processes and bidding systems to comply with them. We do not consider the current requirements to be a regulatory burden.

[2] Consultation paper, p13

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Question 13. What are your views regarding the utilisation of AI in Auto-bidding technology? What do you consider the potential benefits and harms as this technology becomes more utilised and sophisticated?

Bidding systems – including those that leverage AI techniques in components of their architecture - promote competition by reducing barriers to entry for new Market Participants, and support investment in renewables and battery storage assets which are essential to meet government renewables objectives. The following sections elaborate on Fluence's views.

Bidding systems promote competition and enable Market Participants to ensure conformance and compliance with the NER

This section provides context on how bidding systems are used in the NEM to ensure compliance with the NER/NEL.

i) Bidding systems are not a new phenomenon in the NEM and are an essential tool for Market Participants to compliantly submit bids and rebids

Market Participants have been using software tools to form and submit bids since before the creation of the NEM in 1998. AEMO (and NEMMCO before it) requires that bid files be structured in a very specific format, and bid files include information that is both commercial in nature (i.e. offer prices) and physical in nature (i.e. unit capabilities and availabilities). The consequences of mismanaging bid information can be costly for a Market Participant – commercially, reputationally, legally, and physically. These risk factors are well suited to mitigation via software tools that help human traders keep track of required information, ensure structured formatting, and validate adherence to market rules and compliance requirements.

Similarly, price forecasting is not a new phenomenon. All Market Participants in the NEM have historically incorporated some form of price forecast into their unit commitment decision-making, including offer prices and availabilities.

What *has* changed in recent years is the type and composition of dispatchable resources that are participating the NEM. Inverter-based wind, solar, and BESS resources are the most flexible and fast ramping dispatchable resources ever registered in the NEM. This evolution in technological capability drove a related evolution in the software-based bidding tools used to manage and bid these resources. As the NEM's physical resources have become faster, more flexible, and more use limited, with generation availabilities that change dynamically with the weather, their rebidding has necessarily become faster, more frequent, and more precise. This change is a feature of market participants keeping pace with their obligations for fast-response and weather-dependent resources and not of "excessive" bidding.

BESS resources are incredibly use-limited, with ever-changing physical availabilities that require frequent re-forecasting, re-planning, and re-signalling to AEMO, to deliver their limited energy into the market at the time it's needed most, and to efficiently respond to the NEM's price signals. It would be near impossible to efficiently and compliantly offer a BESS into central dispatch without the support of a bidding system with some degree of automation, and without making frequent rebids.

ii) Timely rebids communicate a unit's physical availability updates, not just its offer price updates

Helping a Market Participant form offer prices is just one component of a bidding system's core function. More importantly, bidding systems provide accurate and timely signalling of a BESS' physical availability across the entire dispatch horizon, via the "MaxAvail" parameter within a bid file.

Fluence's Mosaic bidding system reads real-time signals from a BESS's physical plant and uses the very latest plant status information to plan the BESS' intended future dispatch and management of stored energy. If warranted, the Mosaic system updates and rebids the MaxAvail parameter to AEMO

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every five minutes, covering every 5-minute dispatch interval for the remainder of AEMO's dispatch horizon.

Small changes to plant availability or a BESS' planned dispatch in an upcoming interval – often the result of a changed price forecast (itself often the result of a changed demand or renewable generation forecast) - can lead to material changes in MaxAvail for each subsequent interval in the remainder of the trading day. Most rebids submitted by a BESS unit will include MaxAvail updates in future intervals – as required under the Chapter 3.8 of the National Electricity Rules (NER) – because commercial intentions and related physical availabilities have changed. The AER's consultation paper correctly notes that there are fundamentally *two different motivations for Auto-bidding – that related to the technical capabilities of a plant (e.g. availability, FCAS trapezium), and Auto-bidding designed to improve the commercial position of a Market Participant*[3] - we would add that individual rebids are often reflective of both motivations at once, as changes to commercial intentions almost always necessitate corresponding updates to technical capabilities.

It is essential (and required by the NER) that AEMO be provided with the most up-to-date view of the unit's intentions and physical availabilities – and – particularly for BESS units - it would be near impossible for a Market Participant to signal this information fast enough, accurate enough, and reliably enough, without the aid of automated software logic. In this sense, bidding system automation is essential to a BESS unit's ability to bid compliantly and ensure it only seeks dispatch targets it is confident it can physically conform to.

iii) Increased rebid volumes reflect the NEM's changing resource mix

As the power system becomes more reliant on weather dependant generators, resource availability (supply) forecasts will change more often[4], leading to price forecasts changing more often, leading to energy limited plant like BESS needing to re-plan their SOE and rebid their intentions and availabilities more frequently. Given this new reality, in combination with the transition to a market comprised of more numerous smaller generators, governments and regulators should not be surprised that recent years have seen an increase in the volume of unit rebids submitted to AEMO.

The increase in rebids reflects a shift away from a small number of large thermal generators, towards a large number of smaller renewable generators and storage resources. The recent increase in the volume of rebids referenced in (for example) the recent *National Electricity Market Wholesale Market Settings Review*[5] Draft and Final reports, is not problematic in and of itself. Rather, it instead highlights that the AER's market monitoring capabilities may need to be enhanced to effectively monitor bidding compliance, risks of market manipulation, and the effectiveness of competition.

For additional perspective, please refer our response to question 11 above.

iv) Behind every bid is the human hand of a Market Participant, with a defined strategy and regulatory accountability

Recent regulatory discourse including the AER's consultation paper and in the 2025 *National Electricity Market wholesale market settings review* at times refer to 'algorithmic bidding' 'auto-bidding' and 'algorithmic pricing' as if autonomous machines are forming dispatch plans and offer pricing for units on their own. This is not the case. Behind every dispatchable unit is a team of human traders (the Market Participant), with at least one representative on shift around the clock, 24/7.

Fluence's Mosaic bidding system is designed explicitly for Market Participants to define, control, and execute their own trading strategies. The bidding system simply helps the Participant execute on its

[3] AER Consultation Paper, p14
[4] AEMO's demand forecasts will also change more often, as demand becomes increasingly weather dependant on the back of trends including electrification of heating/cooling loads, and rooftop PV.
[5] https://www.dcceew.gov.au/energy/markets/nem-wms-review

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defined strategy, often leveraging algorithmic automation to in support of commercially optimal, technically conformant, regulatorily compliant outcomes.

Importantly, the Market Participant is in control of all key commercial variables that define the trading strategy – for example, the price bands that get offered, the range of prices the bidding system will utilise, the way the unit's physical limits are codified into physical constraints in the optimisation, the way the Participant's risk tolerances are codified into commercial constraints in the optimisation, etc. It is not safe to assume that every bid price offered by a BESS unit was determined by an algorithm, as bidding systems including Fluence's afford the Market Participant's human traders various ways to control or dictate offer prices.

In Fluence's Mosaic system, there are several ways human traders can steer, guide, or otherwise override the algorithmic execution of their strategy. For example, human traders can layer on both "soft" economic constraints to guide the bidding system and influence SOE management, or "hard" constraints including using the Mosaic system to place "manual bids" – where the bid price, volume, availability, and rebid reason are hand dictated by the human trader. Human dictated rebids can be indistinguishable from automation-aided rebids, and in any case, all rebids reflect a combination of human intention, and algorithmic packaging and execution.

Fluence's Market Participant customers can and do often layer on intra-day constraints and overrides to the Mosaic bidding system. These constraints result in bidding and dispatch outcomes that commonly reflect a combination of human intention and input, and algorithmic execution. Importantly, the bid outcomes always reflect the intentions of the Market Participant, and the physical capabilities of the unit.

An examination of recent "peak price" days including several days in June 2025 would reveal the clear role of 'human hands' in guiding the outcomes of many BESS in the NEM's fleet. During these volatile periods, many units rebid fewer times than is typical, and atypically constrained utilised price bands to specific ranges. In this sense, on the most volatile peak price days, the BESS fleet was being traded the same way dispatchable units have traditionally been: by human traders competing against each other, seeking outcomes that align with their organisation's commercial prerogatives and risk management protocols.

Bidding systems in the NEM are not susceptive to algorithmic collusion or converging bids and pricing

i) The technology employed by bidding systems in the NEM is fundamentally different to the technology used in algorithmic pricing systems in other industries

The technology employed by bidding systems in the NEM today (including Fluence's own Mosaic system), is fundamentally different to the technology used in algorithmic pricing systems described in the AEMC Staff Working paper (as referenced in the AER's consultation paper)[6].

Fluence's bidding system incorporates specific AI methods including machine learning to forecast prices. These methods support the optimisation of bidding decisions within a framework of rules and constraints built into the bidding system. Examples of significant rules and constraints include:

1. The Market's Participant's defined prices, preferences, constraints, and strategies;
2. NEM market rules, as defined in the bidding system's codebase;
3. Physical plant limits, as determined by physical models and real-time telemetry.

[6] AER Consultation Paper – p14

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By contrast, the AI methods referenced in the AEMC Staff Working Paper are so-called *uninterpretable AI models*[7]. These approaches, including reinforcement learning, do not always enforce constraints (e.g., market rules, physical limits, or trader strategies) and may instead prioritise singular objectives like maximising profit. As a result, they can lead to unintended behaviours, due to their "unconstrained" decision-making nature.

For example, the AEMC Staff Working Paper cites an example of 'algorithmic collusion' between different sellers selling the same textbook on Amazon.com. In this example, the only constraint in the uninterpretable AI model is the physical availability of the book (i.e. the remaining available stocked quantity). In contrast, optimisation and bidding of a BESS in an electricity market requires the consideration of and strict adherence to modelled constraints including the BESS' physical availability and capabilities, the codified market rules, and the defined limits and objectives of the Market Participant. We suggest that analogies and examples from other industries are not directly relatable to the NEM and the 'algorithmic collusion' posited in the AEMC paper is not occurring in the NEM today and is unlikely to occur in the future.

Fluence's research on the current state-of-the-art AI methods suggests that applying uninterpretable AI models to BESS optimisation and bidding would be impractical, because these types of algorithms cannot reliably enforce physical constraints and limits (for example, a BESS' warranty constraints). Fluence's bidding system does not provide Market Participants with tools that can be used to manipulate market outcomes or engage in anti-competitive behaviour.

ii) Existing regulations hold Market Participants accountable for their bids

Under the current NER, each Market Participant who submits a bid takes responsibility and is accountable for that bid, regardless of whether the bid was created with the assistance of automation or an algorithm. Further, the NER sets out a strong and robust penalty regime for Market Participants who are found to have bid in contravention of the NER. Accordingly, Market Participants already face a strong and efficient incentive to ensure their bidding systems form bids in a way that is compliant, explainable, and defensible.

This incentive gets passed down to bidding system developers, including independent bidding system providers like Fluence, who are typically put through rigorous due diligence processes before being contracted and deployed by a Market Participant. Fluence is committed to helping Market Participants compliantly operate within the NEM's Rules and Technical Guidelines.

Further, the AER already has considerable powers to compel Market Participants to explain and defend their bids, especially rebids close to the start of a Trading Interval. The AER need only ask a Participant to "please explain" a bid. If information from the Market Participant is not forthcoming, insufficient, or indicates non-compliance with the NER, the AER can leverage its enforcement powers – which serve as a strong and constant deterrent to bad or careless conduct on behalf of Market Participants and bidding system developers alike.

The responsibility of Market Participants for their bids also extends to compliance under the CCA that prohibits collusion.

iii) Asset- and Market Participant-specific constraints ensure individuality of trading strategies, and limit the possibility of converging strategies and bid prices

In its consultation paper, the AER states its concern about the possibility of multiple units utilising the same third-party bidding system forming a similar market view and trading strategy due to these assets using the same inputs and serving "to treat this combined capacity as a single block[8]". The AER has expressed concerns that this could drive potentially inefficient market outcomes and elevate

[7] Other commonly used terms for these types of models may include *opaque decision-making models,* or *black-box AI models*
[8] AER Consultation Paper, p15

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prices for consumers. This hypothetical scenario is not borne out in practice and is unlikely to under our current NEM market design. Currently in the NEM, Market Participants use a range of publicly available information to form trading strategies – these include weather forecasts, Predispatch price and demand forecasts – along with other tools like price forecasts. This approach is not new in the NEM and bidding systems assist Market Participants in navigating complex data to form trading strategies and bids and rebids compliant with the NER. However, bidding platforms in the NEM do not operate in isolation without additional asset- and Market Participant-specific information and constraints influencing asset trading. Fluence's experience is that its Market Participant customers utilise the Mosaic software in diverse and varied ways, to pursue unique objectives and to manage risk in bespoke and proprietary ways. No two customers are using the bidding system in the same way, and none are using it with default, out-of-the-box settings, and in a set-and-forget manner.

Below are just a handful of the many input variables that can enable varied strategy formation in the Mosaic software and can ultimately drive divergent outcomes from assets in the same NEM regions, despite leveraging the same third-party bidding tool.

- Dispatchable unit specific: the asset's bid bands, registered markets, contractual agreements over the asset (e.g. virtual toll, financial contracts), network constraints, local price adjustment, constraint management settings, price elasticity assumption and price forecast input weightings.
- Market Participant specific: organisational risk appetite risk limits, broader contracted position and strategy.
- Physical plant specific: configured OEM warranty constraints, SOE limits, telemetry signal construction and droop/PFR settings.

Further, the Mosaic bidding system is architected such that each Participant's dispatchable units are segregated from each other. Unit A using Mosaic is unaware that Unit B even exists, let alone that it is also using Mosaic to submit its bids.

Since the NEM is a regional gross pool market, all dispatchable resources are ultimately competing to chase the same prices, and resources with common characteristics and capabilities – like the NEM's BESS fleet – can at times be expected to exhibit aligned operating profiles (i.e. generally charging during low prices midday and then discharging during the evening peak). However, these behaviours have never been and are not coordinated – this is neither technically possible, nor allowed under the NEM Rules.

Question 14. How can the AER ensure sufficient transparency and accountability of technology being utilised for bidding and rebidding?

Any updated Guideline from the AER should not consider or seek to regulate the technology or systems a given Market Participant uses to form and submit their bids and offers. The advice in the AER's Guideline, and the scope of the AER's enforcement frameworks, should only be concerned with whether the bids and offers submitted by a Market Participant are compliant with the relevant NEM Rules and Laws. Just as the NEM Rules are guided by the principle of technology neutrality, the AER Guideline should remain neutral on the tools and systems employed by Market Participants.

Market Participants use several types of internal tools and IT systems in combination to operate their plants in the market and to inform their preparation of bids, including SCADA systems, ETRM systems, and the like. The AER Guideline does not currently seek to regulate Participants' use of these systems, and it would be inappropriate for the AER to do so. Bidding systems are no different and it would be inappropriate to single them out for regulation in an AER Guideline. The AER's compliance efforts should be focused on the *outputs* of Participants' bids and whether they are compliant with the market Rules and Laws, rather than on what technology the Participant employed

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to prepare them. The choice of internal tools is for Participants to make, and Participants already select and employ their tools with a clear-eyed view of the market Rules and Laws, and their obligations and compliance exposures as Market Participants.

The existing market Rules and Laws are clear, and Participants already have strong incentives to adhere to them (including rules preventing collusion).

The AER's proposal to introduce new obligations for Market Participants "*to certify (and recertify where material changes are made), test, govern and record each Auto-bidding and AI model*" is not described in sufficient detail to constitute a proposal, but in any case, we suggest such an obligation would be cumbersome, time consuming, and expensive for Participants and the AER alike to implement, without creating any novel value or better promoting transparency or accountability.

Question 15. What, if any, amendments to the NER are required to address the utilisation of AI in the bidding process

Based on the information presented to date, there is no evidence to suggest that changes to the NER are required to accommodate the increased use of automation in bidding systems, including bidding systems that leverage AI techniques. Fluence suggests that before regulators and governments seek to enact reforms, they must first clearly articulate problem statements and demonstrate that a problem or problematic gap in the regulatory framework exists, so that industry can participate in the process of forming appropriate and efficient solutions to the problem. We do not believe this standard has been met at this time.

Fluence would welcome an opportunity to contribute further to this consultation, or to share more information about our bidding system and the role it plays in promoting competition in the market and supporting Participants' compliance posture.