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Australian Energy Market Commission (**AEMC**)
Level 15, 60 Castlereagh Street
Sydney NSW 2000

To whom it may concern

Response to "Integrating price-responsive resources into the NEM" Consultation Paper

Energy Locals Pty Ltd (ACN 606 408 879) and its related entity, Energy Trade Pty Ltd (ACN 165 688 568) (**Energy Locals**) welcomes the opportunity to provide a submission to the AEMC's "Integrating price-responsive resources into the NEM," Consultation Paper (Paper).

Energy Locals specialises in energy procurement and management, energy generation and the provision of energy efficient technologies for residential, commercial, and industrial projects. Energy Locals in also in partnership with Tesla supporting the SA VPP, which is one of the biggest residential battery VPPs in the world.

Energy Locals is one of the largest and fastest growing embedded network operators in the National Energy Market (NEM) and has deployed millions of dollars of investment in Distributed Energy Resources (DER). The processes and regulations in dealing with multiple Financially Responsible Market Participants (FRMPs) within an embedded network is well established and understood by both businesses.

The objective of both businesses is to provide end-customers with competitive electricity rates and other clearly defined benefits related to DER and we have extensive expertise in the management and implementation of solutions that include electricity, gas, hot water, solar PV, electric vehicle charging, battery storage and telecommunications.

Our response builds on our previous submissions[1] and is structured as a short paper. We have provided more detailed feedback in our responses to the specific questions at the end of this paper.

Main benefits of price-responsive resources into the NEM

We believe introducing flexible and visibility into the NEM by enabling the' Schedule Lite' voluntary mechanism will bring significant benefits. Some of these benefits in our view include:

1. **Benefits to customers** via competitive and innovative measures.

   Adopting this proposal will offer customers the choice to engage one (FRMP) for their price-responsive resources and a different FRMP for their non-price-responsive resources or utilise the same FRMP with distinct pricing. This will introduce competition within the electricity retail sector resulting in reduced electricity costs for customers, along with an opportunity to provide more inventive product offerings.

[1]See: https://www.aemc.gov.au/sites/default/files/2023-03/Rule%20Change%20Submission%20-%20ERC0346%20-%20Quinbrook%20-%2020230228.PDF

Customers will also gain the ability to select optimisation algorithms through their adaptable FRMP via their trader/aggregator. These algorithms will work to minimise customer's electricity costs by effectively dispatching the most economical energy resources to fulfill demand, encompassing renewable energy sources and flexible loads.

2. **Decarbonisation** by enhancing the incorporation of adaptable resources.

   Adopting this proposal will facilitate more effective integration of renewable energy resources and Customer Energy Resources (CER) into the grid and would minimise the curtailment of renewable sources during periods of low demand. The proposal would support the effective dispatch of renewable energy resources stored in assets like batteries and vehicle-to-grid (V2G) electric vehicles and provide incentives to flexible loads such as water heaters and one directional EV chargers in residential and C&I sites. This will lessen the reliance on high-carbon energy sources and contribute to the shift towards a low-carbon energy framework.

3. **Economic efficiencies** by facilitating the inclusion of adaptable loads in the electricity market.

   This approach enhances transparency regarding the price-responsive resources and provides valuable information for energy management and strategic planning. This empowers power system operators to more accurately predict and address fluctuations in energy consumption. Furthermore, electricity market participants will be able to use "Lite Scheduling Units" (LSU) to generate electricity when the power system is in need of capacity and to soak up excess renewables when renewable generation is high, and demand is low. The financial benefits of this proposal are aligned with CER2 and Project Edge3.

Other considerations

We believe that the reform must prioritise the protection of customers while ensuring that the participants in the Scheduled Lite mechanism (e.g traders, aggregators) are able to compete on a level playing field.

We also suggest introducing the mechanism in a phased manner by initially targeting larger customers and fine tuning the framework during implementation to ensure a seamless transition for smaller customers.

Fundamentally we endorse the proposal and look forward to its further development as we believe this proposal will benefit both the customers, electricity market, the network operators, and other NEM stakeholders. We would like to take this opportunity to thank AEMC for the opportunity to provide this submission and would be pleased to support AEMC's review and recommendations as required.

Kind regards,

Adrian Merrick
Chief Executive Officer
Energy Locals Pty Ltd

[2]See: https://www.aemc.gov.au/rule-changes/unlocking-CER-benefits-through-flexible-trading
[3]See: https://aemo.com.au/en/initiatives/major-programs/nem-distributed-energy-resources-der-program/der-demonstrations/project-edge

Responses to the AEMC's Specific Questions

We have only responded to the AEMC's questions in the consultation paper where we have a specific comment.

AEMC Questions	Energy Locals Response
Question number	
QUESTION 1: **DO YOU AGREE THAT PRICE-RESPONSIVE RESOURCES NEED TO BE INTEGRATED INTO THE NEM?** **1.** The Commission has identified five types of issues with increasing volumes of price responsive resources. Do you agree with this breakdown of the issues? What do you consider the magnitude of each issue is? How is this likely to change over time?	• We agree with the AEMC that price-responsive resources need to be integrated in the NEM. • We agree with the five types of issues identified in the paper. • In our view, the main issue for our customers is inefficient prices as a result of ignoring price responsive resources in residential and C&I sites which results in higher spot prices and consequently higher retail prices. Furthermore, the higher spot prices result in higher hedging cost which also contributes to higher retail prices for our customers. We note that integrating price responsive CER as an aggregated fleet through the retailers has the potential to mitigate this issue and lower the cost of electricity for customers.
QUESTION 2: **REPRESENTING PRICE-RESPONSIVE RESOURCES IN SCHEDULING PROCESSES** 1. Is participation in this mechanism dependent on whether price-responsive resources can be separated at or behind the connection point (currently being considered through the "Unlocking CER benefits through flexible trading" rule change)? Please explain what impacts separating CER would have on traders' participation in energy markets. 2. Do you have views on the need to define price-responsive resources or the traders that	• Although participation in this mechanism does not depend on whether price-responsive resources can be separated at or behind the connection point, the mechanism would be more accurate and effective when CER are separated from the non-flexible loads/generations within a site. • Allowing consumers to engage with multiple FRMPs at premises could potentially provide a number of benefits, including increased access to markets and new services, increased competition, greater choice and control for consumers, and improved market efficiency. At the residential level, this approach moves beyond 'whole of site control' business models by allowing multi-party aggregation models. At the commercial and industrial scale, this means that owning and installing a battery on behalf of a commercial tenant does not require taking on their bulk supply contract, which in many cases is multi-site, multi-year, and the subject of a detailed procurement process. This significantly decreases the complexity of new product offerings to C&I consumers by avoiding high commercial barriers to adoption. • We highly recommend transitioning to a device-centric approach for end-use, shifting away from the traditional emphasis on sites and households. The incorporation of secondary settlement points for

might coordinate a large amount of such resources?	price-responsive resources (e.g CER) represents an important step in this direction. We have elaborated on this point in our submission to AEMC's CER consultation paper (Ref: https://www.aemc.gov.au/sites/default/files/2023-03/Rule%20Change%20Submission%20-%20ERC0346%20-%20Quinbrook%20-%2020230228.PDF) • We note that there is a benefit in allowing multiple types of CERs in a single LSU (e.g a LSU consisting of batteries, PVs, hot water and EVs). By allowing multiple types of CERs in LSU, the trader (or aggregator) can use the inherent complementary natures of these assets to ensure the fleet can deliver the target dispatch amount. • From our VPP experience, we note that aggregation of CERs is important for increasing accuracy of the amount of dispatchability of the VPP fleet. With small and medium size CER assets, there is a risk of assets not responding to dispatch command due to telemetry and communication issues. Therefore, aggregation of multiple assets allows to compensate the underperforming assets/sites with overperforming sites and ensuring accuracy of delivered dispatches.
QUESTION 3: **VISIBILITY MECHANISM - ENCOURAGEMENT TO PARTICIPATE** 1. What are your views on the incentive mechanisms outlined in Table 3.1? 2. Are there any alternative incentives the Commission should consider? 3. Should mandatory participation in the visibility mode be considered? a. If so, what types of traders/ resources should be required to participate and what criteria (for example size in a region) or circumstances (observed behaviour or performance) could the requirement to participate be based on?	• We disagree with linking eligibility to provide contingency FCAS to participation in Schedule Lite. We note that some CERs in residential and small C&I sites, may not be able to participate in Schedule Lite, for variety of reasons, especially if multiple FRMP at premises is not adopted by the CER rule change. However, those assets are capable in providing FCAS responses to contingency events. Disqualifying these assets from the GCAs market would negatively impact the revenue of these assets and may potentially reduce the availability of FCAS responsiveness in the NEM. • We disagree with mandatory participation for all traders with specified characteristics and agree with the disadvantage outlined in the table. We suggest AEMC implement this mechanism initially on a voluntary basis.

QUESTION 4: **ASSESSMENT OF VISIBILITY MODE** 1. Do you think visibility mode would be effective as designed? If not, what improvements or amendments would you suggest and why? 2. Do you agree with the Commission's initial assessment of visibility mode's ability to achieve the outcomes identified? 3. If we progress with this mode, what should the Commission consider in terms of implementation of this mode? 4. Is visibility mode needed as a stepping stone to the dispatch mode?	• We agree that participating in the visibility mode is important for small retailers and aggregators to unlock some of the incentives of the scheme while working on the internal capabilities required for the dispatch mode. We note that the accuracy of the visibility mode heavily relies on the constraints of the networks to which the assets are connected. The networks need to communicate the dynamic constraints such as Dynamic Operating Envelopes with the traders (aggregators) well in advance with the aggregators. • We agree with the Commission's assessment. • The level of aggregation is important when it comes to the accuracy of the "indicative bids". We suggest a minimum aggregation threshold of 1 MW for LSUs in each NEM region and allowing indicative bids with resolution of 100 kW (e.g. bidding 1.4 MW), instead of whole MW numbers, as currently in FCAS bidding. • We believe the visibility mode is an essential step before dispatch mode. It would reveal the issues related to accurate data and telemetry gathering of small to medium CER assets and issues related to different types of CERs in residential and C&I sites.
QUESTION 5: **DISPATCH MODE — INCENTIVES TO PARTICIPATE** 1. Do you think dispatch mode would be effective as designed? If not what improvements or amendments would you suggest and why? 2. What costs would traders incur to participate in dispatch mode? 3. Is access to the wholesale electricity market and other markets (for example regulation FCAS and PFR) sufficient incentive to participate in dispatch mode? 4. Are there other factors that would encourage or discourage participation in the dispatch mode?	• We believe that the dispatch mode would be effective as designed. • The operation and monitoring of the assets would incur costs to the traders. The orchestration platform required for operating LSU would be similar to a VPP orchestration platform but requires more advanced logics in accounting for different levels of flexibility (e.g price sensitivity) for assets within a LSU. Developing those specific logics and optimisation methods would incur cost for the trader. • Although accessing wholesale market and FCAS markets are good incentives, the ability of LSU in providing off-market services to DNSPs is potentially significant. • The penalties associated with noncompliance responses (e.g under delivery of dispatch) can potentially discourage small traders in participating in the mechanism. We suggest AEMC provides more clarification on types and severity of the penalties that in particular small LSU traders might face. • We suggest participation in dispatch mode be voluntarily. We suggest that required participation apply to only large LSUs which their operation would have material impact on the NEM. AEMO is best positioned to define this threshold.

5. Should participation in the dispatch mode be required? If so, what types of traders/resources should be required to participate, against what criteria and in what circumstances?	
QUESTION 6: **ASSESSMENT OF DISPATCH MODE** 1. Do you agree with the Commission's initial assessment of the ability of dispatch mode to address the outcomes identified? 2. If we progress dispatch mode, what does the Commission need to consider in terms of implementation of this mode?	• We agree with the Commission's assessment of the ability of dispatch mode to address the outcomes identified. We note that currently there is a considerable amount of CERs in residential and C&I sites across Australia. These assets have the potential to provide significant flexibility in the short terms (e.g from 5-minute intervals to few hours) to the NEM. • We suggest considering the impact of size and combination of asset types in operation of LSUs. We note that the minimum size of LSU should allow small traders to enter the market and participate in the mechanism. While allowing multi-asset within a single LSU allows the traders to more accurately delver the requested dispatch at the aggregated fleet level. Furthermore, we suggest the Commission to clarify the penalties associated with non-performing LSUs. • Regarding the barriers to implementation, one example is the MASS. If as per MASS, the price-responsive assets forming a VPP have their enablement measured at the connection point, the assets would have to account for the fluctuations in co-located non-price-responsive load and generation when meeting FCAS enablement targets. This situation creates an inequitable situation for VPPs comprised of co-located CER assets in contrast to independent FCAS resources, as underscored in our MASS submission.
QUESTION 7: **OTHER ISSUES RAISED IN RELATION TO THE SCHEDULED LITE MECHANISM** 1. Do you consider that the proposed mechanism (or a similar mechanism) should be introduced through a principles-based framework, with the details considered through AEMO's procedures and guidelines?	• We agree the issue of consumer protections is complex and changes will likely be needed to realise the benefits of flexible trading and a more two-sided market. It is important that customer protections are maintained, and participants are able to compete on a level playing field.

2. Do you consider that the proposed mechanism (or a similar mechanism) requires changes to the NERR to protect consumers?	
QUESTION 8: **ARE THERE PREFERABLE ALTERNATIVE ARRANGEMENTS?** 1. Are there any alternative solutions that you think would be preferable to AEMO's proposal and more aligned with the long-term interests of consumers? What are the costs and benefits of any proposed alternative arrangement?	
QUESTION 9: **ASSESSMENT FRAMEWORK** 1. Do you agree with the proposed assessment framework? Are there additional principles that the Commission should take into account or principles included here that are not relevant?	• We agree with the assessment framework. An additional assessment criterion is "simplicity" for the customers. Based on our experience, the majority of customers prefer simple and predictable energy bills, rather than dealing with added intricacies and complexities. It's important to allow participants the freedom to develop new and simple to understand products and services that offer customer value, understanding that a significant portion of this value arises from enabling customers to establish 'set and forget'. • The main objective of the proposal should revolve around facilitating inventive business frameworks, encompassing areas such as VPPs, aggregation services, and EV charging. This should be balanced by ensuring customer protections are maintained and participants are able to compete on a level playing field.
QUESTION 10: **VISIBILITY MODEL — PARTICIPATION, DATA AND OPERATIONS** 1. Would traders be readily able to participate and provide the data as proposed? What	• In our view, one of the major implementation costs is related to metering of Light Scheduled assets. We believe metering at Lite Scheduled assets must support: Minimum service specifications; Remote communications; and Accuracy and data requirements. • Allowing simpler meters would likely increase uptake, yet it is important to ensure this is not at the expense of customers, retailers and/or participants in terms of complexity and other issues. We would

implementation considerations and costs would be required to participate? 2. Is there anything the Commission could do in designing the rule that would help to minimize the costs and maximise the benefits?	suggest the AEMC investigate the extent to which meters integrated within devices can qualify as meters for secondary settlement points. • The 5MW threshold is too high in our view. We suggest the threshold to be set at 1MW similar to the FCAS requirement. The 5MW threshold will prohibit smaller traders (aggregators or retailers) to participate this mechanism and therefore reduce competition and innovation required for successful implementation of the mechanism.
QUESTION 11: **DISPATCH MODEL — PARTICIPATION, DATA AND OPERATIONS** 1. Could price-responsive resources comply with the operational and data requirements? If not: a. How difficult would it be to change your systems to comply with the requirement outlined above? b. Does this depend on what resource is participating? 2. Do the proposed compliance arrangements strike an appropriate balance between the reliability of the response and the barrier to participation?	• In terms of the dispatchability threshold, the 5MW threshold is too high in our view and creates an unnecessary barrier for small companies to participate. We suggest the threshold to be set at 1MW similar to the FCAS requirement. The 5MW threshold will prohibit smaller traders (aggregators or retailers) to participate this mechanism and therefore reduce competition and innovation required for successful implementation of the mechanism.
Additional topics	