11 February 2021

Ms Anna Collyer
Chair
Australian Energy Market Commission
GPO Box 2603
SYDNEY NSW 2000

Dear Ms Collyer

**Options Paper: National Electricity Amendment (Integrating Energy Storage Systems into the NEM) Rule 2021 (ERC0280)**

Energy Queensland Limited (Energy Queensland) welcomes the opportunity to provide comment to the Australian Energy Market Commission in response to the *Integrating Energy Storage Systems in the NEM* consultation paper.

The attached submission is provided by Energy Queensland, on behalf of its related entities, including:

- distribution network service providers, Energex Limited and Ergon Energy Corporation Limited;
- regional service delivery retailer, Ergon Energy Queensland Pty Ltd; and
- affiliated contestable business, Yurika Pty Ltd and its subsidiaries, which includes Metering Dynamics Pty Ltd trading as Yurika Metering.

Should you require additional information or wish to discuss any aspect of this submission, please do not hesitate to contact me or Charmain Martin on 0438 021 254.

Yours sincerely

Trudy Fraser
**Manager Regulation**

Telephone: 0467 782 350
Email: trudy.fraser@energyq.com.au

# Energy Queensland

## Submission to the Australian Energy Market Commission

## Options Paper – Integrating Energy Storage Systems into the NEM

**Energy Queensland Limited**

11 February 2021

## About Energy Queensland

Energy Queensland Limited (Energy Queensland) is a Queensland Government Owned Corporation that operates businesses providing energy services across Queensland, including:

- Distribution Network Service Providers, Energex Limited (Energex) and Ergon Energy Corporation Limited (Ergon Energy);
- a regional service delivery retailer, Ergon Energy Queensland Pty Ltd (Ergon Energy Retail); and
- affiliated contestable business, Yurika Pty Ltd (Yurika) and its subsidiaries, which includes Metering Dynamics Pty Ltd trading as Yurika Metering (Yurika Metering).

Energy Queensland's purpose is to 'safely deliver secure, affordable and sustainable energy solutions with our communities and customers' and is focused on working across its portfolio of activities to deliver customers lower, more predictable power bills while maintaining a safe and reliable supply and a great customer service experience.

Our distribution businesses, Energex and Ergon Energy Network, cover 1.7 million $km^2$ and supply 35,000GWh of energy to 2.3 million homes and businesses each year.

Ergon Energy Retail sells electricity to 763,000 customers in regional Queensland.

Energy Queensland also includes Yurika, an energy services business creating innovative solutions to deliver customers greater choice and control over their energy needs and access to new solutions and technologies. Yurika Metering, which is a part of Yurika, is a registered Metering Coordinator, Metering Provider, Metering Data Provider and Embedded Network Manager. Yurika is a key pillar to ensuring that Energy Queensland is able to meet and adapt to changes and developments in the rapidly evolving energy market.

## Contact details

Energy Queensland Limited
Trudy Fraser
Phone: 0467 782 350
Email: trudy.fraser@energyq.com.au

PO Box 1090, Townsville QLD 4810
Level 6, 420 Flinders Street, Townsville QLD 4810
www.energyq.com.au

Energy Queensland Limited ABN 96 612 535 583

# 1 Introduction

On 17 December 2020, the Australian Energy Market Commission (AEMC) published the *Integrating Energy Storage Systems into the NEM* options paper (options paper). The options paper follows the AEMC's initial consultation on a rule change request received from the Australian Energy Market Operator (AEMO) seeking to support the participation of storage systems in the National Electricity Market (NEM) by defining storage technologies in the National Electricity Rules (NER).

The AEMC is seeking further stakeholder feedback on several issues set out in the options paper relating to:

- Registration and participation;
- Scheduling, dispatch and performance standards;
- Non-energy cost recovery; and
- Additional storage-related issues raised by AEMO.

The AEMC has requested comment on these matters by 11 February 2021. Energy Queensland's comments are provided in sections 2 and 3 of this submission.

# 2 General comments

Energy Queensland welcomes the opportunity to provide feedback in response to the AEMC's consultation on the matters raised in the options paper. We agree that energy storage facilities are playing an increasingly important role in the NEM and that the regulatory framework needs to change to support their participation.

Energy Queensland notes that the options paper has been published to seek feedback on further issues that relate to the Energy Security Board's (ESB's) post-2025 market design work. In this regard, we are strongly supportive of aligning any rule change with the proposed post-2025 market design reforms, including a potential move towards the trader-services model.

We are also supportive of measures that will improve consistency of requirements for generators. For instance, as mentioned in our recent submission in response to the AEMC's consultation on generator registrations and connections, we are of the view that the 30 MW semi-scheduled / scheduled limit is no longer appropriate in the current NEM context and its ongoing inclusion in the NER is resulting in confusion for proponents.[1]

Energy Queensland notes that the AEMC's options paper does not further discuss how transmission use of system (TUOS) and distribution use of system (DUOS) charges should be recovered from storage. Currently, different charging arrangements apply to transmission-connected storage and distribution-connected storage (as per Chapter 6 of the NER). Under transmission pricing arrangements, there are no TUOS charges for storage, whereas distribution pricing arrangements impose TUOS and DUOS charges for the load component. This results in inconsistent charging arrangements between transmission and distribution and may result in less optimal location of storage. Further clarity is therefore required on how TUOS and DUOS charging arrangements will be applied in the future and if changes to Chapter 6 will be recommended if the option to move towards the trader-services model is adopted.

Energy Queensland also notes that the AEMC sought feedback on a range of network pricing related issues in its consultation paper, in response to which Energy Queensland provided extensive feedback.[2] However, these issues appear not to have been further progressed in the options paper. We therefore seek clarification as to whether they will form part of the AEMC's draft determination.

Energy Queensland's detailed comments on the questions posed by the AEMC in the options paper are provided in section 3. We are available to discuss this submission or provide further detail regarding the issues raised.

[1] Energex and Ergon Energy, *ERC0256 Generator Registrations and Connections*, 11 December 2020.
[2] Energy Queensland, *Integrating Energy Storage Systems into the NEM Consultation Paper*, 15 October 2020.

# 3 Specific comments

Energy Queensland provides the following feedback on the questions posed in the options paper for consideration:

| AEMC Question | EQL Response |
|---|---|
| **Question 1: Registration and Classification** | |
| Is introducing a new participant category, an Integrated Resource Provider (option 4), to better facilitate entry and participation of storage and hybrid facility, more preferable than modifying existing participant categories (option 3)? Are either option 3 or 4 more preferable to options 1 and 2? | Energy Queensland agrees that a new participant registration category is warranted to better reflect the combined services available from bi-directional energy resources and previously indicated support for option 2. However, in light of the additional options put forward, we consider that options 3 and 4 may be more preferable to options 1 and 2, as they both present a consistent pathway towards the ESB's proposed post-2025 market design.<br><br>We acknowledge that option 4 provides the most direct step towards the post-2025 market design. Further, we consider that if this option could be implemented while there is still a relatively small number of storage and hybrid facilities participating in the market, disruption would be minimised.<br><br>However, Energy Queensland considers option 3 to be more appropriate if it can be implemented more rapidly than option 4 and prior to finalisation of the post-2025 market design recommendations and any final modifications to participant categories.<br><br>Regardless of which option is selected, we recommend that the AEMC address the inconsistent treatment of the use of system charges for storage to avoid the sub-optimal location of storage facilities.<br><br>Additionally, we consider that if it is determined to proceed with option 4, generation participants should also register as an Integrated Resource Provider to reduce confusion and incentivise innovation by removing barriers to intelligent, holistic solutions. |

| AEMC Question | EQL Response |
|---|---|
| **Question 2: Classifying MSGAS** | |
| Do you agree that, if an Integrated Resource Provider category (option 4) is established, battery aggregators should use that category and MSGAs should not be allowed to classify storage units exempt from the requirements to register as a Generator? And in that case, should the current arrangements regarding the provision of market ancillary services by MSGAs be maintained? | Energy Queensland supports retaining the existing registration threshold of 5 MW. Uncertainty around the ability of market small generation aggregators (MSGAs) to include storage units below the 5 MW threshold has resulted in confusion for participants and provides barriers to additional participation through that market. We do not consider that a 2 MW solar system and a 2 MW storage system, for instance, should have inherently different performance requirements.<br><br>In relation to the provision of ancillary services, as long as the battery meets the Market Ancillary Services Specification requirements, it should be able to offer ancillary services. As such, we consider that the current arrangements remain appropriate. |
| **Question 3: Existing Storage Participants** | |
| Should existing storage participants be transitioned to a single participant category (as they are currently registered as both a Market Generator and Market Customer)? | A clear pathway and timeline for transition should be identified as optionality and inconsistent treatment of participants introduces confusion. Energy Queensland considers that indefinite grandfathering of participant categories is not appropriate and does not reflect the changing nature of the NEM. |
| **Question 4: Scheduling of hybrid facilities** | |
| 1. What proportion of a hybrid facility's sent-out generation capacity would need to be dispatchable for the whole of the hybrid facility's sent-out generation to be able to follow dispatch instructions, under a single DUID? | Energy Queensland has no comment. |
| 2. Would a dynamic approach to scheduling obligations, for example shifting between scheduled and semi-scheduled obligations based on the state of charge of the storage unit, be appropriate, and how should this operate? | We acknowledge that one of the benefits of a hybrid facility that includes storage is that the storage can be utilised to smooth the variability of the renewable energy resource. However, there may be merit in a dynamic approach which enables a hybrid facility to operate as a generator as well as a battery. For example, export from a |

| AEMC Question | EQL Response |
|---|---|
| | battery could be treated as scheduled, and when fully discharged, generation from the renewable generator can be treated as semi-scheduled.<br><br>While this approach may be complex to implement and would need to align with amendments to the semi-scheduled dispatch obligations (ERC0313), Energy Queensland considers there may be benefit in maximising the utility of such facilities. |
| 3. Could the same approach be taken to scheduling load where storage is added to a Market Customer's site, or should different considerations apply? | Energy Queensland has no comment. |
| **Question 5: Number of price bands** | |
| Do you agree that 20 price bands would be appropriate for grid-scale batteries or would another number of bands be more appropriate? | Energy Queensland has no comment. |
| **Question 6: Dispatching hybrid facilities** | |
| 1. Are there certain configurations of hybrid facilities that cannot, or should not, be dispatched at a single connection point? | Energy Queensland does not consider that this is the case. |
| 2. What benefits are achieved by dispatching a hybrid facility at a single connection point, and what issues arise? | The key benefit of dispatching a hybrid facility at a single connection point is simplicity in understanding of requirements by proponents, network service providers (NSPs) and AEMO. Dispatching from a single connection point also enables participants to manage internal loads and generation in a manner that suits their needs and provides clarity to NSPs on the impacts of the site on the network. |

| AEMC Question | EQL Response |
|---|---|
| **Question 7: Performance standards** | |
| What issues may arise if performance and access standards are set at the connection point for hybrid facilities? Would these standards need to be amended to provide appropriate flexibility for hybrid facilities? | Energy Queensland is supportive of performance standards being set at the connection point rather than at the generating plant terminals. Our experience with an ongoing hybrid facility connection has demonstrated that having different performance standards for different items of plant and for different times of day creates additional complexity and confusion. |
| **Question 8: Options for the recovery of non-energy costs** | |
| 1. Which option do you consider to be the most appropriate for the recovery of non- energy costs from market participants? Please provide detail on why it would be the most appropriate option. | Energy Queensland considers that consistency with the future post-2025 market design reforms is essential. We are supportive of a causer pays approach to non-energy cost recovery. |
| 2. Are there any other factors the Commission should consider when deciding how non-energy costs should be recovered from market participants? | Energy Queensland has no comment. |
| 3. Are there any implementation issues the Commission should consider? | Energy Queensland has no comment. |
| **Question 9: Network service provider connection points** | |
| 1. Do you support the solution outlined in this options paper for resolving the potential issues with establishing standards for NSP owned energy storage? | We note that the examples provided in AEMO's submission both participate in the market, and as such, the issue raised regarding lack of connecting parties is not relevant. Hence, the magnitude or severity of the issue is not clear. It is reasonable that some external due diligence by AEMO should be conducted where storage systems are being utilised by transmission network service providers (TNSPs) to provide system strength services only, noting that responsibility for system stability in a region sits with the relevant TNSP. |

| AEMC Question | EQL Response |
|---|---|
| 2. If not, do you consider there to be other potential solutions for resolving this issue? | Not applicable. |
| **Question 10: DC coupled systems** | |
| 1. What capital, operational or efficiency benefits do DC-coupled systems provide participants and the NEM as a whole, and how might these benefits help consumers in line with the NEO? | Enabling solar farms to add storage via DC-coupling does not change the performance of the inverter(s). As such, additional complexity and administrative burden may limit development of this market.<br><br>It is not clear to Energy Queensland how performance would be negotiated where the existing generator has out-dated performance standards. This situation would also result in uncertainty for industry. However, Energy Queensland acknowledges that guidance on this issue rests with AEMO and is not a matter for inclusion in the NER. |
| 2. Do you support amending the NER to permit the registration and operation of DC-coupled systems? If so, how should they register and operate? | Energy Queensland supports clarification on the classification of generating systems with a DC energy source (whether that is batteries or solar panels). To date, generating systems have been assessed based on the inverter size, not the solar panel capacity.<br><br>It is suggested that such systems should be considered scheduled, as the battery source can smooth the DC source to the inverter. |
| **Question 11: Provision of ancillary services** | |
| Do you support AEMO's proposal to redraft the ancillary services provisions in Chapter 2 of the NER to make them more consistent with the services approach to regulation currently being considered by the ESB's two-sided market work? Please explain why or why not. | Energy Queensland is supportive of an umbrella term for ancillary services. We consider it is vital that barriers to participation should be removed where possible. |