TasNetworks
Delivering your power

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Audrey Zibelman
Chief Executive Officer
Australian Energy Market Operator
Level 22, 530 Collins Street
Melbourne VIC 3000

Via email: eges@aemo.com.au

Dear Ms Zibelman,

**RE Emerging Generation and Energy Storage in the NEM**

TasNetworks welcomes the opportunity to make a submission to the Australian Energy Market Operator (**AEMO**) on the *Emerging Generation and Energy Storage in the NEM* stakeholder paper.

As the Transmission Network Service Provider (**TNSP**), Distribution Network Service Provider (**DNSP**) and jurisdictional planner in Tasmania, TasNetworks is focused on delivering safe and reliable electricity network services while achieving the lowest sustainable prices for Tasmanian customers. This requires the prudent, safe and efficient management and development of the Tasmanian power system. In this regard, TasNetworks is supportive of AEMO's efforts to better integrate grid-scale Energy Storage Systems (**ESS**) into the National Electricity Market (**NEM**), support new business service delivery models and clarify market participant settings.

The key points in this submission are:

- TasNetworks supports the inclusion of a definition of ESS in the National Electricity Rules (**NER**) and considers this would improve services offerings and drive down customer costs over the long term.
- This ESS definition should be robust and flexible enough to encompass as many different viable storage options as possible, e.g. pumped hydro.
- In order to facilitate this, TasNetworks supports the creation of a new Registered Participant category for grid-scale ESS (option 1 in the consultation paper) but with careful consideration given to the situation where the connection point to the shared network is at a different physical location to the registered connection point.
- TasNetworks agrees with AEMO that non-energy services and NEM Participant fees should be charged on the basis of imported and exported electricity to and from the NEM. However,

TasNetworks contends the Transmission Use Of System (**TUOS**) should not be charged for ESS that are used primarily for, and in conjunction with, generation systems, e.g. pumped hydro.

- A rigorous and holistic review of how network costs are recovered is also strongly supported, particularly as it relates to the issue of interconnector transmission pricing.
- TasNetworks considers that amending the relevant clauses of the NER that apply to plant connected within exempt networks is the simplest, fastest and easiest method of maintaining requisite performance access standards.
- Although seeing conceptual benefits to logical metering and separating operational and financial responsibilities, TasNetworks questions whether these will be enough to justify their adoption given the increased complexity, costs and risks.

TasNetworks responses to individual questions are provided below and we welcome the opportunity to discuss this submission further with you. Should you have any questions, please contact Tim Astley, Team Leader NEM Strategy and Compliance, via email (tim.astley@tasnetworks.com.au) or by phone on (03) 6271 6151.

Yours sincerely,

Wayne Tucker

General Manager, Regulation, Policy and Strategic Asset Management

# Stakeholder Feedback Template

This template has been developed to enable stakeholders to provide their feedback on the Emerging Generation and Energy Storage stakeholder paper.
AEMO encourages stakeholders to use this template, so they can have due regard to the views expressed by stakeholders on each issue.
Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern.
Stakeholder submissions will be published on AEMO's website unless they are clearly marked as being confidential. Submissions should be sent to eges@aemo.com.au.

**Organisation:** TasNetworks
**Contact name:** Tim Astley
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| Questions | | Feedback |
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| **Section 2 – Energy Storage System (ESS) definition** | | |
| **1** | Do you have any views on whether a definition of ESS should be included in the National Electricity Rules (NER)? | TasNetworks supports the inclusion of an ESS definition in the NER. This will help clarify registration, participation, operating and cost recovery issues. It would also support the emergence of new business models and service delivery options. This should make for a more innovative and efficient NEM thus improving customer services offerings and driving down customer costs over the long term. |
| **2** | Do you have any views on whether a definition of ESS should be generic and encompass technologies other than batteries, for example, pumped hydro? | TasNetworks considers that any ESS definition should be as robust and flexible so as to encompass as many viable storage options as possible, e.g. pumped hydro. A definition that treats alternative storage options differently will be unlikely to support efficient market functioning by effectively picking and cross subsidising 'winners'. |
| **3** | Do you have any views on AEMO's suggested definition of ESS? | TasNetworks considers the following amendments would improve |

| Questions | | Feedback |
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| | | the AEMO ESS definition:<br>*A resource capable of receiving imported energy from the national grid or other energy source and storing it for later export of energy to the national grid and/or for co-located customer consumption at the same site.* |
| **Section 2 – Integrating ESS** | | |
| **4** | Do you have any views on the appropriate participation model for integrating ESS into the NEM? | TasNetworks supports the creation of a new Registered Participant category for grid-scale ESS (option 1). As noted in the stakeholder paper, the other options share all the risks associated with option 1 but also bring additional challenges. Beyond this, it is likely that the total market costs to implement option 1, which places the burden on only one entity (AEMO), would be less than options 2a and 2b which place the burden on all potential hybrid ESS participants. |
| **5** | Would the proposed aggregation model meet your future needs, both in terms of participating in the NEM with an individual ESS or where multiple resources (e.g. ESS and generating units) are to be aggregated?<br>AEMO is particularly interested to understand the additional benefit that you would derive from aggregating hybrid systems and offering them to the market as a single resource that is not available by separately offering the components to the market. | As above. |
| **6** | Do you have any views on AEMO's proposed approach to implement a single participation model to integrate ESS and other 'new' business models into the NEM? | As above. |
| **7** | Do you have any views on the key requirements AEMO has identified for an ESS participation model? | As above. |
| **Section 2 – NER recovery mechanisms** | | |

| Questions | | Feedback |
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| **8** | Do you have any views on how to integrate ESS into the NEM's recovery mechanisms? If so, please provide them. | TasNetworks agrees with AEMO that non-energy services and NEM participant fees should be charged on the basis of imported and exported electricity to and from the NEM. As noted in the stakeholder paper, to do otherwise would not provide a level cost playing field to all participants.<br><br>TasNetworks, however, contends the TUOS should not be charged for ESS that are used primarily for, and in conjunction with, generation systems, e.g. pumped hydro. Although it could be argued that such ESS act in a market customer fashion, this occurs in a different manner to regular residential or business customers.<br><br>ESS rely on non-firm network access to charge and/or replenish storage levels. Further, this energy is not end consumed. Instead, it is stored until such time as it is used for export for generation or auxiliary support services purposes. Generators are not currently charged TUOS for this and this should extend to ESS used in a similar fashion. To do otherwise is unlikely to be in the best interests of the NEM. Aside from increasing costs to consumers, it could disincentivise generation and storage investment as well as limiting the market for auxiliary service provision.<br><br>Beyond this consideration is the issue of interconnector transmission pricing. The current Modified Load Export Charge (**MLEC**) methodology allocates the "locational costs" of transmission symmetrically between interconnected regions. While this approach may reasonably capture asset utilisation, it does not necessarily reflect the relative benefits provided by an interconnector to each region, nor to the broader NEM. Developing a transmission pricing mechanism to allocate the costs of greater interconnection will therefore be a critical component in developing a more accurate and |

| Questions | | Feedback |
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| | | more equitable cost recovery framework.<br>In this manner, TasNetworks agrees with AEMO's contention that a more holistic review of how network costs are recovered and from whom is required. Distribution and transmission pricing and access arrangements are different. Any proposed changes to facilitate ESS must therefore be considered in light of both chapters 6 and 6A of the NER to avoid any unintended consequences. For instance, differential treatment of distribution and transmission ESS which might result in economically inefficient investment in some parts of the network at the expense of others. |
| **Section 3.1 – The application of performance standards to a generating system or load in an exempt network** | | |
| **9** | Are there other options to address the issue identified for connecting plant in an exempt network? | No comment. |
| **10** | Are there other costs, risks and benefits associated with the options presented? If so, please indicate what these are. | No comment. |
| **11** | Which option to address the issue is your preferred option? Why? | TasNetworks agrees with AEMO that option 1 represents the best alternative for dealing with the performance standards of generating systems in exempt networks. Amending the NER to ensure that relevant clauses of Chapter 5 and rule 4.14 pertaining to access standards apply to plant connected within exempt networks is the simplest and easiest method of dealing with this issue. It would also be the fastest to implement and entails the least risk of unintended regulatory consequences that are inherent within the other options. |
| **Section 3.2 – Providing NEM information to project developers** | | |
| **12** | Should a person intending to develop or build a generating system or ESS (and not subsequently register as a Generator) be | TasNetworks agrees with AEMO that the NER should allow provision of information for developers to allow them to build grid-scale |

| Questions | | Feedback |
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| | allowed to register as an Intending Participant? | resources (such as a generating system, ESS or hybrid system) if they satisfy AEMO this is their intent. Regardless of which option might be chosen to facilitate this, it is imperative that NER confidentiality requirements, including Rule 8.6.1, should apply as if the developer were a Registered Participant. |
| **13** | What is the market benefit associated with allowing a person intending to develop or build a generating system (and not subsequently register as a Generator) to be an Intending Participant? | As above. |
| **14** | Referring to section 3.5.3, are there other options to provide a person intending to develop or build a generating system (and not subsequently register as a Generator) with the necessary NEM data? | As above. |
| **15** | Are there other costs, risks and benefits associated with the options presented? If so, please indicate what these are. | As above. |
| **Section 3.3 – Separation of operational and financial responsibility** | | |
| **16** | What is the market benefit associated with allowing the separation of operational and financial responsibilities? | TasNetworks considers that there may be some market benefit to separating operating and financial responsibility. For instance, in supporting different business and funding models that may stimulate further generation investment. However, TasNetworks questions whether these would be enough to outweigh the costs from such an arrangement. These are likely to include more operational complexity, increased metering and regulatory costs along with heightened asset ownership and transfer risks. |
| **17** | What are the risks associated with allowing the separation of operational and financial responsibilities? | As above. |

| Questions | | Feedback |
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| **18** | Are there other models of separate operational and financial responsibilities that should be considered? | No comment. |
| **Section 3.4 – Logical metering arrangements** | | |
| **19** | What is the market benefit associated with using logical metering arrangements? | As with the financial and operational flexibility question above, TasNetworks considers that there could be a benefit in terms of reduced costs in adopting logical metering. But once again, TasNetworks questions whether these benefits would offset the increased complexity, regulatory costs, and reduced accuracy associated with implementing such an arrangement. |
| **20** | What are the risks associated with allowing the use of logical metering arrangements? | As above. |
| **21** | If logical metering arrangements are permitted to be used instead of a NEM compliant metering installation, who should pay for this? Please identify any cost recovery arrangements that you consider appropriate. | TasNetworks considers that it would be economically most efficient for those who benefit from logical metering to also bear the costs, including those costs that may be inadvertently placed on other parties. |
| **Other Comments** | | |
| **22** | Do you have any further comments? | No. |