

## 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 by Day DD MMM 2018.

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Questions		Feedback			
Sec	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)?	A key benefit of providing a clear definition for ESS would be a subsequent streamlining of registration processes. Currently there are duplicate registration processes and fees to register an ESS as a Market Customer and as a Generator. This is unnecessary and inefficient.			
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?				
3	Do you have any views on AEMO's suggested definition of ESS?				
Sec	Section 2 – Integrating ESS				
4	Do you have any views on the appropriate participation model for integrating ESS into the NEM?	EnergyAustralia supports AEMO's plan for progressing analysis of Option 1 (single bid and dispatch for ESS). Some issues that need further analysis include how bids are optimised with FCAS, how pre-dispatch would operate if battery availability during the 24 hours depends on how the battery is			



Questions		Feedback
		operated during the period (e.g. if it is dispatched in the first hour, it will not be available later on – how will PD reflect this availability constraint?)
		We seek further clarity from AEMO on how bids/offers would be made to reflect a desire to switch from bids that reflect charging at -\$1000/MW to bids that reflect discharging.
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? 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.	There is a benefit in being able to operate individual assets in an aggregated hybrid model. However, this is not our preferred approach if it is mandated that co-located assets must adopt this model. As proposed, Option 2a creates complexities for dispatch compliance for intermittent assets co-located with scheduled units and creates complex forecasting requirements for asset operators. If AEMO pursue Option 2a, it should be optional for participants to use this approach i.e. the hybrid model, and its associated obligations, should not be forced onto all co-located assets. An element of Option 2a that would have benefits is if causer pays is allocated at the parent meter, rather than the child meter.For example, if a battery is operated to compensate for a change in intermittent generation to ensure a dispatch target is met at the parent meter, it would be more appropriate for the plant to not be liable for deviations from reference trajectory (under the causer pays procedure for that dispatch period) as the requested volume of energy has been produced (under current arrangements, operating in such a fashion incurs FCAS causer pays charges at both assets).
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?	



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Do you have any views on the key requirements AEMO has identified for an ESS participation model?		
tion 2 – NER recovery mechanisms		
Do you have any views on how to integrate ESS into the NEM's recovery mechanisms? If so, please provide them.	Broadly agree with AEMO's characterisation of non-energy cost recovery. Greater thought needs to be given to NEM participant fees and whether all the Customer related fees are relevant for ESS e.g. FRC and ECA may not be appropriate. We agree with AEMO's views that TUOS is not appropriate for ESS and that a greater review of network tariff framework is required. We suggest that DUOS charges are also considered in any future review. At present, distribution	
	networks have proposed flat demand tariffs which do not provide adequate price signals for optimal network utilisation.	
Section 3.1 – The application of performance standards to a generating system or load in an exempt network		
Are there other options to address the issue identified for connecting plant in an exempt network?		
Are there other costs, risks and benefits associated with the options presented? If so, please indicate what these are.		
Which option to address the issue is your preferred option? Why?	There appears to be an inconsistency in AEMO's preferred approach. The discussion paper stipulates a preference for allowing AEMO to provide the information if they're satisfied the person is bound by confidentiality requirements. The Materials presented at the industry workshop suggested that AEMO's preference was actually to amend the Intending Participant category. Our main concern is that industry needs confidence that AEMO has strong	
	Do you have any views on the key requirements AEMO has identified for an ESS participation model? tion 2 – NER recovery mechanisms Do you have any views on how to integrate ESS into the NEM's recovery mechanisms? If so, please provide them. tion 3.1 – The application of performance standards to a generating system of Are there other options to address the issue identified for connecting plant in an exempt network? Are there other costs, risks and benefits associated with the options presented? If so, please indicate what these are.	



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		purposes of pursuing a network connection and not used to gather sensitive information for other purposes.	
Sec	tion 3.2 – Providing NEM information to project developers		
8	Should a person intending to develop or build a generating system or ESS (and not subsequently register as a Generator) be allowed to register as an Intending Participant?		
9	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?		
10	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?		
11	Are there other costs, risks and benefits associated with the options presented? If so, please indicate what these are.		
Sec	tion 3.3 – Separation of operational and financial responsibility		
12	What is the market benefit associated with allowing the separation of operational and financial responsibilities?		
13	What are the risks associated with allowing the separation of operational and financial responsibilities?		
14	Are there other models of separate operational and financial responsibilities that should be considered?		
Sec	Section 3.4 – Logical metering arrangements		



Que	estions	Feedback
15	What is the market benefit associated with using logical metering arrangements?	
16	What are the risks associated with allowing the use of logical metering arrangements?	
17	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.	
Otł	Other Comments	
23	Do you have any further comments?	Based on our experience with operating the Ballarat and Gannawarra batteries we would be willing to support AEMO directly with further analysis on how to integrate storage assets into the NEM.