



4 December 2018

Frank Montiel
Executive Officer, Markets
Australian Energy Market Operator
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Submitted via email: eges@aemo.com.au

Dear Mr Montiel

EMERGING GENERATION AND ENERGY STORAGE IN THE NEM – STAKEHOLDER PAPER

Origin Energy Limited (Origin) welcomes the opportunity to comment on AEMO's initial consultation into emerging generation and energy storage in the NEM.

The NEM's large scale generation mix is changing, with an increasing amount of both energy storage and hybrid units seeking to connect. This presents new challenges on how to best integrate these assets in a co-ordinated and streamlined fashion.

AEMO has outlined two options in its paper for a new registration category in the NEM. The first option is a new registration category for Energy Storage Systems (ESS) and the second being the development of a 'hybrid' category that captures combinations of generation and storage in an aggregated fashion. Both options will likely require detailed and complex rule changes relating to registration in the NEM. In addition, after any rule change is made, AEMO will likely be required to develop new procedures and registration guidelines before any new categories can come into effect. Even if a rule change request is submitted in Q1 2019, it is unlikely any changes to registration, if made, will come into force for a period of some years.

In our view, more consideration should be given to the extent to which adjustments to the current arrangements can address any underlying concerns. One area of concern raised under the current arrangements, is the difficulty of organising bids at the same connection point where a storage or hybrid unit is registered both as a generator and load. Origin suggests that AEMO explore the feasibility of enabling NEMDE to not accept bids for load and generation from the same device at the same time.

Hybrid Registrations

Origin believes that if hybrid registrations are to be introduced, participants should continue to be able to decide if they wish to register units individually or as an aggregated unit, subject to AEMO approval. A participant can better decide which registration process is the least cost approach, especially if they must develop complex bidding systems to handle aggregation. That flexibility should be retained under any considered changes to the registration process.

The paper discusses a number of technical issues that would need to be resolved for new registration categories to be introduced, especially in hybrid systems. The paper covers areas such as metering, SCADA data, connections and generator performance standards. Origin notes the complexity of these issues, and considers that if the option is further developed, these concerns will need to be resolved through the rule and procedure change processes.

This discussion includes concerns that the technical parameters of a hybrid system could be limited to the lowest performing unit. Origin would suggest that this would limit capabilities of a site and produce inefficiencies in the way hybrid systems operate. Participants are responsible for the bids and offers they make in the market. It should be up to each participant to assess their capabilities and present an aggregated bid for a hybrid system to the market.

Providing NEM information to project developers

AEMO additionally identifies an issue of project developers not meeting the existing criteria to be considered intending participants, and thus not being able to access relevant information. Origin supports AEMO's proposal to amend NER Rule 2.7 to allow developers access to AEMO information if it is used for the purpose of connecting plant to the national grid and the participant is bound by confidentiality.

Should you have any questions or wish to discuss this information further, please contact James Googan in the first instance via email james.googan@originenergy.com.au or phone, on (07) 3512 4138.

Yours sincerely,



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