



16 September 2021

Merryn York
Chair
Australian Energy Market Commission

Lodged online: www.aemc.gov.au

Dear Ms York,

AEMC: INTEGRATING ENERGY STORAGE SYSTEMS INTO THE NEM – DRAFT DETERMINATION

Origin Energy Limited (Origin) welcomes the opportunity to provide feedback to the AEMC on the draft determination to better integrate storage systems into the NEM. Our key points are summarised below, with additional detail provided in Attachment 1:

- **Universal participant category:** While we do not oppose the new category, the final determination should clearly set out what the stand-alone benefits of introducing the category are over tweaking existing categories, even in the absence of two-sided market reforms.
- **Small storage systems:** We support the draft rules that allow small batteries to provide ancillary services.
- **Plant that cannot linearly transition from one mode to another (e.g. pumped hydro systems):** We support classifying such plant as generation and load. However, they should not be required to re-register as integrated resource providers (IRPs) as this will only result in added cost, without any additional benefits. Grandfathering should instead be considered.
- **Transmission and distribution use of system (TUOS and DUOS) charges:** Storage should be explicitly exempt from paying TUOS and DUOS, as it is akin to generation. This would level the playing field between storage and other forms of generation, which is consistent with the principle of technological neutrality. Retaining existing arrangements would also weaken investment signals and could lead to inconsistent outcomes across regions given the uncertainty of the negotiation process with NSPs.
- **Non-energy cost recovery:** We support the proposed changes. Clear information on any system requirements from AEMO during the implementation phase will be crucial for the timely rollout of this solution.
- **Implementation:** The AEMC should consider if different timelines could apply to changes that are not dependent on the new participant category (TUOS/DUOS, non-energy cost recovery and allowing small batteries to provide ancillary services) so as not to delay these reforms.

Should you have any questions or wish to discuss this submission further, please contact Sarah-Jane Derby at Sarah-Jane.Derby@originenergy.com.au or by phone, on (02) 8345 5101.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Steve Reid".

Steve Reid
Group Manager, Regulatory Policy

Attachment 1: Submission detail

Storage systems will play an increasingly crucial role in supporting the energy transition. It is important that the regulatory framework leverages the unique characteristics of these systems, small and grid-scale, firming renewables and providing ancillary services such as network support to alleviate congestion or frequency control to maintain system security. Origin therefore supports removing barriers to investment and clarifying how energy storage systems participate in the NEM.

Specifically, we **support** the following aspects of the draft rule:

- The ability for small batteries to provide ancillary services.
- The general clarifications provided for registration and classification, including for hybrid and DC-coupled systems, except for the points below.
- The non-energy cost recovery changes.

We **do not support** the following aspects, however:

- The approach to TUOS and DUOS charges.
- Requiring plant that cannot linearly transition from one mode to another to register as IRPs.

We expand on these points in Table 1 below.

Table 1: Feedback on key aspects of the draft determination

Topic	Origin views
Universal participant category	<ul style="list-style-type: none"> • The draft determination notes that the new participant category aligns with the possible future direction foreshadowed by the ESB towards a trader-services model. • However, there is no explicit recommendation or detail on a move to a trader-services model, nor does the ESB clearly state a way forward for progressing this work. • Given the level of uncertainty around this reform, we do not consider that the AEMC's decisions should be guided by the need to ensure consistency with a trader-services model. • To provide confidence that the introduction of the new universal participant category is in the long-term interest of consumers, the final determination should clearly assess its net benefits as a standalone change, even absent the move to a trader-services model.
Small storage systems	<ul style="list-style-type: none"> • We support the draft rules to allow <5MW batteries/storage to provide ancillary services such as frequency control ancillary services (FCAS). • This will better capture the value small batteries can bring to supporting the NEM, beyond providing energy. • Origin notes that allowing small batteries to provide ancillary services can be achieved without a change in participant category. • The draft determination states that this would not be consistent with the long-term goal of the trader-services model. However, this model is still be examined, as noted above.
Plant that cannot linearly transition	<ul style="list-style-type: none"> • We agree plant that cannot linearly transition from one mode to another, such as pumped hydro systems, should be exempt from classifying as an integrated resource unit. We support allowing AEMO to classify such plant as generation and load, as is current practice. • In light of this, we do not support requiring existing plant to re-register as an integrated resource provider. This would involve administrative changes (i.e. moving to a single category and seeking an exemption from AEMO)

	<p>for no clear benefits since re-registration would not lead to practical or operational improvements associated with a bi-directional classification.</p> <ul style="list-style-type: none"> Existing pumped hydro systems' registration and classification arrangements should therefore be grandfathered for life. If the AEMC chooses not to grandfather existing pumped hydro systems, then they should be automatically re-registered as IRPs, consistent with the approach taken for MSGAs.
TUOS and DUOS	<p><u>The rules should explicitly exempt storage from paying TUOS and DUOS</u></p> <ul style="list-style-type: none"> At present, storage proponents face uncertainty as the rules are not clear on how each NSP will assess whether storage is exempt from paying UOS charges through the negotiated process. Proponents do not know if they will face these charges until negotiations are complete, and there is a risk that outcomes could vary from NSP to NSP. This uncertainty can dampen investment, with the potential for inconsistent outcomes across the NEM could also lead to inefficient locational signals. The draft rule does not address these issues. In further assessing this issue, the AEMC should take into account that storage is akin to generation in practice: <ul style="list-style-type: none"> Batteries arbitrage between the cost of energy (through storage) and the return from using that energy to generate electricity. This is similar to how a gas-fired generator arbitrages between the cost of energy (gas) and the return from using that energy to generate electricity. In other words, the load requirements for storage are comparable to the energy generators use to produce electricity, rather than end-consumer demand. Storage is also unlikely to be acting as a load during reliability events given that prices would be high. In fact, storage is incentivised to alleviate tight demand-supply situations by acting as a peaking generator instead. Given that generators do not pay TUOS and DUOS, storage should therefore also be explicitly exempt from paying these charges to maintain consistency with how generators are treated in the NER – this is consistent with the principle of technological neutrality. Furthermore, treating storage as an end consumer risks overpayment of UOS – once by the storage proponent when storing electricity, and again by end customers who later consume that stored electricity. <p><u>Alternative to provide clarity for storage proponents</u></p> <ul style="list-style-type: none"> Our preference is for the rules to explicitly exempt storage from paying these charges. However, if the AEMC decides not to do so, the final rules should still aim to provide clarity and certainty for proponents so as not to dampen investment signals. One option would be for the rules to explicitly exempt storage from paying UOS by default, but still allow for negotiation between proponents and NSPs to charge these fees by exception. The criteria for triggering negotiation could be set out in the rules or in guidelines administered by the AER. The criteria could reflect the exceptional circumstances in which it may be appropriate for storage to pay UOS.
Non-energy cost recovery	<ul style="list-style-type: none"> We support the proposed solution and consider it should be implemented on an enduring basis. As with other rules that require significant system changes, to ensure timely implementation, AEMO should be expedient in providing information to market participants on the likely system requirements.

Implementation	<ul style="list-style-type: none"> • Generally, we support the AEMC considering different implementation timelines for some aspects of the final rule, given that not all changes depend on the new participant category. • Storage should be exempt from TUOS and DUOS without delay. This change should not require any system changes or implementation. • Changes to non-energy cost recovery should be implemented as soon as practicable. We understand that these system changes are separate from the introduction of the new participant category and could therefore be implemented sooner. • We understand that the change to allow small storage systems to provide ancillary services could be achieved through MSGAs and should therefore be implemented as soon as practicable using transitional rules.
Other comments	<p><u>Re-registration process</u></p> <ul style="list-style-type: none"> • Origin understands that the re-registration process is not intended to trigger re-opening existing agreements such as performance standards. However, the draft rules regarding re-registration are not prescriptive so it remains unclear how this process would work in practice. • We would welcome clarity in the final determination that the re-registration process will not be disruptive to existing grid-scale storage providers including those looking to register between the time the final rule is made and the new category being in place. • Our preference would be for all existing grid-scale storage to be automatically re-registered (with pumped hydro grandfathered, as discussed above) if practicable to minimise administrative burden, similar to the approach taken with MSGAs. <p><u>Performance standards</u></p> <ul style="list-style-type: none"> • Origin understands that while compliance will be assessed at the transmission network connection point taking into account unit-level capabilities, there is flexibility in how performance will be determined and measured. • This flexibility is important given the specifics of different assets, e.g., some may have a transformer between the connection point and the unit, which would affect measurement. <p><u>Price-bid bands</u></p> <ul style="list-style-type: none"> • We support introducing 20 price-bid bands (10 in each direction) if the final rule proceeds with a bi-directional unit. This would maintain current practice.