



7 August 2026

Tiffany O'Keefe
Manager
AEMC

Lodged via email

Dear Tiffany O'Keefe,

IMPROVING THE NEM ACCESS STANDARDS – PACKAGE 2 – TECHNICAL WORKING GROUP

Origin Energy Limited (Origin) welcomes the opportunity to provide additional feedback on the Draft Determination for Improving the National Electricity Market (NEM) Access Standards – Package 2, following the questions and discussion raised at the Technical Working Group (TWG) meeting held on 20 July 2026.

This feedback supplements Origin's submission of 7 May 2026 on the Draft Determination and responds to specific technical matters raised at the TWG meeting: voltage disturbance ride-through (active power and current limits), continuous uninterrupted operation (CUO), under-voltage ride-through, over-voltage ride-through, and guidance on instability detection and response.

Voltage disturbance ride-through

In relation to the questions raised on slide 25 of the TWG presentation, Origin considers that the voltage ride-through envelope set out in Figure 4.1 of the Draft Determination is a practical and achievable approach, already tested with uninterruptible power supply (UPS) manufacturers currently available to the market.

Origin considers that the additional active power and current limits as outlined in Figure 4.2 of the Draft Determination and discussed on slide 25 of the TWG presentation may provide limited benefit, particularly given the associated technical and compliance complexity. Instead, limiting current increases to 20% above rated current during all undervoltage disturbances, as outlined in Table 4.2 of the Draft Determination, acts as a de facto bound on active power in most undervoltage scenarios via the $P=VI$ relationship. Given this, the incremental system security benefit of the additional separate active power limits in Figure 4.2 is unclear.

Origin considers that a single requirement limiting current at the connection point to 1.2 p.u. of rated current would achieve a sufficiently similar outcome with reduced technical and compliance complexity. Origin recommends the AEMC adopt this simplified approach, with scope to increase the limit further if revised assessments confirm the technical capability of UPS technology.

Continuous uninterrupted operation (CUO)

Origin does not support the CUO requirement as outlined on slide 26 of the TWG presentation. The inherent and unpredictable nature of demand fluctuation across most IBL types means a fixed active power setpoint would not be feasible to maintain, and CUO could only be achieved for a narrower subset of IBLs with more predictable and/or constant demand. Even for these IBLs, CUO would likely require coordination with a co-located battery energy storage system (BESS), or equivalent technology, capable of absorbing active power changes in the IBL arising from changes in client demand or from the IBL's response to a disturbance. This would likely require an overarching controller to manage the division of active power between the UPS and BESS, together with dynamic ramp rate and state-of-charge (SOC) management capability not common to current BESS operations, adding complexity and requiring a

lengthy development and testing period before it could be relied upon. In practice, this would confine CUO to IBLs — such as data centres — able to co-locate with a sufficiently capable BESS or an equivalent fast-responding technology. Given this narrow field of application, Origin considers the burden CUO would place on IBL connections outweighs the system security benefit it would deliver.

Origin is also concerned that the CUO requirement, as currently framed, may widen the voltage range over which an IBL cannot disconnect from the network beyond what is required under the current active power and current limit approach — an unrealistic expectation of UPS technology currently available in the market. If this is not the intended effect, Origin recommends CUO instead be scoped to a 90–115% voltage range combined with a current limit of 1.2 p.u., retaining the region boundaries already established in Figure 4.1 rather than introducing new or broader disconnection thresholds.

Under-voltage ride-through – automatic and minimum access standards

Origin recommends the AEMC retain the draft rule's under-voltage ride-through requirements for both the automatic and minimum access standards, as illustrated in the chart on slide 28 of the TWG presentation and Figure 4.3 of the Draft Determination. Figure 4.3 shows the draft rule's deep disturbance ride-through durations already sit well within the range of comparable international standards, which Origin considers an appropriate and proportionate basis for the access standards without further amendment.

Options 1 and 2 (slides 29–30) would place a greater technical burden on load connections than the draft rule, and Option 3 combines both changes. Origin does not support any of these options and recommends the draft rule be retained unchanged.

Over-voltage ride-through

Origin supports Option 1, as outlined on slide 35, which maintains the draft rule approach of not imposing specific ride-through requirements for voltage transients. Origin understands from some UPS suppliers that ride-through of over-voltage transients above 1.2p.u. — and, for certain models, even above 1.15p.u. — is not achievable, meaning many such IBLs would likely need to seek the minimum rather than the automatic access standard.

Additional guidance on instability detection and response

Origin recommends that additional guidance on the implementation and application of the new instability monitoring access standard, as discussed on slide 40 of the TWG presentation, be included in AEMO's Power System Stability Guidelines (PSSG), which Origin considers the most appropriate place for it.

If you wish to discuss any aspect of this submission further, please contact Megan Findlay at

[REDACTED]

Yours sincerely,

[REDACTED]

Sarah-Jane Derby
Group Manager, Regulatory Policy