11 July 2025

Ben Skinner
Specialist, Wholesale Market Reform
AEMO

Lodged via email: NEMReform@aemo.com.au

Dear Mr Skinner,

Consultation on automation of negative residue management for the implementation of transmission loops

Origin Energy Limited (Origin) welcomes the opportunity to provide feedback on the proposed changes to the automated negative residue management (NRM) process to address procedural issues and support the integration of transmission loops into the NEM.

We note that AEMO's Consultation Paper was released prior to the publication of the AEMC's Directions Paper on the *Inter-Regional Settlements Residue (IRSR) Arrangements for Transmission Loops* rule change.[1] The AEMC's proposed approach within this Directions Paper—to introduce netting of positive and negative residues across interconnectors within a transmission loop—is a significant departure from the current arrangements.

The outcome of the AEMC's rule change will have material implications for the NRM process changes proposed in this consultation, particularly the changes to reduce cycling and cease the use of pre-dispatch estimates in the NRM process. Given the potential overlap and interaction between the AEMC's rule change and the proposed NRM process changes, we recommend that AEMO carefully consider the sequencing of these reforms and account for the outcome of the AEMC rule change before finalising any NRM changes.

As we are yet to know the outcome of the AEMC rule change and the potential implications for the proposed NRM process changes, the feedback provided below is provisional.

Cycling

Cycling occurs when multiple successive NRM management periods are triggered on a directional interconnector, separated only by short intervening time intervals. AEMO proposes to reduce the occurrence of cycling by adjusting the NRM constraint so that the minimum flow on a directional interconnector is reduced to a small non-zero value (e.g. 20 MW), rather than clamped to zero. This would allow limited accumulation of small negative residues throughout a management period if counter-price flows persist.

We acknowledge the intent to reduce cycling. However, under the AEMC's proposed netting approach, these additional negative residues could be netted against positive residues within the loop before the surplus is allocated to Settlement Residue Distribution (SRD) unit holders. This may further reduce the value of SRD units under the proposed netting arrangements and affect participants relying on them for risk management.

To avoid unintended consequences under a potential netting framework, Origin recommends that AEMO consider a hybrid approach that combines the small non-zero minimum flow constraint with the

[1] AEMC, Inter-regional settlements residue arrangements for transmission loops, https://www.aemc.gov.au/sites/default/files/2025-06/ERC0386%20IRSR%20arrangements%20for%20transmission%20loops%20-%20Directions%20paper.pdf

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‘graduated release’ methodology outlined in the Consultation Paper. For example, AEMO could initially clamp flows to zero, then release up to 20 MW while monitoring outcomes—re-clamping to zero or exiting the NRM period as appropriate based on observed conditions.

This approach may better preserve the value of SRD units while still addressing cycling concerns. As noted in the Consultation Paper, a ‘graduated release’ method is also likely to be more effective at mitigating a new form of cycling that could emerge under looped interconnector configurations.

Given the complexity of the changes under a ‘graduated release’ methodology, Origin considers that further analysis and stakeholder consultation will be important before any final decision is made.

If the AEMC does not proceed with the netting proposal under the rule change, then implementing a small non-zero minimum flow threshold is an appropriate way to reduce cycling.

We would also support AEMO’s proposal to:

- Test this change in a pre-production environment before full implementation; and
- Monitor the effectiveness of the 20 MW threshold, with a willingness to adjust as needed based on market outcomes.

Ceasing the Use of Pre-Dispatch Estimates in the NRM Process

The proposal to cease using pre-dispatch IRSR estimates and instead rely on actual outcomes has broader implications—particularly under the AEMC’s proposed netting approach. While this change may streamline the NRM process, it could also lead to the accumulation of additional negative residues, thereby reducing SRD unit distributions and further diminishing their value as a hedging tool.

Origin does not support removing pre-dispatch estimates from the NRM process, even under a non-netting framework. Pre-dispatch signals provide valuable foresight for participants and can help mitigate residue accumulation by prompting earlier intervention. For example, if the IRSR is forecast to be negative, early clamping can help ensure pre-dispatch outcomes are more accurate and improve operational planning.

Origin recommends that AEMO assess this interaction further and continue the use of pre-dispatch estimates in the NRM process.

Use of 5-Minute Settlement (5MS) for IRSR Estimation

Origin supports AEMO’s proposal to use 5MS data for estimating IRSR values within the NRM process. This change aligns with broader market reforms and will provide more accurate, granular insight into residue accrual.

Treatment of NRM Constraints as ‘Soft’ Constraints

While we acknowledge the rationale for treating NRM constraints as ‘soft’ to minimise inefficient market outcomes, changes to Constraint Violation Penalty (CVP) costs can have broad and unintended consequences. Origin considers that further analysis is warranted before implementing this change.

We recommend that AEMO undertake additional testing and consultation to evaluate the operational and market consequences of this proposal. This will help ensure that any soft constraint treatment continues to support secure and efficient dispatch.

Transmission Loop NRM Process Changes

Origin considers that the proposed changes to adapt the NRM process for transmission loops are appropriate and necessary to support the integration of Project EnergyConnect into the NEM.

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Origin appreciates the opportunity to engage on this consultation and supports AEMO's efforts to evolve the NRM framework in line with future transmission developments. We recommend that implementation of these changes be staged, with adequate testing and monitoring, and closely coordinated with the outcomes of the AEMC's concurrent rule change process on IRSR arrangements.

If you wish to discuss any aspect of this submission further, please contact Megan Findlay at Megan.Findlay@originenergy.com.au.

Yours sincerely,

Sarah-Jane Derby
Senior Manager, Regulatory Policy

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