12 November 2026

Clare Savage
Chair - Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Lodged electronically: regulatorysandbox@aer.gov.au

Dear Sir / Madam

RE: ESSENTIAL ENERGY ISLANDABLE MICROGRIDS WAIVER - CONSULTATION

Origin Energy (Origin) welcomes the opportunity to respond to the Australian Energy Regulator (AER) Essential Energy Islandable Microgrids Sandbox Trial Waiver Application 2026 – Consultation Notice.

Origin supports practical solutions that improve reliability and resilience for remote communities and sees the trial as a useful way to build evidence for future reform. We accept that in some instances it is more economically viable for a network to install a non-network solution such as a battery than to upgrade the network. As a competitive market participant, we also have an interest in how the trial affects competitive neutrality and the costs paid by consumers.

Because a battery can operate as both a network and generation asset this raises legitimate issues over how these assets should be owned, operated and controlled. There are two main models:

1. The network can own the battery and make it available to a third party to operate when it is not needed for network purposes.
2. A third party can own the battery and contract the network's priority use of it, such as for outages, and operate it commercially at other times.

This is effectively the standard approach for community batteries and network support batteries.

Origin's preferred model is the second, with third-party ownership. DNSPs should ideally procure microgrid capabilities as a service via competitive tenders rather than holding generation assets inside their regulatory asset base (RAB). Third parties should have the first right of refusal to own and operate each microgrid, following rigorous market testing. Network ownership should be a last resort, only where that testing has failed to attract a credible third-party provider. Even then, the battery should be operated by a third party whenever it is not needed for network purposes.

Competitive provision for supply of battery generated electricity should be the default, and a network business seeking a waiver to own generation and storage should show why third-party ownership and operation is not viable. Our main concern is that the application seeks a single waiver for up to 10 microgrids, with sites, ownership models and funding not fully specified, and no clear explanation of how a third-party investor would be paid. Without clear limits, this risks distorting competition and shifting costs to regulated customers.

Recovering microgrid costs from all customers is reasonable where a microgrid replaces network augmentation but should be limited to the network need and capped at the cost of the next-best alternative. Contestable activities should be funded by their users and excluded from the RAB.

If the AER grants the waivers, they should include clear eligibility criteria, a firm cap of 10 microgrids, notification of each site and its funding, regular cost-allocation audits, and AEMO's agreement on settlement and metering before any microgrid operates in island mode. The trial should have a fixed end date with no automatic extension. At the end, each microgrid should operate under the framework then in

place (such as a Temporary Stand-Alone Power System (T-SAPS) framework, if one has been made), be transferred to a third party through open tender, or be decommissioned. Essential Energy should have no automatic right to keep or replace assets, and the AER should settle upfront who bears decommissioning and transition costs.

Our response to stakeholder questions is provided at Attachment A.

If you have any questions regarding this submission, please contact Gary Davies in the first instance at [redacted]

Yours sincerely



Sean Greenup
Group Manager Regulatory Policy
[redacted]

Question 1: What regulatory and industry learnings could this trial generate regarding islandable microgrids as a network solution?

The trial could demonstrate how safely microgrids can move between grid-connected and islanded operation modes. It will also help quantify the frequency, duration, and financial materiality of settlement, metering, and reconciliation anomalies during temporary islanding events. Additionally, it can help to assess microgrid cost compared with conventional solutions and offers a framework to test the operational viability and transparency of combining self-owned and third-party-operated microgrid assets.

Origin recommends that the AER mandate a data collection and publication framework to ensure the trial effectively informs future rule-making. To achieve this, the trial conditions should require Essential Energy to publish regular, standardised reports for each microgrid, specifically covering detailed costs and funding breakdowns, delivery timelines, market-testing outcomes, the frequency and duration of islanding events, customer reliability outcomes, and the overall level of third-party participation.

Question 2: What are stakeholders' views as to the proposed benefits of this trial?

Origin accepts that better reliability and resilience for remote communities, and less reliance on diesel, are valuable. The AER should assess these benefits separately, because they should be funded by different parties. Reliability benefits can reasonably be funded by Essential Energy's customers, public-policy benefits such as diesel displacement should be funded by government, and commercial benefits such as market trading should be funded by those who earn the revenue. The reliability benefits of a microgrid also do not depend on Essential Energy owning the generation and storage, so they should not be treated as a reason for network ownership..

The application does not yet show that microgrids are the least-cost network solution. Essential Energy indicates other options, such as stand-alone power systems (SAPS), suit individual customers but not township-level resilience. While this may be the case, each site should show why a SAPS, network augmentation or other alternative was not sufficient, so the AER can compare costs.

Question 3: Do stakeholders consider that the trial may impact the operation of the national electricity system and market, including AEMO's role as the system and market operator? If so, how?

When a grid-connected microgrid transitions to islanded mode, it shifts from standard market rules to localised operations. Islanding may affect settlement, metering, unaccounted-for-energy allocation, retailer and Financially Responsible Market Participants (FRMPs) obligations, and AEMO's visibility of load and generation. It may also introduce risks of metering data mismatches and financial reconciliation variances for retailers and FRMPs. Origin recommends that AEMO's agreement to the settlement, metering and islanded-mode arrangements be a precondition for each site islanding, and that retailers and FRMPs be notified in advance.

Question 4: What are stakeholders' views on potential risks of the trial? How might such risks be mitigated with conditions? Which conditions do stakeholders think will be appropriate to manage these risks?

DNSP ownership of generation and storage presents a major competitive neutrality risk that can crowd out private investment and inhibit contestable energy markets. There is also a distinct risk of cross-subsidisation. Regulated customers could fund the costs of commercial microgrid activities, such as capital, operating and decommissioning costs, and regulated revenue could be used to support those activities. Costs may also be shifted from commercial activities to regulated services through cost allocation, and customers could then bear the cost of assets that benefit commercial users. To mitigate these risks, the AER should mandate a detailed, granular cost-allocation methodology paired with an independent annual audit requirement and a zero-materiality threshold for cross-subsidies. Furthermore, strict ring-fencing must

be maintained, and any local network capacity data must be published transparently to all market participants at the same time to eliminate information asymmetry.

Question 5: Is a program-level waiver framework appropriate for this trial? What deployment-specific information should be available before the waiver can be relied on (e.g. should individual deployments require AER approval or notification; to what extent should sites be able to be added or substituted over time; and what should constitute a material change requiring further assessment?)

Origin is concerned that an open program-level waiver operates as a standing exemption, when waivers should be reserved for exceptional circumstances. The application also leaves key information open. It states that about $2.6 million of a $23.8 million program will be funded through Essential Energy's RAB, with a third-party investor or operator to be sought for the balance, and ARENA has funded three sites. It does not give a per-site funding split or say how the third party would be paid. Origin recommends that, if the AER proceeds, Essential Energy must be required to formally notify the AER and market participants prior to deploying each site, providing a documented network gap analysis and a clear efficiency justification. Any subsequent change to the program, such as substituting locations, modifying technical configurations, or altering the asset ownership mix, must be classified as a material change that triggers renewed AER assessment and public consultation.

Question 6: Does this trial raise any other regulatory or operational barriers that need to be considered? Are there any further waivers required in addition to the ones identified by Essential Energy?

Origin does not propose additional waivers. The AER should confirm that settlement, metering and retail interface issues can be managed within the existing framework, as Essential Energy has not sought relief for them. It should also clarify how the Shared Asset Guideline and NER registration categories apply. Any new barrier found during the trial should be addressed through a variation that is consulted on publicly.

Question 7: What are stakeholders' views as to Essential Energy utilising a mix of self-owned and third-party owned and operated microgrid assets? What further information should the AER take into account when deciding whether to grant the trial waivers?

Origin strongly prefers third-party ownership and operation of the generation and storage components of the microgrids. DNSPs should ideally procure microgrid capabilities as a service via competitive tenders rather than holding generation assets inside their RAB. We recommend that each site be market-tested against published criteria, that Essential Energy show why a procured service would cost customers more for any self-owned site, and that it commit to trialling third-party ownership. The AER should also confirm how third-party investors would be paid, because this determines the cost to customers.

Question 8: What are stakeholders' views as to the operational arrangements outlined in Essential Energy's application that would need to be in place before a site is allowed to island? What should be the parameters around islanding?

From a market perspective, islanding should only occur once AEMO-agreed protocols are in place and retailers, FRMPs, metering providers and customers have been notified. Islanding should be limited to unavoidable network outages or pre-notified upstream maintenance and should not be used for commercial purposes. Network reliability should take priority over commercial use of the storage, so the battery should always maintain sufficient stored energy to supply the community during an outage, and this reserve should not be used for trading. DNSP-owned assets funded through the RAB should not trade for commercial gain, and any incidental revenue should be returned to customers. Third-party assets should be able to participate in the market when grid-connected, on the same terms as other providers.

Question 9: Do stakeholders have concerns with the possibility to exceed 10 deployments? What possible conditions could be imposed to ensure trial deployments are appropriately identified and managed?

Yes, allowing an unconstrained expansion beyond 10 microgrids undermines the transitional, experimental purpose of the regulatory sandbox framework. The AER must impose a hard regulatory cap of 10 sites for the duration of the trial. Any expansion or addition of sites beyond this cap must require a separate waiver application subjected to full stakeholder consultation.

Question 10: We are interested in stakeholders' views on the boundaries between contestability and competition. What constraints or other conditions could be placed on Essential Energy's ownership and operation of the microgrids to support efficient outcomes for customers regarding affordability and reliability of their electricity supply?

To protect competitive boundaries, independent charge point operators and competitive providers must be given a formal first right of refusal to build, own, and operate the microgrid's generation and storage assets. Essential Energy should only be permitted to step in as an asset owner of last resort where a transparent, open market tender process receives zero credible private sector proposals. Furthermore, Essential Energy must offer third-party operators the exact same technical access terms, timelines, and asset connection conditions that it grants to its internal projects.

Question 11: What are stakeholders' views as to the appropriate RAB and revenue treatment of the microgrids and their assets?

Origin's principle is that customers should fund only the regulated service, and no more than the efficient alternative would have cost. Competitive assets such as solar PV arrays, generators, and trading-focused storage devices should be excluded from the RAB. Standard control service electricity consumers should not cross-subsidise or absorb the asset risks of technology that generates commercial trading opportunities. For any residual network infrastructure components that are funded via the RAB, 100% of any incidental market or trading revenues generated during the trial must be returned directly to consumers through an explicit regulatory adjustment mechanism.

Question 12: What impacts could there be on third parties? How could these be managed appropriately? What conditions might need to be imposed to help manage any impacts on third parties?

Retailers, FRMPs, metering providers and competing storage and generation developers may be affected. Origin recommends non-discriminatory access to network and connection information, and a condition that the trial does not delay third-party connections in microgrid areas. Retailers and FRMPs should have clear processes for settlement and metering anomalies, there should be an AER-overseen complaints process, and procurement outcomes should be published.

Question 13: What do stakeholders think about this exit strategy?

Origin supports a time-limited exit but considers the proposal too open-ended. We recommend a fixed end date with no automatic extension, and the exit pathways and the criteria for choosing between them should be stated in advance. At the end of the trial, each microgrid should operate within the framework then in place (such as a T-SAPS framework, if one has been made, or the SAPS framework), be transferred to a third party selected through open tender or be decommissioned. Essential Energy should have no automatic right to keep or replace assets and should retest the market if it wishes to continue.

Question 14: Do stakeholders have concerns around decommissioning, transition costs or impacts on customers' energy supply arrangements?

Assets recovered through the RAB over decades will outlast a five-year waiver, so customers could be left funding assets that do not fit the permanent framework. Customers should not bear costs, supply risks or liabilities from a failed transition or decommissioning. Costs for contestable activities should be borne in full by Essential Energy or its third-party partners. For the network support component, customers should only bear costs that are prudent and efficient, and the AER should settle upfront how any undepreciated value is treated if an asset cannot move to the permanent framework. Customers should not pay for poor planning or for assets that fail to qualify.

Question 15: Do stakeholders have any other comments about the trial?

Origin supports innovation that improves resilience for remote communities. We are concerned with the increase in ring-fencing waiver applications, as waivers should remain exceptional rather than standard administrative mechanisms. Regulatory sandboxing should be reserved for unique, time-bound trials to generate evidence for further reform and should not serve as an alternate route for DNSPs to expand their regulated reach into contestable generation markets.