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# Enel X Trial waiver decision

Regulatory Sandboxing – Energy Innovation  
Toolkit

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# 1 Decision

Pursuant to s18ZL and 18ZM of the National Electricity Law (NEL), the Australian Energy Regulator (AER) has decided to grant a trial waiver to Enel X from clause 2.3.6(m)(1)(i) of the National Electricity Rules (NER) for 10 sites for a period of 5 years, subject to conditions outlined at section 3.4 and the standard disclaimer at section 4. This trial waiver will allow Enel X to test participation of up to 10 sites with multiple connection points in the Wholesale Demand Response Mechanism (WDRM) across the National Electricity Market (NEM).

The AER recognises the continuing work to reform the WDRM. The AER expects this trial to generate important learnings to inform the Australian Energy Market Commission's (AEMC) consideration of Enel X's proposed rule change to expand eligibility under the WDRM (the **Proposed WDRM Rule Change**). Trial learnings will also be key for the Australian Energy Market Operator (AEMO) in its implementation of the rule change, should it proceed.

The AER recognises from the AEMC's Final Report into the WDRM<sup>1</sup> that the market for demand response is constrained and the WDRM remains potentially underutilised. Submissions to VIOTAS' related trial waiver application raised that granting a trial waiver to enable one market participant to provide wholesale demand response from sites with multiple connection points may affect competition or commercial arrangements in the wholesale demand response market. Therefore, the AER considers it important and appropriate to impose conditions, and consider parallel applications for similar projects, to minimise commercial impacts.

The AER notes that AEMO can accommodate up to 20 sites for demand response service providers (DRSPs) to test participation of multiple connection point sites in the WDRM. VIOTAS submitted a related application for a trial waiver from clause 2.3.6(m)(1)(i) of the NER for 20 sites for a period of 5 years. The AER has also decided to grant a trial waiver to VIOTAS for 10 sites, as outlined in a separate decision published on the Energy Innovation Toolkit website.

The AER considers that additional trial proponents may generate a broader range of learnings and promote competition between DRSPs to generate learnings faster. This is expected to produce better learnings and benefits, including providing directly relevant, in-market evidence for the Proposed WDRM Rule Change. AEMO also noted that the trial would provide useful evidence on the suitability of current baselining methodologies, information on settlement risks and operational processes to support this reform. Further learnings include whether the risk of gaming can be overcome, and how it supports the participation of commercial and industrial (C&I) sites. There is potential for cost savings and continued innovation in the operation of the demand response market.

The trial is granted subject to conditions set out in section **Error! Reference source not found.**, which relate to system protections, reporting, consumer protections and other matters proposed by the proponent, AEMO and stakeholders through consultation.

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<sup>1</sup> AEMC, [Final report – Review of the Wholesale Demand Response Mechanism](#), October 2025, accessed June 2026.

## 2 Background

### 2.1 The AER's trial waiver power

The AER can grant a time limited trial waiver for eligible trial projects, which temporarily exempts an innovator from having to comply with specific laws or rules that may be acting as regulatory barriers to allowing an innovative trial to proceed.

In considering whether to grant a trial waiver, the AER has regard to the eligibility requirements specified in the NER<sup>2</sup> and the innovative trial principles specified in the national energy laws.<sup>3</sup> Clause 4.2 of the Trial Projects Guidelines sets out our proposed approach to assessing whether the eligibility requirements and innovative trial principles are met.

There is no requirement that the AER must be satisfied that all innovative trial principles are met to grant a waiver. The AER takes a holistic approach to the consideration of the eligibility requirements and innovative trial principles when assessing each application.

We have assessed Enel X's trial waiver application against the innovative trial principles and eligibility requirements, as set out in the Trial Projects Guidelines. We consider that Enel X's application sufficiently meets these requirements to grant the waiver, for reasons set out at section 3.2.

### 2.2 Enel X's application

Enel X Australia was the first registered DRSP and is an Integrated Resource Provider in the NEM. Enel X focuses on providing demand services from C&I customers, including wholesale demand response, energy and market ancillary services, firming capacity and reserve and emergency trader.

Enel X has sought opportunities to develop and invest in innovations or systems that support flexible demand services in the NEM and the wholesale electricity market. This forms part of Enel X's commercial activities, including its identification of an opportunity for sites with multiple electrical connection points to participate in the WDRM. In April 2022, Enel X submitted a rule change proposal to the AEMC seeking to enable WDRM participation from sites with multiple connection points.

Following consultation on VIOTAS' related proposal on WDRM (on which Enel X engaged), Enel X has submitted a near-identical application seeking a trial waiver from the same clause. Enel X has requested the same criteria and conditions be placed on any trial waiver from clause 2.3.6(m)(1)(i) of the NER for any DRSP, to ensure a level playing field, but has proposed that its trial be run at 10 sites (compared with VIOTAS' proposal of 20).

Noting AEMO's submission on VIOTAS' related trial waiver proposal, Enel X suggested that the trial waiver can reach its stated aims and objectives with a smaller remit of 10 sites. Enel

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<sup>2</sup> NER clause 8.16.4(a); NERR clause 178(1); NGR clause 135MC(1).

<sup>3</sup> NEL section 18ZL(2); section NERL 121C(2); section NGL 30W(2).

X submitted in its application that its trial waiver will be complementary and additive to VIOTAS' trial waiver. Multiple DRSPs should generate more learnings sooner.

As with VIOTAS' application, Enel X specified that embedded networks and residential electricity consumers will not be included in this trial. An updated or latest version single line diagram (SLD) will be provided for each participating site.

## 2.3 Wholesale Demand Response Mechanism

The WDRM operates by paying registered participants to reduce their demand (from a predicted baseline calculated by AEMO) during anticipated high-demand conditions. Demand response through the WDRM reduces the need for generation to be dispatched. The prohibition on sites with multiple connection points in 2.3.6(m)(1)(i) exists because such sites could artificially lower usage at one classified connection point, while increasing it at others, resulting in being unduly paid for demand response services that were not provided.

In October 2025 the AEMC released its final report on the WDRM, which found that the mechanism has generated more value than it has cost. The AEMC recommended that the WDRM be expanded. It noted the Proposed WDRM Rule Change and stated this would be considered by the AEMC.<sup>4</sup> The AER recognises the potential benefits of a trial to inform this future rule change.

## 2.4 Consultation and stakeholder views

Pursuant to cl. 8.16.3 of the NER, the AER must undertake consultation unless it is satisfied that the trial project is unlikely to have an impact on other registered participants and is unlikely to have a direct impact on retail customers other than those who provide explicit informed consent to participate in the trial project.

The AER has chosen not to consult on Enel X's trial waiver application, as we already undertook substantive consultation in relation to the functionally identical VIOTAS trial waiver application. In addition, no registered participants beyond those who had the opportunity to engage on the VIOTAS trial waiver consultation are impacted by this trial project.

AEMO's submission to VIOTAS' related application noted that sites representing different configurations and operational requirements would likely deliver the identified learnings because learning value is more likely to be driven by the diversity of site configurations and operating characteristics. Enel X and VIOTAS are likely to submit different sites, with more variety in site types and configurations, than if a trial were granted to only one proponent.

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<sup>4</sup> AEMC, [Final report – Review of the Wholesale Demand Response Mechanism](#), October 2025, accessed June 2026.

## 3 Waiver assessment

### 3.1 Benefits to test in the trial

The AER considers the waiver may generate several benefits and contribute to learnings while increasing participation in the WDRM. The AER considers the waiver will offer the following benefits: Trialling a similar approach to the Proposed WDRM Rule Change; and Broadening participation in the WDRM without harming the system.

#### 3.1.1 Trialling a similar approach to the Proposed WDRM Rule Change

The Proposed WDRM Rule Change as it was lodged in 2022 proposes that the load for all connection points at a site participate in WDRM on an aggregate basis. This would likely require changes to AEMO's standard baselining and settlement systems to facilitate an aggregate approach, as opposed to the current per-connection point basis.

In comparison, VIOTAS has proposed a trial that would adopt a baselining approach that is currently standard – reflecting a lesser impact on AEMO's systems than the Proposed WDRM Rule Change. VIOTAS has done desktop analyses that demonstrate that sites with multiple, electrically interconnected connection points can successfully participate in the WDRM without the need for significant or costly changes to AEMO systems. The trial model will associate the load's connection points with each other to allow for data aggregation and performance monitoring. Both VIOTAS' and Enel X's trials will seek to demonstrate this approach.

#### 3.1.2 Broadening participation in the WDRM without harming the system

This trial is expected to broaden competition for demand response aggregation services by allowing currently excluded C&I sites with multiple connection points to participate in the WDRM, providing an alternative to retailer demand response programs. These larger C&I sites are more likely to have multiple connection points and are currently an untapped source of demand response capacity.

AEMO has indicated since providing its submission, that it is prepared to support **a total of 20 trial sites** given the impacts of such trials on its systems and staff capacity, and it supports the division of these sites between multiple trial participants if applicable. VIOTAS applied to undertake this trial at 20 trial sites and Enel X applied to undertake the related trial at 10 trial sites. The AER has provided the same trial waiver to both VIOTAS and Enel X.

**Previous guidance provided by staff at the Energy Innovation Toolkit was that trials are typically only granted once. Historically, this supported the importance of trials existing to deliver unique learnings. In this instance, the AER has decided to grant the same waiver to two participants on the basis that additional and specific learnings are possible through Enel X's participation, with the trial scope remaining supportable by the impacted market body, AEMO.**

The AER's view is that granting Enel X's trial waiver in addition to VIOTAS' should generate competitive tension between DRSPs, thereby producing additional learnings and better outcomes. Broadening trial participation also has the benefit of generating evidence across a wider mix of site locations, jurisdictions, unit types and dispatch thresholds. This increases the likelihood of any site being called to respond to a wholesale demand response (WDR) event.

AEMO supports the granting of trials for up to 20 sites. It affirms that the trials are likely to generate relevant and useful learnings about its ability to facilitate participation in the WDRM of sites with multiple connection points, and whether the risks of gaming and system harm can be overcome by the conditions put in place. These learnings are likely to directly feed into the consideration of the Proposed WDRM Rule Change and other reforms.

## **3.2 Innovative Trial Principles and eligibility requirements**

The AER has undertaken a thorough assessment against the Innovative Trial Principles and eligibility requirements collectively. This assessment is summarised as follows.

### **3.2.1 Learnings and possible market improvements**

Staff consider that having an additional participant in this trial will generate additional learnings beyond a single trial participant. AEMO has also expressly supported additional trial participants on the basis that it is likely to generate evidence across a wider mix of site locations, jurisdictions and unit types. This increases the likelihood of any site being called to respond to a WDR event.

This trial is likely to provide directly relevant, in-market evidence for the Proposed WDRM Rule Change. AEMO noted that the trial would provide useful evidence on the suitability of current baselining methodologies, information on settlement risks and operational processes to support this reform. Learnings also include the level of interest from sites with multiple connection points in participating in the WDRM and information about these sites as potentially reflective of future interest in the WDRM if the proposed WDRM Rule Change is made. This trial will test whether the risks of gaming can be meaningfully overcome through the proposed protections, and the potential benefits of additional WDRM participation. This trial supports increased participation in the WDRM by allowing previously ineligible C&I sites. This trial also has the potential to support increased cost savings and may support continued innovation in the demand response market. The AER expects the overall impact of this trial to improve the operation of the WDRM and support continued benefits to the market that were identified by the AEMC review of the WDRM.

### **3.2.2 Implementation and scalability**

VIOTAS has undertaken desktop assessments to prove baseline, performance and settlement assessments can be done on an individual connection point or National Metering Identifier (NMI) basis with no material difference to the result. Enel X has adopted this approach for the purposes of this trial waiver. The trial allows for in-market testing of this outcome. AEMO has confirmed that the trial is able to proceed with minimal impacts to its systems, and the AER has imposed conditions (set out at section 3.4) to further minimise impacts. The trial has been designed to minimise impact on AEMO systems. The AER notes

that the rule change as proposed may have a more material cost on AEMO systems, but this trial and the related VIOTAS trial should help identify these.

### 3.2.3 Consumer protections and National Electricity Objective

This trial has the potential to support the achievement of the National Electricity Objective through improved efficiency of energy services by reducing peak usage and avoiding network augmentation to support these peak periods. Additionally, by increasing participation in the WDRM, it supports emissions reduction across the NEM and contributes to a lower wholesale price, providing benefits to all users, as noted in the AEMC’s final report for its WDRM review.<sup>5</sup>

This trial does not directly impact household and small business consumers. Energy consumers are protected from negative WDRM performance through AEMO’s monitoring. Trial participants (large industrial site owners) will continue to have access to standard dispute resolution processes with Enel X. Enel X is required under the conditions (set out at section 3.4) to inform site owners that the sites are participating in a trial, and that this involves risk.

## 3.3 Ending the trial

This trial is granted for a period of 5 years. If, through the AEMC’s determination on the Proposed WDRM Rule Change, the NER is changed to allow multiple connection point sites to participate in the WDRM, the AER will engage with participants to determine an orderly exit strategy. Transitional arrangements may need to be established.

The AER, pursuant to cl. 8.18.2(a)(2)(i) of the NER, and the Trial Project Guidelines, has the power to terminate a trial early. The AER also, pursuant to cl. 8.16.5(a) of the NER, has the power to extend a trial by up to 12 months (on application). Should circumstances change – particularly those concerning the Proposed WDRM Rule Change – the AER reserves its right to determine appropriate action at that time.

## 3.4 Conditions

As provided in section 18ZM of the NEL, the AER may impose any conditions we consider appropriate for the trial. This allows the AER to impose conditions to ensure issues raised through public consultation are addressed, ensuring the trial maximises the learnings, while also ensuring other requirements are met. Section 18ZR of the NEL requires that a trial waiver proponent must comply with any conditions to which the trial waiver is subject. If the proponent breaches a condition, the AER may revoke the trial waiver or revoke or vary the condition, or impose further conditions on the trial waiver.<sup>6</sup>

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<sup>5</sup> AEMC, [Final report – Review of the Wholesale Demand Response Mechanism](#), October 2025, accessed June 2026.

<sup>6</sup> The AER’s framework for monitoring and ensuring compliance with conditions on a trial waiver is set out in the AER’s Trial Projects Guidelines on page 21 and is explained in the Trial Projects Guidelines Explanatory Statement at pages 26–27.

The conditions developed over 6 months by AER staff, AER Board and through consultation for the VIOTAS trial will be identical as the ones imposed on Enel X. The AER has imposed the following conditions on Enel X in granting the trial waiver.

#### **Condition 1: Site number**

Enel X's trial project is to be limited to a maximum of 10 trial sites.

#### **Condition 2: Mitigating impacts on AEMO**

Applications to classify loads as wholesale demand response units (WDRUs) must be submitted to AEMO on a phased basis (a maximum of 2 applications per week).

#### **Condition 3: Single line diagrams**

Enel X must provide the AER and AEMO with an up-to-date single line diagram (SLD) for each trial site at the time it seeks to classify that trial site with AEMO, and must provide updated SLDs within 3 business days in the event of any material changes to the electrical configuration of a trial site. The SLD must clearly identify the complete and fixed set of NMIs and metering points that together represent a single operational facility for the purposes of the trial. AEMO may engage with the local network service provider to validate SLDs.

Where changes occur, the AER may (after consulting with AEMO) determine whether the site may remain part of the trial or will cease participation in the trial.

#### **Condition 4: Site selection**

Enel X must propose any trial sites to AEMO and obtain AEMO's endorsement prior to commencing an application to classify the site as a WDRU, and must inform the AER once it has obtained this endorsement.

Enel X must provide to AEMO the following information in relation to trial sites:

- the number of connection points
- the (single) financially responsible Market Participant at each connection point of a site
- any history of non-compliance at the site
- whether real-time telemetry is available at the site
- whether multiple single connection point WDRUs will be dispatched by a single dispatchable unit identifier (DUID)
- the total capacity of the site and the registered WDR capacity of the site.

Enel X must provide any additional information reasonably requested by AEMO in its exploration of the suitability of the site. Enel X must provide this information to the AER on request. Any disputes between Enel X and AEMO will be resolved by the AER.

#### **Condition 5: Performance and conformance**

AEMO has the discretion to declare a trial site WDRU non-conforming after a single non-conforming dispatch outcome. Enel X must notify the AER of any such occurrence within 3 business days.

If any NMI at a specific trial site is made unavailable in AEMO's Portfolio Management System, all other NMIs at that site are to be made unavailable.

#### **Condition 6: Classification for WDRM with the same DRSP and market customer or retailer**

All connection points at a trial site are to be classified for WDRM, assigned with the same AEMO WDRM baseline methodology, registered by the same DRSP and share the same market customer or retailer.

#### **Condition 7: Reporting and validation**

Enel X is to provide 6-monthly reporting to the AER, AEMO and the AEMC of observed outcomes under the trial.

The first Enel X report is to be provided within 6 months of the date this trial is granted. The AER may require information from Enel X on written request outside of this reporting cycle, and will provide a reasonable timeframe in which Enel X must provide this information.

Reporting to the AER, AEMO and the AEMC must include:

- the total number of trial sites currently classified or undergoing the classification process with AEMO
- the jurisdiction in which each trial site (current or undergoing classification) is located
- site use (e.g. industry), capacities (in MWh, both total and WDRM-classification) and number of connections points per site, of sites classified at the end of each reporting period
- number of dispatch events for each trial site during the reporting period
- post-dispatch performance and settlement data, comparing the proposed approach to the aggregation approach
- other emerging learnings or issues as relevant.

Enel X is to publish each subsequent report on its website and must provide a link or copy to the AER, within 20 business days from the end of each 6-month period.

Where requested, Enel X may seek to redact information from reporting that it considers to be confidential. Enel X must obtain the AER's written consent – which it may give at its sole discretion – to any redaction, and this consent must be sought prior to the date on which the report is published. Enel X must, on request by the AER, provide it with unredacted trial information, only excluding personal information.

#### **Condition 8: Site classification**

A minimum of 2 trial sites must be fully classified within 6 months of the trial start date to ensure that learnings are available in time for the Proposed WDRM Rule Change process.

The AER can in its absolute discretion extend the time for compliance with this condition if events outside of Enel X's control prevent compliance.

### **Condition 9: Protecting consumers**

Where a trial site is owned or operated by a party other than Enel X, Enel X must provide written information to that owner or operator that its participation in the WDRM is as part of a trial, and that trials involve risk. This notice must be provided prior to classification of the site with AEMO and must detail information about the trial, including its length, conditions and the possibility of the trial concluding before its scheduled completion for reasons outlined in the Trial Project Guidelines and cl. 8.18.2(a)(2)(i) of the NER. It must also explain how the trial might impact the activities of the third-party owner or operator of the site. A copy of this notice must be provided to the AER prior to site classification.

Embedded networks and residential electricity consumers will not be included in this trial.

## 4 Trial disclaimer

The terms below which are used in the disclaimer, have the following meanings:

**Proponent** means the party/parties benefitting from the Trial Waiver.

**Trial** means the project undertaken in accordance with the Trial Waiver for the duration and limited to the scope of that advised to the AER for the purpose of granting the Trial Waiver.

**Trial Waiver** has the same meaning as sections 18ZL(1) of the National Electricity Law, 30W(1) of the National Gas Law and 121C(1) of the National Energy Retail Law.

**Trial Project Confidential Information** means information regarding a trial project and submitted to the AER in, or in connection with, an application for a trial project that is identified by the applicant as being confidential.

**Trial Projects Guidelines** means guidelines of that name made and published by the AER under the National Electricity Rules.

**AER** means the Australian Energy Regulator.

**By accepting** the Trial Waiver, the Proponent acknowledges that:

- a) To the extent that is lawful, the AER by granting this Trial Waiver is not responsible or liable for any loss suffered by any party, including third parties, resulting from or related to the Trial.
- b) The AER makes no representations as to the likely success or failure of the Trial and the Proponent remains responsible at all times for the operation of the Trial. In granting a Trial Waiver, the AER is making no statement about, advising or commenting in any way, on the commercial viability of the Trial.
- c) The Proponent must not describe its propositions as “AER approved” or otherwise imply in any way that the AER endorses its product, service, methodology or business model.
- d) The Proponent at all times remains bound by all other laws, rules and regulations not expressly the subject of the Trial Waiver.
- e) The Proponent is responsible for the effective and lawful operation of the Trial in accordance with the terms of the Trial Waiver and as proposed by the Proponent in its application to the AER for a Trial Waiver. The AER has no direct involvement in the Trial beyond the granting of the Trial Waiver and the monitoring of any reporting (if required under the Trial Waiver).
- f) The AER, in granting this Trial Waiver, makes no comment or commitment, with regard to any further consideration of this Trial Waiver (e.g.: early termination; reconsideration of the conditions which apply to the Trial Waiver).
- g) The AER, in granting this Trial Waiver, makes no comment or commitment, with regard to any further applications regarding this Trial Waiver (eg: an application for extension of the Trial Waiver).
- h) To the extent that is lawful, the AER is not responsible for any loss suffered by the Proponent or a third party arising from any action, or inaction, by the AER in the course of the Trial, including through Trial monitoring activities.
- i) The Proponent must not misrepresent the information, guidance or regulatory relief given to the Proponent by the AER.