

28 August 2026

Ms Anna Collyer
Chair
Australian Energy market Commission

By online submission

Dear Ms Collyer

Rule change requests – IPRR staged implementation approach rule change request package

The Australian Energy Market Operator (AEMO) is submitting the attached package of rule change requests to support the successful implementation of the National Electricity Amendment (Integrating price-responsive resources into the NEM) Rule (IPRR Rule).

This package comprises the following rule change requests:

- IPRR staged implementation approach;
- Accounting for Voluntary Scheduled Resources in the Frequency Performance Payments residual; and
- Additional minor IPRR changes.

These rule change requests seek to achieve outcomes that support successful and robust IPRR implementation and deliver long-term benefits for consumers, consistent with maximising the benefits of consumer energy resource uptake and the energy transition.

IPRR staged implementation approach rule change request

Following extensive internal planning, detailed design work and industry engagement, AEMO concluded that delivering dispatch mode on existing timelines created unmanageable delivery risk to the IPRR implementation project, with consequential implications for participants managing their own implementation programs. In April 2026, AEMO took the prudent decision to pause project delivery and to assess and explore alternative approaches with stakeholders.

This rule change request seeks to defer the implementation date for IPRR dispatch mode and access to VIM payments, for up to 2.5 years, while progressively delivering and trialling key aspects of IPRR functionality and market integration with market participants through the National Electricity Rules' (NER) regulatory sandboxing framework.

Additional IPRR implementation rule change requests

The IPRR implementation project has also identified additional refinements necessary to maximise benefits and support robust implementation. These changes would:

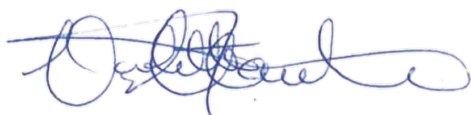
- account for Voluntary Scheduled Resources (VSRs) in the Frequency Performance Payments (FPP) residual rather than through individual assessment; and
- allow the publication of VSR SCADA data and the aggregation of non-scheduled load in central dispatch. AEMO considers these changes non-controversial and requests that the AEMC consider them through an expedited rule change process.

AEMO has submitted these as separate rule change requests to give the AEMC flexibility to consolidate the requests or consider each through separate processes as needed.

AEMO looks forward to continuing its collaboration with the AEMC and stakeholders across the energy sector to support successful IPRR implementation.

Any queries concerning this letter should be directed to Hannah Heath, Group Manager – Strategic Market Reform, at hannah.heath@aemo.com.au.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Violette Mouchaileh', with a stylized flourish at the end.

Violette Mouchaileh

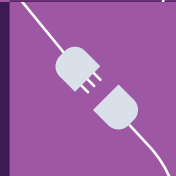
Executive General Manager, Policy and Corporate Affairs

Attachments:

Electricity rule change proposal: IPRR staged implementation approach

Electricity rule change proposal: Accounting for Voluntary Scheduled Resources in the Frequency Performance Payments residual

Electricity rule change proposal: Additional minor IPRR changes



Electricity Rule Change Proposal

IPRR staged implementation approach

August 2026

aemo.com.au

New South Wales | Queensland | South Australia | Victoria | Australian Capital Territory | Tasmania | Western Australia

Australian Energy Market Operator Ltd ABN 94 072 010 327

© 2026 Australian Energy Market Operator Limited. The material in this publication may be used in accordance with the [copyright permissions on AEMO's website](#).

Contents

1. Summary	4
2. Background	8
3. Statement of issue	11
3.1. Current Rules	11
3.2. Challenges meeting the current Rule's timing	13
4. How the staged implementation approach will address these issues	15
4.1. Introducing the staged implementation approach	15
4.2. Stakeholder feedback has informed this rule change request	19
5. Proposed Rule	21
5.1. Stage 3 commencement arrangements	21
5.2. Consequential timing and transitional amendments	22
5.3. Guidance and other requirements required to facilitate delivery of Stages 1 and 2.	24
6. How the Proposed Rule Contributes to the National Electricity Objective (NEO)	24
7. Expected benefits and costs of the proposed rule	25
7.1. Expected Benefits	26
7.2. Expected Costs	27
Appendix A. System impact assessment – Stage 1	28
Appendix B. System impact assessment – Stage 2	29
Appendix C. System impact assessment – Stage 3	30
Appendix D. NEM reform program details	31

1. Summary

The Integrating Price Responsive Resources (IPRR) reform is a voluntary mechanism that seeks to integrate currently non-scheduled price-responsive resources into NEM dispatch and market arrangements.

On 19 December 2024, the Australian Energy Market Commission (AEMC) made the National Electricity Amendment (Integrating price-responsive resources into the NEM) Rule 2024 (IPRR Rule), which will allow aggregated consumer energy resources (CER), distributed energy resources (DER) and price-responsive loads to be scheduled and dispatchable in the National Electricity Market (NEM).

IPRR introduces ‘dispatch mode’ that will allow currently non-scheduled aggregated price-responsive resources to participate in NEM dispatch. Through IPRR dispatch mode, eligible qualifying resources will be able to access scheduled markets meaning AEMO can dispatch these resources based on their actual bids and offers rather than approximating their price responsiveness through demand forecasts. Dispatch mode includes three operating modes: active, inactive (deactivated), and hibernation. Together, these modes provide participants with flexibility to manage operational and participation risks under the IPRR framework.

In addition to dispatch mode, IPRR also includes a Voluntary Scheduled Resource (VSR) Incentive Mechanism (VIM) to support participation in the initial years of the voluntary mechanism’s operation. The IPRR rule also introduced a monitoring and reporting framework to improve AEMO’s visibility of the impact of price-responsive resources on market pricing outcomes, which is now operational.

This rule change request seeks to defer the implementation date for IPRR dispatch mode and access to VIM payments, for up to 2.5 years, while progressively delivering and trialling key aspects of IPRR functionality and market integration with market participants through the National Electricity Rules’ (NER) regulatory sandboxing framework. No amendments are sought to the IPRR dispatch mode functionality in this rule change request.

Revised IPRR delivery approach required

Currently, the IPRR Rule requires dispatch mode to commence on 23 May 2027, which is the point when Voluntary Scheduled Resources (VSRs) can participate in central dispatch and the full IPRR framework, including all elements of dispatch mode and the VIM, become operational.

Following extensive internal planning, detailed design work and industry engagement, AEMO concluded that delivering dispatch mode by 23 May 2027 created unmanageable delivery risk for the IPRR implementation project, with consequential implications for participants managing their own implementation programs. In April 2026, AEMO took the prudent decision to pause project delivery and to assess and explore alternative approaches with stakeholders to reduce implementation risk accounting for the existing reform landscape.

A combination of technical solution complexity and the impact of reform implementation congestion were the principal drivers leading to the pause decision. Reform congestion is also impacting AEMO’s IPRR delivery capacity with competing priorities across an extensive reform program.

Another change in the reform landscape since the AEMC’s final IPRR determination in 2024 are the outcomes from the Review of Wholesale Market Settings in the NEM (The NEM Review).¹ The revised delivery approach for IPRR provides AEMO and industry with the opportunity to consider how the systems solution to deliver the rules defined IPRR dispatch mode could also provide a pathway to enable any future state Market Visibility

¹ <https://www.dceew.gov.au/energy/markets/nem-wms-review>

Framework (MVF) requirements. While the draft MVF is still under development, there are efficiency benefits in looking for opportunities to include system design flexibility where possible to accommodate that future state.

AEMO proposes a staged implementation approach which defers dispatch mode and VIM payments to Stage 3

AEMO proposes to implement IPRR in three stages. A staged approach will enable AEMO to deliver IPRR functionality progressively while managing reform congestion, supporting participant readiness, and incorporating considerations and learnings from concurrent reform initiatives as they arise.

Only Stage 3 - full implementation of IPRR dispatch mode and VIM payments – would be implemented through this rule change request. Stages 1 and 2 involve the progressive delivery of IPRR systems functionality and capabilities under AER sandbox enabled trial arrangements. Progressive delivery of systems, participation, and complexity through trial stages would facilitate the robust and successful implementation of dispatch mode in Stage 3.

Participants in Stages 1 and 2 would operate as scheduled resources in active mode and, other than residential Virtual Power Plants (VPPs), would be limited to same-technology aggregations. Regulatory waivers would be available where required to address technical barriers to entry and support participant risk management until inactive and hibernation modes become available through dispatch mode in Stage 3.

- **Stage 1 will enable early participation and operational learning:** The primary objective of Stage 1 is to allow participants and AEMO to gain initial operational experience that can inform later stage implementation decisions and participant business model development.

AEMO intends to operate Stage 1 as a controlled implementation in existing AEMO systems with a select participant cohort including sub-30 MW non-scheduled generators, Bidirectional Units (BDUs) under 5 MW, and other small batteries.² A select cohort in Stage 1 is necessary given the use of existing AEMO systems.

Stage 1 is proposed to commence in mid to late 2027.

- **Stage 2 would expand trial participation and deliver and test foundational IT systems:** Like Stage 1, Stage 2 would operate under AER sandbox-supported trial arrangements. Increased participation in Stage 2 would provide further opportunities for participants and AEMO to build operational experience and mature business models ahead of full implementation.

Stage 2 is proposed to deliver foundational IT capabilities, particularly large-scale portfolio management. These capabilities would enhance AEMO systems, enabling aggregated resource participation at scale and supporting greater involvement of large scale residential VPPs, which is critical to realising the benefits of dispatch mode in Stage 3.

Stage 2 is proposed to commence in mid to late 2028.

- **Stage 3 delivers dispatch mode, VIM payments, and full implementation of the IPRR Rule:** Stage 3 would deliver full dispatch mode functionality and access to inactive and hibernating modes of operation. VIM payments would also commence at Stage 3. Under the proposal, Stage 3 would commence no later than 30 November 2029 with the potential for AEMO to commence earlier, with notice to participants, if implementation timelines allow.³

² AEMO is currently working with the AER on Stage 1 and 2 trial design. The AER would assess any participant applications received and determine whether to grant any regulatory waivers through its established assessment processes.

³ Stage 1 and 2 trial participants progressing to Stage 3 would need to satisfy the same procedural and registration requirements as new participants at Stage 3. Trial participants would be expected to transition to dispatch mode under the IPRR Rule if they wish to continue participating in dispatch as VSRs at the end of the trial.

Proposed Stage 3 commencement timing includes flexibility to maximise benefits where practical

AEMO proposes flexibility to commence Stage 3 dispatch mode and VIM payments from 1 July 2029 but no later than 30 November 2029.

The proposed approach sets a clear expectation on the latest date on which dispatch mode would commence, while providing AEMO with flexibility to commence Stage 3 earlier in consultation with stakeholders if implementation timelines allow. The ability to commence Stage 3 early would increase market benefits which will ultimately flow through to consumers.

AEMO proposes to provide participants with a target commencement date 12 months in advance and a minimum of 3 months' formal notice to participants prior to commencement.⁴ These notice periods provide transparency on staged commencement to allow participant readiness and stage transition activities to occur.

AEMO considers staged implementation will deliver long-term net benefits that exceed short term costs

The IPRR staged implementation approach promotes the efficient operation and use of electricity services. As a voluntary mechanism, staged implementation will allow learnings and participant and consumer confidence to build prior to Stage 3 to support participation and long-term benefits.

As participation and system functionality expands through each stage, participants and AEMO will build operational experience, refine business models, and test new capabilities in a controlled environment. In addition, staged implementation supports the efficient use of finite industry and AEMO implementation resources. This supports the robust implementation of the full IPRR framework in Stage 3 and a smooth transition to full functionality, reducing the risk that early implementation challenges could undermine participant uptake, market confidence, and potential benefits. The staged approach would also provide flexibility to incorporate lessons and implications arising from parallel reform processes, including implementation of relevant NEM Review recommendations.

While the proposed rule change may defer dispatch mode delivery by up to 2.5 years, AEMO considers it enhances IPRR's long-term benefits. AEMO appreciates that some market benefits may be delayed relative to the current implementation timetable. However, Stages 1 and 2 would continue to deliver benefits during this period, at a lower level, while providing the operational experience and system capabilities required to maximise long term benefits from the successful deployment of the full framework in Stage 3.

AEMO has engaged with stakeholders to inform this rule change request

AEMO has undertaken extensive stakeholder engagement across multiple industry forums, webinars, one-to-one meetings, and received 12 submissions to a consultation paper on a staged approach. Throughout this engagement, stakeholders have been open to a revised delivery approach, with stakeholder submissions to the consultation paper expressing a high degree of support for a staged approach.

This rule change request substantially reflects the proposal set out in the consultation paper with 2 variations.⁵ These are that 1) Stage 2 would be delivered through trial arrangements rather than through an amended IPRR Rule and 2) VIM payments would not be available at Stage 2 given implementation through the regulatory sandboxing framework.

⁴ AEMO will continue to engage closely with industry on progress towards stage commencement through its NEM industry enablement program, to maximise transparency and certainty for participants.

⁵ AEMO has also published a consultation paper feedback summary report, which is available [here](#).

AEMO made this decision to minimise rule change request complexity and maximise learning opportunities, reflecting the greater flexibility provided by regulatory sandbox arrangements. AEMO also considers that this change will enhance the benefits of conducting a trial and address several timing and sequencing issues identified through the consultation process. It can also support a smoother transition between the early stages, enable concurrent stage development activities, and improve overall participant readiness for full dispatch mode.

AEMO is conscious that the purpose of the VIM is to support participation in IPRR and is exploring alternative funding support that may assist participation in Stages 1 and 2 prior to VIM payments becoming available.

2. Background

Currently, aggregated non-scheduled price-responsive resources have limited pathways to participate in dispatch, meaning they are not effectively integrated into the NEM's planning and operation functions. As a result, their actual response to market conditions is not directly visible to AEMO and the market. This limits their contribution to real time balancing of supply and demand with consequential implications for price formation leading to less efficient market outcomes.

On 19 December 2024, the AEMC made the IPRR Rule,⁶ which introduced a framework that allows aggregated CER, DER, price-responsive loads, and other non-scheduled resources, to be scheduled and dispatchable in the NEM. At the centre of IPRR is 'dispatch mode' that integrates CER and flexible demand into the core NEM dispatch process. Dispatch mode allows greater participation of price responsive resources in scheduling and will reduce reliance on forecasting these aggregated price responsive portfolios, leading to improved dispatch outcomes and AEMO operational decision making.

Over time, the expanded integration and conversion of existing non-scheduled price-responsive resources into visible NEM scheduling processes is expected to reduce total system costs and decrease electricity prices for all consumers. AEMC's published benefits analysis indicates \$1.5b to \$1.8b in potential cost reductions (net value between 2025 and 2050) from undertaking the IPRR reform, compared with doing nothing.⁷

2.1.1. AEMO has identified the need for a staged approach through its IPRR implementation work to date

AEMO established the IPRR implementation project under the NEM Reform Program to carry out the procedure and system changes required to implement IPRR and to support industry readiness.⁸ This project has undertaken detailed planning and design and published procedures, guidelines, and consultation documents including:

- ISF and IPRR Constraint Formulation Guidelines⁹
- Price Responsive Reporting Guidelines¹⁰
- Voluntarily Scheduled Resources Guidelines¹¹
- VSR Incentive Mechanism Procedure¹²
- High-Level Implementation Assessment (HLIA)¹³

Learnings from this detailed implementation process, including its active stakeholder engagement, identified a range of emerging challenges and issues. As a result, in April 2026, AEMO determined it prudent to pause the

⁶ National Electricity Amendment (Integrating price responsive resources into the NEM) Rule 2024.

⁷ AEMC, Benefit analysis of improved integration of non-scheduled price-responsive resources into the NEM, 12 February 2024, p.68

⁸ Further information on the NEM reform program is available [here](#).

⁹ The ISF and IPRR Consultation of Constraint Formulation Guidelines can be found [here](#).

¹⁰ The Price Responsive Reporting Guidelines can be found [here](#).

¹¹ The Voluntarily Scheduled Resources Guidelines can be found [here](#).

¹² The VSR Incentive Mechanism Procedure can be found [here](#).

¹³ The High-Level Implementation Assessment (HLIA) can be found [here](#).

existing IPRR delivery project, reset its delivery path, and consult with industry on a revised approach. This process identified that a rule change proposal would be required to give effect to any revised delivery pathway.¹⁴

Following this initial announcement, AEMO has engaged actively with stakeholders to inform the development of a staged implementation approach to ensure it attracts and enables active participation and learnings at each stage.

In addition to multiple industry briefings and one-on-one stakeholder meetings, AEMO also sought stakeholder comments on its revised approach in a consultation paper published on 1 June 2026. Submissions received in that consultation have informed this rule change request. Further discussion is provided in Section 4.2.¹⁵

Further information on AEMO's implementation effort and the systems affected by IPRR is provided in Appendices A, B, and C.

2.1.2. This rule change request is submitted as part of a package of IPRR related rule change requests

Throughout 2025 and 2026, AEMO engaged with the AEMC and other stakeholders on potential changes to the IPRR Rule to reduce implementation costs, market uncertainty, and any unintended consequences of implementing the framework. Engagement through the IPRR implementation project has identified refinements and options that could enable the policy intent of the IPRR Rule to be met while also improving its efficient and cost-effective delivery. Through this process, AEMO has identified a set of IPRR related rule changes, in addition to this rule change request for staged implementation, that are necessary to ensure robust implementation in the long-term interest of consumers.

This rule change request is therefore submitted in a package accompanied by the following:

1. Accounting for VSRs in the Frequency Performance Payment (FPP) residual rule change request. AEMO proposes a change to how frequency performance payments are allocated to VSRs over 5 MW, moving away from an individual assessment to one where VSRs are accounted for in the FPP residual.
2. Additional minor IPRR changes rule change request. These minor changes are to allow the publication of VSR SCADA data and the aggregation of non-scheduled load in central dispatch. The additional minor rule change request is proposed as an expedited non-controversial request.

AEMO is proposing these as separate rule change requests to provide the AEMC flexibility on whether to consolidate or progress consideration of each change through separate processes.

In addition to the rule change requests included in this package, AEMO is developing a further set of rule change requests to further support implementation of dispatch mode in Stage 3 of the staged implementation approach. AEMO expects to submit these rule change requests to the AEMC before the end of 2026.

The additional rule change requests AEMO is currently developing are:

- introducing minimum ramp rate arrangements for VSRs and other plant - to address an unintended consequence of the IPRR Rule's amendments to minimum ramp rate requirements for aggregated conventional generating plant.

¹⁴ AEMO's decision to pause IPRR project delivery and submit a rule change request for a staged implementation approach was announced at a Project Consultative Forum (PCF) session on 23 April 2026. Further information is available [here](#).

¹⁵ The Consultation Paper – IPRR Reform Implementation Project - Development of a staged delivery path can be found [here](#).

- enhancing the VIM cost recovery arrangements - to improve efficiency by aligning VIM payment and cost recovery arrangements with AEMO's settlement processes.
- clarifying the interaction between clause 3.8.2(e) and IPRR hibernation mode - to clarify the arrangements that apply where a VSR is subject to NER clause 3.8.2(e), which allows AEMO to require otherwise exempt participants to participate in central dispatch for system security purposes.

Final determinations for these rule changes by the end of 2027 will provide the required time for AEMO to incorporate outcomes into system design, development and implementation planning for dispatch mode in Stage 3.

AEMO is also considering how best to give effect to the AEMC's policy objective regarding VSRs being constrained-on and constrained-off. AEMO is currently assessing potential approaches and intend to engage with industry on options to inform whether a further rule change request may be required to give effect to the preferred option.

3. Statement of issue

3.1. Current Rules

On 19 December 2024, the AEMC published the final IPRR Rule and determination which included the following three components.¹⁶

1. A voluntary framework known as “dispatch mode” to integrate presently non-scheduled price-responsive resources into NEM scheduling and dispatch processes.¹⁷
2. A time-limited incentive scheme, the VIM, to drive IPRR participation in its early years.¹⁸
3. A monitoring and reporting framework to transparently evaluate the effect of price-responsive resources on the accuracy of AEMO’s short-term demand forecasts and associated impacts on market efficiency.¹⁹

3.1.1. Dispatch mode

Dispatch mode allows VSRPs to nominate a qualifying resource or multiple qualifying resources as a VSR, which can participate in central dispatch processes.²⁰

There are three modes of operation within dispatch mode. A VSR in dispatch mode can be in:

- **Active mode:** A VSR in active mode participates in dispatch as a scheduled resource. In active mode, the VSR submits bids, receives dispatch instructions from AEMO, and has full conformance obligations.
- **Inactive (Deactivated) mode:** VSRs may temporarily deactivate during which the VSR is exempt from certain rule clauses, including directions and conformance to dispatch instructions (except in relation to provision of market ancillary services). During the deactivation period, VSRs submit energy bids but are not subject to conformance against dispatch instructions.²¹
- **Hibernated mode:** VSRs can hibernate for a minimum 30 days and no more than 18 months (maximum hibernation period) during which the VSR will not participate in central dispatch for energy and is not considered to be a scheduled resource.²² Hibernation is used for longer-term opt-out without deregistration.

The IPRR Rule set the date for dispatch mode commencement to be 23 May 2027.²³

¹⁶ National Electricity Amendment (Integrating price-responsive resources into the NEM) Rule 2024

¹⁷ AEMC, IPRR final determination, 19 December 2024, Appendix A.

¹⁸ Ibid, Appendix B.

¹⁹ Ibid, Appendix C.

²⁰ NER 3.10A.1(a) specifies that a ‘qualifying resource’ means:

1. a market generating unit that is a non-scheduled generating unit;
2. a market bidirectional unit that is a non-scheduled bidirectional unit;
3. a market connection point that is non-scheduled load; or
4. one or more small generating units or small bidirectional units (or any combination) at a small resource connection point classified as a market connection point in accordance with clause 2.2.8.

²¹ IPRR Rule 3.10A.2.

²² Ibid.

²³ IPRR Rule 11.180.1

3.1.2. Participation in dispatch mode is supported by the VIM

The IPRR Rule sets out a time-limited mechanism to further encourage VSR participation in the NEM called the ‘VSR incentive mechanism’ or VIM.²⁴ The VIM utilises tenders to be administered by AEMO with an overall cap of \$50 million that is recovered from cost recovery market participants through market settlements. The IPRR Rule requires AEMO to conduct at least two VIM tenders across an ‘incentive period’ of 1 April 2026 to 31 December 2031.²⁵

3.1.3. IPRR monitoring and reporting framework implemented and operational

The IPRR Rule also introduced a new framework to monitor and report on non-scheduled price-responsive resources. The framework includes reporting by AEMO and the Australian Energy Regulator (AER) on the impacts, efficiency implications, and costs associated with non-scheduled price-responsive resources in the market. Monitoring and reporting outcomes will inform the AEMC if a “visibility market model” is warranted.²⁶

The monitoring and reporting framework has been delivered and is operational. In accordance with NER 3.10C.2(e)-(g), AEMO has developed a monitoring and reporting portal for the quarterly and annual reporting required under the IPRR Rule. The monitoring and reporting portal can be found [here](#).²⁷

Insights from this framework can help inform AEMO’s design and delivery of IPRR.

3.1.4. The IPRR Rule requires AEMO to deliver dispatch mode on 23 May 2027

The IPRR Rule requires dispatch mode, and the VIM to commence operation as follows:

- Dispatch mode to commence on 23 May 2027, which is the point when VSRs begin participating in central dispatch and the full IPRR framework becomes operational.²⁸
- The incentive period for the VIM to commence on 1 April 2026 and finish on 31 December 2031,²⁹ with VIM payments commencing on 23 May 2027 at the same time as dispatch mode.

Figure 1 shows the current IPRR Rule implementation timeline including the monitoring and reporting framework, which commenced on 15 April 2026, and dispatch mode and VIM payment eligibility both commencing on 23 May 2027.³⁰

²⁴ IPRR Rule 3.10B

²⁵ IPRR Rule 3.10B.1

²⁶ IPRR Rule 3.10B. See also IPRR final determination, section 3.4 and Appendix C

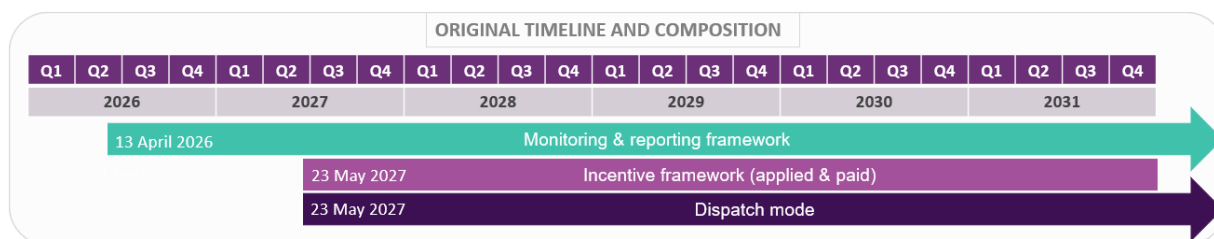
²⁷ The IPRR monitoring and reporting portal and additional information can be found [here](#).

²⁸ IPRR Rule 11.180.1

²⁹ IPRR Rule 3.10B.1

³⁰ Note, VIM commencement is taken to be at the point where VIM payments commence.

Figure 1 IPRR Rule commencement dates



3.2. Challenges meeting the current Rule's timing

The IPRR Rule requires all dispatch mode functionality to commence at a single point in time. At the point of dispatch mode commencement in May 2027, the framework assumes a complete transition to full participation. It does not provide for interim functionality, staged commencement, or progressive participant transition arrangements.

AEMO's internal planning and detailed design work, through the IPRR implementation project and stakeholder consultation, identified a single-stage delivery for IPRR was sub-optimal. As a complex reform for a voluntary market mechanism, single-stage delivery increases implementation risk and requires AEMO and participants to deliver an end state functionality without the opportunity to test and iterate on design functionality. This limits scope to achieve operational learnings, inform business model development and supporting voluntary participation ahead of full implementation.

After extensive consideration, AEMO determined it could not reduce the delivery risk of full IPRR framework implementation by 23 May 2027. AEMO therefore considered it would not be prudent or likely to deliver outcomes in the short- or long-term interests of market participants or consumers to continue with IPRR implementation on existing timelines.

The following specific issues informed AEMO's decision in this regard:

- **NEM Reform congestion** has affected AEMO's ability to deliver IPRR as originally intended. Delivering the full IPRR dispatch mode functionality requires extensive changes across core NEM systems such as dispatch, forecasting and settlement. Competing priorities across multiple concurrent reform projects have constrained delivery, with finite availability of key subject matter experts and significant congestion in IT specialist teams through 2026 and 2027.

To illustrate, in addition to IPRR, reform programs currently underway include:³² Metering Services Review, Shortening the Settlement Cycle, ST PASA Replacement, Project EnergyConnect integration, Improving Security Frameworks, Cash Security, Inverter Dispatch, Flexible Trading Arrangements, Industry Data Exchange (IDX), Identity and Access Management (IDAM), Real-Time Data for Consumers, Supporting Meter Compliance, and Cumulative Price Threshold projects.³² Further information on AEMO's NEM Reform Implementation Roadmap and reform program is provided in Appendix E.³³

The principal challenge is the concentration of multiple reform initiatives on the same areas within a similar timeframe. This concentration of delivery effort has affected the same systems, specialist

³² AEMO, Project Consultative Forum, Meeting #42 presentation, available [here](#).

³³ The NEM Reform Implementation Roadmap can be found [here](#).

resources and participant implementation teams. These constraints are not readily scalable in the short term and have become more apparent through detailed implementation planning.

- **IPRR implementation technical solution complexity** was found to be greater than originally anticipated, increasing delivery effort, duration and cost. This included technical issues arising from allowing VSRs to operate in multiple modes – i.e. the ability to handle deactivation and hibernation adds to the complexity of the NEM dispatch model and other core AEMO systems. AEMO has also identified the need to replace legacy platforms to provide foundational capability to manage expected VPP participation volumes. These foundational systems must be delivered in advance of the VSR mode switching functionality. Appendices A, B and C illustrate AEMO’s systems implementation task and degree of solution complexity involved.

AEMO considers these factors have led to unacceptable uncertainty in delivery timelines and impose significant risks for both AEMO and participants managing their own implementation programs. This delivery risk could result in a poor early participant experience, reducing market confidence, slowing uptake of the voluntary mechanism, and limiting the potential benefits of IPRR.

4. How the staged implementation approach will address these issues

AEMO proposes to implement IPRR in three stages. A staged approach will enable AEMO to deliver IPRR functionality progressively while managing reform congestion, supporting participant readiness, and incorporating considerations and learnings from concurrent reform initiatives as they arise.

Only Stage 3 - full implementation of IPRR dispatch mode and VIM payments – would be implemented through this rule change request. Stages 1 and 2 involve the progressive delivery of IPRR systems functionality and capabilities under AER sandbox enabled trial arrangements to provide greater flexibility in staged approach design and delivery.

AEMO does not seek to alter the end state dispatch mode functionality that would be delivered in Stage 3 in this rule change request.³⁴ Instead, this rule change request focuses on the timing and delivery of Stage 3 to enable learning and the progressive delivery of system capabilities through Stages 1 and 2 that are necessary to support the successful delivery of dispatch mode in Stage 3.

While this rule change request focusses on Stage 3 timing and delivery, AEMO has also sought a minor change to facilitate the inclusion of VPPs in trial Stages 1 and 2 by providing for the aggregation of non-scheduled load for the purposes of central dispatch. This administrative change is set out in the accompanying additional minor IPRR Rule change request.³⁵

AEMO is also currently engaging with the AER and stakeholders on the design of the Stage 1 and 2 trials. If this process identifies any incremental rule changes that would support the efficient implementation of Stages 1 and 2, AEMO intends to engage with the AEMC to determine whether those changes can be considered as part of this rule change process.

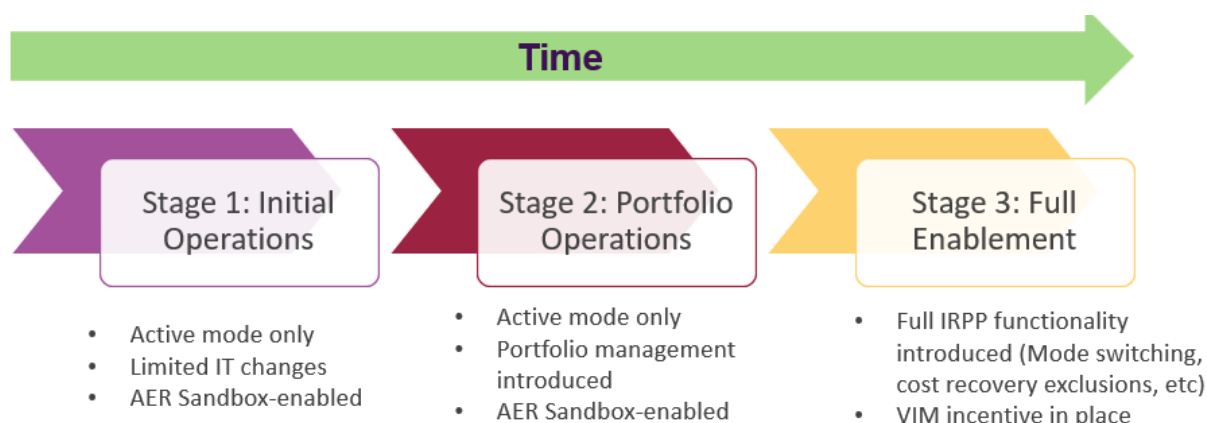
4.1. Introducing the staged implementation approach

The staged implementation approach would deliver IPRR functionality progressively, increasing scope and complexity over time as capacity and readiness allow. The relationship between stages is conceptually introduced in Figure 2.

³⁴ AEMO has also identified a set of IPRR related rule changes, in addition to this rule change request for staged implementation, that are necessary to ensure robust implementation in the long-term interest of consumers. These rule change requests do not affect IPRR's core policy intent and are discussed further in section 2.1.2.

³⁵ An amendment is proposed to include non-scheduled load in the list of resource types that can be aggregated for central dispatch under NER 3.8.3(a).

Figure 2 Staged implementation approach



Stage 1 – Learning commences through the regulatory sandbox trial. Stage 1 would include in dispatch and provide real-world visibility of sub-30 MW non-scheduled generators, Bidirectional Units (BDUs) under 5 MW, other small batteries, and a limited number of residential VPPs. This will enable AEMO and industry to evaluate system implementation approaches and assess their benefits through operational experience.

Stage 1 is intended to operate as a controlled implementation with a select participant cohort and simplified arrangements to enable targeted learning. In keeping with a trial approach, there is a limit to the size and number of participants that could be reasonably managed given the manual processes to onboard participants.³⁶

Participants operate in active mode as fully scheduled resources under AEMO's existing systems and NER arrangements in Stage 1. Consistent with AEMO's existing system capabilities, only single-technology aggregations would be permitted, except for VPPs which may include a range of behind the meter technologies. Technical barriers to entry and the compliance burden associated with operating in active mode without access to hibernation and inactive modes are proposed to be managed through AER regulatory sandbox trial waiver arrangements.^{37 38}

Stage 2 – Delivers foundational systems that will support dispatch mode delivery in Stage 3. AEMO is focussing on delivering VSR portfolio management capabilities in Stage 2 that will allow the broader involvement of aggregated resources, in particular a larger number of full scale residential VPPs.³⁹ AEMO proposes that Stage 2 participation continue to be supported by regulatory sandbox arrangements.

Portfolio management is a foundational capability to support large scale VPP participation in dispatch and includes processes to establish and maintain portfolios of resources, enable resource nomination/de-nomination, enable aggregation of resources within zones, manage the addition/removal of resource NMIs,

³⁶ While Stage 1 is 'trial-like', participation still occurs within AEMO's live dispatch systems.

³⁷ AEMO is currently engaging with the AER on the design of the Stage 1 and 2 sandboxing arrangements. Any participant waiver applications would be subject to AER assessment through their regulatory waiver approval processes.

³⁸ AEMO proposes conformance enforcement will be waived at Stage 1 with limited waivers also available in Stage 2. Conformance monitoring will however be in place to provide real world insights into VSR conformance.

³⁹ Stage 1 and 2 participants progressing to Stage 3 will need to satisfy the same procedural and registration requirements as new participants at Stage 3.

and manage aggregated resource configurations and standing data.⁴⁰ Industry feedback would be obtained in Stage 2 on the first release of portfolio management functionality including on usability, challenges and barriers to entry.

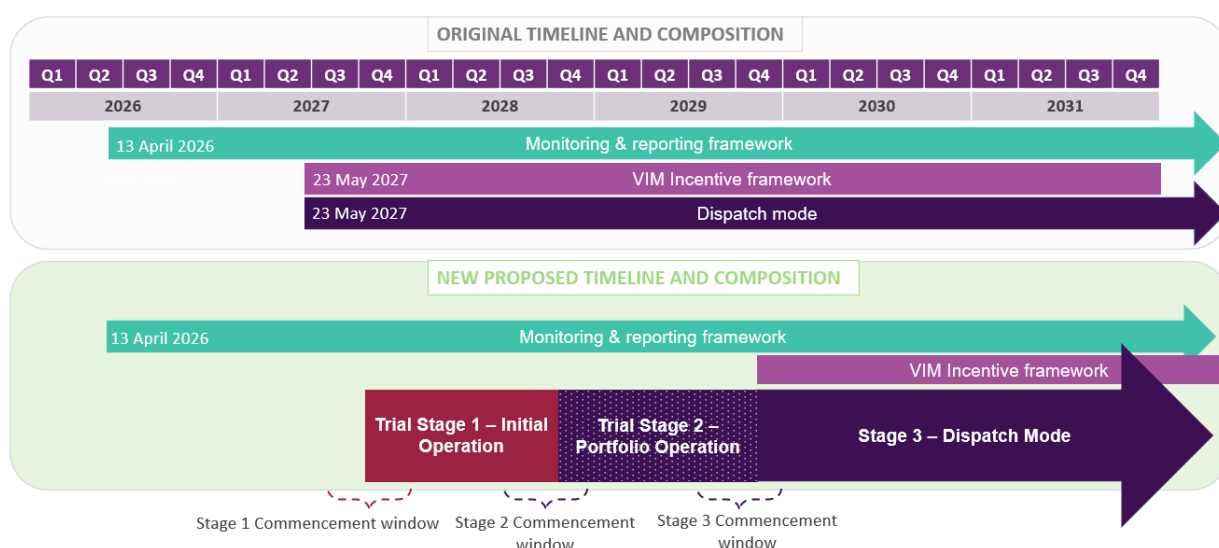
Participants in Stage 2 will remain scheduled resources in active mode without multiple modes of operation, including inactive or hibernation modes, which will be delivered in Stage 3. Like Stage 1, only single-technology aggregations would be permitted, except for VPPs which may include a range of behind the meter technologies. Stage 2 regulatory sandbox arrangements are intended to provide access to dispatch conformance waivers to manage participation risk and any technical barriers to participation.

Stage 3 – The IPRR Rule commences in Stage 3 including dispatch mode and VIM payments. Stage 3 delivers the systems required to implement more complex functionality and integrate it with AEMO’s core NEM platforms. VIM payments and systems enabling mode shifting between active, inactive, and hibernated modes of VSR operation will be delivered in Stage 3. This complex integration task will benefit from the additional time and learning opportunities provided through Stages 1 and 2.

AEMO may also apply learnings from VSR conformance in Stages 1 and 2 to develop VSR-specific conformance criteria for Stage 3. These criteria could consider the characteristics of aggregated CER resources and the ways in which their capabilities differ from conventional scheduled resources. The IPRR Rule provides for AEMO to specify VSR conformance criteria in the VSR Guideline.⁴¹ AEMO can therefore assess and calibrate ongoing IPRR conformance requirements through stakeholder consultation on the VSR Guideline, as required.

Figure 3 shows Stage 1 commencing in August 2027, followed by Stage 2 in mid to late 2028, and dispatch mode and VIM payments commencing at Stage 3 in mid to late 2029.

Figure 3 IPRR Rule timing compared to proposed staged implementation approach timing



⁴⁰ AEMO, Integrating price responsive resources into the National Electricity Market: High level implementation assessment, March 2025, Table 3, p. 18.

⁴¹ IPRR Rule 3.10A.3(b)(5)

4.1.1. How the staged implementation approach addresses existing IPRR Rule issues

The staged implementation approach, with all dispatch mode functionality and VIM payments commencing in Stage 3, provides time for AEMO and industry to gain operational learnings and progressively implement the necessary systems while working within resource availability constraints. Staged implementation would:

- **Address reform congestion related risks** - Progressive delivery of IPRR functionality, through a regulatory sandbox, aligns with the availability of AEMO's constrained IT and subject matter expert resources and better supports the successful and timely delivery of AEMO's broader reform program. This approach improves reform delivery efficiency and reduces implementation risk by delivering key IT platform uplift and legacy system replacement initiatives over time, in preparation for dispatch mode commencement in Stage 3.
- **Enable learning and continuous improvement supporting robust delivery of full dispatch mode** - A staged implementation approach allows AEMO to progressively build operational experience in an area that involves uncertainty around uptake, operational behaviour, incentive effectiveness and broader market outcomes. By providing opportunities to test key assumptions, evaluate outcomes and apply lessons learned before delivering dispatch mode in Stage 3, a staged approach reduces uncertainty, improves implementation decision-making and supports more efficient reform delivery.

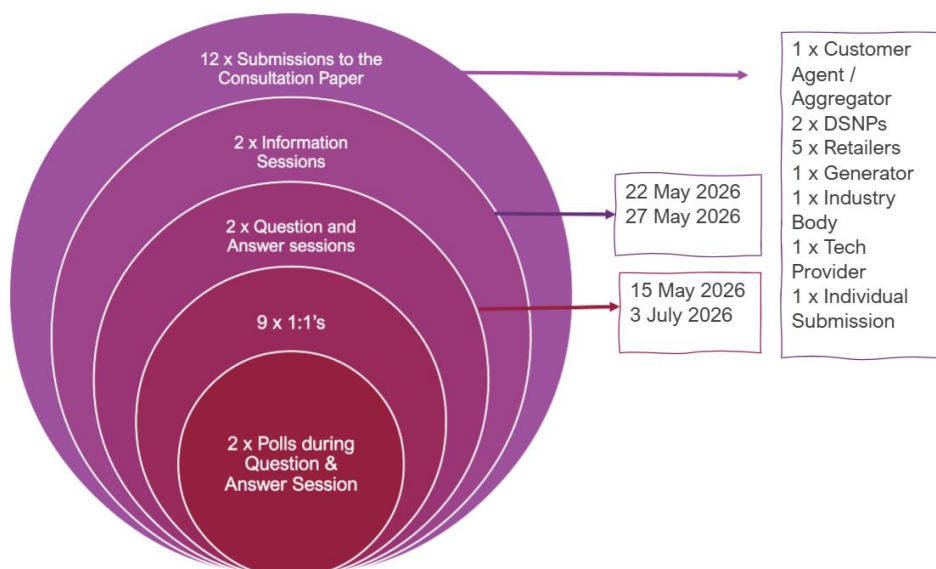
Staged implementation also supports participant capability and confidence. It enables participants to develop and test their systems and refine business models through real-world experience as functionality is progressively delivered. This may support more participant confidence and greater levels of participation in dispatch mode delivering enhanced benefits over time.

- **Leverage the flexibility of the regulatory sandboxing mechanism** – AEMO proposes progressing Stages 1 and 2 through a regulatory sandbox in partnership with industry and the AER. Sandboxing provides a flexible approach to testing arrangements and identifying implementation issues before dispatch mode is introduced in Stage 3. A flexible approach allows AEMO, industry, and the AER to adjust timing and scope as required and as information and learnings become available. This approach aims to maximise learnings from early deployment and use those insights to inform the dispatch mode implementation. The use of sandboxing to deliver IPRR Stages 1 and 2 may also provide industry learnings on the role of sandbox trials for informing the implementation of large complex reforms.
- **Capture synergies with related parallel reform processes** – A staged implementation approach which delivers dispatch mode in Stage 3 provides scope for AEMO and industry participants to incorporate lessons learned from related reform initiatives as they develop. In particular, the proposed Market Visibility Framework design is currently under development and shares complementary objectives to improve the participation and visibility of aggregated non-scheduled price responsive resources. A staged approach allows AEMO to consider and identify potential opportunities for how the IPRR systems solution design could also enable any future market visibility framework requirements. The forward-looking systems design approach can help deliver a more efficient design and implementation for both AEMO and market participants.

4.2. Stakeholder feedback has informed this rule change request

AEMO has undertaken extensive stakeholder engagement on the proposed staged implementation approach. Stakeholders have been engaged in consultation and industry forums, one-on-one engagement, and through a consultation paper.⁴² Figure 6 illustrates the scope of stakeholder engagement as of 3 July 2026.

Figure 4 AEMO industry engagement on the staged implementation approach



On 1 June 2026, AEMO published a consultation paper that set out a proposed IPRR staged implementation approach.⁴³ AEMO received 12 submissions to its consultation paper. Stakeholders provided a high degree of support for a staged implementation approach. Stakeholder feedback:⁴⁴

- recognised a need to reset the IPRR delivery timeline
- considered that staged implementation reduced delivery risk
- expressed a desire to maintain momentum and avoid unnecessary delays

This rule change request substantially reflects the proposal set out in the consultation paper with 2 variations.⁴⁵ These are that 1) Stage 2 would be delivered through trial arrangements rather than through an amended IPRR Rule and 2) VIM payments would not be available at Stage 2 given implementation through the regulatory sandboxing framework.

AEMO is conscious that the purpose of the VIM is to support participation in IPRR and is exploring alternative funding support that may assist participation in Stages 1 and 2 prior to VIM payments becoming available. AEMO

⁴² AEMO, Integrating Price Responsive Resources (IPRR) Reform Implementation Project Development of a staged delivery path, Consultation paper, March 2025. Available [here](#).

⁴³ Further information on AEMO's IPRR stakeholder engagement is available [here](#).

⁴⁴ The alternate IPRR delivery approach consultation paper and stakeholder feedback summary report, are available [here](#).

⁴⁵ AEMO has also published a consultation paper feedback summary report, which is available [here](#)

is aware of alternate funding sources and will work with participants who are applying for funding from these sources.

5. Proposed Rule

This chapter describes the proposed IPRR staged implementation approach rule. Proposed rule elements are introduced in the following order:

- 1) Stage 3 dispatch mode and VIM commencement timing
- 2) Consequential timing and transitional amendments
- 3) Guidance and other requirements to facilitate delivery of Stages 1 and 2

The proposed rule does not seek to re-prosecute or amend the policy intent or core IPRR Rule functionality and instead focusses on the timing of Stage 3 to enable learnings to be achieved and system capability to be progressively delivered through sandbox arrangements in Stages 1 and 2.

5.1. Stage 3 commencement arrangements

The proposed Rule gives effect to the staged implementation approach by deferring commencement of dispatch mode, VIM payments, and other associated IPRR Rule obligations to Stage 3.

5.1.1. Flexible Stage 3 dispatch mode commencement dates

AEMO proposes flexibility to commence Stage 3 dispatch mode and VIM payments from 1 July 2029 but no later than 30 November 2029.

The proposed approach sets a clear expectation on the latest date on which dispatch mode would commence, while providing AEMO with flexibility to commence Stage 3 earlier in consultation with stakeholders if implementation timelines allow. The ability to commence Stage 3 early would increase market benefits which will ultimately flow through to consumers.

Commencement date flexibility allows AEMO to finalise delivery planning and incorporate participant feedback before confirming a Stage 3 implementation date once timelines are sufficiently mature. AEMO would provide participants with advance notice of the commencement date, subject to the minimum notice period discussed in the next section.

This approach also allows the earliest practicable delivery of IPRR functionality and manages system implementation timeline risk. Commencement date flexibility also provides benefits by enhancing AEMO's ability to schedule IPRR functionality releases in a coordinated manner, minimising implementation and go-live risks across multiple initiatives and supports an orderly release and commencement schedule that provides greater certainty for participants.

Box 1 – Flexible stage commencement dates

- Amend IPRR Rule 11.180.1 to specify that dispatch mode must commence no later than Friday 30 November 2029.
- Specify relevant transitional arrangements to provide for AEMO to commence dispatch mode as early as 1 July 2029.

5.1.2. Proposed notice period prior to Stage 3 commencement

AEMO recognises that participants require advanced notice of stage commencement to support planning and implementation activities. In addition to a 3-month formal commencement notice, AEMO intends to publish an indicative target commencement date approximately 12 months in advance. The target commencement date will reflect AEMO's best understanding of system delivery timelines at the time and provide participants with early guidance to also support planning and implementation activities for participants transitioning between stages.

Providing a target commencement date 12 months in advance, together with formal notice at least 3 months before commencement balances AEMO flexibility with participant certainty and provides the best available information to the market on progress towards commencement.

AEMO has worked collaboratively with participants throughout IPRR delivery program to date. AEMO would maintain open communication with industry on progress and readiness through its NEM reform program and industry enablement forums,⁴⁶ including ongoing engagement leading up to the notification of stage commencement dates.

Box 2 – Proposed notice period prior to stage commencement

- Specify transitional arrangements so that AEMO must provide a minimum of 3-months notice prior to Stage 3 commencement.

5.2. Consequential timing and transitional amendments

AEMO proposes several amendments to transitional and other timing arrangements to align with the proposed staged implementation approach. These include amending the:

- VIM incentive period end date.
- scheduled 2030 VSR Guidelines review date.
- deadline for which AEMO must amend and publish procedures, guidelines and other documents to account for the IPRR Rule (other than the VSR Guidelines).

Separately, AEMO intends to review the VSR Guidelines to accommodate any rule change outcomes. AEMO will conduct this review in accordance with IPRR Rule clause 3.10A.3(e), which provides for AEMO's reviews of the VSR Guidelines from time to time.

5.2.1. Amending the VIM incentive period end date

AEMO proposes a consequential change to the VIM incentive period to maintain its effective duration following dispatch mode commencement in Stage 3.

⁴⁶ Further information on AEMO's NEM reform program forums can be found [here](#).

The IPRR Rule defines a VIM incentive period between 1 April 2026 to 31 December 2031.⁴⁷ This provides approximately 5 years (4 years and 7 months) over which VIM payments may be made following IPRR Rule dispatch mode commencement on 23 May 2027.⁴⁸

Amending the VIM incentive period to end on 30 June 2034 would maintain approximately 4 years and 7 months of payment support after the latest date on which Stage 3 dispatch mode would commence, being 30 November 2029, and align to the end of the financial year.

AEMO only proposes to adjust the end date of the VIM incentive period because the IPRR Rule incentive period has already commenced.⁴⁹ Extending the existing end date is preferable to terminating and re-establishing the incentive period, which would add transitional complexity without changing the substantive operation of the VIM.

Box 3 – Amending the VIM incentive period end date

- Amend the definition of “incentive period” in IPRR Rule clause 3.10B.1 to end on 30 June 2034.

5.2.2. Amending the scheduled VSR Guideline review

Currently, the IPRR Rule requires AEMO to review and amend the VSR Guidelines by 23 May 2030, currently 3 years after dispatch mode is scheduled to commence on 23 May 2027.⁵⁰

AEMO proposes rescheduling the 2030 VSR Guideline review to commence 3 years after the commencement of dispatch mode in Stage 3. Commencing a review of dispatch mode within 3 years of operation will provide sufficient data and experience to inform a comprehensive review of the VSR Guideline arrangements.

Box 4 – Amending the scheduled VSR Guideline review

- Amend NER 11.180.3(c) to require AEMO to commence a review of the VSR Guidelines within 3 years of dispatch mode commencement.

5.2.3. Amending the deadline for AEMO to review, amend and publish procedures, guidelines and other documents

AEMO proposes rescheduling the deadline to review, amend and publish procedures, guidelines and other documents to take the IPRR Rule into account from 1 June 2026 to 1 July 2028.

The IPRR Rule specifies a 1 June 2026 deadline for AEMO to review, amend, and publish guidelines, procedures and other documents published by AEMO to take the IPRR Rule into account.⁵¹ This requirement was approximately one year prior to the IPRR Rule dispatch mode commencement date.

⁴⁷ IPRR Rule 3.10B.1

⁴⁸ The incentive period commences before the start of payments to provide for AEMO to run tenders prior to dispatch mode commencement. During the incentive period, AEMO must also conduct at least two tender processes to determine which participants will receive participation payments.

⁴⁹ IPRR Rule 3.10B.1

⁵⁰ IPRR Rule 11.180.3(c)

⁵¹ IPRR Rule 11.180.2(b)

While AEMO conducted its review of consequential guidelines, procedures and other documents prior to the existing 1 June 2026 deadline, it determined not to progress any specific consultations following the decision to pause and reset the IPRR Rule implementation. AEMO wanted to avoid unnecessary stakeholder engagement on documents that may require subsequent changes pending the outcome of the staged implementation decision.

The proposal to amend the deadline to 1 July 2028 maintains a minimum one-year period prior to the earliest date on which Stage 3 dispatch mode would commence.

While a minimum one-year lead time is requested, AEMO intends to update these guidelines as early as possible to maximise certainty for participant readiness and internal system development activities.

Box 5 – Amending the deadline for AEMO to review, amend and publish procedures, guidelines and other documents

- Amend NER 11.180.2(b) to require AEMO to review, amend, and publish guidelines, procedures and other documents published by AEMO to take the IPRR Rule into account by 1 July 2028.

5.3. Guidance and other requirements to facilitate delivery of Stages 1 and 2.

Sandbox arrangements provide flexibility to support early enablement and testing of key IPRR functionality within today's regulatory framework. AEMO, the AER and industry are progressing the detailed design of Stages 1 and 2 including the scope of potential sandboxing waivers to enable participation and early learnings ahead of end state implementation.

As this process progresses, we may identify certain IPRR Rule provisions or other amendments that could support and enable these sandboxing trials. AEMO would welcome the AEMC's consideration of any supportive provisions that may assist the sector and AEMO in delivering a trial in partnership with the AER and industry that achieves the learnings that can inform AEMO's trial stage delivery process.

For example, this may include:

- Amendments to address any NER barriers identified in the sandbox detail design that the waiver process cannot address.
- Early enablement of certain IPRR Rule provisions where they may more efficiently support trial enablement.

6. How the Proposed Rule Contributes to the National Electricity Objective (NEO)

The National Electricity Objective as stated in the National Electricity Law is *“to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:*⁵²

⁵² National Electricity Law section 7.

- (a) *price, quality, safety, reliability and security of supply of electricity; and*
- (b) *the reliability, safety and security of the national electricity system; and*
- (c) *the achievement of targets set by a participating jurisdiction—*
 - i. *for reducing Australia's greenhouse gas emissions; or*
 - ii. *that are likely to contribute to reducing Australia's greenhouse gas emissions.”*

In submitting this rule change request, AEMO does not seek to revisit the AEMC’s IPRR final determination assessment that IPRR contributes to the NEO.⁵³ Rather, informed by its experience and practical insights and learnings during IPRR implementation, AEMO recommends delivering the complex IPRR reform in stages, and over a longer time horizon. This will deliver a better outcome for the market and ultimately consumers by better balancing the long-term market benefits while managing the delivery complexity and identified implementation risks. For example:

- **More efficient use of scarce delivery resources will promote lower cost NEM reform.** It will achieve more efficient implementation across the range of NEM reform programs currently underway this will deliver better value for market participants and consumers recognising NEM reform implementation costs are recovered from these parties. AEMO recognises that implementation resources are finite and seeks to sequence reforms in a manner that maximises overall consumer benefits, reduces delivery risk and avoids inefficient expenditure arising from compressed implementation timeframes, not just for IPRR implementation but across the suite of concurrent reforms being delivered.
- **Staged implementation enables AEMO and participant learning that may enhance longer term price and reliability benefits.** Staged learning enables AEMO and market participants to refine system implementation, business models, operational procedures, and customer relationships, using experience and information gained at earlier stages. The learning achieved through staged implementation may build industry confidence leading to higher participation of this voluntary mechanism than would have otherwise been the case. Higher participation, more refined participant business models, and robust AEMO systems implementation may improve the ability of demand-side and distributed resources to respond to market signals, placing downward pressure on wholesale prices and improving the efficiency of dispatch outcomes.
- **Allows learnings from parallel reform projects to be incorporated.** Staged implementation will also provide scope to incorporate any learnings and implications of parallel reform processes, like those related to the NEM Review recommendations. For example, the Market Visibility Framework development process may yield insights that could also inform the implementation of Stage 3, consistent with IPRR’s policy objectives. A staged implementation approach also enables alignment of implementation approaches and functionality in the systems solution design, improving delivery efficiency across both frameworks.

7. Expected benefits and costs of the proposed rule

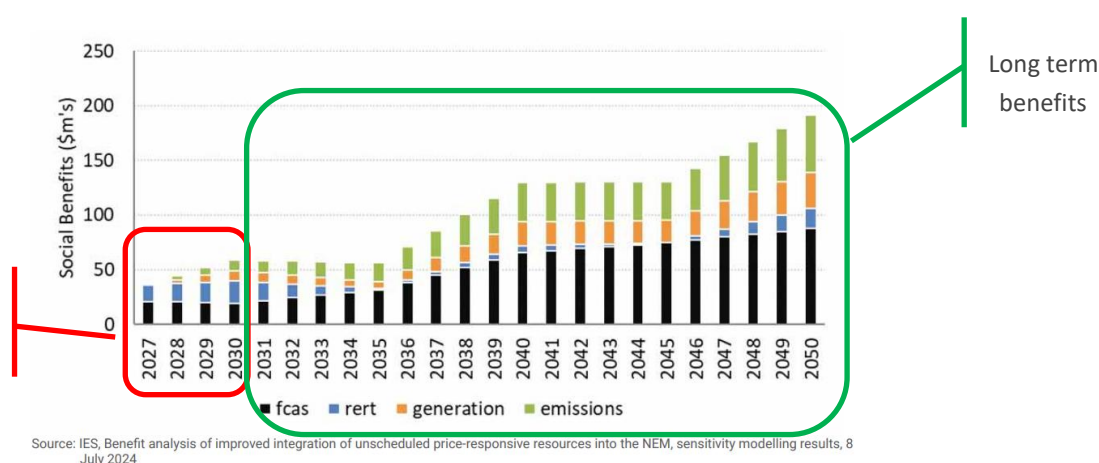
On balance, AEMO considers the impact of the staged implementation approach that delivers dispatch mode in Stage 3 to be net positive for market participants and consumers. AEMO acknowledges that staged implementation may reduce near-term market benefits relative to dispatch mode commencing in line with the IPRR Rule implementation timeline. This is due to the potential for lower or more limited participation and scope during Stages 1 and 2, and therefore fewer market benefits may accrue than would have otherwise been the

⁵³ AEMC, IPRR final determination, 19 December 2024, pp. 37-40.

case under full IPRR implementation. However, it is expected the costs associated with delays in project delivery due to risks and reform congestion under a “no change” scenario could outweigh any potential short-term benefits. AEMO therefore considers a staged implementation is the most efficient pathway to deliver longer-term benefits by using a more pragmatic reform implementation and delivery project that can benefit from a trial-informed implementation and market development approach.

The staged approach delays dispatch mode delivery by up to 2.5 years. During this time, market benefits will still be accessible through participation in Stages 1 and 2, albeit at lower levels. The scope of the period in which market benefits would be affected by staged implementation is illustrated in Figure 5, which shows the timing of benefits modelled in the AEMC’s IPRR final determination. In particular, the red box highlights the portion of near-term benefits that may be reduced during Stages 1 and 2. In contrast, the green box highlights the much greater scope of IPRR benefits that accrue over the long term.⁵⁴

Figure 5 IPRR net benefits in the short and longer terms



7.1. Expected Benefits

Benefits for AEMO and consumers from reduced implementation risk and delivery costs. The staged approach reduces delivery risk by sequencing capability development and deferring more complex dispatch mode functionality to later stages when AEMO and participants will have the benefit of learnings achieved through earlier stages. It allows AEMO to progressively implement and test systems, incorporate industry feedback, and apply operational learnings during Stages 1 and 2 before full implementation. This reduces the risk and costs of suboptimal implementation, lowering the risk of system rework and remediation costs that are passed through the market participants and are ultimately borne by consumers.

Benefits for AEMO, participants and consumers – more efficient use of scarce delivery resources. A staged implementation approach allows AEMO and market participants to sequence investment and capability development more effectively. It supports more efficient use of constrained delivery resources within a congested reform pipeline, reducing AEMO’s implementation costs and avoiding inefficient expenditure. Lower AEMO implementation costs reduce charges recovered through market fees and ultimately borne by consumers.

⁵⁴ AEMC, IPRR final determination, 19 December 2024, p. 38, Figure 4.1

Benefits for market participants – enhanced participation and capability development. The staged approach allows participants to progressively build the capability required to meet dispatch obligations, manage aggregated portfolios and develop business models. By lowering initial implementation costs and providing opportunities to gain operational experience, participants can refine systems, processes and business models before committing to full capability. This supports participation and more effective implementation outcomes that will increase the quantum of market efficiency benefits that may be achieved in the long term.

7.2. Expected Costs

The IPRR staged implementation approach introduces a range of additional costs relative to the single step implementation model.

As discussed, the primary cost is associated with the loss of some near-term market efficiency benefits from lower participation in Stages 1 and 2.

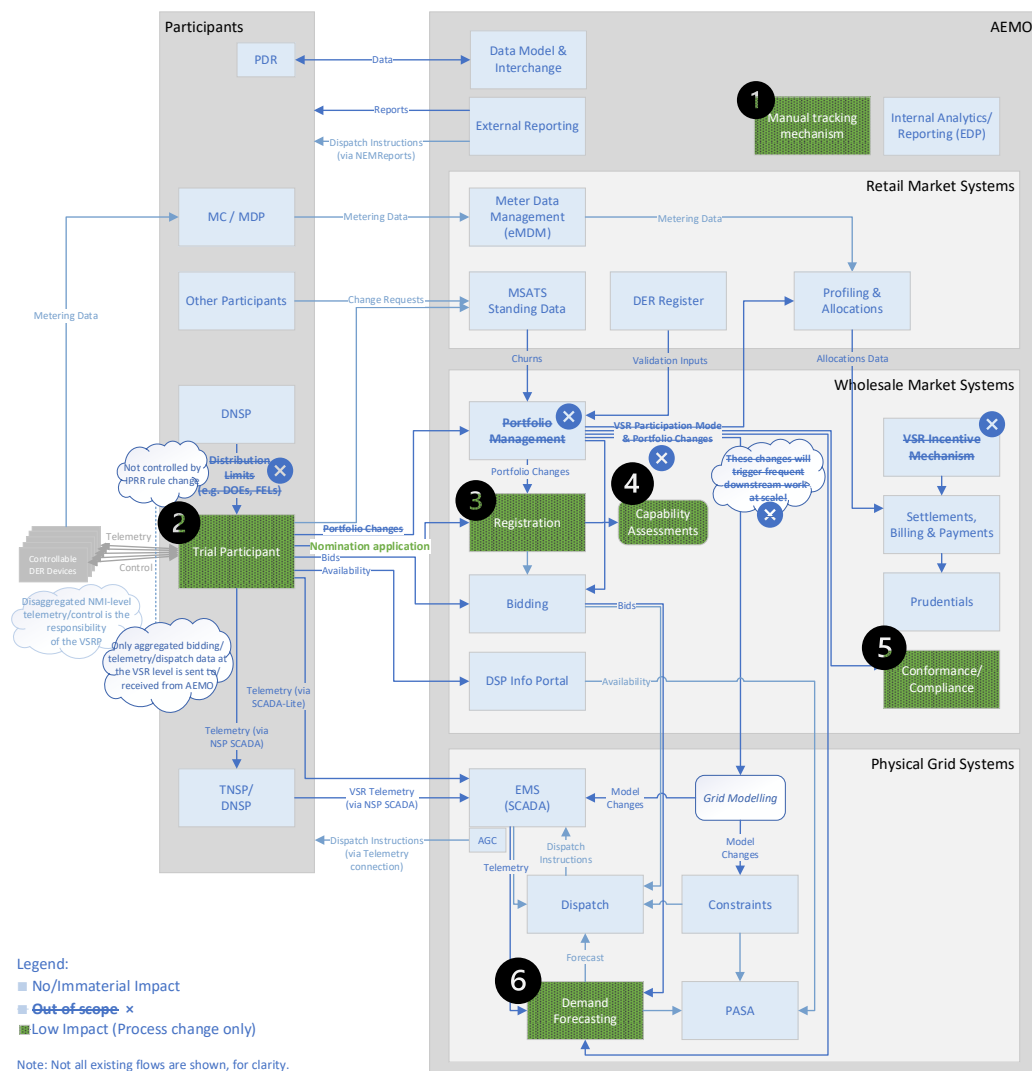
There may also be additional development and administrative costs associated with a longer implementation timeline. While these costs should be recognised, they are primarily short-term and transitional in nature and are incurred to reduce more significant implementation risks and support the delivery of long-term benefits.

Transitional costs may include AEMO onboarding participants across multiple stages and managing the transition from Stages 1 and 2 trial-style arrangements to a Stage 3 regulatory framework. AEMO expects these costs to be modest and considers them justified by the benefits of a more robust, efficient and fit-for-purpose implementation.

There may also be additional short-term costs arising from participant uncertainty. However, some degree of uncertainty is inherent in a flexible, learning-oriented delivery approach that allows AEMO and participants to inform and refine implementation arrangements through operational experience. AEMO considers that any additional short-term costs incurred by participants are likely to be outweighed by the longer-term benefits of a more robust, efficient and fit-for-purpose dispatch mode implementation that better reflects operational experience and market needs.

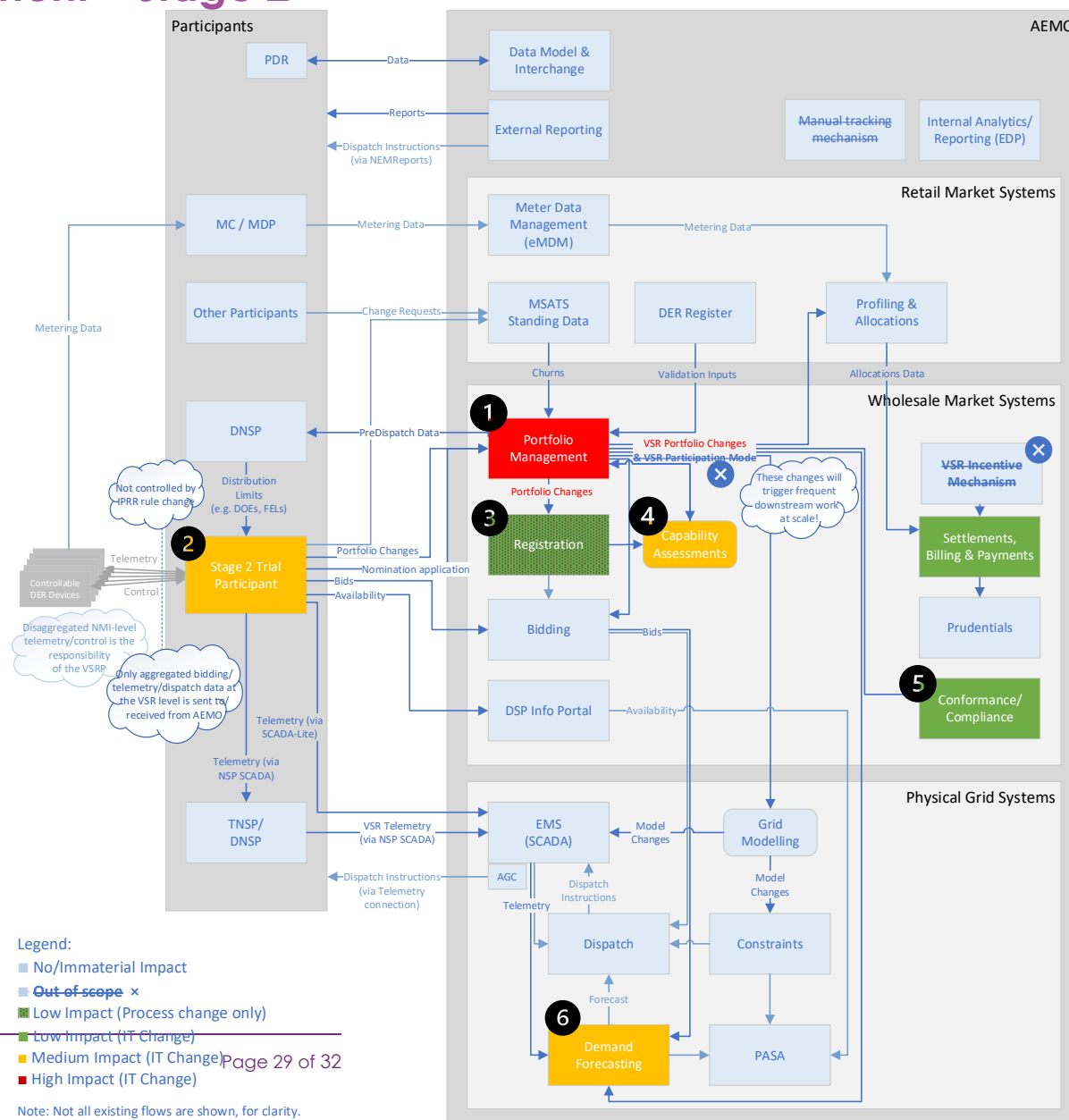
Appendix A. System impact assessment – Stage 1

Component	Impact
1. Manual Tracking Mechanism	AEMO will track VPP involvement through some manual process so they can be re-classified as VSR prior to dispatch mode commencement.
2. Trial Participant: Nomination Application	Trial Participants send through a nomination application (e.g. a pdf form or csv)
3. Registrations	Participating resources will be registered in one of the existing scheduled categories associated with its native plant type. VSR Subtype delivery in stage 1 is currently under assessment.
4. Capability Assessments	AEMO will assess the technical capabilities of the nominated VSR.
5. Conformance / Compliance	AEMO to monitor conformance but suspend conformance enforcement for Stage 1 participants
6. Demand Forecasting	AEMO will manually update the demand forecast models, to move any non-scheduled resources that are participating in the trial that were previously modelled in demand forecasts.



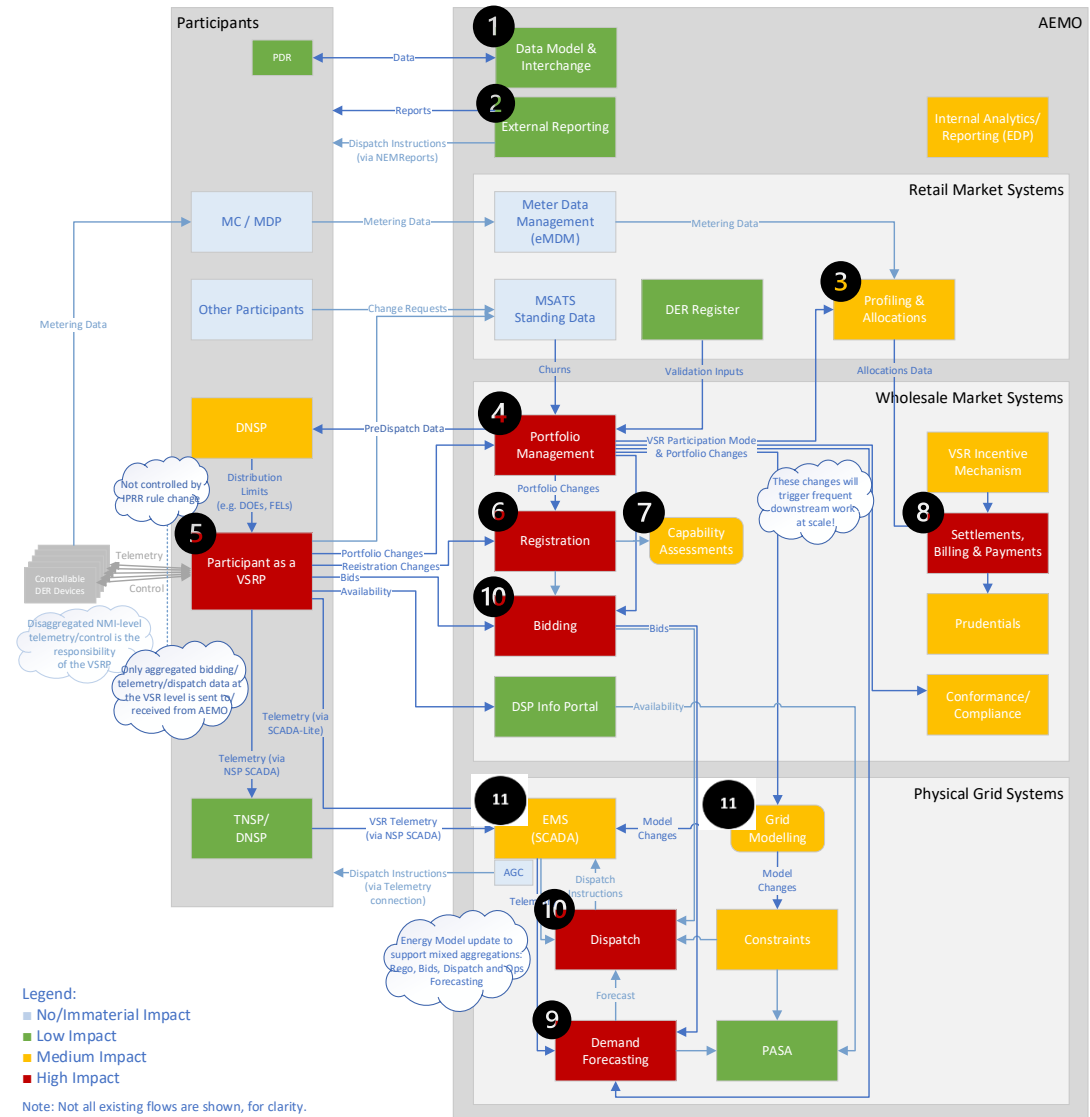
Appendix B. System impact assessment – Stage 2

Component	Impact
1. Portfolio Management (PMS)	A new system to manage VSR portfolios: enabling adding and removing NMIs from a DUID. Includes the nomination of a VSR and associated NMIs.
2. Participant as VSRP: Nomination Application	Participants send through nomination applications via PMS
3. Registrations	Additional DUIDs are classified
4. Capability Assessments	Automated validations of nomination applications and on-going monitoring of VSR portfolio changes
5. Conformance / Compliance	Conformance to be monitored but enforcement to be turned off for those participants with Stage 2 waivers.
6. Demand Forecasting	Demand v Supply side in the forecast models updated, automated scaling to ASEFS that scales demand up/down by DERR PV capacity values in portfolio.



Appendix C. System impact assessment – Stage 3

Component	Impact
1. Data Model and Interchange	Participant data model updated to incorporate VSR participation modes
2. External Reporting	NEM Reports are updated with new VSR attributes
3. Profiling & Allocations	New data exchange interface file between metering and settlements for VSR aggregations
4. Portfolio Management	PMS updated to support VSR participation mode changes.
5. Participant as VSRP	Participants will also manage mode switching & mixed aggregations
6. Registrations	Mixed aggregation rules will be applied for setting up VSR DUIDs
7. Capability Assessments	Certain portion of the assessments are automated
8. Settlements, Billing & Payments	Functionality to exempt VSR participants from RERT and directions cost recovery obligations. VIM payments and cost recovery arrangements.
9. Demand Forecasting	Forecasting systems are updated to include VSR modes and automate the scaling of ASEFS output prior to providing inputs to NEM Scheduling
10. Bids, Dispatch, Conformance, Constraints	Change to the energy model to support VSR Modes and mixed aggregations
11. EMS and Grid Modelling	System enhancements to accommodate VSR modes



Appendix D. NEM reform program details

AEMO's NEM Reform Implementation roadmap (the Roadmap) provides AEMO and stakeholders with a holistic view of the reforms impacting Australia's east coast Electricity and Gas markets. The purpose of the Roadmap is to de-risk delivery, inform implementation timing and minimise implementation cost. The Roadmap will be revised periodically to reflect changes in scope or timelines as policy or designs are being finalised or as new rule determinations are made.

Detailed information on each of the NEM Reform initiatives currently underway is provided in the NEM Reform Program Initiative Briefs which can be found [here](#).

Timelines on the set of initiatives currently in the initiation phase, and therefore contributing to reform congestion are provided below. Further information is provided in the AEMO, Project Consultative Forum, Meeting #42 presentation, available [here](#).

