

مىرارىك

CER Data Exchange Industry Co-Design

April 2025

*

Attachment C: Implementation Plan

An implementation roadmap outlining key steps, technical and governance considerations, and timelines to support from planning to execution of the CER Data Exchange.

A



Important notice

Purpose

This report defines the approach for delivering the CER Data Exchange, identifying key implementation steps, regulatory considerations and timelines. By mapping out practical execution strategies, the report supports industry stakeholders in navigating challenges, ensuring a structured and effective transition from co-design to implementation.

Acknowledgements

AEMO would like to thank the many individuals and organisations who have contributed time and expertise through the project's Expert Working group, stakeholder meetings and workshops. These stakeholder contributions have informed AEMO's work towards a national CER Data Exchange as presented in this paper. This Project received funding from the Australian Renewable Energy Agency (ARENA) as part of ARENA's Advancing Renewables Program.

Disclaimer

This document or the information in it may be subsequently updated or amended. This document does not constitute legal or business advice and should not be relied on as a substitute for obtaining detailed advice about the National Electricity Law, the National Electricity Rules, or any other applicable laws, procedures or policies. AEMO has made reasonable efforts to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this document:

- make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in this document; and
- are not liable (whether by reason of negligence or otherwise) for any statements or representations in this document, or any omissions from it, or for any use or reliance on the information in it.)

The views expressed herein are not necessarily the views of the Australian Government, and the Australian Government does not accept responsibility for any information or advice contained herein.

Copyright

© 2025 Australian Energy Market Operator Limited. The material in this publication may be used in accordance with the <u>copyright permissions on AEMO's website</u>.

We acknowledge the Traditional Custodians of the land, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations. AEMO Group is proud to have launched its first Reconciliation Action Plan in May 2024 (scan QR code to read).



Table of Contents

Gloss	ary and Abbreviations	5
1	Introduction	7
1.1	The CER Data Exchange Industry Co-Design initiative	7
1.2	This Implementation Plan	7
2	Detailed design and implementation of priority use cases	9
2.1	Key implementation phases	9
2.2	Detailed design and implementation will be conducted through two working groups	10
2.3	Implementation timeline	13
3	Further implementation considerations identified by stakeholders	17
3.1	Integration challenges	17
3.2	Broader implementation challenges	18
3.3	The case for government support on the initial investment cost	18
3.4	Implementation Risks	19
Apper	ndices	21
A1.	Proposed Minimum Viable Product for priority use cases	21
A1.1	Broader Access to CER Standing Data	21
A1.2	Efficient Sharing of Network Limits	21
A1.3	Network Support and Flexibility Capability Discovery	22

Tables

Table 1: Implementation Risks and Mitiga	on Strategies1	19
--	----------------	----

Figures

Figure 1: Reports for the CER Data Exchange Industry Co-Design project	7
Figure 2: Stakeholder preferred option for the CER Data Exchange	8
Figure 3: Overview of priority use cases	9
Figure 4: Phases for the CER Data Exchange development with indicative timings	. 10
Figure 5: MITE and CER Data Exchange indicative implementation timeline	. 10
Figure 6: Technical capabilities	. 11
Figure 7: Expected key detailed design and implementation activities in 2025-26	. 15
Figure 8: Expected key detailed design and implementation activities in 2026-27	. 16

Glossary and Abbreviations

T	D-finition
Ierm	Definition
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
API	Application Programming Interface
ARENA	Australian Renewable Energy Agency
СВА	Cost Benefit Analysis
CDR	Consumer Data Right
CER	Consumer Energy Resources
CIM	Common Infrastructure Model
DER	Distributed Energy Resources
DERMS	Distributed Energy Resource Management System
DNSP	Distribution Network Service Provider
DOE	Dynamic Operating Envelope
DSO	Distribution System Operator
ENTSO-E	European Network of Transmission System Operators for Electricity
EWG	Expert Working Group
EY	Ernst & Young
FCAS	Frequency Control Ancillary Services
FFR	Fast Frequency Response
FTE	Full Time Equivalent
GDPR	General Data Protection Regulation
IDAM	Identity and Access Management
IDSP	Integrated Distribution System Planning
IDX	Industry Data Exchange
IEC	Information Exchange Committee
IPRR	Integrating Price Responsive Resources
ISP	Integrated System Plan
LNSS	Local Network Support Services
MITE	Market Interface Technology Enhancements
MVP	Minimum Viable Product
NEM	National Energy Market
NEO	National Electricity Objective

Term	Definition
NER	National Electricity Rules
NETP	National Energy Transformation Partnership
NMI	National Metering Identifier
NSP	Network Service Provider
OEM	Original Equipment Manufacturer
PC	Portal Consolidation
PII	Personally Identifiable Information
РМ	Project Management
RBAC	Role-Based Access Control
RERT	Reliability and Emergency Reserve Trader
SOCI	Security of Critical Infrastructure
SWIFT	Society for Worldwide Interbank Financial Telecommunication
SWIS	South West Interconnected System
UI	User Interface
VPP	Virtual Power Plant

1 Introduction

1.1 The CER Data Exchange Industry Co-Design initiative

The Consumer Energy Resources Data Exchange (CER Data Exchange) Industry Co-design is a joint initiative between the Australian Energy Market Operator (AEMO) and AusNet with support from the Australian Renewables Energy Agency (ARENA) to work collaboratively with industry to co-design a national CER Data Exchange. It is part of a long-term, multistage process to build the digital foundation that will support the efficient integration of CER into the energy system in Australia. This phase of the CER Data Exchange will conclude with a final public webinar in **April 2025** to present the findings and recommendations on next steps.

This document is part of a series of reports marking the conclusion of the high-level design phase of this project. This report should be read in conjunction with the reports depicted in Figure 1 below. AEMO will also publish a knowledge sharing report to outline the project team's journey of applying a co-design framework to progress customer outcomes and key learnings from the process.

Outcomes of the co-design process **Co-Design Summary** A report outlining the key outcomes of the co-design process and the plan for the next phase of the project. Knowledge **Sharing Report** The report documents the Project team's experience running a co-design with industry on a complex reform, we hope to share valuable lessons learnt and insights for future co-design processes to build on. **High-Level High-Level Cost** Implementation Design Assessment Plan Reflection on This documents the This reports outlines the This document identifies next functional framework and approach used to estimate steps and key stakeholder the process technical capabilities of the the costs of the CER Data actions to implement the MVP of the priority use Exchange and the results. CER Data Exchange. cases.

Figure 1: Reports for the CER Data Exchange Industry Co-Design project

1.2 This Implementation Plan

The stakeholder preferred option for the CER Data Exchange

Since June 2024, a team consisting of members from AEMO and AusNet, supported by independent consultants Mott MacDonald and EY (the Project Team), have undertaken a significant industry co-design process to develop a high-level design for the CER Data Exchange.¹ Stakeholders feedback provided through public workshops and

© AEMO 2025 | CER Data Exchange Industry Co-Design – Implementation Plan

¹ Details of the co-design process can be found in Appendix A2 of the Co-Design Summary.

responses to the Consultation paper confirmed broad industry support for the preferred option in Figure 2 below. The stakeholder preferred option reflects stakeholder preference that the CER Data Exchange should leverage existing industry capability where possible and that it should 'start small and grow' so that lessons learned in the initial implementation can be incorporated into future use case and capability development.

High-level reference design developed to guide implementation

In the final public workshop held in March 2025, the Project Team and stakeholders considered trade-offs between full-service and minimum viable products for the priority use cases and the process and timeline for their implementation. The outcomes of the final public workshops are captured in the following documents:

- The *High-level Design* document contains details of the priority use case minimum viable products to guide detailed design
- **This document** sets out the key components of the plan for AEMO to undertake the detailed design and implementation phase of the CER Data Exchange project. It will also discuss key implementation considerations.



Figure 2: Stakeholder preferred option for the CER Data Exchange

2 Detailed design and implementation of priority use cases

2.1 Key implementation phases

The broader CER Data Exchange development journey

The next phase of the development of the CER Data Exchange will be the detailed design and implementation of the priority use cases (see Figure 3) that stakeholders considered to provide the immediate benefits to industry and customers. This approach reflects stakeholder preference for a phased implementation of the CER Data Exchange where the initial priority use cases focus on developing core capabilities that support early adoption by users and provide the foundation for future enhancements as the priority use cases evolve and new use cases are developed. Figure 3 below shows the detailed design and implementation phase as part of the broader CER Data Exchange development journey.

Figure 3: Overview of priority use cases



See Attachment A: High-Level Design for detailed description and functionalities of the priority use cases.

The next phase will consider both the short- and long-term implementation issues according to two horizons. In the near term, we will move through the AEMO governance process and expect to proceed on to Detailed Design in FY 2026. In Detailed Design, we will work with industry stakeholders to resolve the technical and regulatory issues required to enable the implementation and uptake of the priority use cases by May 2027. In the longer term, AEMO will focus on developing the frameworks which will support the operation of the CER Data Exchange beyond the initial establishment phase. Figure 4 below shows the detailed design and implementation phase as part of the broader CER Data Exchange development journey.

Figure 4: Indicative Phases for the CER Data Exchange development



The detailed design and implementation of the CER Data Exchange will occur in parallel to the implementation of the Market Interface Technology Enhancement (MITE) Project

AEMO aims to undertake the detailed design and implementation of the priority use cases in parallel with the MITE Project so that the CER Data Exchange can leverage the MITE foundational capabilities such as the Industry Data Exchange (IDX) and Identity Access and Management (IDAM). Figure 5 shows the relationship between the MITE and CER Data Exchange implementation timeline.

Figure 5: MITE and CER Data Exchange implementation timeline 2026 2027 Year 2025 Month 10 11 12 ndustry & AFMO Testing MITE Progressive Migration \bigstar (IDAM & IDX) \bigstar $\overleftarrow{}$ IDX Foundation Use Case Go Live **B2B** Procedures PQD Go-Live Build, test, deploy Detailed design **CER Data** Progress MVP of priority use Proof of Concepts Exchange Priority use cases

2.2 Detailed design and implementation to be conducted through two working groups

2.2.1 Technical Working Group to develop core digital infrastructure

The Technical Working Group will focus on designing and developing the core digital infrastructure that enables secure data exchange, processing and accessibility, and the technical mechanics of data movement, validation and presentation to users. The technical capabilities can be grouped into functional services shown in Figure 6 below.

Figure 6: Technical capabilities



The functional services of security and access and data integration will be developed and implemented concurrently through the MITE Project while the CER Data Exchange Technical Working Group will design and implement the CER specific functional services of data processing, business logic, user interface and reporting and audit. The concurrent implementation of the CER Data Exchange and MITE Project will enable the IDX and IDAM development to inform the priority use case design. AEMO anticipates the build, test and deploy phase of the priority use cases will begin once the IDX foundational capabilities are built.

Appendix A1 contains a summary description of the minimum viable product for each functional services to be developed for the priority use cases.

2.2.2 Governance workstream to consider operational governance and regulatory enablers

The Operation Governance and Regulatory Enablers Working Group will operate concurrently with the Technical Working Group to develop an operational governance framework that will enable the CER Data Exchange to evolve along with changes in consumer and industry needs. This workstream will also need to establish enduring forums or working groups that support and facilitate industry input beyond the detailed design and implementation phase.

Identifying regulatory enablers for priority use cases

A key priority for this working group will be identifying whether changes to government regulations, the national electricity rules, or AEMO procedures may be required to enable the implementation and uptake of the priority use cases.

The digital infrastructure that enables the physical exchange of data and information between organisations, will need to be a complemented by a regulatory framework that codifies the requirements to exchange certain data and information. Additionally, the regulatory structure will need to provide guidance to organisations that are required to provide and receive data, oversee potential compliance and data integrity framework.

AEMO anticipates four workstreams will need to be established to explore regulatory enablers. These are discussed below.

Workstream 1: regulatory enablers to facilitate access to CER Standing Data

This workstream will identify the organisations that will be responsible for the collection and storage of CER Standing Data and those who are authorised to receive it. It will also need to identify the types of standing data that should be shared and the frequency of update. A key area for investigation will be arrangements that allow organisations that are currently not registered market participants to access the information. This workstream will also need to consider customer privacy implications as well as issues relating to customer consent to share information.

As the DER Register already exists as a repository for CER/DER standing data, the workstream may also need to consider whether (and how) existing data will be available for authorised organisations in the CER Data Exchange.

Workstream 2: longer-term governance arrangements |

The Technical Working Group and the Governance and Regulatory Enablers Working Group are temporary industry working groups created to support the implementation of the priority use cases. Beyond the initial implementation stage, there needs to be an enduring framework that supports the consideration of new use cases, the evolution of the CER Data Exchange's technical capabilities, how industry and consumers (through consumer representative groups) can provide input. Workshop 3 participants expressed a preference for a separate working group to be created under an existing AEMO-convened forum to manage these issues and were open to more formal arrangements with the potential of leveraging existing structures where appropriate.

This workstream will focus on identifying the most appropriate forum for the longer-term working group to reside in and the governance arrangements (organisations represented, arrangements for the nomination and selection of members, advisory vs decision body, voting rights etc) for the working group. It will also need to explore whether regulatory or procedural changes are required for the working group to be created and develop an initial term of reference.

Another governance aspect that this workstream will need to consider is the level of prescription required for the CER Data Exchange and the operation of use cases. For example, documenting data sharing arrangements/requirements for use case in a guidance note would provide a high level of flexibility but may not provide sufficient regulatory coverage for compliance management. In contrast, prescribing arrangements in the national electricity rules may provide regulatory certainty, but less flexibility as changes to the rules generally require a lengthy period.

Workstream 3: Regulatory enablers to facilitate the sharing of network limits to multiple parties

A significant amount of detailed design work will be required to bring to life the broad stakeholder support for distribution network service providers (DNSPs) to share network limits with a wider range of organisations. DNSPs are at different stages of maturity in developing and implementing dynamic operating envelopes/dynamic network limits and there is currently no standardised format between DNSPs on how the information should be shared more broadly with a range of organisations. This workstream will need to work closely with the Technical Working Group to consider the parameters of data to be shared, the cost trade-offs between different frequency of update and how a staged approach (e.g. dynamic limits for 'active CER' to be shared first) could support the use case's uptake. It is important to note that this workstream is focused on the *sharing* of network limits only. The transmission of the actual limits between DNSPs and CER devices, and the devices' response to the commands is not in scope of the CER Data Exchange.

Workstream 4: Cost recovery arrangements

This workstream will focus on arrangements for AEMO specifically to recover costs associated with the initial design and development, and the ongoing cost of operating the CER Data Exchange. AEMO acknowledges that other organisations will also incur their own integration and ongoing costs for exchanging data through the CER Data Exchange, however, industry cost recovery arrangements will not be included in this workstream.

While AEMO will endeavour to determine least the cost solutions when implementing the CER Data Exchange use cases, it is not within its remit to determine how costs should be recovered for other participants. For example, there is a well-established framework in place for DNSPs to recover the cost of providing distribution network services to customers through the AER revenue determination process.

In the near term, AEMO will incur an estimated \$8.8 million in incremental cost to implement the priority use cases. Stakeholders provided feedback through this co-design process that they generally prefer a hybrid approach where some government support is provided to reduce the level of user contributions. They considered this would help make the CER Data Exchange accessible to all market participants, including smaller players, while providing a fair mechanism for recouping costs. The cost recovery arrangement for the initial implementation costs, including whether governments should provide a contribution is a priority area for this workstream.

For longer-term (business-as-usual) cost recovery, this workstream will need to develop a cost recovery framework that support the uptake of CER Data Exchange services in the most efficient way and avoid imposing disproportionate cost on smaller organisations as per stakeholder feedback. Other cost recovery issues to be considered include charges for organisations that are not market participants, and organisations that may wish to use some of parts of CER Data Exchange services for commercial purposes.

2.3 Implementation timeline

AEMO estimates that the detailed design and implementation phase will be conducted over a 24-month period. After progressing through the AEMO governance process, we will look to commence implementation from July 2025. This next phase will consider issues over both the near- (2025 – 2027) and long-term (202+) horizons in response to stakeholder feedback that the CER Data Exchange should 'start small, then grow'. The objective of the near-term phase is to resolve the technical and regulatory issues required to implement at least the *Broader Access to CER Standing Data* and the *Efficient Sharing of Network Limits* priority use cases by July 2027.

This timeline aligns with the deployment of the MITE project and delivers key capabilities (through the priority use cases) to support on-going reforms such as the implementation of the *Integrating Price Responsive* Resources final rule. The IPRR rule change is one of numerous other interrelated reforms in progress or anticipated in the energy sector (see Appendix A1.3 in the Co-Design Summary). The implementation timeline acknowledges that the CER Data Exchange is a key enabler for several parallel reforms and is part of a much larger effort to achieve a consistent national coordinate response to CER, as outlined in the CER Roadmap.

Key stakeholder engagement activities

AEMO will continue to work collaboratively with industry to undertake this phase of the CER Data Exchange initiative. The key stakeholder engagement activities for this phase includes:

- Working group meetings | AEMO plans to hold monthly meetings for the Technical Working Group and the Governance and Regulatory Enablers Working Group. The working groups are forums for stakeholders to provide inputs and industry perspectives into the detailed design and implementation process and enable AEMO to discuss potential options and stress test solutions.
- **Public consultations and forums** | AEMO also intends to hold public consultation activities during this phase. This is likely to include a combination of public in-person workshops, webinars, targeted mini forums as well as consultation papers. Public consultations are likely to occur at key milestones of this phase, such as the conclusion of detailed design of priority use cases.

2025-2026: Detailed Design

Technical focus

The main effort of this period will be the detailed design of the *Broader Access to CER Standing Data* and the *Efficient Sharing of Network Limits* priority use cases. A key outcome of this period is building industry alignment and documenting the technical aspects of the priority use cases, in preparation of the build, test and deploy activities planned for 2026-27. As the CER Data Exchange will rely heavily on foundational capabilities delivered by IDX and IDAM, members of the MITE project team are expected to be closely involved in discussions with the Technical Working Group.

Governance focus

This period will see the 'detailed design' of enabling regulatory arrangements through a staged approach. AEMO will commence examining regulatory enablers for the *Broader Access to CER Standing Data* use case and longerterm governance arrangements as they are likely to identify changes that are foundational to other use cases. Where rule changes are required, AEMO will work with industry to identify potential regulatory options and identify proponent(s) for rule change requests. Rule change requests that are essential to support the priority use case will need to be submitted to the Australian Energy Market Commission (AEMC) in the first quarter of 2026 to allow the sufficient time for the rule change process to be conducted.

AEMO will also undertake early engagement with the AEMC and the Australian Energy Regulator (AER) on potential regulatory changes.

Figure 7 below shows the expected key activities between July 2025 and June 2026.



Figure 7: Expected key detailed design and implementation activities in 2025-26

2026-2027: Build, test, deploy

Technical focus

For the 2026-27 activities, the focus of the technical workstream will be the building of the technical infrastructure for the priority use cases. This will include both AEMO and industry testing and industry readiness and transition planning. AEMO will also progress the development of the *Network Support & Flexibility Capability Discovery* priority use case as need and market maturity for the capability surfaces. Stakeholders considered that more time and effort is needed further develop the services and potential benefits that this use case will provide to customers.

Governance focus

If rule change requests are required to enable CER Data Exchange functionalities, AEMO anticipates that this period will be focused on supporting the AEMC's rule change process. AEMO may also progress procedure changes in parallel to the rule change process during this period where required if the AEMC has indicated a clear direction on aspects of the rule change proposal.



Figure 8: Expected key detailed design and implementation activities in 2026-27

3 Further implementation considerations identified by stakeholders

Throughout the co-design process, stakeholders highlighted key issues, challenges and questions that require further consideration at the detailed design stage. Beyond the data exchange, stakeholders raised concerns about data quality, collection processes and the need for complementary business rules, compliance frameworks and regulations.

There were calls for better integration of roles and responsibilities, clearer definitions of use cases, and the need to address DOE policy variability. Additionally, suggestions included improving scalability and security measures and ensuring compliance with evolving regulatory standards. Most notably, stakeholders repeatedly expressed the need to ensure alignment and connection with other projects across industry, including the National CER Roadmap, rule changes, and updates to standards.

Some of these issues are discussed below and will be considered by AEMO in the following stages.

3.1 Integration challenges

The proposed implementation activities for the CER Data Exchange focus on achieving a comprehensive level of standardisation, automation, and scalability to address the diverse challenges of the *Broader Access to CER Standing Data, Efficient Sharing of Network Limits*, and *Network Support & Flexibility Capability Discovery* Use Cases. These activities aim to create a unified, efficient, and secure ecosystem capable of supporting the NEM's transition to a decentralised energy landscape.

In this context, it will be important in the detailed design phase to consider:

- Standardised Data Framework | It will be important to develop and implement a unified data model encompassing CER standing data, dynamic network limits, and local network service parameters, ensuring alignment with technological advancements and market needs. This includes aligning data practices with regulatory requirements, international best practices, and industry standards to support interoperability and operational consistency across DNSPs, aggregators, and marketplaces. The detailed design phase will need to define consistent schema structures for dispatch signals, telemetry, and compliance reporting, reducing integration complexity and fostering scalability.
- Enhanced System Integration | Utilising the IDX platform can facilitate seamless connectivity between DNSPs, the DER Register, and external marketplaces like Piclo – creating a harmonised operational ecosystem. This could include standardising APIs while supporting a variety of protocols (e.g., RESTful APIs, GraphQL, gRPC) to enable future-proof data exchange capabilities. An additional feature could be robust sandbox environments for stakeholders to test integrations, validate compliance, and optimise system performance before full deployment.
- Secure and Scalable Infrastructure | It will be important to build an elastic and secure infrastructure capable of managing growing data volumes, transaction rates and service complexities as CER adoption scales. This could include implementing cutting-edge security measures, such as Identity and Access

Management (IDAM), granular role-based access controls, and advanced encryption protocols to safeguard sensitive data. Another option is to deploy predictive scaling tools to optimise resource allocation during peak usage periods, ensuring seamless service delivery and cost efficiency.

3.2 Broader implementation challenges

Implementing the CER Data Exchange requires addressing significant challenges that span across the technical, operational, and regulatory domains. These challenges must be navigated to ensure the platform's effectiveness and scalability. For example:

- Data Quality and Consistency | Harmonising data standards and formats across DNSPs, aggregators, and marketplaces would minimise inconsistencies and enable seamless interoperability. It will be important to ensure the accuracy, completeness, and timeliness of data inputs, particularly for telemetry, dispatch signals, and compliance reports.
- Stakeholder Alignment | It will be important to balance the diverse priorities, operational capabilities and market roles of DNSPs, aggregators, technology providers, and regulators. This requires the establishment of collaborative frameworks to promote consensus on schemas, integration protocols, and service definitions, reduce friction, and foster adoption.
- **System Integration** | Overcoming legacy system limitations while ensuring compatibility with cuttingedge technologies and evolving integration standards is a major challenge. Addressing discrepancies in security requirements, data-sharing protocols, and verification mechanisms will support seamless system integration.
- Regulatory Compliance | A work program will be needed to navigate complex regulatory landscapes across jurisdictions to align with both existing mandates and emerging standards. Comprehensive, auditable records of data transactions, service operations, and compliance metrics will be needed to support regulatory reporting and oversight.
- Scalability and Security | Designing systems to handle increasing data volumes, transaction rates, and service complexities driven by CER penetration and market evolution is another major challenge. This requires mitigating cybersecurity risks through advanced encryption, continuous threat monitoring, and adaptive security controls capable of responding dynamically to emerging threats.

3.3 The case for government support on the initial investment cost

Stakeholders provided substantial support for government funding to help establish the CER Data Exchange as a public good and ensure equitable cost recovery, especially in the initial rollout phase. Stakeholders recognised the need to transition to a user-pays model over time but emphasised the importance of government support to get the CER Data Exchange off the ground and mitigate the financial impacts on early participants.²

The CER Data Exchange may be considered a public good, given industry participants will gain access to the same amount and the same types of benefits from exchanging CER data. So, there is a risk that participants

² AEMO, CER Data Exchange Industry Co-Design: Consultation Summary Report, December 2024.

[©] AEMO 2025 | CER Data Exchange Industry Co-Design – Implementation Plan

default to point-to-point solutions regardless of the benefits of collective investment in and use of an exchange. Government or ARENA funding to support the initial investment would reduce the costs of market participants adopting the CER Data Exchange.

3.4 Implementation Risks

Throughout the co-design process, industry stakeholders warned against overinvesting in capabilities early on. The risk is that a full-service exchange would require a lengthy build time and by the time it is deployed, it utilises out-of-date technology or has limited applicability to the future energy market. In the meantime, organisations may also choose to develop their own, localised solutions to address immediate needs, propagating more point-topoint connections. Further, many workshop participants were concerned about the cost of implementing the CER Data Exchange.

Participants broadly preferred the CER Data Exchange to start with a narrow focus to accelerate implementation of the immediate use cases. However, there was recognition of the need to design for broader functionality based on a wider set of potential use cases – enabling the scope to expand over time as industry needs evolve. Participants suggested that the CER Data Exchange should focus on quick wins with near term use cases, but be designed with an end state in mind, with implementation staged in a way that supports that future whilst remaining agile to market changes. To further manage cost and risk, stakeholder preference was to leverage existing capabilities in the energy market. By building upon the MITE business case, specifically IDAM and IDX, provided much of the foundational capabilities required, thus reducing upfront cost of the CER Data Exchange, the time period to deploy the priority use cases and the scale of investment.

The implementation plan has incorporated this feedback with a streamlined the deployment of capabilities and staggered progression of use cases. Further risks and corresponding mitigations have been outlined in Table 1. Risks specific to each priority use case are outlined in Attachment A: High-Level Design.

Risk	Details	Proposed Recommendation	
Funding	• AEMO will explore government / ARENA support for all or part of the initial capital expenditure costs. This government support was seen as important by stakeholders to recover the initial costs and establish the CER Data Exchange as a public good.	• Without this funding, there is a risk that participants default to point-to-point solutions regardless of the benefits of collective investment in and use of an exchange.	
Misalignment with market and technology needs	 Concurrent software upgrades (i.e. DER Register uplift) do not occur, which means the value provided by the CER Data Exchange under-delivers. 	 Maintain conversations with relevant teams responsible for concurrent reforms and ensure alignment on timing. 	
Technical Challenges	 Participant technological maturity is below the appropriate level to integrate with the CER Data Exchange. 	 By leveraging the MITE capabilities, this risk will be inherently smaller as participants will be gradually migrating on to the platform. 	
	 Subsequently, stakeholder integration with the platform is delayed and early users are subjected to higher costs due to low uptake. 	• Undertake an industry readiness plan during the build, test, deploy phase, and see stakeholder feedback to confirm organisations are adequately prepared (on the whole) to ensure effective deployment of the CER Data Exchange.	

Table 1: Implementation Risks and Mitigation Strategies

Risk	Details	Proposed Recommendation
Inadequate resourcing	 Insufficient resources (time, budget, personnel) to deliver against the proposed timeframes. Project loses momentum, incurs extraneous costs or stagnates. Stakeholders are resource constrained and unable to contribute sufficiently to working groups, and subsequently design reflects limited stakeholder input. Lack of stakeholder bandwidth to dedicate time to this project AEMO and/or industry cannot prioritise 	 AEMO to undertake resource planning (utilising the resourcing estimates included in the High-Level Cost Assessment) and allocate resources accordingly. Specifically design stakeholder engagements to maximise effective use of stakeholder's time. Provide multiple different mechanisms for stakeholders to provide feedback (e.g. industry workshops, consultation papers, email)
Dependency on MITE	 The CER Data Exchange is inherently linked to the development of the MITE business case. The build, test, deploy phase cannot be initiated prior to the foundational capabilities being completed. 	 Maintain discussions with the MITE team and provide support where needed.
Enabling rule changes do not proceed	 Depending on the outcomes of the Longer- term governance workstreams, rule changes may be required to establish governance arrangements within AEMO's remit or to enable a broader range of participants to have access to CER data, for example. There is a risk that the rule change processes are drawn out, and / or the AEMC rejects or makes a preferrable decision that inconsistent with the intent. 	 Early engagement with the AEMC and AER to increase understanding and gain feedback. Continue in-depth stakeholder engagement with all of industry, addressing stakeholder concerns to ensure all stakeholders' feedback is considered in the next stage.
Rule changes that undermine the CER Data Exchange	 The CER Data Exchange is a crucial enabler for CER integration at scale in the NEM and is highly complementary to several other reforms such as the Integrating Price Responsive Resources (IPRR) and Integrated Distribution System Planning (IDSP) rule changes. AEMO will closely monitor whether any new reform initiatives would create arrangements that duplicate or act as a substitute to the functions of the CER Data Exchange. 	 Maintain communications and discussions with market bodies and organisations across the energy sector.

Appendices

A1. Proposed Minimum Viable Product for priority use cases

A1.1 Broader Access to CER Standing Data



A1.2 Efficient Sharing of Network Limits

Functional Services	SECURITY & ACCESS Authentication, ecorption, and compliance controls to protect data integrity, ensure authorised access, and enforce regulatory security standards.	DATA INTEGRATION Standardised APIs, event-driven messaging and multiple access methods to enable reliable and scalable data sharing.	DATA PROCESSING Validates, transforms, and securely stores data (if required), ensuring data quality and interoperability and accessibility.	BUSINESS LOGIC Defines and enforces schema validation, business rules and automated governance to maintain consistency & compliance.	USER INTERFACE User-centric web portals, dashboards and self-service tools to enable stakeholders to interact and monitor data exchange efficiently.	REPORTING & AUDIT Monitors data interactions through audit logs, automated compliance checks, and self- service reporting tools.
Use Case MVP	Implement IDAM authentication and multi-tiered RBAC permissions for differentiated data access	Enable integration with network limits & CER compliance registers via a uniform data schema	Data validation or normalisation reprocessing to ensure consistent formatting.	Protocols to ensure consistent formatting, interpretation, and integration.	Not included in MVP; access is provided through APIs and integrated platforms	Implement compliance tracking, encryption, and audit logging for compliance alignment.

A1.3 Network Support and Flexibility Capability Discovery

