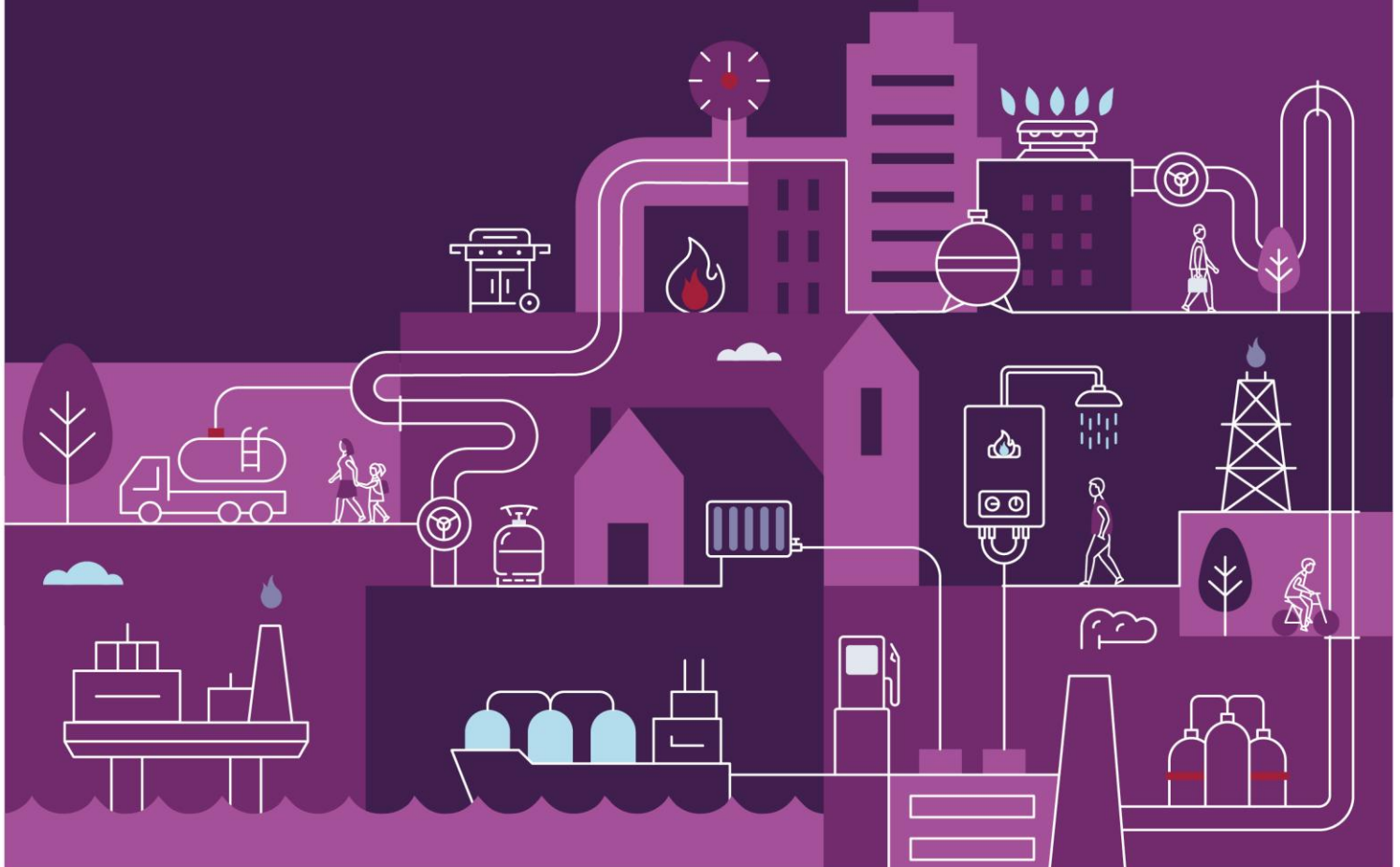
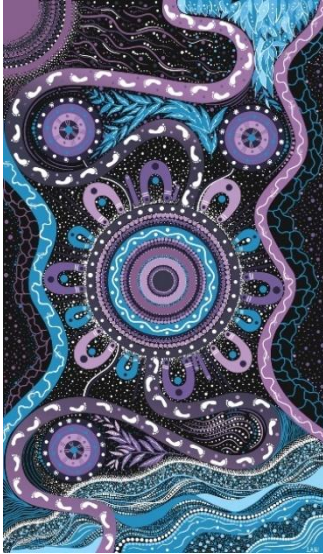




This report presents the outcomes of the CER Data Exchange project, including key requirements, barriers, industry feedback, and enabling reform pathways





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.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country; and hope that our work can benefit both people and Country.

AEMO is proud to have launched its Innovate [Reconciliation Action Plan](#) (RAP) in June 2026. Pictured left and featuring on the cover of the Innovate RAP is Wiradjuri artist Lani Balzan's 'Journey of unity: AEMO's Reconciliation Path', a visual representation of our ongoing journey towards reconciliation – a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.

Important notice

Purpose

The purpose of this publication is to present the outcomes of the Consumer Energy Resources Data Exchange project, including the technical, regulatory and governance foundations required to enable future implementation of the priority use cases, and to identify the CER Roadmap initiatives that support their progression. This publication is generally based on information available to AEMO as of 27 September 2026, unless otherwise indicated.

Disclaimer

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Executive summary

The project established the foundations required to progress priority Consumer Energy Resources (CER) Data Exchange use cases

Purpose of this report

This report presents the outcomes of the CER Data Exchange (CDX) Detailed Design project, including industry feedback and the enabling reform pathways required to support future implementation of the priority use cases. It summarises the technical, regulatory and governance considerations identified through the Technical and Regulatory Working Groups and explains how relevant National CER Roadmap (CER Roadmap)¹ initiatives support resolution of the key barriers identified.

Why CER Data Exchange matters

CER is becoming increasingly material to power system operation, market participation and customer service delivery. As CER uptake grows, consistent and well-governed access to CER-related data will be required to support coordination between consumers, their representatives, networks, retailers, aggregators, technology providers and market bodies.

CDX has the potential to support more efficient sharing of CER-related information between authorised parties, improving visibility of CER assets, reducing duplication of data exchanges, supporting customer participation and enabling emerging energy services.

The project explored the technical and regulatory arrangements required to support such a capability and identified a range of implementation considerations, dependencies and enabling reforms relevant to its future implementation.

Use cases considered

The CDX project considered three priority use cases identified through the CDX Industry Co-Design Initiative²:

- **Broader Access to CER Standing Data** – to support authorised access to relevant CER standing data, including from the Distributed Energy Resource (DER) Register (DERR), where required to enable improved CER visibility, data quality and customer-facing services.
- **Sharing and Receiving of Dynamic Operating Envelopes (DOEs)** – to support the exchange of DOE information between Distribution Network Service Providers (DNSPs) and eligible parties, enabling operational awareness and management of CER within network limits.
- **Network Support and Flexibility Capability Discovery** – identified through the CDX Industry Co-Design Initiative but not progressed in detail during the project. This was due to overlap with other industry-led flexibility market initiatives; accordingly, it is not considered in this report.

¹ For more information on CER Roadmap initiative, see implementation plan update from August 2025

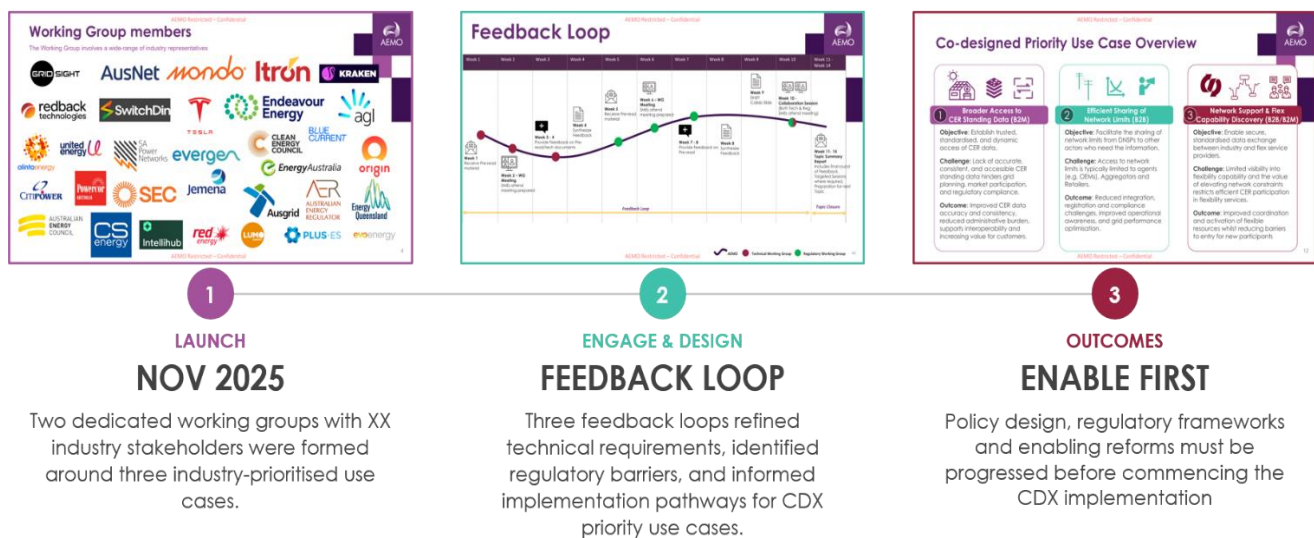
<https://www.energy.gov.au/sites/default/files/2025-08/National%20Consumer%20Energy%20Resources%20%28CER%29%20Roadmap%20Implementation%20Plan%20Update%20August%202025.pdf>

² For more information on CDX Industry Co-design Initiative, see <https://www.aemo.com.au/initiatives/major-programs/nem-distributed-energy-resources-der-program/markets-and-framework/CER-Data-Exchange-Industry-CoDesign>

How the project was undertaken

In November 2025, the AEMO established Technical and Regulatory Working Groups comprising representatives from DNSPs, retailers, aggregators, technology providers, customer representatives and market bodies. These groups were established to validate and refine the requirements, governance considerations and regulatory enablers for the priority CDX use cases. The project used an iterative feedback process to obtain and incorporate feedback from the working groups into the Use Case Requirements Document.³

Figure 1 CDX detailed design project snapshot



Key themes and regulatory considerations emerging from the feedback

- Working Group feedback indicated broad support for the objectives of the two in-scope use cases, while highlighting that implementation depends on resolving foundational data access, governance, role-recognition and regulatory issues.
- For Use Case 1, feedback identified the need for a clear regulatory basis for AEMO to share DERR data with authorised parties, supported by defined access entitlements, data stewardship responsibilities and improved CER asset data quality.
- For Use Case 2, feedback identified the need for DNSP obligations to publish DOE information (via a market system like CDX), access entitlements for eligible parties, standardised data structures and exchange formats and governance arrangements.
- Broader feedback emphasised the need to coordinate CDX with CER Roadmap initiatives and other reforms including Integrating Price Responsive Resources into the NEM (IPRR)⁴ to avoid duplication, manage dependencies and support efficient sequencing.
- Stakeholders also highlighted the importance of demonstrating value before introducing new obligations and providing clearer visibility of CER Roadmap progress, dependencies, decision points and ownership.

³ For more information on the CDX Use Case Requirements Document, see <https://www.aemo.com.au/initiatives/major-programs/nem-reform-program/nem-reform-program-initiatives/consumer-energy-resources-data-exchange>

⁴ For more information on IPRR, see <https://www.aemo.com.au/initiatives/major-programs/nem-reform-program/nem-reform-program-initiatives/integrating-price-responsive-resources-into-the-nem>

CER Roadmap initiatives supporting the regulatory enablers

The project found that a number of regulatory enablers required for CDX implementation have resolution pathways through existing CER Roadmap Initiatives. These include the following recommendations:

- Data Sharing Arrangements (M2) ⁵
 - Recommendation #1 Establish a National CER Data Strategy and CER Data Coordination Function to support a national CER data management framework
 - Recommendation #2 Establish a Nationally Harmonised CER Asset Registration, Commissioning and Retirement model to support richer datasets and additional lifecycle information
- Redefining roles for market and power system operations (M3/P5) ⁶
 - Recommendation #1 Formalise the DNSP as the Distribution System Operator (DSO) for obligations to share DOEs
 - Recommendation #3 Drive consistent delivery of DSO activities for DOE consistency
 - Recommendation #4 Recognise actors that control and interact with CER for recognition of customer-facing roles
- Consumer Energy National Technical Regulatory Framework (T2) ⁷ for the proposed Asset Installation Repository.

Overall, the project confirmed that the value of CDX remains linked to the progression of enabling reforms. Continued coordination across industry, policy and regulatory workstreams will be required to support secure, scalable and nationally consistent CER data sharing arrangements.

⁵ For more details on Data Sharing Arrangements (M2) recommendations, see final report at <https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/electricity-working-group/consumer-energy-resources-sub-working-group/data-sharing-arrangements>,

⁶ For more details on Redefining roles for market and power system operations (M3/P5) Recommendations, see final report at <https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/electricity-working-group/consumer-energy-resources-sub-working-group/redefining-roles-for-market-and-power-systems-operations>

⁷ For more details on Consumer Energy National Technical Regulatory Framework (T2) , see <https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/electricity-working-group/consumer-energy-resources-sub-working-group/consumer-energy-national-technical-regulatory-framework>



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1 Introduction

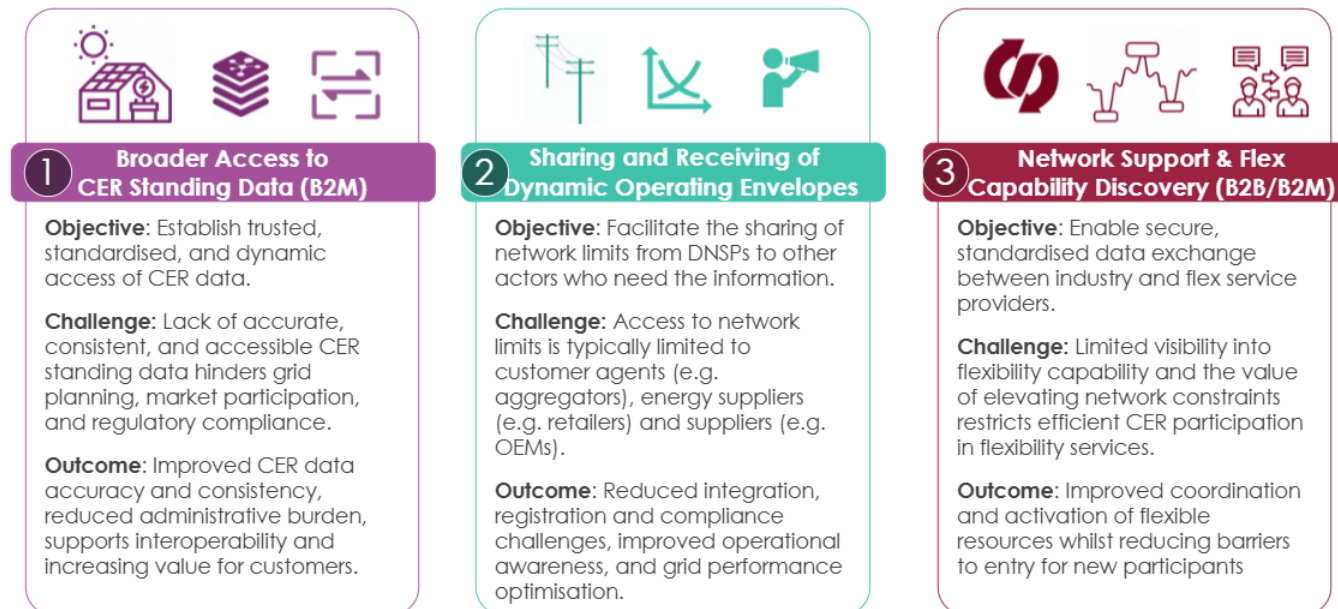
As CER continue to grow in scale and complexity, effective and trusted data exchange becomes increasingly critical to enable informed decision making, efficient market participation and coordinated operation across the energy ecosystem. CDX supports CER integration in Australia's energy transition by establishing the foundations for the secure, interoperable and scalable sharing of CER-related information.

In 2024, AEMO and AusNet Services, with Australian Renewable Energy Agency (ARENA)'s support, commenced the CDX Industry Co-Design Initiative⁸ to explore data sharing capabilities that could support emerging industry needs. Through this process, industry participants identified three priority use cases and collaboratively developed the high-level design of the CER Data Exchange. They also agreed that AEMO should own and operate the CER Data Exchange and progress the detailed design of these use cases.

The three priority CDX use cases identified for further investigation were:

- Broader Access to CER Standing Data
- Sharing and Receiving of DOEs⁹
- Network Support and Flexibility Capability Discovery

Figure 2 Priority use cases



⁸ See here for CER Data Exchange Industry Co-design <https://www.aemo.com.au/initiatives/major-programs/nem-distributed-energy-resources-der-program/markets-and-framework/cer-data-exchange-industry-codesign>

⁹ This use case was previously referred to as 'Efficient Sharing of Network Limits'. The name was refined following working group feedback to better align with the intended scope of the use case and is being used in this report.

The CDX project was launched in November 2025 to deliver detailed design and implementation requirements for the priority use cases. While the initial objective of the project was to develop detailed design and implementation requirements for the priority use cases, industry engagement identified several foundational technical, governance and regulatory considerations requiring further development. These included data structures and standards, access arrangements, role definitions, governance frameworks, accountabilities, and the privacy and regulatory settings required to support secure and effective information sharing. The proposed approach considered how Market Interface Technology Enhancement (MITE)¹⁰, including the Industry Data Exchange (IDX) and Identity Access and Management (IDAM) could provide a common integration layer across the market between data providers, data consumers, and existing AEMO systems including the DERR¹¹, as well as extending this to other systems as required.

This report presents the outcomes of the CDX project, including industry feedback provided through working groups comprising representatives from DNSPs, retailers, aggregators, technology providers, customer representatives and market bodies. It outlines the implementation considerations identified for the in-scope use cases and the regulatory and reform pathways required to support future CDX implementation. The report also identifies how relevant CER Roadmap initiatives support resolution of the foundational data access, governance, role-recognition and regulatory enablers required for CDX to progress.

¹⁰ For more information on MITE, see <https://www.aemo.com.au/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/market-interface-technology-enhancements>

¹¹ For more information on DER Register, see <https://www.aemo.com.au/energy-systems/electricity/der-register/about-the-der-register>

1.1 Overview of CDX use cases

1.1.1 Use Case 1: Broader Access to CER Standing Data

Use Case 1 seeks to improve access to CER standing data from the DERR by enabling eligible parties to securely access and exchange information, thereby providing additional visibility to support their business practices. This would improve prospective service offerings for customers, market and system operations and enable energy service provision. It would also improve CER data accuracy and consistency, reduce administrative burden and thereby increase value for customers.

The project sought feedback around who needs access to the DERR, and what data fields they need access to. They also identified opportunities for future evolution of the use case that can support access to different sources of information and other roles that are currently not defined within the National Electricity Rules (NER).

While the implementation of CDX is intended to provide a streamlined mechanism for authorised parties to access standardised, accurate and consistent CER standing data, the project also considered a near-term pathway for this use case. This near-term pathway was identified as a potential transitional capability that could facilitate broader access to ‘aggregated’ DERR data (such as nameplate inverter/solar/storage capacity and device status) to the market participants while longer-term CDX implementation continues to mature. Upon further investigation with DERR subject matter experts from AEMO, technical constraints (such as representing quantitative and qualitative CER device-level information for multiple devices without loss or obfuscation of detailed characteristics in Market Settlement and Transfer Solutions (MSATS)) were acknowledged. Moreover, feedback highlighted that the delivery of such a capability would also require regulatory considerations and lead times for associated rule change processes. This near-term pathway will therefore not be progressed or discussed further in this report. For more information on near-term MSATS-based pathway, see Use Case Requirements Document (refer to Appendix A1).

1.1.2 Use Case 2: Sharing and Receiving of DOEs

Use Case 2 seeks to support the sharing and receiving of DOEs between DNSPs and eligible parties. This would enable market participation of CER by reducing integration costs and complexity, improving operational awareness, supporting the delivery of energy services within network limits and optimising grid performance.

Similar to Use Case 1, the project’s primary objectives for Use Case 2 revolved around determining who needs access to DOE data and what data fields will be shared, as well as related reforms that this use case would intersect with.

The foundational capabilities would be designed to support future evolution across four key dimensions: data access, data types, data frequency, and data integration, allowing the solution to mature in line with emerging industry requirements.

1.1.3 Use Case 3: Network Support and Flexibility Capability Discovery

Use Case 3 seeks to improve visibility of constraints and exchange of flexibility service capability data within the energy market, enabling flex providers, DNSPs, constrained parties, and market participants to discover and share information about constraints and available flexible resources through a secure, standardised framework.

Although Use Case 3 was identified through the CDX Industry Co-Design Initiative, it required further clarification of its scope, supporting data and potential value for implementation. During this project, initial assessment of this use case also identified overlap with existing industry-led initiatives. Given this overlap, the project did not progress detailed work on Use Case 3. Any future consideration and work in relation to the CDX infrastructure will be informed by engagement with the

relevant industry bodies leading flexibility market initiatives, including the Consistency Prototype Projects¹² arising from M3/P5 R3. This will support alignment across related initiatives and help avoid duplicating existing work.

Accordingly, Use Case 3 is not considered further in this report.

1.2 Project execution

In November 2025, the project established a Technical Working Group (TWG) and a Regulatory Working Group (RWG), comprising representatives from DNSPs, retailers, aggregators, technology providers, customer representatives and market bodies. These groups were established to validate and refine the technical requirements, governance considerations and regulatory enablers associated with the priority CDX use cases.

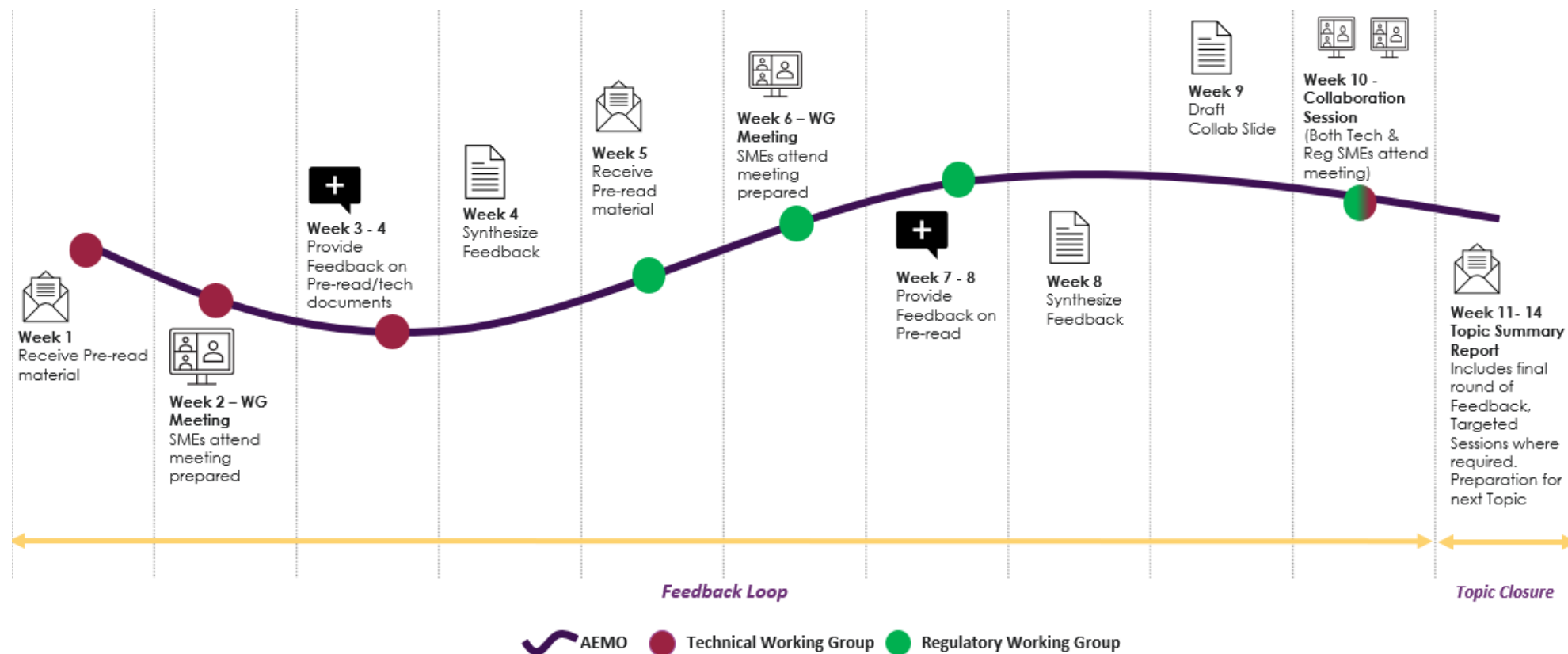
The project adopted an iterative feedback process consisting of TWG, RWG and combined collaboration sessions. Feedback from each session was reviewed and incorporated into the Use Case Requirements Document, with occasional targeted conversations providing stakeholders another opportunity to review updates, refine requirements and test emerging findings.

The collaboration sessions brought together members from both working groups (WG) to review proposed technical requirements and regulatory considerations, identify areas of alignment, and provide final feedback on the use cases. The outcomes of each feedback cycle were summarised in a Topic Summary Report and incorporated into the Use Case Requirements Document.

The feedback process was completed for Use Case 1 and Use Case 2. Feedback collected through this process informed the outcomes and recommendations documented within this report, as well as the published Use Case Requirements Document (refer to Appendix A1).

¹² For more information on the Consistency Prototype projects arising from M3/P5 R3, see M3/P5 final report <https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/electricity-working-group/consumer-energy-resources-sub-working-group/redefining-roles-for-market-and-power-systems-operations>

Figure 3 CDX working group engagement and feedback process



1.3 Structure of the report

- **Section 1 – Introduction**, this section, outlines the project context, priority use cases, project execution approach, deliverables and the Use Case Requirements Document.
- **Section 2 – Use Case 1** presents Working Group feedback and regulatory enablers for broader access to CER standing data.
- **Section 3 – Use Case 2** presents Working Group feedback and regulatory enablers for the sharing and receiving of DOE.
- **Section 4 – Other Feedback** summarises broader feedback on coordinated reforms, demonstrating value before introducing obligations, and improving visibility of CER Roadmap reform progress.
- **Section 5 – CER Roadmap Initiatives supporting regulatory enablers** identifies the reform initiatives that support resolution of the barriers identified for Use case 1 and Use Case 2.
- **Section 6 – Conclusion** summarises the project outcomes and the need for continued coordination across industry, policy and regulatory workstreams.

2 Use Case 1: Broader Access to CER Standing Data

2.1 Key themes emerging from working group feedback

During the WG sessions, members reviewed the clarity and completeness of the proposed data specifications, identified regulatory barriers and enablers and provided feedback on broader access to CER standing data.

Their feedback acknowledged that broader access to CER standing data depends on establishing secure and appropriate arrangements for sharing information in the DERR, including clear requirements for data access, roles and responsibilities, data availability and quality and governance arrangements.

High-level discussion themes identified by the WG members are outlined below, with detailed feedback provided in the CDX Use Case Feedback Tracker (refer to Appendix A1).

Data quality, maintenance and coverage

Feedback highlighted the need to clarify responsibilities for maintaining CER standing data and ensuring its ongoing quality and accuracy. Feedback distinguished between parties that should collect CER information, parties that should be responsible for providing and maintaining it in the DERR, and AEMO's role in administering the exchange through CDX.

The WG members also proposed the inclusion of CER device types that are not currently included in the DERR, such as Electric Vehicles (EVs) and pool pumps, for improved visibility of CER.

A nationally harmonised asset registration, commissioning and retirement model to support consistent CER asset identification and lifecycle management and greater consistency in CER asset information was considered important to improve the data quality, interoperability and future scalability of data-sharing capabilities.

AEMO's authority to share CER standing data

The WG members recognised the importance of establishing a clear regulatory basis for AEMO to share CER standing data from the DERR with authorised parties. Feedback highlighted the importance of governance, security and oversight arrangements to support the secure sharing of CER standing data.

Security and compliance obligations

The WG members raised the potential application of the Security of Critical Infrastructure (SOCi) Act¹³ to CDX. Feedback highlighted the need to assess any associated security, governance and compliance obligations, including whether additional requirements may need to be incorporated into the CDX specifications or future implementation arrangements.

¹³ For more information on SOCi, see <https://www.cisc.gov.au/legislation-regulation-and-compliance/soci-act-2018>.

There has also been a review recently on SOCi Act, see <https://www.homeaffairs.gov.au/help-and-support/how-to-engage-us/consultations/proposed-amendments-to-streamline-and-modernise-the-soci-act-2018>

Access rights to CER standing data

Feedback acknowledged that there are mechanisms such as the Consumer Data Right (CDR)¹⁴ framework that provide pathways for accessing disaggregated CER data. These mechanisms typically require accreditation, representative agreements, and customer authorisation. Although appropriate for specific use cases, feedback suggested these mechanisms may not readily support broader, scalable access to CER standing data needed for product development, effective service delivery and other customer-support services.

The WG members emphasised the significance of clearly defining which parties may access CER standing data, the information they may access, and the justifications under which access may be granted. The WG members also highlighted that consent and authorisation requirements must be considered and clarified in respect of sensitive data. Recognition of customer-facing roles and associated access rights was also identified as an important consideration in supporting secure, consistent and scalable access to CER standing data.

2.2 Regulatory enablers required for CDX implementation

As discussed in the previous section, feedback collected during WG sessions highlighted a number of implementation considerations, including the quality and maintenance of CER standing data, arrangements for sharing and accessing data from the DERR, and broader security, privacy and compliance obligations. Collectively, this feedback acknowledged that providing broader access to CER standing data requires a clear regulatory framework that establishes AEMO's authority to share DERR data, defines access rights for authorised parties, and sets appropriate governance and compliance requirements.

To support the implementation of this use case, the following foundational regulatory enablers were identified:

- **Provision in the NER for AEMO to share CER data from the DERR** in accordance with a role-based framework and explicit authorisation settings, would be required to establish the regulatory basis for AEMO to share CER standing data with authorised parties. This would enable the development of consistent, secure and governed data-sharing arrangements, the provision of clarity regarding AEMO's authority and responsibilities in administering access, and the establishment of a foundation for future CDX capabilities.
- **Defining access entitlements to data in the DERR** is required to establish clear eligibility, access and governance arrangements for CER standing data. This would define which parties are eligible to access CER standing data, the specific data elements they may access, and any applicable use constraints, including the purposes for which information may be accessed, used or disclosed. It would also establish the conditions under which access may be provided, including customer consent and role-based authorisation arrangements, to appropriately manage information access, privacy and confidentiality. Together, these arrangements would support secure, scalable and well-governed access to CER standing data through future CDX capabilities.

¹⁴ For more information on CDR, see <https://www.cdr.gov.au/>

3 Use Case 2: Sharing and Receiving of DOEs

3.1 Key themes emerging from working group feedback

The WG members were asked to review and provide feedback on the clarity and completeness of the proposed data specifications and identify regulatory barriers and enablers for sharing and receiving of DOEs. The feedback focused on gaps in regulatory obligations to publish DOE information, governance and accountability arrangements for DOE exchange, access rights to DOE information and access arrangements for emerging customer-facing roles.

High-level discussion themes identified by the WG members are outlined below, with detailed feedback provided in the CDX Use Case Feedback Tracker (refer to Appendix A1).

DOE data specification and exchange requirements

Feedback indicated that using the proposed specification, which was based on the Common Smart Inverter Profile – Australia (CSIP-AUS)¹⁵ framework, would support industry alignment. Delivery of DOEs via CDX could provide a more efficient mechanism for market participants by enabling them to receive all DOEs from relevant DNSPs via a single mechanism (rather than, for example, having to integrate with various Original Equipment Manufacturers (OEMs) clouds to “pick up” DOEs from inverters to which DNSP CSIP servers directly communicate limits).

Feedback considered the required timing and horizon of DOE information, including DOEs being made available in advance of their effective time and records of previously issued or updated DOEs. These requirements may vary according to the operational purpose and would require further definition to establish consistent expectations for publication of DOE information.

Regulatory obligations for DNSPs to publish DOE information

WG members emphasised the importance of establishing regulatory obligations for DNSPs to publish DOE information. These obligations should be informed by an assessment of the likely costs and benefits to affected stakeholders including demonstrated benefits from IPRR trials and coordinated with related initiatives, including M3/P5 R1 Formalise the DNSP as the DSO¹⁶. Retailers, aggregators and technology providers generally supported improved access to DOE information and highlighted the value of DOE visibility for market participation, portfolio optimisation and operational decision-making.

¹⁵ For more information on CSIP-AUS, see <https://www.csipaus.org/>

¹⁶ For more information on the DSO role and M3/P5 R1, see M3/P5 final report <https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/electricity-working-group/consumer-energy-resources-sub-working-group/redefining-roles-for-market-and-power-systems-operations>

Governance, accountability and DOE exchange arrangements

Feedback highlighted the importance of governance arrangements to support the exchange of DOE information. Emphasis was placed on the need for clear accountability, security controls and standardised DOE definitions to support consistent implementation.

Alignment across broader CER Roadmap Initiatives, including M2 R1 Establish a National CER Data Strategy and CER Data Coordination function, and Consistency Prototype Projects¹⁷ arising from M3/P5 R3 was considered important to support consistent outcomes. WG members were broadly supportive of exploring whether the existing Information Exchange Committee (IEC)¹⁸ and its Business-to-Business (B2B) WG could provide an appropriate regulatory pathway for progressing this use case while CER Roadmap Initiatives mature.

Access entitlements to receive DOE information

Feedback indicated that regulatory entitlements to access DOE would be required in addition to any obligation on DNSPs to publish DOE data. Discussion highlighted the need to clearly define which parties should be authorised to receive DOE information and the purposes for which access may be provided. Participants also noted that customer consent may be required in some circumstances, particularly where access is sought by prospective or customer-facing parties, and that the appropriate balance between role-based authorisation and customer consent would require further consideration having regard to broader data governance, privacy and confidentiality frameworks.

Access arrangements for customer-facing roles

Feedback highlighted the importance of recognising customer-facing roles within future DOE access frameworks and establishing clear access rights for those parties. Participants noted that the absence of formally recognised roles creates challenges in establishing long-term access arrangements, determining appropriate access entitlements, and applying consistent privacy and confidentiality requirements. WG members also identified a need to align any new access arrangements with broader CER governance and role-recognition reforms.

3.2 Regulatory enablers required for CDX implementation

Working group feedback identified a number of considerations relating to DOE publication, access arrangements, governance frameworks and broader regulatory obligations. Collectively, these considerations reinforced the need for regulatory enablers to support the sharing and receiving of DOE information through CDX.

To support implementation of this use case, the following foundational regulatory enablers were identified:

- **Establish DNSP obligations to publish DOE information** under the NER to specified authorised parties to support operational use cases such as managing distribution limits and Voluntarily Scheduled Resource (VSR)¹⁹ dispatch as

¹⁷ For more information on the Consistency Prototype projects arising from M3/P5 R3, see M3/P5 final report <https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/electricity-working-group/consumer-energy-resources-sub-working-group/redefining-roles-for-market-and-power-systems-operations>

¹⁸ For more information on IEC, see <https://www.aemo.com.au/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/information-exchange-committee>

¹⁹ For more information on VSR, see Voluntary Scheduled Resource Guidelines https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/voluntarily-scheduled-resources-guidelines-consultation/final-documents/iprr-vsr-final-guidelines.pdf?rev=2d69bf531c824c7e925efe083c2bdea8&sc_lang=en

part of the IPRR rule change (refer to Appendix A2), in accordance with defined access entitlements. This is essential to support DNSPs to recover associated implementation and operational costs.

- **Establish access entitlements to receive DOE information** to define which parties are eligible to access DOE information, the specific information they may access and the conditions upon which access may be granted. This would provide a clear framework for managing access rights, including the role of customer consent and role-based authorisation where appropriate, and address uncertainties regarding the access entitlements of third parties.
- **Standardised data exchange mechanism and governance for DOEs** are required to support secure, standardised and interoperable sharing of DOEs. This would include establishing appropriate governance and accountability arrangements, security and access controls and data standards to support consistent approaches to the publication of DOE information. This could leverage existing industry governance frameworks, such as the B2B framework and IEC, to support standardised transactions, defined access rights and coordinated change management, reducing reliance on bespoke bilateral data-sharing arrangements.
- **Recognition of customer-facing roles and associated access arrangements** is required to support future DOE sharing arrangements. This would enable access rights and obligations to be clearly defined for emerging CER roles, establish appropriate governance and accountability arrangements, and provide a foundation for determining whether access should be based on role-based authorisation, customer consent, or a combination of both.

4 Other feedback

In addition to the specific technical and regulatory feedback for use cases 1 and 2 outlined above, the WG members provided general comments spanning both use cases as well as in relation to the visibility of CER reform in general. This section outlines this feedback.

4.1 Coordinated reforms to avoid duplication and delays

WG members consistently articulated the importance of coordinating reforms, highlighting that for each of the regulatory barriers identified across use cases, an existing CER Roadmap reform was available to address the gap.

For example, both Use Cases 1 and 2 identified regulatory barriers regarding third-party access to the DERR and DOE data, respectively. M3/P5 R4 targets the formal recognition within energy frameworks of roles who interact with CER devices to ensure conformance to and compliance with consumer protections, market and security frameworks, and the effective access and sharing arrangements of CER data. Working Group feedback indicated that a separate rule change could create overlap and introduce inefficiency in regulatory processes, and would also potentially delay the implementation of CDX.

4.2 Need for better visibility of CER Roadmap reform progress

The project sought to outline the progress and scope of relevant CER Roadmap reforms for WG members in order to highlight the potential implementation pathway for the use cases.

In response, WG members requested greater visibility of CER Roadmap initiatives, including clear dependency mapping, sequencing, timelines, decision points and reform ownership. In particular, members indicated that more comprehensive and detailed information on CER Roadmap implementation progress would support the coordination of interdependent activities (including the CDX project). DNSP members indicated this information would be particularly helpful for their individual planning activities leading to regulatory submissions.

4.3 Demonstrate value before introducing new obligations

WG members were keen to ensure that prior cost-benefit analysis be undertaken to demonstrate the value of implementing CDX use cases and suggested that such analysis could form part of a relevant rule change proposal. For example, DNSPs suggested confirming whether the costs associated with sharing DOEs via CDX (Use Case 2) would outweigh the benefits of improved forecasting visibility for Virtual Power Plants (VPPs) and other relevant parties.

5 CER Roadmap initiatives supporting regulatory enablers

As previously identified, there are regulatory barriers that currently hinder the implementation of Use Cases 1 and 2. This section outlines CER Roadmap initiatives that may provide a regulatory pathway to address these barriers for both use cases.

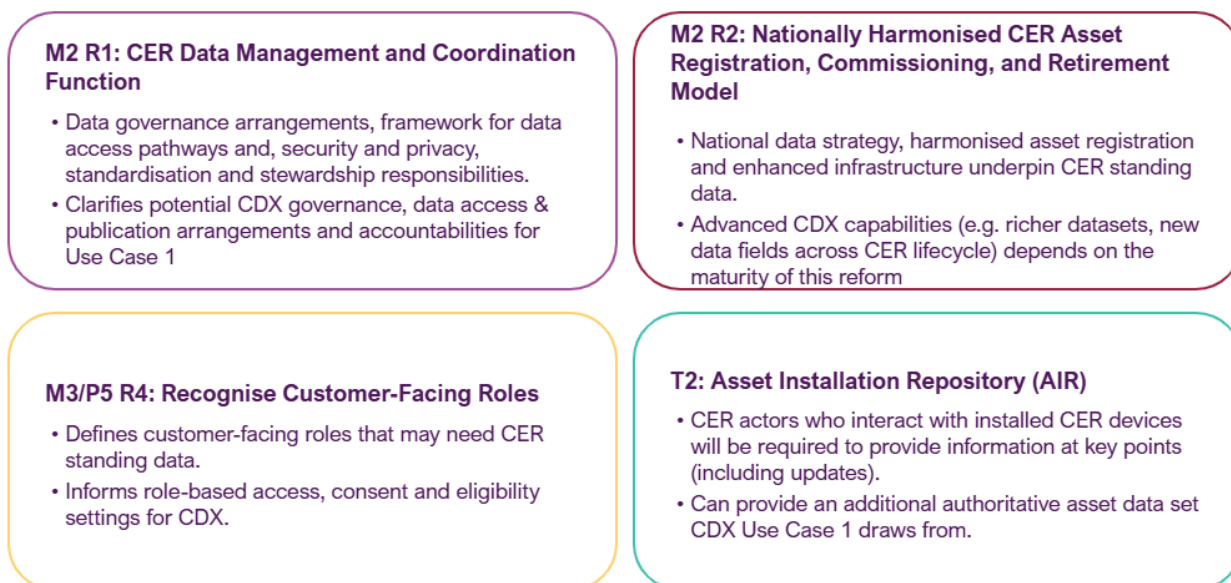
5.1 Foundational reforms enabling the broader access to CER standing data

Figure 4 identifies the CER Roadmap initiatives and recommendations that would support implementation of Use Case 1 on broader access to CER standing data.

Figure 4 Foundational reforms for use case 1

Foundational Reforms for Use Case 1

How related reform workstreams shape the governance, roles, data sources and infrastructure needed for CDX Use Case 1.



M2 R1: CER Data Management Framework and Coordination Function

M2 R1 proposes the establishment of a National CER Data Strategy (now Data Management Framework) and the design of a CER Data Coordination Function, including the operating model detailing the function's responsibilities and identifying any prospective organisations that may be best placed to undertake them.

This recommendation addresses CER data governance arrangements, data access pathways, security and privacy, standardisation and data stewardship responsibilities. The implementation of this recommendation is intended to clarify potential CDX governance, as well as establish operating arrangements and protocols for CER data classification, access, standardisation, publication, and exchange arrangements (together with associated accountabilities) for Use Case 1.

M2 R2: Nationally Harmonised CER Asset Registration, Commissioning, and Retirement Model

Alignment of asset registration, commissioning and retirement processes across jurisdictions will support consistent CER asset identification, registration, data quality and governance, strengthening CDX's ability to deliver interoperable and scalable Use Case 1 outcomes as this underpins CER standing data.

The maturity of this reform will enable CDX to expand beyond foundational data exchange capabilities by supporting richer datasets and additional CER lifecycle information. As asset registration, commissioning and retirement processes become standardised, CDX would leverage these outcomes to deliver more comprehensive data sharing capabilities, improved data quality, and enhanced support for emerging CER services and market requirements.

M3/P5 R4: Recognise Customer-Facing Roles

As mentioned previously, roles such as customer agents will require access to CER standing data. M3/P5 R4 proposes to recognise customer-facing roles and associated access rights, enabling authorised access to CER standing data (and potentially other market systems) by these emerging but currently unrecognised roles. This would support establishing the governance, access rights and customer protection arrangements required for access to CER standing data by these new roles.

T2: Asset Installation Repository (AIR)

Actors who interact with installed CER devices, as part of proposed national CER technical regulation, will be required to provide information at key touchpoints during the CER lifecycle. The Consumer Energy National Technical Regulator (CENTR)²⁰ will establish and maintain an AIR, which may support the provision of an authoritative CER asset data set capable of being leveraged by Use Case 1 in future.

²⁰ To know more about CENTR, please refer, [Consumer Energy National Technical Regulatory Framework](#)

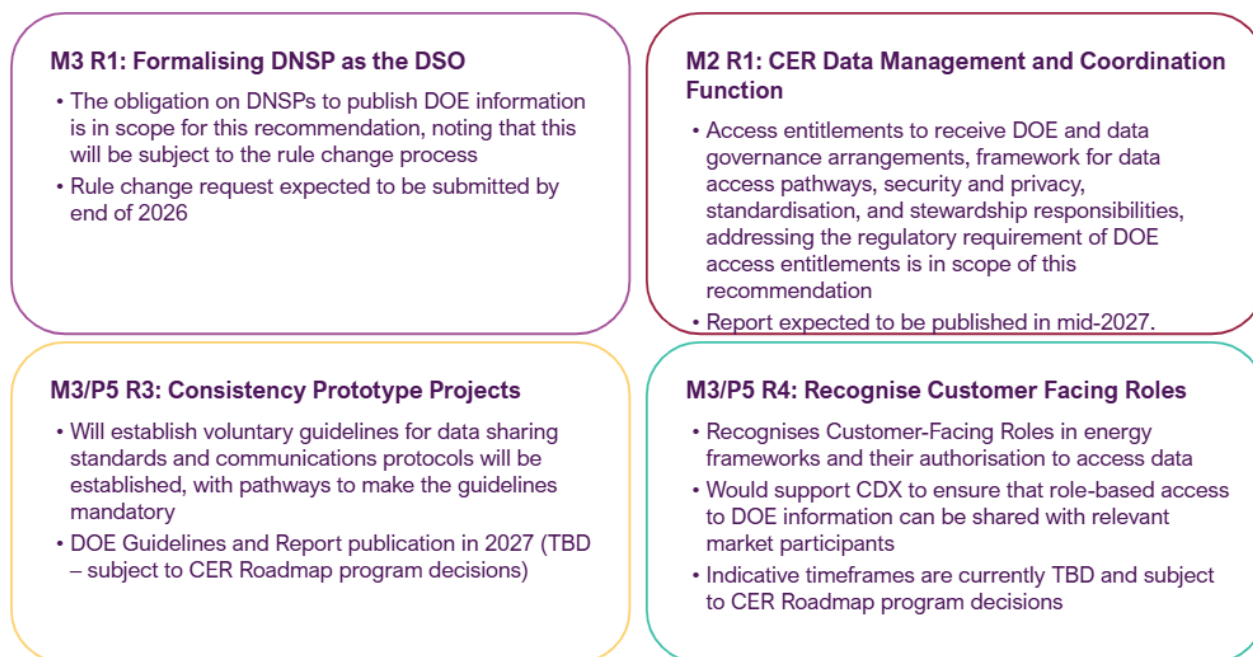
5.2 Foundational reforms enabling the sharing and receiving of DOEs

Figure 5 identifies the CER Roadmap initiatives and recommendations that would support implementation of Use Case 2 on sharing and receiving DOE information.

Figure 5 Foundational reforms for use case 2

Foundational Reforms for Use Case 2

How related reform workstreams shape the governance, roles, data sources and infrastructure needed for CDX Use Case 2.



M3/P5 R1: Formalising DNSPs as the DSO

Use Case 2 proposes the sharing and receipt of DOE information. The prospective formal establishment and recognition of DNSPs as DSOs provides a regulatory foundation for determining whether and how DNSPs may be obligated to publish DOE information to customers and their agents. This recommendation proposes to establish an obligation on DNSPs under the NER to publish DOE information to authorised parties and support operational use cases (for example managing distribution limits and enabling compliant VSR dispatch as part of IPRR rule change).

M2 R1: CER Data Management and Coordination Function

M2 R1 proposes the establishment of a National CER Data Strategy (now Management Framework) and the design of a CER Data Coordination Function, including the operating model detailing the function's responsibilities and identifying any prospective organisations that may be best placed to undertake them.

This recommendation addresses data governance arrangements, data access pathways, security and privacy, standardisation and data stewardship responsibilities. The implementation of this recommendation is intended to clarify

potential CDX governance and protocols for CER data classification, access, standardisation, publication, and exchange arrangements (together with associated accountabilities) for Use Case 2.

M3/P5 R3: Consistency Prototype Projects

M3/P5 R3 recommends the formation of consistency prototype projects to address stakeholders' concerns over the potential lack of standardisation between distribution networks as they formalise their DSO functions. The intent is to establish a baseline framework for consistency across DSOs in the delivery of key services, including DOEs, the emergency backstop mechanism, and flexibility services (as a potential foundation for other services). Establishing consistent DOE components and potentially exchange arrangements will support interoperability across DSOs and align with CDX's ability to deliver nationally consistent and scalable data exchange capability for CER devices and services.

M3/P5 R4: Recognise Customer-Facing Roles

Roles such as customer agents will require access to CDX capabilities to receive DOEs as part of Use Case 2. M3/P5 R4 proposes to recognise customer-facing roles and associated access rights, enabling authorised access to DOE information (and potentially other market and CER data) by these emerging but currently unrecognised roles. This would support establishing the governance, access rights and customer protection arrangements required for access to DOEs by these new roles.

6 Conclusion

The CDX project has further developed the understanding of the technical, governance and regulatory arrangements required to support the sharing of CER-related information across the energy sector. Through industry engagement and assessment of two priority use cases, the project identified a range of technical requirements, implementation considerations and regulatory enablers relevant to broader access to CER standing data and the sharing and receiving of DOEs.

Feedback demonstrated broad support for the objectives of the use cases, while reinforcing the importance of clear access arrangements, governance frameworks, data stewardship, privacy protections and supporting regulatory settings. Feedback also highlighted the importance of aligning future CDX capabilities with broader industry and reform initiatives to support consistent outcomes across the energy ecosystem.

The outcomes of this project provide a foundation for future consideration of CDX capabilities and can inform subsequent industry, policy and regulatory initiatives relating to CER data sharing. Continued collaboration across industry will be important to progress the identified implementation considerations and support secure, interoperable and scalable exchange of CER-related information as the role of CER continues to grow across the energy system.

A1. Appendix - Other project deliverables

A1.1 Use Case Requirements Document

The project developed the CDX Use Case Requirements Document²¹, which consolidates industry feedback and documents the preliminary business justifications, and technical and regulatory enablers for the two priority CDX use cases: Broader Access to CER Standing Data and the Sharing and Receiving of Dynamic Operating Envelopes (DOEs). The document has progressed the design for these use cases by defining indicative solution concepts, priority data sets, access requirements, user needs, technical requirements and regulatory considerations identified through the feedback process of the project.

This report should be read alongside the CDX Use Case Requirements Document as the requirements, data specifications, access models and design considerations in this document can be leveraged to inform subsequent detailed solution design, regulatory development, build and implementation. Capturing this work at the detailed design stage reduces the need for future initiatives to re-establish baseline requirements and provides a clear starting point for progressing implementation when required policy, regulatory and investment decisions have been made.

A1.2 Additional Appendix - CDX Use Case Feedback Tracker

This is an additional appendix produced alongside the CDX Project Outcomes Report and the Use Case Requirements Document.

The CDX Use Case Feedback Tracker²² provides visibility of the stakeholder feedback received through the TWG and RWG and collaboration sessions undertaken as part of this project. It documents the feedback received, project responses and resulting updates made throughout the development of the use case requirements.

The tracker should be read alongside the CDX Project Outcomes Report and the Use Case Requirements Document. While the Outcomes Report summarises the key themes, implementation considerations and regulatory enablers identified through stakeholder engagement, the CDX Use Case Feedback Tracker provides the detailed feedback and supporting rationale that informed the development of the requirements documented in the Use Case Requirements Document.

²¹ To access the CDX Use Case Requirements Document, see <https://www.aemo.com.au/initiatives/major-programs/nem-reform-program/nem-reform-program-initiatives/consumer-energy-resources-data-exchange>

²² To access the Additional Appendix – CDX Use Case Feedback Tracker, see <https://www.aemo.com.au/initiatives/major-programs/nem-reform-program/nem-reform-program-initiatives/consumer-energy-resources-data-exchange>

A2. Appendix - Relationship between IPRR and CDX

During the working group discussions, stakeholders frequently referenced IPRR due to its potential interaction with the CDX use cases, particularly the sharing and receiving of DOEs. Feedback highlighted the importance of considering dependencies between the two initiatives when assessing future implementation pathways.

To better understand these interactions and dependencies, the CDX and IPRR project teams explored the data sharing capabilities required for the IPRR rule, IPRR rule objectives and the implementation timeframes for both initiatives. The teams also considered the regulatory enablers identified for data sharing through CDX.

The assessment identified the following capabilities that could be supported through CDX:

- Portfolio visibility from Voluntarily Scheduled Resource Providers (VSRPs) to DNSPs
- Pre-dispatch target sharing from VSRPs to AEMO, with visibility to DNSPs
- Sharing of DOE information from DNSPs to VSRPs

The IPRR project team, however, confirmed that the current IPRR rule change proposal does not specifically require DOE sharing. Instead, where DNSPs impose non-static export limitations, they must consult with VSRPs through connection policy processes or otherwise sufficiently consult them.

Additionally, CDX WG feedback indicated that a number of regulatory enablers (refer to section 3.2) are required to support DOE sharing, which may influence future implementation pathways and timelines for the CDX project.

As a result of the teams' exploration, the IPRR initiative will be proceeding without any assumption that CDX capabilities will be available for its implementation schedule and therefore will continue to progress independently.

The CDX and IPRR project teams also noted that subject to industry demand and supporting regulatory pathways being available, AEMO would provide support for implementing these capabilities including DOE information sharing, VSRP portfolio visibility and pre-dispatch target sharing through CDX in the future.

Finally, while IPRR may benefit from capabilities explored through CDX, these future implementation approaches and timing will require ongoing coordination between the initiatives and broader industry reform activities.