

Additional Appendix - CDX Use Case Feedback Tracker

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1 Document Context

The Feedback Tracker provides a detailed record of comments and feedback received from industry participants during the Technical Working Group (TWG) and Regulatory Working Group (RWG) engagement activities undertaken as part of the CDX project. This document contains stakeholder feedback, project responses, and resulting decisions made by the CDX team relating to the development of the technical requirements and regulatory considerations of the priority use cases. The content highlighted in this document is the expanded version of the feedback that is explored in the CDX Project Outcomes Report¹, and should be read alongside both the outcomes report and the Use Case Requirements Document.

This tracker document informs the evolution of the Use Case Requirements Document, including the changes made to the data specifications, user stories, governance arrangements, and regulatory considerations, therefore providing additional context to the evolution of the Use Case Requirements Document.

The feedback captured in this document relates to:

- Use Case 1: Broader Access to CER Standing Data
- Use Case 2: Sharing and Receiving of Dynamic Operating Envelopes (DOEs)

The tracker document is structured such that each use case has its own section, with each section containing feedback received from feedback session 1 and feedback session 2 as well as the CDX teams Decisions, Responses and Questions based on WG Feedback

The tracker document is structured such that each main body section contains the feedback received for the relevant use case across the various feedback stages.

¹ For more information on the CDX Project Outcomes Report and the 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>

2 Use Case 1: Broader Access to Standing Data

2.1 Feedback Received in Session 1

Session 1 focused more on validating the initial data requirements for Use Case 1, with participants being asked to consider the value and priority of each proposed data element, relevant business justifications, and the roles that may require access. This feedback session was the first session where the CDX team shared the draft Use Case Requirements Documents with the WG members.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
National Meter Identity (NMI)	BR01	Unique Identifier for connection point	- System Operators (Tx) - System Operators (Dx) - DNOs - CER Installers - OEMs - Energy supplier - Customer agent - Clean Energy Regulator - CER Regulator - Comparison Sites	Project Decision: Include in Part 1 & 2 Part 1: include summary CER information in the NMI Standing Data Part 2: Use NMI as the primary reference for access to CER standing data for a site via CDX. Added roles as per feedback - Added roles: Clean Energy Regulator, CER Regulator, Comparison Sites (e.g. Energy Made Easy, Victorian Energy Compare) - Participants suggested customer should be added as a role with access. - Project: Customer's will not be access CDX directly but can make enquiries through their Energy Supplier. Alternative to NMI for 3rd Parties - Participants-raised the potential need for an alternative mechanism or identifier for parties (e.g. OEMs) who need to access CER Standing Data but are not permitted access to the NMI - Project: Part 3 consideration. - With respect to 3rd parties who may gain access to MSATS/CER Standing Data in the future, consideration would need to be undertaken in relation to provision of the NMI. Eg is it Personally Identifiable Information (PII)? - Note: We do not believe NMI should be considered PII if access to the associated address is not provided with the NMI. Sub-NMI requirement for FTA - Participants raised the potential need for sub-NMI configurations to support Flexible Trading Arrangements and stated an assumption that this data element only refers to the primary NMI recorded in DERR today. - Project: Assumption is correct. Sub-NMI configurations and FTA support will be a Part 3 consideration.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
				• Explicit Consent – Participants sought clarification on the approach to explicit consent for prospective vs current retailer access to standing data. – Project: The same approach as MSATS will be applied for CER standing data. • Data Access for Comparison Sites – Participants requested a role be added for Government comparison sites (e.g. Energy Made Easy, Victorian Energy Compare). – Project: Have added a role for 'Comparison Sites' but not limited it to Government at this stage. This could include any 3rd party comparison site.
	new	• Retailers require the NMI to correlate the CER device to the physical location.	• Energy Supplier	• Justification added as per feedback
	new	• The NMI Standing data is a critical input into product and pricing decisions at the point of sign up - and establishing this as part of the Type 2 response would be ideal	• Energy Supplier	• Justification added as per feedback • Applies to Part 1 & Part 2
NMI location within physical network topology	BR02	• Required to understand load behaviour at transmission connection points for power system studies	• System Operators (Tx) • System Operators (Dx)	• Project Decision: Include in Part 3 This is not in the DERR today. • T-D Coordination – Participants suggested this use case did not require disaggregated NMI level data for the TSO and that that Data Requirements should be worked out through the T-D design initiative resulting from M2 – Data Sharing Final Report, Recommendation 3 – Project: Acknowledged but not a consideration for CDX. • Further detail on justifications – Participants called for further detail of the business justifications and use cases. – Project: Business justifications will be revised and iterated on in final case before moving forward. • OEMs & NMI Standing Data Process

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
				- Participants asked if OEMs would be put through NMI Standing Data process. - Project: TBC. This would be considered in Part 3 at earliest Clear definition of CER Standing Data - Participants called for a clear definition of CER Standing data and how it ties into taskforce work. - Project: Project will attempt a definition of CER Standing Data and seek to have it supported across any policy/taskforce work. (Action on project)
	BR03	NMI level data and correspondence between NMIs and nodes in the transmission network (preferably mapped to EMS IDs)	- System Operators (Tx) - System Operators (Dx)	
	new	For aggregated access – to understand counts of NMIs at TNI/regional level when looking at other data types e.g. cyber/power system security risk of a party with the ability to control CER being compromised	- CER Conformance Monitor - CER Cyber Coordinator - JSSC - Market Operators - Policy Makers	Justification added as per feedback
	new	Required to model CER and their behaviour for forecasting, planning, pricing and tariff analytics, operational purposes, T-D coordination (distribution side), and dynamic tariff billing.	- DNO - System Operators (Dx)	Justification added as per feedback DNSPs Already Have This Data - Participants called out that DNSPs are the source for this data (and several other data elements listed here) and as such, do not need to this use case to gain access to these data elements. - Project: Acknowledged. We have updated the data spec from “Roles requiring access” to “Data Access Rights” to indicate parties that have access to view the data, not necessarily those that need to get the data from CDX.
Installation date: month and year of installation	BR04	Required to accurately model the fleet as it ages	- System Operators (Tx) - System Operators (Dx) - DNOs	Project Decision: Include in Part 3 - Installation Date for the Device (L3) is not currently captured in the DERR. - Note: Could potentially be sourced from the National Installed Device Register being developed by the Clean Energy Regulator. Given this is associated with a payment/ certificate, the data is expected to be of higher quality.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
			Energy Supplier	Added roles as per feedback - Added roles: Energy Supplier Commissioning Date as proxy for Installation Date - Participants pointed out that the DERR tracks Commissioning Date not Installation Date and they are generally similar in most cases, but acknowledged that the two dates can diverge in some cases (e.g. a system could have been operational off-grid for quite some time which has age-related implications) - Project: DERR Commissioning Date will be included in Part 2 as a potentially useful proxy for Installation Date which will not be available until Part 3. DERR Data insufficient to model CER device life cycle - Participants suggested that the data proposed for CDX Use Case 1 (and in the DERR in general) is not sufficient to reliably model CER device asset life cycle, including age-based condition. - Project: Disagree with this statement. The age of the fleet determines compliance and operational characteristics that do influence operational outcomes.
	BR05	Helps identify / confirm assumptions relating to DER device standard that may apply to the specific device	- System Operators (Tx) - System Operators (Dx) - DNOs	
	new	Supports before and after analysis of impacts that CER device has on consumption patterns.	Energy Supplier	Justification added as per feedback
	new	Required to produce an accurate network model and also maintain accurate historical versions including CER for a large range of business functions	- DNO - System Operators (Dx)	Justification added as per feedback
Commissioning Date		Project: this was added as a proxy for Installation Date; assumption is that all of the same justifications apply.		Project Decision: Include Commissioning Date in Part 2 Available in the DERR Today: The DERR holds "Commissioning Date" at the AC Connection level (L2) which may be of use in the meantime. This is the date the "AC Connection becomes active," but is not an installation date per se. For context, a comparison against the Clean Energy Regulator's database showed that the DERR Commissioning Date was generally later than the CER's Installation Date. Data Quality: The majority of data in Commissioning Date is of good quality. A small number of older records have some unreliable data (e.g. a date in 1970) but these exceptions are relatively few.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
				Recent changes to implement more strict validations in the API have further improved the reliability of more recent data, and any new data going forward.
Network Type: Static or Dynamic	BR06	Understand static or dynamic limits	- System Operators (Tx) - System Operators (Dx) - DNOs - CER Installers - OEMs - Energy supplier - Customer agent - Policy Makers - Comparison Sites	Project Decision: Include in Part 3 - Not available in the DERR today. - Allows us to know whether a NMI is subject to FELS Added roles as per feedback - Added roles: Policy Makers, Comparison Sites Dynamic Limits - Participants stated the requirement for dynamic limit data. - Project: This will be the subject of Use Case 2. Challenging OEM access to Network Type - Participants: questioned the requirement for OEMs require access to Network Type. - Project: Project has an action to provide justification from Supplier Access. Min/Max Import and Export Limits - Participants suggested the inclusion of Max/Min import/export limits (for dynamic agreements). - Project: Dynamic Limits are the subject of Use Case 2. Any limits in standing data would be static only and would not provide sufficient insight into the NMI. Note: Static limits are available in the DERR today, but there is no obligation for DNSPs to provide them unless the installation is in Central Protection Control Mode as such, they cannot be relied on to be populated.
Phase Information: Connection point no. of phases, No. of phases with CER	new	Same as Connection Agreement Type?	- DNO? - System Operators (Dx) - Policy Makers	Project Decision: Include in Part 2 Available in the DERR The following attributes at the NMI Level (L1) - availablePhasesCount - installedPhasesCount Added this data based on feedback
Decommissioning date: month and year of decommissioning	BR07	Important for modifying forecasts and not double counting	- System Operators (Tx) - System Operators (Dx) - DNOs	Project Decision: Include in Part 2. Available in the DERR This is "End Date" on the device record which is set when the device status is set to decommissioned.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
			- Clean Energy Regulator - OEM - CER Installers	– Data Quality: If status = decommissioned record will have an end date. Quality is relatively high except for a subset of SA data where a data cleansing incident falsely decommissioned devices to clean up data. Decommission and resubmitted. • Decommissioned Status tied to Decommissioned Date – Participants raised a requirement that decommissioning date should be tied to the date the device status was set to decommissioned. – Project: This is already in place. When a DNSP sets a device status to 'Decommissioned' the system will set an 'End Date' i.e. Decommissioning Date. • Added roles as per feedback – Added roles: Clean Energy Regulator, OEMs, CER Installers • DERR Source Field – Participants asked if this was a derived field. – Project the source being used here is "End Date" at the device (L2) level. End Date is the date set when the when the device is decommissioned. • Prospective Decommissioning Date – Participants suggested that Decommissioning date would provide extra value if it looked into the future. – Project: future dated information on decommissioning dated is likely to be impractical. • OEMs providing Decommissioning Date – Participants suggested that OEMs do not provide this data the source was limited to Installers providing it to the DNO – Project: OEMs are potentially a source for the NTR decommissioning date field. TBC
	BR08	Removing device(s) from portfolio	- Energy supplier - Customer agent	
	new	Supports before and after analysis of impacts that CER device has on consumption patterns.	- Energy supplier ?	• Justification added as per feedback
	new	Required to produce an accurate network model and also maintain accurate historical versions including CER for a large range of business functions.	DNO	• Justification added as per feedback

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
Device Status	BR09	Code used to indicate the status of the device. Options currently include are Active, Inactive and Decommission.	- System Operators (Tx) - System Operators (Dx) - DNOs - Energy Supplier - OEM - Customer Agent - Comparison Sites	Project Decision: Use to derive PV & Battery Flags in Part 1 - Part 1 will use Connection Status, Device Status and Device Type to determine if a NMI has active Solar & Battery. Include in Part 2 - Part 2 will provide Device Status (L3) for all devices returned in the CER standing data. Added roles as per feedback - Added roles: Comparison Sites, Energy Supplier, OEM, Customer Agent Decommissioned Devices (open questions) - Participants asked if decommissioned devices should be visible for a certain amount of time after decommissioning (e.g., If requesting CER standing data for a NMI today, would we want to know about equipment that was decommissioned in 2020?) - Project: The DERR has connection/inverter Status (L2) and device status (L3) for each device associated with the connection. - Assume we will show all Active and Inactive devices and Connections, but how will Decommissioned devices be handled? - Is there a requirement to see decommissioned connections? - Is there a requirement to see decommissioned devices? - Is there an “expiry” or period of time after decommissioning that CDX would no longer provide info about the device? - Do we need to include another attribute for “Connection Status” which is also available in the DERR? 15/09/2026 Note: the ‘open questions’ above were open at the time this feedback was first included in v0.4 of draft requirements document but have since been resolved. All connections and devices for a NMI will be provided including those with a disconnected status.
	new	Assist with onboarding of devices onto VPP/ seeing history of device for debugging	- Energy Supplier - Customer Agent	
Device Type Type of Generation DER: DPV, BESS, EVSE, demand response, etc	BR10	Identifying resources that may be eligible to provide energy services	- Market Operator - System Operators (Dx) - Energy supplier - Customer agent	Project Decision Part 1: Use Device Type to identify Battery and PV and set flags Part 2: Include current Device Types - Device Types will be limited to the current pick list in the DERR Today. (Fossil, Hydro, Wind, Solar PV, Biomass/Waste, Geothermal, Storage, Co- / Tri-generation, Other) Part 3:

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
			- OEMs - CER Installers - Comparison Sites	Expand the available Device types (e.g. DPV, BESS, EVSE, demand response, etc) Explore the use of Sub-Type Sub-Type is not included in Part 2 as there is currently no validation and the data cannot be relied on. Consideration for inclusion in Part 3 would require a significant data cleansing exercise and new API validations. Added roles as per feedback - Added roles: Comparison Sites, OEM Capturing EV Devices - Participants commented on the requirement for capturing EV type devices (EVSE, V2G) - Project: How we deal with EVs is TBD. Part 3 consideration. Additional Device Types - Participants: Suggested the DER register should be updated to include EV's, load DER, hot water particularly those that are in VPP's/IPRR to support a high DER future. - Project: Phase three will consider some of these matters.
	BR11	Adding resources to a portfolio	- Energy supplier - Customer agent	
	new	Support understanding of different types of resources/portfolios	Energy Supplier	Justification added as per feedback
	new	Adding resources for planning future products	Energy Supplier	Justification added as per feedback

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
	new	Specifically in relation to EV's, this would help us with modelling/forecasts, identifying constraints etc. In the near future we will need to control these for flexible imports and exports including DOE calculations.	- DNO - DSO	Justification added as per feedback
Type of Controllable Load: Hot Water, EV, Pool Pumps	BR12	Identifying resources that may be eligible to provide energy / flex services	- Market Operator - System Operator (Dx) - Energy supplier - Customer agent - OEMs - Comparison Sites	Project Decision: Include in Part 3. - Not available in DERR Today Added roles as per feedback - Added roles: Comparison Sites, OEM
	BR13	Adding resources to a portfolio	- Energy supplier - Customer agent	
	new	Support analysis of different types of loads and helps retailers when having conversations with consumers on what their devices can achieve.	Energy Supplier	Justification added as per feedback
	new	Forecasting load/generation/constraints and optimising the distribution system as a DSO i.e. when there is a lot of hot water in this area so we can bring more solar on.	DSO	Justification added as per feedback Market Offerings for Controllable Load - Participants stated the importance of a DNSP having knowledge of market offerings relating to controllable loads so that they can act accordingly to protect and optimise the network - Project: This could be a valuable addition. Consideration for part 3.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
Technology: synchronous generator, inverter-based, induction motor, etc.	BR14	Understanding device operation and impact on network	- System Operators (Tx) - System Operators (Dx) - DNOs - Energy Supplier - Customer Agents	Project Decision: Include in Part 3 - Not available in the DERR today. Added roles as per feedback - Added roles: Energy Supplier, Customer Agent
	BR15	Forecasting expected generation and/or load shifting for system operation purposes	- System Operators (Tx) - System Operators (Dx) - Energy Supplier	Added roles as per feedback - Added roles: Energy Supplier
Size: capacity (kW), storage capacity (kWh)	BR16	Forecasting expected generation and/or load shifting for energy services provision	- Market Operator - System Operators (Dx) - Energy supplier - CER Installers - Suppliers - Customer agent - CER Conformance Monitor - CER Cyber Coordinator - JSSC - Policy Makers	Project Decision: Include Inverter and Device Capacities in Part 2 - DERR today has: - L2 Inverter Rated Capacity - L3 Device Rated Capacity - L3 Device Storage Capacity Aggregating Inverter Capacity for Part 1 Question (open question) - A NMI can have multiple L2 connections/inverters and multiple devices. Do we provide aggregated capacity or does this stop being useful? 15/09/2026 Note: the 'open question' above was open at the time this feedback was first included in v0.4 of draft requirements document but since then a project decision was made to aggregate capacity for Part 1 in cases where multiple device records exist. Added roles as per feedback - Added roles: CER Conformance Monitor, CER Cyber Coordinator, JSSC, Policy Makers Clarify what values are provided - Participants: asked for clarity on what I being provided as Capacity (kW) - Battery, Inverter and Solar Power (kW) will differ. - Project: For Part 2, we will provide Inverter capacity (L2 Connection level), and Device (L3) Capacity and Storage Capacity. Org Responsible for Capacity Data - Participants suggested that Customer Agent might not always have accurate data (e.g. may have come from the customer) and that OEMs should be the source of truth.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
Manufacturer, make and model number				– Project: CER Roadmap, NTR and M2 streams will determine the source for CER Standing Data
	new	• Required to model CER and their behaviour for forecasting, planning, and operational purposes.	• System Operators (Tx) • System Operators (Dx)	• Justification added as per feedback
	BR17	• Helps accurately model the predicted response of the generation/load, as individual models behave differently (system operation purposes)	• Market Operator • System Operators (Tx) • System Operators (Dx) • Energy Supplier • CER Conformance Monitor • CER Cyber Coordinator • JSSC • Policy Makers • CER Installers • Suppliers	• Project Decision: Include Inverter & Device Manufacturer and Model in Part 2 – DERR has Inverter (L2) Make & Model today – DERR has Device (L3) Make & Model today • Added roles as per feedback – Added roles: Energy Supplier, CER Conformance Monitor, CER Cyber Coordinator, JSSC, Policy Makers
	BR18	• Helps forecast response of the generation/load for energy services provision	• Market Operator • System Operators (Dx) • Energy supplier • Customer agent	• Project Decision: Not included in Part 1 – Participants: suggested this could be included in the simplified dataset in MSATS. – Project: Due to the One to Many relationship of NMI>Inverter>Device, this cannot be rolled up to so a single NMI level value
	new	• Helps more seamless customer onboarding, as often some VPP Provider only support certain make and model	• Energy Supplier	• Justification added as per feedback
	new	• Less info customer has to seek out to access VPP product – valid asset?	• Energy Supplier • Customer Agent	• Justification added as per feedback

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
Inverter Serial number	BR19	Used when engaging OEMs about performance of their assets when performance data indicates non-compliance or other unusual behaviours	- System Operators (Tx) - System Operators (Dx) - Energy Supplier - CER Installers - Suppliers	Project Decision: Include Inverter & Device Manufacturer and Model in Part 2 - DERR has Inverter (L2) Serial Number - Where an AC Connection has multiple inverters (e.g. PV systems with micro-inverters) a list of serial numbers will be provided.
	BR20	Confirmation of specific Inverter asset joining portfolio	- Market Operator - System Operators (Dx) - Energy supplier - Customer agent	
	new	Helps more seamless customer onboarding, as often serial number is required to gain control	Energy Supplier	Justification added as per feedback
	new	Compliance with standards with OEM	- DNO - DSO	Justification added as per feedback
	new	Fault finding with OEM	- DNO - DSO	Justification added as per feedback
Battery Serial Number, Site ID, System ID (Added by WG Feedback)	new	Ease of adding asset to VPP or Aggregation Platform	- Energy Supplier - Customer Agent	Project Decision: This would have to be Part 3
Performance derating over the life of the asset.	BR21	Forecasting expected generation and/or load shifting for system operation purposes	- System Operators (Tx) - System Operators (Dx)	Project Decision: Not Include - Not practical data to reliably capture. - Alternative approach suggested by participants in feedback: use data and assumptions to infer this.
	BR22	Forecasting expected generation and/or load	Market Operator	

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
		shifting for energy services provision	- System Operators (Dx) - Energy supplier - Customer agent	
	new	So that VPP DUIDs can accurately know amount they can bid in/provide taking into account of capacity degradation of assets.	- Energy Supplier ?	Justification added as per feedback
Installation type (new installation, replacement, addition)	BR23	Forecasting expected generation and/or load shifting for system operation purposes	- System Operators (Tx) - System Operators (Dx) - Energy Supplier	Project Decision: Include in Part 3 - Data is not in the DERR today. It may be possible to infer it from job number details and update dates but complex logic. - Clarification required. "Additional" is ambiguous. Clarify what "Additional" means as opposed to "New" and what value it provides. Would it be better to limit options to "New" and "Replacement"? Added roles as per feedback - Added roles: Energy Supplier
	BR24	Forecasting expected generation and/or load shifting for energy services provision	- Market Operator - System Operators (Dx) - Energy supplier - Customer agent	
LFDI - Asset Identification Number	BR25	Needed for VPP connection - to connect to asset information	- Market Operator - System Operators (Dx) - Energy supplier - Customer agent	Project Decision: Include for consideration Part 3 - Not available in DERR today Device Control Information - Participants suggested additional device control data be added to CER Standing Data. Specifically, for each CER device: - Is the device controllable (yes/no) - What is controllable (e.g. generation/site exports/ target power/ consumption) - How is it controlled (e.g. CSIP-AUS, SCADA, relevant agent, AFLC, smart meter) - Who can control it (e.g. DNSP, energy supplier, OEM, aggregator) - Project: This requires further consideration to determine the feasibility of capturing this data.

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
	new	Needed for coordinating of detailed market processes (e.g. disconnection due to non-payment).	Energy Supplier	Justification added as per feedback
Last Updated (date & by who)	BR26	If other parties are adding to the database	- System Operators (Tx) - System Operators (Dx) - DNOs - CER Installers - OEMs - Energy supplier - Customer agent	Project Decision: Part 3 consideration - if we allow other parties to write to the database Updated to 'Last Updated' - Participants asked for clarification on what 'Last Verified' meant - Project: Renamed to make it clear that it is about the last data update, not verification of the data.
	BR27	Useful for sites with an empty decommissioning date	- System Operators (Tx) - System Operators (Dx) - DNOs - CER Installers - OEMs - Energy supplier - Customer agent	
What drives / influences the device's operation and for what purpose e.g. passive, weather driven	BR28	Understanding active participation status (in trader or Dx management programs) for forecasting (system operation) purposes	- System Operators (Tx) - System Operators (Dx) - DNOs	Project Decision: Not Include - VPP forecasts will be considered in UC3 and/or Market Visibility Framework.
	BR29	Identifying Dx constraints associated with the connection (OE generation and assignment)	- System Operators (Tx) - System Operators (Dx)	

Data	BR	Business justification(s) for Data access	Role requiring access	Decisions, Responses and Questions based on WG Feedback
	new	Understanding system behaviour for planning purposes. (operational, seasonal, connections, constraints)	- DNO - System Operators (Dx)	Justification added as per feedback
Who has control over a device, and what control do they have (e.g. dispatch controls, limits, settings)	new	Understand ability for a device to have a negative impact on power system security	- System Operators (Dx) - Market Operator - JSSC - CER Cyber Coordinator	Project Decision: Not Include - Participants suggested this be added but the project has chosen not to include it. - Field is not necessary - Control will be one of three options (Manufacturer/VPP/Retailer)
VPP Participation information	BR30	IPRR registration / Portfolio Information	- Market Operator - System Operators (Dx) - Energy supplier - Customer agent	Project Decision: Not Include - VPP forecasts will be considered in UC3 and/or Market Visibility Framework.
	BR31	DSO Registers	- Market Operator - System Operators (Dx) - Energy supplier - Customer agent	
	new	Visibility of a device on a VPP to avoid double joining.	- Energy Supplier - Customer Agent	Justification added as per feedback
	new	Understanding system behaviour for planning purposes. (operational, seasonal, connections, constraints)	- DNO - System Operators (Dx)	Justification added as per feedback

2.2 Feedback Received in Session 2

Session 2 focused on refining the updated Use Case Requirements Documents following the feedback received from the WG members from Session 1. In Session 2, the WG members reviewed the proposed data specifications for Use Case 1 Parts 1, 2 and 3, together with the associated access arrangements, responsibilities, user stories, regulatory and implementation dependencies. The outcomes of this feedback cycle are documented in the tables below

2.2.1 Data Elements: Part 1

Data	Part	Description	Project Response
Solar Flag	1A	Indicates an active Solar PV device at the site.	Data Access - Participants - Project: The expectation is that existing MSATS data access rules apply here as this is an extension of the NMI Standing Data. As such, prospective FRMP would be subject to the existing rules requiring justification to access this data. Solar Flag Definition - Participants asked for clarity on how the Solar and Battery Flags would be populated. - Project: - This flag would be populated based on DERR data where there is a device record with a Device Type of PV - For part 1A, the status of the device is considered private so this flag would be limited to indicating if there is a Solar device record of any status (including decommissioned) in the DERR. I.e - Yes = device record - No = no device record. - For Part 1B with a rule change we can enhance this flag to show the solar device status. I.e: - A (Active) - I (Inactive) - D (Decommissioned) - N (No Solar Device) Detailed explanation of this has now been added to the requirements document.
Battery Flag	1A	Indicates an active battery device at the site.	Battery Flag Definition See above for Solar Flag Definition. The same logic applies but for Device Type = Storage
Solar Total Capacity	1B	Sum of rated capacity of all active solar devices at the site.	
Inverter Nameplate Capacity	1B	The rated output capacity of the site's inverter(s).	
Storage Nameplate Capacity	1B	Sum of rated capacity for storage devices at the site.	
Installation Status	1B	The status of the inverter at the site.	Installation Status Not Needed - Participants challenged the need for Installation status. - Project: Agree. If the 1B rule change allows device status to be provided in the Solar and Battery flags, Installation Status does not add any addition I value. It will be removed.

Other?

Data Management

- Participants as who will be responsible for managing / maintaining this data.
- Project: This data will be taken from the DERR which has the required data to populate the attributes described in Part 1 . Existing data maintenance responsibilities would remain unchanged (i.e. DNSP remains responsible for the data in the DERR) and AEMO would be responsible for ensuring MSATS values are kept up to date based on the DERR data.

Retailers, VPPs and OEMs Already Ask This?

- Participants pointed out that retailers, VPPs, and OEMs already have this data as they ask their customers for it.
- Project: Retailers don't want to rely on customers self-reporting CER details as this can be prone to inaccurate formation being provided. The preference is for a more reliable method of obtaining CER standing data which in turn allows retailers to provide better products offers to their customers.
Regarding OEMs and VPP Providers, Part 1 is limited to existing MSATS roles and will not be made available to OEM's and VPP Providers

Terminology: FRMP / Retailer

- Participants pointed out inconsistent naming of retailer between Part 1 (FRMP) and Part 2 (Energy Supplier)
- Project: This table describes an extension of the NMI Standing Data in MSATS and as such, uses the MSATS role of "FRMP."
Parts 2 & 3 use the new "Energy Supplier" role described in the National CER Roadmap.

Device / Installation Mismatch

- Participants asked if there can be a scenario where solar and/or battery devices (L3) are active, but the inverter connections (L2) are inactive.
- Project: It is technically possible for the DERR to allow a scenario where an active device (L3) is associated with an inactive or decommissioned inverter record (L2), this does not happen in practice. Analysis on the DERR production data showed only a single instance of an active device with a decommissioned inverter.
Improving data quality is outside the scope of this project, but we will highlight the issue with the DER Register team and suggest that a validation to prevent this could be added to their roadmap

One set of flags per NMI

- Participants suggested clarifying that a single flag will be presented for the NMI. Someone reading this table could interpret that there will be one per device, as "Device (L3)"
- Project:
 - For each NMI there will only be one battery flag and one solar flag. Where the DERR contains multiple Solar or Battery device records, a priority would need to be given to each status (e.g. if a NMI has two Battery device record, one decommissioned and one active, the battery flag in MSATS would show Active. This explanation has been added to the requirements document.
 - MSATS will not be able to present one record per device, but this will be available in Part 2.

Prospective FRMP should require explicit consent

- Participants reiterated that prospective FRMPs should not have access to this data without consent from the customer.
- Project: Noted. Access entitlements to these data elements would be considered through a rule change process and implemented through changes to relevant procedures. These CDX team anticipates that these rule changes will be informed by the CER Data Management Framework being developed by the CER Taskforce.

Confidential Data

Data	Part	Description	Project Response
			- Participants wanted clarification on what makes the proposed flags in Part 1A not confidential. - Project: highlighting the following in the Regulatory Working Group slide pack #4 “These data fields are confined to high-level indicators of CER presence and configuration and do not: - Disclose detailed technical specifications, customer behavioural information, a customer’s investment rationale or decision-making, or information that would be sufficient to enable control of a device - Appear to be materially different in character from existing standing data attributes already maintained within MSATS that describe the electrical configuration or operational characteristics of the connection point (e.g. controlled load indicators and network tariff codes that already indicate the presence of solar).”

2.2.2 Data Elements: Part 2

Data	Description	Project Response
NMI	National Meter Identifier. This is the unique Identifier for connection point.	Secondary NMI - Participant: Suggest clarifying that this only applies to primary NMIs and not secondary NMIs. Or will it also allow secondary NMIs if the specific CER is under the secondary NMI? - Project: Accepted. A note has been added to the requirements document that <i>“this will always be the primary NMI for the premises. Regardless of whether a device is associated to a Secondary Settlement Point (SSP) NMI, the DER Register and CER Standing Data will continue to use the Primary Connection Point as the NMI.”</i> Jurisdictional Installer portal - Participant: Should NSW Government (or Jurisdictional Installer Portal) be shown in this and the next column as they will implicitly be responsible and have access rights through the NSW CER Installer Portal? - Project: No. Regardless of 3rd parties using the portal, DNSPs are responsible for reviewing and ensuring the data is accurate.
Phase Information	Phase configuration at the connection point. Includes: - Connection point number of phases - Number of phases with CER Note: this was added based on participant feedback.	
Commissioning Date	The commissioning date of the Connection/Inverter. Note: this was added as a proxy for Installation Date which is not available in the DERR.	
Decommissioning Date (End Date)	The decommissioning date of the device. This is device record End Date and is set when the device status is set to ‘Decommissioned’	
Device Status	The status of the device.	Data Maintenance Participant: How will AEMO ensure that the Device Status in CDX aligns with the information in MSATS? E.g. Solar is Active in MSATS but Inactive in CDX?

Data	Description	Project Response
		- Project: This data is sourced from the DERR for Part 2. CDX does not seek to impose any new rules on how the data in DERR or MSATS is maintained, it merely acts as a passthrough to make the data available to the authorised roles/parties. The mechanism for updating MSATS needs further definition to ensure that DERR data updates are propagated to MSATS in a timely manner. The proposed solution is to use a CR (similar to CR5051) that triggers changes to MSATS standing data when the corresponding change is made in the (DER Register). Given this approach, we would not expect to see a scenario like “Solar is Active in MSATS but Inactive in CDX?” Decommissioned Devices - Participant: What is the value of presenting decommissioned devices? - Project: Presenting decommissioned devices supports participants in maintaining their own data sources. Eg if a participant is trouble shooting a device that they have on record as ‘Active’ and a CER Standing Data discovery returns that device is ‘Decommissioned,’ the participant can update the device in their system to reflect the accurate status.
	Indicates the primary technology used in the CER device. Note: Part 2 includes the device types currently available in the DERR. Part 3 will consider expanding these options.	EV Devices - Participant: Does this include EVs? - Project: No. Part 2 provides access to the existing data in the DERR which does not currently include EVs. Part 3 seeks to expand the CER data to include things like EVs.
Size: (capacity (kW) - storage capacity (kWh)	Capacity information for the connection and devices. Includes 3 attributes: - L2 Inverter Rated Capacity (Inverter based connections only) - L3 Device Rated Capacity - L3 Device Storage Capacity (Storage devices only)	
Manufacturer & Model No.	The manufacturer and model number for the inverter (if an inverter-based connection) and the CER devices. Includes: - Inverter Manufacturer - Inverter Model Number - Device Manufacturer - Device Model Number	Data Maintenance - Participants: Need to understand how this information is going to be maintained, particularly for devices that do not require connectivity to the market. In particular controllable loads (e.g., Pool Pumps, EVs) - Project: The existing rules and responsibilities for data maintenance in the DERR will continue to apply. CDX does not change this. Re pool pumps and EVs: these are not supported in the DERR today and as such will not be provided in Part 2 of this use case. Part 3 seeks to expand the data to include these devices.
Inverter Serial number	The serial number of the inverter(s) Note: where the connection has multiple inverters (e.g. micro-inverters), a list of serial numbers will be provided.	
Other?		V2G Flag - Participant: Suggest adding V2G Flag as Part 1B. But need to see if V2G appears at L2 (as a property of an inverter) or L3 (as a new device, e.g. a V2G module on a hybrid inverter stack) - Project: Part 1 and Part 2 only includes data that is available in the DER Register today. V2G data does not exist in the DERR today, it will not be available for Part 1 or Part 2. It has been flagged as an enhancement to the DER Register in Part 3.

Data	Description	Project Response
		Prospective FRMP in Part 2 - Participant: Why is prospective FRMP not shown in this table? Will they be expected to use the Part 1 method, and that will continue to exist even when Part 2 is available via CDX? - Project: A note has been added to v0.5 of the document regarding data access rights for prospective FRMPs. Regarding Part 1 changes to MSATS persisting after part 2 is delivered, the expectation is yes, the limited CER standing data from Part 1 would continue to be published in MSATS, but this is TBC. M3/P5 Rule Changes - Participant: Is it likely to successfully make piecemeal rule changes for separate parts of CER DX when there is a whole raft of interdependent required rule changes still outstanding that were foreshadowed by the M3/P5 final report? (such as, and not limited to, establishing the roles of DSOs or Customer Agents in the rules, the definition of compliance and conformance frameworks for CER and a National CER Data Strategy?). We raised this question in our previous feedback in the regulatory WG, but it hasn't been addressed. - Project: It is a fair question. The CDX team recognises that some of the reforms identified through the M3/P5 and other workstreams are interrelated. Our current approach is to assess the regulatory requirements and dependencies for each use case, including whether particular changes are contingent on other reforms, are already being considered through other policy processes, or can appropriately be progressed independently. The objective is to balance reform efficiency with timely delivery of capabilities where dependencies do not require a broader package of changes. VPP Participation - Participants raised that DNSPs want to see the which NMIs are enrolled in VPPs trading as VSRPs - Project: As per the feedback response to TWG3, the decision was that this would not be included in the CER Standing Data but would be considered in UC3 and/or Market Visibility Framework. CRIMP/SOCI - Participant: Now that the enhanced CIRMP amendment to SOCI has been finalised, have you reviewed the impacts on CDX? In particular 8c(4): For the purposes of subsection (3), the following elements are required to achieve network segregation of critical systems: (a) ensuring critical systems can be segregated as between critical systems, and between critical systems and other computers; (b) ensuring critical systems can be operationally independent from other internet connected computers and critical systems; (c) ensuring critical systems can continue to be operational for a period of at least three months while other computers are in a state of restoration or recovery; Out expectation is that this would be considered critical and SOCI would be applicable - Project: AEMO is subject to obligations under the Security of Critical Infrastructure Act (SOCI Act) in its role as the owner and operator of critical energy market operator assets. As CDX design and implementation progresses, AEMO will continue to consider any relevant SOCI obligations through its established governance, cyber security, risk management, and compliance processes. These assessments would be undertaken as part of the normal design, implementation and operational activities associated with the service. We note that the Australian Government is also currently consulting on amendments to the SOCI Act, including proposals relating to the coverage and regulation of Distributed Energy Resources (DER) and associated operators. AEMO will continue to monitor these reforms and consider any implications for CDX as the regulatory framework evolves. Similarly, organisations participating in CDX that are, or could become under any SOCI Act enhancements, subject to SOCI obligations would be expected to consider and manage those obligations through their own governance and risk management frameworks.

Data	Description	Project Response
		Shared Data Capture Processes with CER Installers and Customer Agents - Participants stated that with respect to the “Org Responsible” column of the data specification. DNOs are responsible for reporting data into the DER Register, but some of the data is captured via processes shared with CER Installers and Customer Agents. - Project: Acknowledged. CDX does not seek to change the processes or responsibilities for maintaining data in the DER Register, and while we acknowledge the distinction being made in the feedback, we do not believe it has a material impact on the use case. Data Requirements for CER Conformance Monitor - Participants suggested that CER Conformance Monitor would need access to more than the two attributes currently flagged for them in the document (e.g. NMI or lifecycle information) - Project: Agree, the access to attributes can be extended when the role is created. We have captured the role as provide in feedback round 1 we can move it to the list of needing more clarification in future. Data Requirements for CER Regulator - Participants suggested that CER Regulator would need access to more than the few attributes currently flagged for them in the document. - Project: The access to attributes can be extended when the role is created. We have captured the role as provide in feedback round 1 we can move it to the list of needing more clarification in future Data Requirements for Clean Energy Regulator - Participant: Would the Clean Energy Regulator not also need lifecycle information, potentially Device Status (and potentially capacity information, though this may already have been supplied through a separate process?) - Project: Clean Energy Regulator has been removed as a recipient of CER Standing Data from CDX. The original feedback suggesting this role be included in Use Case 1 was provided before the Clean Energy Regulator was made National Tech Regulator and tasked to establish a new National Installed Device Register . Data Requirements for Market Operator - Participant: Does the Market Operator need site level information or aggregated information? And in either case, would it not also require knowing if the installation is actually established and active (lifecycle information)? - Project: Market Operator will have access to all of the DERR data attributes Data Requirements for TSO - Participant: Would the TSO require detailed site level information or data aggregated to the TNI? They don't usually model impacts on site level in distribution. - Project: Agree. TSO will be updated to get aggregated data only Explicit Consent - Participants pointed out the need for prospective Energy Suppliers and Customer Agents to obtain explicit consent to access data. - Project: Notes have been added to Energy Supplier and Customer Agent roles to indicate that prospectives must obtain explicit consent before accessing the data and a similar note has been added for comparison sites.

Data	Description	Project Response
		Supplier Role in Role Glossary - Participants pointed out that the supplier role is missing from the role glossary - Project: The role glossary has been updated to include the Supplier Role. Data Responsibility - Participant: DNOs are responsible for REPORTING that data into the DER Register. Actually, capturing some of this data through the right processes shared with CER Installers and Customer Agents. - Project: A qualification has been added to the document to say “Org Responsible for providing data to the DER Register, but not necessarily responsible for collecting it”

2.2.3 Data Elements: Part 3

Data	Description	Org Responsible	Project Response
NMI Location in Network	Represents the NMI location within the physical network topology. Assumption: this would be represented by a TNI (Transmission Node Identifier)	DNOs	Default TNI - Participant: Is this the default TNI? Noting that NMI:TNI is an n:m relationship and could also change with switching events. - Project: Assumption is that this would be the TNI as recorded against the NMI in MSATS.
Installation Date	The date the device was installed.	DNOs Suppliers	
Network Type	Indicates whether the connection agreement requires static import and export limits or if it allows for dynamic limits.	DNOs	Supplier Access to Network Type - Participants challenged the need for Energy Supplier to have access to “Network Type” - Project: Based on participant feedback, data access right to Network Type for the Supplier role has been removed. Note: Data Access Rights is something that should be decided/finalised as part of consultation when the new role of OEM (Supplier) is created. This applies to all data access rights and roles. CER Conformance Monitor & Cyber Coordinator to Network Type - Participants suggested that CER Conformance Monitor and Cyber Coordinator roles would need access to Network Type - Project: Based on participant feedback, data access rights to Network Type has been added for CER Conformance Monitor and Cyber Coordinator roles. Note: Data Access Rights for all roles and data should be decided/finalised as part of consultation, when the new roles are created.
Device Type (“Type of Generation DER” in previous version of this document)	Indicates the primary technology used in the CER device. Note: Part 3 will expand the options already included in part 2.	DNOs CER Installers Suppliers Customer Agents	Hybrid Inverters - Participant: Does not allow for hybrid inverters? (Referring to DPV and BESS in the Value column) - Project: This is device level information, not inverter. If an inverter were connected to multiple devices, there would be an L3 record for each device connected to the inverter. The assumption is that the DER Register’s data model currently supports hybrid inverters with connection/inverter details at L2 and device details at L3 allowing multiple devices to be associated to the L2 connection/inverter record.

Data	Description	Org Responsible	Project Response
Type of Controllable Load	Identifies the specific types of CER devices that have controllable load and may be eligible to provide energy services.	DNOs CER Installers Suppliers Customer Agents	Why call out controllable load separately? - Participant: Why call out controllable load separately? A battery could be a load, and it could be controllable. - Project: What we're trying to capture is all types of "flex" BTM. A controllable load is different from a battery, although a battery could be considered a controllable load at times (depending upon state of charge). Who Can Control? - Participants called out a requirement to know who can control the device - Project: AEMO supports the concept of adding information on control capabilities / entities. As part of a DERR Uplift project looking at our current Information Guidelines, AEMO will consider how to add Control capability to the DER register
Technology	Type of electrical device technology installed at the property, specifically whether AC electrical machines, rotating equipment or power system resources.	DNOs CER Installers Suppliers Customer Agents	
Installation Type	Indicates whether the installation is a new installation, a replacement of an existing installation, or an additional installation at the site.	DNOs CER Installers Suppliers	
LFDI	Long Form Device Identifier. CSIP:AUS Asset Identification number.	CER Installers Suppliers Customer Agents	
Last Updated (date & by who)	The date the device information was last updated and by who. Assumptions: - This will only be required if/when 3rd parties (e.g. CER Installers, Suppliers, etc) are given access to enter data directly into the DERR or other CER Standing Data source. - Re "Org Responsible" this would be system generated on data update, not explicitly provided by a participant.	DNOs CER Installers Suppliers Energy Supplier Customer Agent	Update process if multiple organisations are responsible - Participant: What would be the process followed to update data if multiple organisations are responsible for the data? - Project: TBD – This will be explored in part 3
Other?			

2.2.4 User Stories Table 4 (Part 2)

Role	Data	User Story	Project Response
CER Installers	- NMI - Decommissioning Date - Device Type	As a CER Installer, I want to verify NMI and device information so that I can confirm installation and status of assets.	Clarification of "Duplication" Participant: Avoid duplication of what?

Role	Data	User Story	Project Response
	- Size - Manufacturer & Model - Inverter Serial Number	As a CER Installer, I want visibility of decommissioned devices so that I can avoid duplication and maintain accurate records.	Project: "Duplication" refers to devices being accounted for more than once. This has now been updated to "... avoid duplication of devices"
CER Regulator	- NMI - Decommissioning Date	As a CER Regulator, I want access to CER standing data so that I can monitor compliance and regulatory obligations.	
Clean Energy Regulator	- NMI - Decommissioning Date	As the Clean Energy Regulator, I want access to CER lifecycle data so that I can maintain accurate national CER records.	
Comparison Sites	- NMI - Device Status - Device Type	As a Comparison Site, I want CER standing data so that I can inform consumers about suitable products and services.	
Customer Agent	- NMI - Decommissioning Date - Device Status - Device Type - Size - Manufacturer & Model - Inverter Serial number	- As a Customer Agent, I want to view CER standing data so that I can optimise and manage customer CER portfolios. - As a Customer Agent, I want device status and lifecycle information so that I can onboard and manage devices in VPPs.	Prospective Roles - Participant: Ideally only receive this information if they are the FRMP for the site. Same applies to customer agent - if energy supplier also customer agent - Project: Acknowledged. The requirements document has been updated to add a qualification against Energy Supplier and Customer Agent roles to say that data is available to these roles where they have a current arrangement with the customer and will only be available to prospective Energy Retailer and Customer Agents with explicit consent from the customer. Similarly, a note has been added requiring Comparison Sites to also have explicit consent before accessing the data. Network Type for Energy Supplier/Customer Agent - Participant: Can Energy Supplier/Customer Agent also receive the network type data type to know if an export limit is present at site? - Project: Yes, Energy Supplier/Customer Agent will be able to see Network Type when the data becomes available in Part 3 (see Table 6)
DNOs	- NMI - Phase Information - Commissioning Date - Decommissioning Date - Device Status	- As a DNO, I want access to CER standing data for NMIs so that I can maintain and validate network models for larger business functions - As a DNO, I want commissioning and decommissioning dates so that I can accurately reflect the state of CER assets over time.	
Energy Supplier	- NMI - Commissioning Date - Decommissioning Date - Device Status - Device Type - Size - Manufacturer & Model - Inverter Serial number	- As an Energy Supplier, I want access to CER standing data for a customer's NMI so that I can tailor products and pricing, offering better services to consumers about their devices - As an Energy Supplier, I want commissioning and decommissioning dates so that I can analyse consumption impacts and manage portfolios. - As an Energy Supplier, I want device specifications and device status so that I can onboard devices and support VPP participation.	Prospective Roles As per Customer Agent comments above. Network Type for Energy Supplier/Customer Agent As per Customer Agent comments above.
Market Operator	- NMI - Device Type - Size - Manufacturer & Model - Inverter Serial number	As a Market Operator, I want CER standing data so that I can understand resource capability for market participation.	

Role	Data	User Story	Project Response
Suppliers	- NMI - Decommissioning Date - Device Status - Device Type - Size - Manufacturer & Model - Inverter Serial number	- As a Supplier, I want access to CER asset information so that I can manage device updates and support integration. - As a Supplier, I want visibility of device status and lifecycle events so that I can maintain accurate inventory and forecasting.	
System Operators (Dx)	- NMI - Phase Information - Commissioning Date - Decommissioning Date - Device Status - Device Type - Size - Manufacturer & Model - Inverter Serial number	- As a System Operator (Dx), I want access to detailed CER standing data for each NMI so that I can support distribution-level planning, pricing and operational coordination. ~~As a System Operator (Dx), I want to understand device types and capacities so that I can identify resources eligible to provide energy services.~~ - As a System Operator (Dx), I want accurate lifecycle and status data so that I can maintain an accurate current and historical network model. - As a System Operator (Dx), I want CER standing data such as inverter serial numbers so that I can work with Supplier for any standards compliance or faults	DNOs already have this - Participant: Under the current projected arrangements (aka DNSP is the DSO and the DNO), DNSPs would not source that data from the CER DX, but through our connection processes. So, the valid user stories in this row would mostly not require CER DX sourced data. - Project: This is about defining who has the right to access the data, and DNO role will have that right regardless of whether or not they already have this data from another source. Removed user story - Participant: Re the second user story, DSOs, being part of DNSPs, are not highly likely to perform targeted marketing activities for CER customers that can provide energy services. - Project: Based on participant feedback, removed the user story for System Operator (Dx) to "identify resources eligible to provide energy services." as DNSP's are unlikely to perform targeted marketing activities for CER customers that can provide energy services.
System Operators (Tx)	- NMI - Commissioning Date - Decommissioning Date - Device Status - Size - Manufacturer & Model - Inverter Serial number	- As a System Operator (Tx), I want access to NMI-level CER standing data so that I can understand the CER capability at transmission-connected locations. - As a System Operator (Tx), I want to know commissioning and decommissioning dates so that I can accurately model fleet age and avoid double counting. - As a System Operator (Tx), I want device capacity and technical specifications so that I can model CER behaviour for forecasting, planning, and operational purposes.	
Other?			Justification for Use Case 1 - Participant: It would be good if AEMO can incorporate the current status quo without standing data from CDX. The use case is good that it outlines the user stories of the different stakeholders. However, it can be clearer in describing their existing pain points and how CDX resolves it. For example, CER installer wants "visibility of decommissioned devices to avoid duplication" could be reframed as "CER installer is not updated when their installation gets commissioned by the customer". - Project: The case (justification) for data sharing across the sector has been made previously as part of the M.2 Data Sharing arrangements Consultation paper (and subsequent final report, endorsed by the ECMC) in Dec 2025. Additional deliverables from

Role	Data	User Story	Project Response
			the M.2 workstream - a recommended National Data Management Framework and associated Coordination function - are expected shortly that will further detail the justification(s) for general and specific data publication and sharing arrangements. User Stories for New Actors - Participants recommended that where actors/roles that were provided as feedback from participants have been added to the Use Case 1 user stories and data access rights, these roles should be properly validated as some do not exist yet. should be validated - Project: Acknowledged. Roles and Data Access Rights for all roles will be decided/finalised as part of consultation, when the new roles are created.

2.2.5 User Stories Table 5 (Part 2 Aggregated)

Role	Data	User Story	Project Response
CER Conformance Monitor	- Size - Manufacturer & Model	As a CER Conformance Monitor, I want aggregated CER data so that I can assess network and cyber risk at a regional level.	- Participant: Wouldn't this role require site level data to understand what conformance measures apply and detect non-conformance, such as NMI, applied limits for static connections or that a connection is a dynamic connection, so they can check DOE against performance? - Project: Agree. CER Conformance Monitor and CER Cyber Coordinator have been moved to site level access and have also had access added for 'Network Type'
CER Cyber Coordinator	- Size - Manufacturer & Model	As a CER Cyber Coordinator, I want aggregated CER data so that I can assess cyber risk across the CER fleet.	
Jurisdiction System Security Coordinator (JSSC)	- Size - Manufacturer & Model	As JSSC, I want aggregated CER technical data so that I can assess system security risks.	
Policy Makers	- Size - Manufacturer & Model	As a Policy Maker, I want aggregated CER data so that I can support policy development and system planning.	
Other?			

2.2.6 User Stories Table 6 (Part 3)

Role	Data	User Story	Project Response
CER Conformance Monitor	- NMI location in Network - Technology	As a CER Conformance Monitor, I want access to CER location and technology data so that I can assess system and cyber risks at a regional level.	
CER Cyber Coordinator	- NMI location in Network - Technology	As a CER Cyber Coordinator, I want access to CER technology and location data so that I can identify and manage cyber risks across the CER fleet.	
CER Installers	- Network Type - Device Type - Type of Controllable Load - Technology - Installation Type - LFDI - Last Updated	- As a CER Installer, I want access to device and installation data so that I can validate installations and ensure compliance with technical requirements. - As a CER Installer, I want identifiers such as LFDI and serial numbers so that I can correctly register and manage CER assets.	
Comparison Sites	- Network Type - Device Type - Type of Controllable Load	As a Comparison Site, I want access to CER capability data so that I can inform consumers about suitable products and services.	
Customer Agent	- Network Type - Device Type - Type of Controllable Load - Technology - Installation Type - LFDI - Last Updated	- As a Customer Agent, I want access to CER device and control-related data so that I can optimise customer portfolios and deliver energy services. - As a Customer Agent, I want asset identifiers and capabilities so that I can manage and coordinate DER participation effectively.	
DNOs	- NMI Location in Network - Installation Date - Network Type - Device Type - Type of Controllable Load - Technology - Installation Type - Last Updated	- As a DNO, I want access to comprehensive CER standing data so that I can build and maintain accurate network models and support planning decisions. - As a DNO, I want visibility of installation and technology details so that I can manage network constraints and optimise hosting capacity.	

Role	Data	User Story	Project Response
Energy Supplier	• Installation Date • Network Type • Device Type • Type of Controllable Load • Technology • Installation Type • LFDI • Last Updated	• As an Energy Supplier, I want access to CER technical and installation data so that I can tailor products, pricing, and services and have conversations to consumers about them • As an Energy Supplier, I want visibility of device capabilities and identifiers so that I can onboard assets into VPPs and manage portfolios. • As an Energy Supplier, I want LFDI details so that I can coordinate detailed market processes (e.g. disconnection due to non-payment)	
Jurisdiction System Security Coordinator (JSSC)	• NMI location in Network • Technology	• As JSSC, I want aggregated CER technical and locational data so that I can assess system security risks.	
Market Operator	• NMI Location in Network • Device Type • Type of Controllable Load • Technology • Installation Type • LFDI	• As a Market Operator, I want access to CER technical and capability data so that I can understand resource availability for market participation.	
Policy Makers	• NMI Location in Network • Network Type • Technology	• As a Policy Maker, I want aggregated CER data so that I can support policy development and system planning.	
Suppliers	• Installation Date • Network Type • Device Type • Type of Controllable Load • Technology • Installation Type • LFDI • Last Updated	• As a Supplier, I want access to CER asset and lifecycle data so that I can manage device portfolios and support integration into services. • As a Supplier, I want technical and identification data so that I can onboard and maintain CER assets effectively.	
System Operators (Dx)	• NMI Location in Network • Installation Date • Network Type • Device Type • Type of Controllable Load • Technology • Installation Type • LFDI • Last Updated	• As a System Operator (Dx), I want access to detailed CER technical and operational data so that I can manage distribution system operations and optimise network utilisation. • As a System Operator (Dx), I want visibility of controllable load and technology types so that I can identify resources capable of providing energy services. • As a System Operator (Dx), I want access to CER location and technical data to model CER and their behaviour for forecasting, identifying constraints, planning, pricing, tariff analytics and tariff billing	Tariff Billing • Participant: Tariff billing is not related to any of this. Tariff enrolment is a market transaction, and tariff billing data is then calculated from metering data, in some cases DOE telemetry, and network constraints • Project: Tariff billing has been removed from the user story in the next version of the document.

Role	Data	User Story	Project Response
System Operators (Tx)	- NMI Location in Network - Installation Date - Network Type - Installation Type - Last Updated	- As a System Operator (Tx), I want access to CER location and installation data so that I can model network behaviour and system impacts at transmission level. - As a System Operator (Tx), I want visibility of network type and installation characteristics so that I can assess operational constraints and planning assumptions.	
Other?			Benefit to Retailers, Customer Agents, and their Customers - Participant: - I would like to hear further from retailers and customer agents for both use cases how the additional data sharing will benefit them and consumers. I see the user stories have been added and these are useful, but very high level – it is hard to see the quantifiable benefit. - Project: - Noted further detail on retailer and customer agent use cases, including quantifiable benefits for consumers, would support an assessment of a proposal to enable access to the DER Register data against the National Electricity Objective.

2.2.7 Regulatory Requirements

Requirement Type	Requirement Description	Project Response
Part 1A: Inclusion of a set of CER related configuration characteristics in NMI Standing Data in MSATS	- Focuses on targeted, incremental access to CER related information that can be delivered using existing AEMO systems and procedures. - It would include a set of high-level non-confidential indicators, consistent with the definition of NMI Standing Data in the NER, which provide limited categorisation of CER related configuration characteristics sufficient to support retail interactions, in NMI standing data in MSATS. - Proposed NMI standing data fields include: - Solar flag (Y/N) to indicate an active solar PV device at the site - Battery flag (Y/N) to indicate an active battery at the site	NER, MSATS Procedures and Defining Standing Data - Participant: The NER defines the main components of NMI Standing Data, with the MSATS Procedure - Principles and Obligations for all Connection Points then setting out detailed data fields in its Table 17C. So, to add Solar and Battery flags, AEMO would need to update this procedure/table in consultation with stakeholders - Project: Noted. The creations of fields for solar and battery flags would require AEMO to consult on an update to the MSATS Procedures - Principles and Obligations for all Connection Points in accordance with the Rules consultation procedures in NER clause 8.9.

Requirement Type	Requirement Description	Project Response
Part 1B: Define access rights to data in the DER Register	• Enable authorised parties to access an expanded sub-set of data from the DER Register in NMI standing data in MSATS, through amendments to the NER, to establish a clear definition of eligible parties, data elements and use constraints to appropriately manage information access and confidentiality. • Examples of NMI standing data fields: - o Solar/Battery: code representing the solar/battery capability at the site and total solar capacity in kW - o Nameplate capacity of solar PV: an indicator of the installed rated output capacity of the solar PV system at the site - o Nameplate capacity of storage: an indicator of the installed rated storage capacity of the battery system at the site - o CER device status: indication of whether the device is active, in-active or decommissioned	Alignment between DER Register & Part 1B • Participant: - o In terms of expanding DER Register data, to what extent do existing requirements for data in the DER Register, as set out in Appendix A of AEMO's DER Register Information Guidelines, already provide for collection of the proposed information? If changes are necessary, then AEMO would need to update this procedure/appendix in consultation with stakeholders. • Project: - o We confirm the existing requirements for data in the DER Register, as set out in Appendix A of AEMO's DER Register Information Guidelines already provide for collection of the proposed information. Amending these requirements would require these Guidelines to be updated in accordance with NER clause 3.7E(h) which includes consultation in accordance with the Rules consultation procedures. Interdependencies between CDX reforms • Participant: - o In terms of expanding the authorised parties with access to the DER Register, we think it's important any rule change proposals are submitted to the AEMC in a coordinated way. Particularly given related reform processes that we understand are underway in 2026 e.g. the M3/P5 Recommendation 4: recognise actors that control CER devices in energy frameworks to ensure conformance and compliance with consumer protections, market and security frameworks, and appropriate sharing of and access to data. We have flagged these interdependencies and the need for updates on their progress in our earlier feedback. The CDX WGs could feed recommendations into a coordinated approach across these other reform processes. • Project: - o AEMO acknowledges the importance of considering interdependencies between CDX reforms and broader CER governance initiatives, including work arising from M3/P5 Recommendations 4 regarding recognition of CER actors and associated responsibilities, obligations, and data access arrangements. The intent of the CDX Working Groups is to identify use cases, regulatory requirements, and implementation considerations. The outputs from this project will provide valuable insights to inform the CER Taskforce projects and future regulatory reforms.
Other?		

2.2.8 Technical Requirements

Requirement Type	Requirement Description	Project Response
CER Data Exchange	Provision in the NER for AEMO for sharing data from the DER Register data in accordance with defined access rights.	Expanding access to DER Register - Participant: - If this involves expanding the authorised parties with access to the DER Register, we think it's important that any rule change proposals are submitted to the AEMC in a coordinated way. Particularly given related reform processes that we understand are underway in 2026 e.g. the M3/P5 Recommendation 4: recognise actors that control CER devices in energy frameworks to ensure conformance and compliance with consumer protections, market and security frameworks, and appropriate sharing of and access to data. We have flagged these interdependencies and the need for updates on their progress in our earlier feedback. The CDX WGs could feed recommendations into a coordinated approach across these other reform processes. - Project: - Refer to the project response in 1B of the regulatory requirements above with title "Interdependencies between CDX reforms" SOCI - Participant: - We also think it's worth exploring the impacts on the SOCI Act on the CDX and add relevant requirements to the spec. For example, will the CDX need to be SOCI compliant and what are the implications (i.e. additional requirements and responsibilities) for new entities with access to the data, including in the case of network limits. (was discussed in WG meeting) - Project: - SOCI response: AEMO is subject to obligations under the Security of Critical Infrastructure Act (SOCI Act) in its role as the owner and operator of critical energy market operator assets. As CDX design and implementation progresses, AEMO will continue to consider any relevant SOCI obligations through its established governance, cyber security, risk management, and compliance processes. These assessments would be undertaken as part of the normal design, implementation and operational activities associated with the service. We note that the Australian Government is also currently consulting on amendments to the SOCI Act, including proposals relating to the coverage and regulation of Distributed Energy Resources (DER) and associated operators. AEMO will continue to monitor these reforms and consider any implications for CDX as the regulatory framework evolves. Similarly, organisations participating in CDX that are, or could become under any SOCI Act enhancements, subject to SOCI obligations would be expected to consider and manage those obligations through their own governance and risk management frameworks.

Requirement Type	Requirement Description	Project Response
Define access rights to data in the DER Register	• Clear definition of eligible parties, data elements and use constraints to appropriately manage information access and confidentiality. • Potential to recognise new entities within the NER (e.g. new participant category, accredited party). • Specify the basis for access (e.g. customer consent or role-based authorisation) to provide specifications for explicit data access rights in the NER.	Data Access Models to be Considered Through Broader Data Governance Frameworks • Participant: ○ Please see above for our feedback on expanding the authorised parties with access to the DER register and recognition in the NER. Questions regarding the basis for access to information (role based authorisation versus explicit informed consent of customer) could only be addressed with the input of the relevant experts, because there will be considerations and constraints that our WG are not aware of e.g. requirements under the Privacy Act and the Consumer Data Right framework. We have previously provided feedback that it would be important to engage with privacy and confidentiality experts such as lawyers. We suggest the current framework is already role-based access for only certain parties with a direct relationship with the customer, combined with explicit informed consent for prospective parties wishing to assume those direct relationship roles. It's difficult to see this changing. • Project: ○ The CDX team acknowledges the feedback and agrees that questions regarding the basis for access to DER Register information require consideration by the appropriate privacy, confidentiality, and legal experts. The project also acknowledges the observation that current access arrangements generally combine role-based access for parties with an established relationship to the customer, together with customer authorisation processes for prospective parties. Feedback from stakeholders indicates that any proposal to expand access to DER Register information would require a clear justification, an assessment of the appropriate access model, and consideration of interactions with existing privacy, confidentiality, and data-sharing frameworks. The project considers these questions are best considered through broader work on data governance and access frameworks, rather than through CDX in isolation. The project has therefore not sought to determine whether role-based authorisation, customer consent, or another access model is the appropriate basis for access. Instead, feedback received through this project will be provided to relevant CER Roadmap initiatives, including the development of a CER Data Management Framework, which will be considering data governance, data access pathways and related privacy and confidentiality arrangements.
Other?		

3 Use Case 2: Sharing and Receiving of DOE

3.1 Feedback Received in Session 1

Session 1 focused on validating the initial requirements for Use Case 2 relating to the sharing and receipt of DOEs, with WG members viewing the proposed DOE data specifications, exchange requirements, access arrangements, responsibilities, and implementation considerations. The feedback received in session 1 informed subsequent refinement of the use case, which can be seen documented in the table below

3.1.1 General Feedback

Data Component	Description	Notes
Dynamic Operating Envelope (DOE) advice	Forecast: the DOE allocated to a NMI for every nominated interval for a defined period in advance. E.g. 24 or 48 hours. The network limit, as represented by the DOE, is the time-varying range within which power can vary without exceeding the physical and operational limits of the local network. Defined by 'upper' and 'lower' limits which delineate the max power that can be exported or imported at a site (or by device(s) at the site).	• DOE Standardisation and Application – Participants made several statements related to the standardisation, frequency, latency of DOEs that goes beyond the scope of CDX. – Project: Some of the feedback falls outside the MVP scope of CDX and will be addressed by other reforms. This feedback will be shared with the relevant reforms. • TNI Level DOE – Participants noted that a potential requirement for TNI-level aggregated DOE was not included in Use Case 2. – Project: this is not the current scope/MVP for Use Case 2, however if required CDX can support it in future. • Prioritise Network Type (Static/Dynamic) standing data before DOE – Participant noted that the standing data should confirm whether the NMI was subject to DOE and that this should be prioritised before CDX implements DOE – Project. "Network Type" is included in Use Case 1 but it is not currently available in the DERR so will not be delivered until part 3 of Use Case 1. • Single Consistent Pathway for DOE – Participant called out the need for a single, consistent pathway for receiving DOE schedules (either via CSIP-AUS or CER DE). They also noted that this was being discussed in other working groups and the need for coordination across interoperability programs. – Project: Acknowledged and agreed. CDX team is working with related reforms to avoid bilateral integrations. • Instantaneous application of DOEs (Conformance) – Participant pointed out that the topic of instantaneous application of DOEs requires careful consideration to mitigate the risk of non-conformance. – Project: Conformance is not within the scope of CDX and will be handled in other reforms. Feedback will be shared with the relevant reforms.

3.1.2 Attribute Level Feedback

Data Component	Description	Notes
NMI	NMI to which the DOE relates	• IDAM Approach – Participants pointed out that from a connection agreement perspective, only the customer is directly responsible. The applicant nominates which CSIP-AUS client they will use for the NMI, but this is not a nomination of responsibility. The client nominates on the application may not be the same as the client that is actually used when the system is installed. – Project: From a CDX perspective, the IDAM approach will determine which entity is capable of receiving the DOE based on their access to the NMI information. • Only Publish Limits Applicable to the NMI – Participants pointed out that some NMIs are only subject to dynamic import limits while others are only subject to dynamic export limits and other are subject to both and that the DOE should only publish the limit(s) which apply to the NMI. – Project: Agree. CSIP:AUS allows for a DERControl to publish an export limit only, an import limit only or both. Only the applicable limit is required. Regardless, CDX will be publishing a parallel copy of the same controls sent by DNSPs to the customer's inverter and as such would only expect the limits included by the DNSPs for that purpose. • Flex Services and Forecasts – Participants asked for clarification on how forecast DOEs and revisions would be used to inform bids and rebids – Project: this is not a question for Use Case 2 but will be a consideration for Use Case 3. • DOE is already done by DNSPs with CSIP:AUS – Participants pointed out that DOE is already being done by other direct-to-DNSP programs with CSIP-AUS. – Project: Acknowledged. This is why we have aligned as closely as possible to the CSIP:AUS structure and seek to use the same protocol in the data exchange. We are not looking to define a separate format but rather use the existing CSIP:AUS control messages to publish the DOE in parallel to eligible participants who need it.
Start time	The time from which the DOE advice applies	•

Data Component	Description	Notes
Interval	The segments of time for which the DOE applies. E.g. 5-min, 15-min, 30-min, across the Duration	• Interval vs Duration – Participants suggested that ‘Interval’ would be better described as ‘Duration’ – Project: Agree. The DOE control message will not contain a TI type interval (e.g. 5min, 15min, 30 min). Interval in CSIP is a complex element with no specific value of its own but includes Start (datetime) and Duration (seconds) elements that specify when the control becomes applicable and for how long it applies (xml example below). <pre> <!-- Control timing example--> <interval> <start>2026-05-11T03:00:00Z</start> <duration>3600</duration> <!-- seconds --> </interval> </pre> • Full/Partial Revisions – Participants asked if the DOEs received will cover all time periods and rather than having to manage partial updates override only a portion of time from a previously received DOE – Project: Design must support whether DOE updates are full time-series replacements or partial (sparse) updates to minimise data volume and complexity.
Duration	The period of time in advance for which the DOE advice is provided. E.g. 30-min, 1-hour, 24-hours	• Near real-time revision of DOEs – Participants said that DNSPs will have the ability to revise DOEs in near real-time and expect CER to respond accordingly (e.g. within 5 minutes) – Project: Acknowledged. This would indicate that aggregators and other participants who are using the CDX to pick up DOEs would need to be polling at something like 5-minute intervals to ensure that their data remains up to date. • Replacing Duration with Issue Time – Participants suggest that “Duration” be replaced with an “issue time” to represent the time that DOE was issued so that the recipient can manage scenarios where multiple versions of the control are issue for the same interval. – Project: Both things are required and will be included. ▪ “Duration” is required to specify how long the control remains applicable from the specified start time. ▪ “Creation Time” is part of the CSIP:AUS DERControl and will be included to allow recipients to determine the order in which overlapping controls were issued.

Data Component	Description	Notes
Upper limit	The maximum power that can be exported (kW)	• “Export Limit” instead of “Upper Limit” – Participants suggested “Export Limit” as a cleaner and more unambiguous term than “upper Limit” – Project: Agree. The control message will include an Export Limit which is implemented in CSIP:AUS as opModExpLimW which is a complex element comprising 2 values: ▪ Value: Base magnitude power in watts ▪ Multiplier: Scale factor applied to value (power-of-ten exponent) <pre> <!-- Export Limit 2kW (example with no multiplier) --> <csipaus:opModExpLimW> <value>2000</value> <multiplier>0</multiplier> </csipaus:opModExpLimW> <!-- Export Limit 2kW (example using multiplier) --> <csipaus:opModExpLimW> <value>2</value> <multiplier>3</multiplier> <!-- 2 × 10^3 = 2000 W --> </csipaus:opModExpLimW> </pre>
Lower limit	The minimum power that can be imported (kW) Reword to “The <i>maximum</i> power that can be imported (kW)”	• “Import Limit” instead of “Lower Limit” – Participants suggested that “Lower Limit” was ambiguous and term like “Import Limit” would be clearer. – Project: Agree. The control message will include an Import Limit which is implemented in CSIP:AUS as opModImpLimW which is a complex element comprising 2 values: ▪ Value: Base magnitude power in watts ▪ Multiplier: Scale factor applied to value (power-of-ten exponent) See Export Limit above for an example of how this is used in XML. • Import Limit Definition – Participants pointed out that an import limit should be described as “The <i>maximum</i> power that can be imported (kW)” not the minimum. – Project: Agree. This has been updated.
Maximum recalculation period	The period of time after which the DOE must be recalculated and reissued to the NMI. i.e. 24 hours	• “Maximum Recalculation Period” Not Required – Participants suggested there is little value in having this attribute if an “Issue Time” or similar is provided. – Project: Agree. “Maximum Recalculation Period” will not be included, but “Creation Time” will be included as described in CSIP:AUS.

3.2 Feedback Received in Session 2

Session 2 focused on validating and refining the updated requirements for Use Case 2, following consideration of the feedback received in Session 1. The WG members reviewed the updated DOE data specifications and exchange requirements, with the outcomes of this review and associated project responses documented in the tables below:

3.2.1 Data Attributes

Data Element	Format	Description	CSIP Element	Mandatory/Optional	Project Response
Control Event ID	UUID	Unique identifier for the DERControl event.	mRID	Mandatory	mRID only for Actual DOE - Participants Called out that the mRID attribute was only relevant for actual control messages that had been sent and should not be expected for forecasted p[eriod beyond what was sent to the inverter. - Project: Agree, this has been removed from v0.5 of the document.
NMI	CHAR(11)	The NMI to which the DOE relates Note: this is NMI + Checksum	N/A	Mandatory	
Start	datetime	Date and time when the control becomes effective (UTC). i.e. The time from which the DOE advice applies.	interval.start	Mandatory	“Start” datatype - Participant: Data type should be integer (for consistency with CSIP-AUS) - Project: Have updated to TimeType as per CSIP:AUS

Data Element	Format	Description	CSIP Element	Mandatory/Optional	Project Response
Duration	Integer	Length of time, in seconds, that the control remains active.	interval.duration	Mandatory	
Export Limit Value	Integer	The maximum power that can be exported. Base value of the site export power limit. Watts (scaled)	csipaus:opModExpLimW.value	Optional. Note: the control must contain at least one limit (Export or Import) and can include both.	Export Limit Value for Generation or Load Limit Participant: The control could also be a generation or load limit. But these would only be used in MSL or LOR scenarios. The DNSP/DSO would have this information, but would the retailer/VPP also need to know this as part of their bidding? Project: Acknowledged, but this is not relevant in this particular use case which specifically talks about DOEs which are import or export limits.
Export Limit Multiplier	Integer	Power-of-ten scale factor applied to the export limit value.	csipaus:opModExpLimW.multiplier	Optional. Required if Export Limit Value is populated.	Keeping the Multiplier Attributes - Participants provided feedback in the TWG4 session that the Export Limit Multiplier and Import Limit Multiplier should be removed to simplify the DOE given this was not an actual DERControl message being sent to an inverter. - Project has decided to keep these attributes to keep the DoE in line with the CSIP:AUS format to avoid any need to translate from DERControl format to DOE format in cases where the DNSP uses actual DOEs for both purposes (i.e. to send to inverters or to provide DOE via CDX).
Import Limit Value	Integer	The minimum power that can be imported. Base value of the site import power limit. Watts (scaled)	csipaus:opModImpLimW.value	Optional. Note: the control must contain at least one limit (Export or Import) and can include both.	
Import Limit Multiplier	Integer	Power-of-ten scale factor applied to the import limit value.	csipaus:opModImpLimW.multiplier	Optional. Required if Import Limit Value is populated.	
Event	Pick List: - Normal Operations - MSL Event - Frequency Disturbance - More?	A description of the purpose or event underlying the DOE's upper and lower bounds. E.g. Normal operations, MSL event, Frequency disturbance	N/A	Mandatory	"Event" is not a CSIP-AUS requirement - Participants questioned whether the "Event" attribute should be included, and the agreement was that if it was included it should be optional. - Project: Agree, this has been made optional in v0.5
Creation Time	datetime	Date and time at which the DERControl event was created by the server	creationTime	Mandatory	Creation Time attribute - Participant: Data type should be integer (for consistency with CSIP-AUS) - Project: This attribute will actually be removed. The IDX platform includes its own timestamp that will serve this purpose.

Data Element	Format	Description	CSIP Element	Mandatory/Optional	Project Response
Other?					Who else needs visibility? - Participants requested clarification of the Challenge statement in the requirements document. - Project: The challenge statement was ambiguous and has now been updated to “Challenge: Customer Agents (e.g. aggregators), Energy Suppliers (e.g. retailers), and Suppliers (e.g. OEMs) typically have limited or no access to DOE.” Business Case - Participant: Will CER DX project deliver that business case before there is a rule change request to make this mandatory for DNSPs? We assume that this use case is all about forecast DOE (because it wouldn't make much sense otherwise). Refer to meeting minutes. We also note that in the meeting Kate Reid said that a business case would be done through the rule change, prior to the rule change being implemented. We would encourage this business case to be prepared by AEMO and included in the rule change proposal. - Project: The CDX project is focused on understanding the business need and the regulatory and implementation mechanisms that may be required. Any future proposal to introduce mandatory obligations would need to be justified by a proponent through a rule change request or consequential procedure or guideline, including demonstrating how the proposal contributes to the National Electricity Objective and assessing the likely costs and benefits for affected stakeholders. The CDX team highlighted in the presentation for Regulatory Working Group 4 that the obligation on DNSPs to publish DOE information is in scope for recommendation M3R1 and noted that this will be subject to the rule change process. IPRR Customers - Participant: Is it assumed we know which customers are IPRR customers? was that in use case 1? - Project: Use Case 1 does not provide a standing data element specific to IPRR. Part 2 is about sharing current information already held in DER Register. VPP Portfolio information is not currently captured in DER Register. This information has therefore been added to Part 3 of the use case for further consideration. Churn - Participant: If the aggregators churn, CDX can handle that seamlessly? - Project: The technical requirement “Security & Access Control (RBAC)” covers this. Longer Duration DOE - Participant suggested that if there is agreement on the need for a party to receive a longer-term view of a DOE (e.g. 48 hours), then we should be asking: (a) can we already do this with an existing system? (b) if so, how efficient is that approach? (c) is there a more efficient way to do it? and suggested that (c) is what CDX is looking to address.

Data Element	Format	Description	CSIP Element	Mandatory/Optional	Project Response
					- Project: Acknowledge this comment, however the variable used by DNSPs for the Duration of their OE advice is not an element requiring resolution at this stage for CDX as we now have agreed the DOE structure. DOE “Advice” terminology - Participant: In the context of this sentence, it is the DOE, not the DOE advice, as the fall back behaviour is the control. DOE advice would be better used as a term to be applied when it is about the envelope without the fallback behaviour included. - Project: Version 0.4 of the document only updated the data specifications and user stories but did not address introductory paragraphs. Version 0.5 has addressed this and removed the “Advice” terminology

User Stories

Role	Data	User Story	Project Response
Energy Supplier	DOE	- As an Energy Supplier, I want access to daily forecast DOE advice for a customer's NMI so that I can support tariff optimisation, product operation and customer engagement while ensuring any retail or orchestration actions remain within network limits. - As an Energy Supplier, I want access to historical and updated DOE advice for a customer's NMI so that I can support onboarding, investigate customer issues and disputes, and improve product design based on how network limits affect site operations over time.	Commercial Entities Require Customer Consent - Participants called out that any commercial entity wanting to access DOE (FRMPS or otherwise) should require customer consent. - Project: acknowledged. This is addressed in the regulatory requirements under "Access for new customer facing-parties." Note: this feedback has been provided against several roles; the same response as above applies to all those roles. Tariff Optimisation - Participant: Tariff optimisation is a use for historical actuals? How would tariffs change if a DOE changes? Should this be bids take into account network limits? The devices must obey site limits under CSIP AUS nothing an energy supplier can do about that. - Project: agreed. User story has been updated
Supplier	DOE	~~As a Supplier, I want access to daily forecast DOE advice for the NMIs of devices I support so that I can configure, coordinate and optimise device behaviour in line with network limits and avoid actions or updates that could breach operating envelopes.~~ - As a Supplier, I want access to current and historical DOE advice for the NMIs of devices I support so that I can troubleshoot device behaviour, validate responses to network limits and improve device settings and firmware to maintain compliance and performance.	Supplier already has all data - Participants suggested that Suppliers already have all the data that is sent to the site and do not need to get it via CDX. - Project: As with the feedback provided for DNOs above, this is about defining who has the right to access the data, and Supplier role will have that right regardless of whether they already have the data from another source. Device Config by Config - Participant: The first use case is unclear. Device config at installation time only needs to know the connection agreement parameters. If a Supplier does anything with a device that could breach operating envelopes after that, aren't they taking on the role of a Customer Agent? - Project. Agree, story has been removed.
Customer Agent	DOE	- As a Customer Agent, I want access to daily forecast DOE advice for a customer's NMI so that I can optimise site and portfolio operations, coordinate CER dispatch within network limits and fulfil my obligations to the customer and the network. - As a Customer Agent, I want access to updated and historical DOE advice for customer NMIs so that I can onboard services, investigate non-conformance or customer complaints, and demonstrate that portfolio actions were coordinated in accordance with network limits.	DOE "Forecast" - Participant: Is this to be tested whether NMI level forecasts are really required in IPRR stages 1/2? Forecast NMI level DOEs are essentially impossible, and then the agent needs to forecast sub NMI level behaviour (i.e. battery SOC, internet reliability, customer load, solar, EV, etc.). That's 2x NMI level forecasts that are not going to be accurate 24 hrs out and require a ton of investment and capability. So, couldn't a portfolio level forecast model (using previous actual DOE's) be sufficient? - Project: To be clear, by Forecasts we mean DOE "in advance of start time". If CPPCUE wish to provide DOE that stretches to 24 hours in advance, that is its call. We recognise that CPPCUE depends upon "near real-time" metering to calculate hosting capacity and assign DOEs, and that they intend to provide

Role	Data	User Story	Project Response
			DOE that may be 30-mins ahead only. We also acknowledge the CPPCUE believe that if it were to provide DOE 24 hours in advance that it would be inaccurate, given its limited "operational forecasting" capability at present. If any of the above comments are unclear or inaccurate, we welcome the opportunity to discuss directly with CPPCUE
CER Regulator	DOE	- As the CER Regulator, I want access to DOE advice and associated network limit information so that I can monitor whether network limits are being communicated and applied consistently, support regulatory oversight of DSO activities, and assess whether arrangements are operating in the long-term interests of consumers. - As the CER Regulator, I want access to DOE advice history and related compliance information so that I can assess whether network limit obligations are being met, investigate potential breaches or disputes, and support monitoring and enforcement of compliance arrangements.	CER Regulator does not exist yet - Participants questioned why there were user stories for CER Regulator when this role does not exist yet. - Project: These user stories are indicative only and have been written on the assumption that the new roles will be created. Actual Roles and associated Data Access Rights should be decided/finalised as part of consultation when the new roles are created. User Story Updates - Participant: Who is speaking for the CER Regulator here? How is this possible? This is the DOE we are generating not what is communicated or applied. That would depend on whether the device is online and how it complies. This use case is about DOE's not compliance to them? - Project: Agreed. First user story has been updated and second user story removed. As far as who is speaking for CER Regulator, the working group members were asked to suggest additional roles that they think would need access to this information.
Other?			

3.2.2 Technical Requirements

Requirement Type	Requirement Description	Project Response
Established DOE Data Model, Structure and Attributes	• A consistent data structure aligned to CSIP-AUS format is required so all parties interpret DOE fields even if DNSP values vary (e.g. 5, 15, 30 mins granularity) • Data structure must accommodate both flexible export and import limits, even if not all DNSPs currently implement both • DOE data should be available at the NMI/site level to enable accurate operational decisions and compliance with connection agreements • iv. DOE advice needs to match the advice sent to site through alternative channels e.g. utility server, OEM cloud, site controller	
Ability to publish DOE and support data updates	• System must support publication of DOE forecasts (e.g. 30min – 48 hrs ahead) so authorised parties can receive it to plan their energy usage and dispatch decisions for their portfolios • Ability to publish revised DOEs at least once a day i.e. 24 hours or to reflect changing network conditions. Duration needs to match-up with CSIP-AUS field • Design must support whether DOE updates are full time-series replacements or partial (sparse) updates to minimise data volume and complexity • Technical design must define the acceptable latency.	
Include Event/Context Metadata Field	• Ability to include a field that describes the purpose of the DOE (e.g. normal operation, MSL event, Frequency disturbance) to explain why limits are applied	Event field optional • Participants challenged the need for the event field to be mandatory. • Project: The Event field has now been made optional.
Data Standards	• DOE data should be exchanged with consistent protocols and connection patterns for system interoperability.	
Schema Validation & Data Quality Controls	• Incoming/outgoing DOE data must be validated against defined schemas to ensure consistency, accuracy, and completeness.	
Security & Access Control (RBAC)	• Role-based access control and authentication mechanisms must restrict DOE data access to authorised participants only • If the portfolio of an authorised participant changes, access control and authentication mechanisms reflect these changes so that DOEs can be shared based on new portfolios	
Data Encryption & Secure Transmission	• DOE data exchange must implement encryption and security controls to protect sensitive network and customer information.	
Scalability & High-Volume Handling	• System must support large-scale data exchange (potentially millions of NMIs and high-frequency updates)	
Audit & Reporting Capability	• Ability to track DOE publications, metadata, changes, and access for compliance, transparency, and dispute resolution	

Requirement Type	Requirement Description	Project Response
Other?		How near real-time - Participant: How near real time does the actual data need to be? i.e. if its actuals how soon after the control period has ended do they need to come through? Just a note here that a DOE control might be issued then halfway through it could be cancelled and overridden due to an emergency/abnormal event - Project: The CDX process has helped define a consistent structure to DOE. However, each DNSP is responsible for determining the variables that sit underneath each component heading (e.g. duration). We expect, as part of other policy reform channels such as Consistency prototypes, further refinement around the structure and content of DOEs may become available.

3.2.3 Regulatory Requirements

Requirement Type	Requirement Description	Project Response
DNSP obligation to publish DOE/network limit information	Establish an obligation on DNSPs under the NER to publish DOE / network limit information to specified authorised parties to support operational use cases (e.g. managing distribution limits and Voluntarily Scheduled Resource (VSR) dispatch) in accordance with defined access rights.	Interdependencies of CDX Reforms and Cost/Benefit Analysis - Participant: - In terms of imposing new obligations on DNSPs, we think it's important that rule change proposals are submitted to the AEMC in a coordinated way. This is particularly given related reform processes that we understand are underway in 2026 e.g. the M3/P5 Prototype Project 1: the application and implementation of DOEs, which includes defining what DOE-related information must flow between AEMO, DNSPs and customer agents. We have flagged these interdependencies and the need for updates on their progress in our earlier feedback. The CDX WGs could feed recommendations into a coordinated approach across these other reform processes. It would also be prudent to base such an obligation on a clearly positive benefit-vs-cost business case. Would the small benefit in improved forecasting visibility for VPP bidding justify the DNSP costs of sharing DOE forecasts? Is this being explored in the other reform processes? - Project: - AEMO acknowledges the importance of coordinating reform initiatives considering obligations on DNSPs. Feedback from the CDX Working Groups will be used to help identify DOE related information requirements, regulatory dependencies and implementation considerations that may inform those broader reform processes. We note that sharing and receiving DOE information is being considered as an enabling capability that supports a range of operational, market and customer outcomes, including: future VSRP operational coordination, customer agent optimisation of batteries, EVs and other flexible CER, improved visibility of network constraints, coordination between distribution and market operations, and the reduction of bilateral DNSP-to-third-party integration arrangements through more standardised information exchange mechanisms. DOE sharing may also support future DSO operational functions being considered through related CER Roadmap initiatives. CDX is currently exploring the technical and regulatory requirements for DOE information sharing, while related CER Roadmap reforms are considering the broader operational and policy framework. Feedback from stakeholders regarding implementation costs, operational complexity, forecast horizons, and value propositions will help inform future assessment of costs and benefits. Any future regulatory obligation would ultimately be subject to the appropriate rule change and consultation processes, including consideration of costs, benefits, and implementation impacts.

Requirement Type	Requirement Description	Project Response
Data exchange mechanism, access rights, and governance	• Provide for a governed data exchange mechanism for DOE / network limit information including consideration of the B2B framework as the regulatory and delivery pathway. • Current assessment (subject to change) is the exchange of DOE / network limit information appears consistent with the definition of a B2B Communication which has an established governance structure, framework specifying parties that may use the B2B mechanism and their access rights, that could be extended (if necessary) through an amendment to the NER. • DOE /network limit data communications might be defined within a new or extended B2B Procedure which could require definition of new transactions, schemas, specification of data fields. • Incorporation of network limit information into the B2B framework would require the use of the B2B e hub for sharing network limits with authorised parties unless otherwise agreed between the sender and receiver.	• Participant: ○ This proposal could be explored by the subject matter experts - the B2B-WG established by the Information Exchange Committee - with advice then provided back to the CDX WGs on its feasibility. However, implementation of such a proposal would also be dependent on the outcome of the whether or not to impose new obligations on DNSPs to publish DOEs to specified authorised parties, which (as we indicate above) would be premised on: - outcomes of other reform processes such as the M3/P5 Prototype Project 1; and - a clearly positive benefit-vs-cost business case. • Project: ○ We agree that further development, and feasibility, of this proposal would benefit from consideration by the B2B Working Group and that any implementation pathway would need to take account of broader regulatory and policy developments, as well as the strength of the supporting business case. The CDX team notes that decisions regarding the development of B2B transactions and procedures fall within the existing governance framework administered by the Information Exchange Committee (IEC). Depending on the circumstances, the IEC may determine to progress changes independently of a related rule change, or it may choose to progress changes as a consequence of, or in alignment with, any future rule change outcomes. The CDX team anticipates that the IEC would appropriately consider sequencing, regulatory dependencies and broader reform interrelationships as part of any assessment of a potential B2B solution.

Requirement Type	Requirement Description	Project Response
Access for new customer-facing parties	• Potential to recognise new entities within the NER (e.g. new participant category, accredited party, extension of “third party B2B participant”. • Specify the basis for access (e.g. customer consent or role-based authorisation) to provide specifications for explicit data access rights in the NER.	Recognising New Entities • Participant: In terms of recognising new entities, we think it’s important that rule change proposals are submitted to the AEMC in a coordinated way. Particularly given related reform processes that we understand are underway in 2026 e.g. the M3/P5 Recommendation 4: recognise actors that control CER devices in energy frameworks to ensure conformance and compliance with consumer protections, market and security frameworks, and appropriate sharing of and access to data. We have flagged these interdependencies and the need for updates on their progress in our earlier feedback. The CDX WGs could feed recommendations into a coordinated approach across these other reform processes. • Project: AEMO acknowledges the importance of coordinating reform initiatives considering the recognition of CER actors and associated data access arrangements. The intent of the CDX Working Groups is to identify use cases, regulatory requirements, and implementation considerations. The outputs from this project will provide valuable insights to inform the CER Taskforce projects and future regulatory reforms. Role Based Authorisation Versus Explicit Informed Consent of The Customer • Participant: Questions regarding the basis for access to information (role-based authorisation versus explicit informed consent of the customer) could also only be addressed with the input of the relevant experts, because there will be considerations and constraints that our WG may not be aware of e.g. requirements under the Privacy Act and the Consumer Data Right framework. We have previously provided feedback that it would be important to engage with privacy and confidentiality experts such as lawyers. We suggest the current framework is role-based access for only certain parties with a direct relationship with the customer, combined with explicit informed consent for prospective parties wishing to assume those direct relationship roles. It’s difficult to see this changing. • Project: The Data Management Framework workstream (M.2 Rec#1) will propose governing principles for CER data and an associated data classification framework to enable public or otherwise restricted, secure access to CER data. This recommended framework is expected to be available for stakeholder engagement by end 26 / early 27.
Other?		