

21 November 2024

Nick Regan  
CER Data Exchange team  
Australian Energy Market Operator  
*Submitted by email to: cerdataexchange@aemo.com.au*

Dear Mr Regan,

### **Submission – CER Data Exchange Industry Co-Design Consultation Paper**

Energy Networks Australia (ENA) welcomes the opportunity to provide a submission in response to AEMO's CER Data Exchange (CDX) Industry Co-Design Consultation Paper.

ENA is the national industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

ENA members are committed to supporting Australia's world-leading transition to distributed renewable electricity. Central to this is ensuring that Consumer Energy Resources (CER), such as rooftop solar, batteries and electric vehicles, can be integrated with the electricity system efficiently and effectively. This must be achieved in ways that enable those customers investing in CER to derive the best value from their investments, and those customers who do not have CER of their own to receive their fair share of the benefits of the energy transition.

In recent years, ENA members have played a leadership role in transforming the grid to enable these outcomes, working with the CER industry, AEMO, Governments and customers to develop and deploy solutions such as dynamic export limits, also referred to as 'flexible exports' or 'dynamic operating envelopes' (DOEs), 'solar-sponge' tariffs, emergency solar backstop measures, advanced modelling of network hosting capacity and dynamic voltage management. These advances have helped Australia to achieve levels of CER penetration that were previously thought impossible, and Australia is now a global leader in solving the technical challenges of integrating very high levels of CER with the electricity system.

The reliable, efficient and secure exchange of CER-related data between different organisations is an important piece of the CER integration puzzle. ENA supports efforts to streamline processes, enhance national consistency, remove bottlenecks and increase data access and transparency in this area where this can reduce costs or create value for electricity customers.

ENA offers the following feedback in response to the CDX consultation paper:

- ENA supports the intent to create a pathway to a shared industry data platform that is secure, extensible and scalable to meet the long-term information exchange needs of the energy sector.
- We strongly agree that the purpose of a CER data exchange platform is for business-to-business data exchange and not for operational control for network management or system security purposes. Any communication of data associated with DOEs or emergency backstops via such a CER data exchange must be independent of, and additional to, the operational communication pathways that DNSPs rely on to deliver DOEs and backstop signals to the customer premises.

- We strongly agree that any new data exchange platform should be ‘an enabler rather than a controller’. The purpose of a data exchange platform should be to provide a common framework for authorised parties to access and exchange data with one another in a secure and efficient way, not to perform operations on the data that passes through it. It is not intended to be a system of record, nor a decision-making tool. This being the case, the data platform should not interact with the data passing through it other than for the purposes of identity and access management and routing.
- As electricity customers will ultimately bear the cost of any investment in the development of new data exchange capabilities by AEMO, distribution networks, retailers, aggregators or other market participants, no such investments should be made unless there is high confidence that they will return net positive value to customers. To this end:
  - We agree with other stakeholders that the immediate focus must be on identifying use-cases that solve actual problems that are impacting negatively on customers today.
  - We consider that any new data exchange use-cases should be supported by a cost/benefit analysis on a case-by-case basis.
  - No use-case should be pursued unless:
    - a) its intended users support it
    - b) they can articulate a clear unmet need
    - c) they can demonstrate a clear pathway for benefits to flow back to electricity customers
    - d) consumer advocates are supportive.
- To the extent that a new CER data exchange platform is established and DNSPs are required to use it for the publication or exchange of CER data, DNSPs must be able to recover their efficient costs to integrate with and use the platform.
- Noting that AEMO and industry have already committed more than \$100 million to the Industry Data Exchange (IDX) / Identity and Access Management (IDAM) program, this program should be leveraged as far as possible in developing the pathway to the future CER data exchange. Architectural choices made for IDX/IDAM should be compatible with the long-term target architecture for a CER data exchange for the sector and aligned with contemporary digital best-practice.
- The proposed phased implementation approach should be preceded by, and validated through, a strategically focused, consultative review phase, which should consider the capabilities of IDAM/IDX to support the long-term vision for the platform and inform the architecture, governance, and roadmap for the CDX. This phase must include the right industry, digital and cyber security expertise for each decision.
- Regulatory and policy reforms in the energy sector should be looked at holistically to ensure that the timing and capabilities of any new CDX align with and support other reforms, noting the high number of reform initiatives currently underway or proposed.

We have provided some further commentary on the specific questions posed in the paper in the Annex to this letter.

The views put forward herein represent consensus views of ENA members. We understand that individual members may also make their own submissions to the consultation paper with further detail on their individual perspectives.

If you have any questions or would like to discuss specific topics further, please do not hesitate to contact Dor Son Tan, Head of Distribution Networks, at [dstan@energynetworks.com.au](mailto:dstan@energynetworks.com.au).

Yours sincerely,



Dominic Adams  
General Manager Networks

# Annex

In the sections below we provide further commentary on each of the topics canvassed in the consultation paper.

## 1. Use-cases

1. **Priority Use Cases:** Do the identified priority use cases effectively address immediate data-sharing needs, and are there any additional use cases you would recommend prioritising?
2. **Strategic Use Cases:** How do you view the long-term value of the strategic use cases and are there specific outcomes you would like these use cases to achieve in the future? Also do the strategic use cases sufficiently complement the priority use cases? Do you have any feedback on when these use cases should be implemented?
3. **Additional Use Cases:** Are there additional or alternative use cases that would enhance the CER Data Exchange's outcomes?
4. **Changes to Use Cases:** Would you suggest any changes to the use cases presented? Please outline your reasoning.

Our feedback on the proposed use-cases follows.

### Priority Use Case 1 – Sharing Network Limits

As the consultation paper notes, there is an existing national standard for data exchange for network limits used to manage power flow at the customer connection point, CSIP-AUS, actively developed and maintained by a national cross-industry technical working group, the DER Integration Application Programming Interface Technical Working Group (DERIAPITWG), established under ARENA's Distributed Energy Integration Program (DEIP). CSIP-AUS has been adopted and published as Standards Australia Handbook SA HB 218.

Any device, aggregator or Original Equipment Manufacturer (OEM) cloud service that needs to receive a DOE or CSIP-AUS emergency backstop signal from a DNSP to give effect to a customer's CER connection agreement must do so by registering a CSIP-AUS client directly with the DNSP's CSIP-AUS utility server. We understand from the consultation paper that there is no intent that a new CDX would change this, rather that the CDX may be used as a secondary pathway to communicate network limit information that is not used for operational control of the customer's connection point to market participants that have an interest. This could include, for example, providing aggregators with forecasts of what the DOEs are expected to be for a NMI or group of NMIs over the next 24 hours.

ENA strongly supports the intent that a new CDX must never be 'in the loop' for communicating the DOEs used for operational control. This would be unnecessary, duplicative and, noting that the CDX is intended as a business-to-business information exchange platform and not a high-availability operational control system, would put at risk the correct operation of the controls used to prevent network asset overloads and activate emergency backstops, and hence potentially undermine the security of the power system at times of minimum system load. For avoidance of doubt, it would be unacceptable to ENA members if the performance or availability of a future CDX had any operational impact on DOEs and backstops.

ENA recognises that an issue has emerged in recent months where differences in implementation of CSIP-AUS by different DNSPs have caused some significant problems for CER OEMs. Efforts are underway to address these issues, and this is discussed further in relation to the relevant Stakeholder-led use-cases below.

## **Priority Use Case 2 – Supporting Local Network Services**

ENA members recognise the benefits of common platforms to share data between DNSPs and potential network support service providers to facilitate the efficient procurement of services by networks. The Piclo platform developed in the UK is an example of an information exchange system developed specifically for this purpose, and CitiPower, Powercor and United Energy are already piloting this platform in Australia.

At this stage, it is unclear to ENA what additional functions or benefits data exchange through a new CDX would provide as an alternative to, or in parallel with, an established commercial solution. We consider further investigation of this use-case is needed, taking into consideration:

- the findings of pilots currently underway or planned
- the outworkings of workstreams M.3 ('Define the roles and responsibilities of distribution level market operation') and P.5 ('Define the roles and responsibilities of power system operation with high CER and drive alignment of incentives between industry actors for CER integration') of the National CER roadmap.

## **Priority Use Case 3 – Consistent CER Standing Data**

ENA considers that an expanded version of the current DER register would be a candidate for migration to a new CDX – noting that some shortcomings of the current register arise from issues of data quality and inconsistencies in the data capture process, which simply moving to a new data exchange platform will not fix.

ENA suggests that this could be a good use-case to start with.

### **Stakeholder-led use-case – Network Limits Standardisation**

OEMs have raised the issue that different DNSPs have taken different approaches to setting the limits for their DOEs and the need to accommodate these differences in CER products can drive up cost and effort for industry.

ENA recognises that this is an issue that DNSPs need to work with OEMs and industry to address as a matter of urgency. As this issue relates to operational DOEs delivered via CSIP-AUS, however, it is not a matter that will be resolved by implementing a new CDX, as operational DOEs are not within the scope proposed for the CDX.

Notwithstanding the above, ENA also notes that (a) this issue is about the use of the data standard, not a problem with delivery of or access to data, and (b) this issue needs to be addressed as soon as possible, and certainly ahead of the realistic timeframe in which a new CDX could be put in place.

For the above reasons, we consider that this issue needs to be addressed by DNSPs working with industry in the near term and does not give rise to a use-case for a future CDX.

### **Stakeholder-led use-case – Support common CSIP-AUS testing and certification**

Similar to the above, ENA recognises the need to transition, as soon as possible, from current interim arrangements in South Australia, Queensland and Victoria to a common national framework for CSIP-AUS testing and certification. ENA members appreciate the difficulties faced by OEMs and installers in the absence of a proper national framework, fully support the establishment of a national framework, and are working actively to progress this as a matter of urgency.

Also similar to the above, as this issue relates to CSIP-AUS and needs to be resolved ahead of the realistic timeframe in which a new CDX could be put in place, we do not consider it a use-case for a new CDX.

### **Stakeholder-led use-case – National CSIP-AUS certification register**

ENA understands that there is an existing online API hosted by the Clean Energy Council (CEC) that provides access to the current certification register. Access to this register could potentially be brought

into a new CDX in future. With the proposed architecture of the CDX not being a central repository, we understand that a body such as CEC would still be required to hold the master data source for the register.

## 2. Capabilities

5. **Prioritisation:** Do you agree with industry preference that the CER Data Exchange should be designed with narrow capability initially but have the flexibility to expand in the future?
6. **Capability:** Do the proposed data sharing capability discussed above support both current and future CER data sharing use cases? Please nominate what essential data sharing capability would be required?
7. **Additional Features:** What additional features or capabilities could improve flexibility and scalability in the CER Data Exchange?

ENA offers the following feedback regarding capabilities of a new CDX:

- ENA strongly agrees with industry preference that a new CDX should be designed with narrow capability initially but have flexibility to expand in future.
- ENA agrees that responsibility for ownership, storage, management, maintenance and quality of data shared through a CDX should remain with the data owners. This means that the CDX should not need to, and should not, interact with the data exchanged through it other than for the purposes of identity and access management and routing.
- Given the above we consider that the core capabilities required for a CDX are:
  - identity and access management – a single framework for enrolling users of the exchange, validating their identity and the roles they perform (which will dictate data access rights) and facilitating secure role-based access management
  - directory services and data discovery – a central point of entry for participants seeking to access data through the exchange that links data access requests to the data owners
  - routing functions, e.g. to support publish / subscribe
  - transaction logging, to support basic audit functions, and usage reports to help track which services and data are proving most valuable to participants.
- As a data exchange rather than a system of record, we note that a new CDX will not solve existing issues of data quality, completeness, consistency or ownership.

### 3. Ownership, operation and oversight

8. **Ownership Preferences:** Which ownership model do you believe is best suited for the CER Data Exchange: Industry-led consortium, AEMO-led, or a New Independent Government Agency? Do you have feedback on the models in addition to those summarised in this paper? Are there other ownership models not listed in this paper that you would like us to consider?
9. **Oversight – prescription vs discretion:** What level of oversight should apply to the CER Data Exchange? Should its operation be heavily prescribed, or should it be provided with operational discretion?
10. **Oversight body:** Who should be responsible for overseeing the CER Data Exchange’s operation? Are there other models of oversight that you would like considered? How important is regulatory independence in overseeing the CER Data Exchange, and would a new dedicated oversight agency or body better support transparent, impartial governance?

ENA’s feedback regarding ownership and oversight is:

- We note that ownership and oversight can and should be considered as separate issues. The consultation questions recognise this, but the presentation of ‘Model 1’, ‘Model 2’ and ‘Model 3’ in the paper implies that these are the only three combinations under consideration. We do not support limiting the options to just these three.
- ENA acknowledge the benefits of AEMO providing the energy data exchange infrastructure as a service to the industry, under a clearly defined SLA. We consider AEMO is best placed to own a new CDX, noting that ownership in this case could mean procuring a CDX solution from one or more third parties.
- We do not favour Model 3’s ‘Independent Government Agency’ as a model for oversight.
- ENA supports the majority stakeholder preference of a “balanced approach” to oversight that includes industry-wide collaboration and decision making, including customer representation. Any oversight model must include significant representation from the users of the exchange; industry is best placed to identify their own needs and priorities from a data exchange.
- The oversight model must provide full transparency and accountability for the costs of the exchange, to facilitate independent cost/benefit analyses by researchers and/or customer advocates.
- The oversight body must be guided by the National Electricity Objective (NEO) in its decisions, that it, it must promote efficient investment in, and efficient operation and use of, the CDX in the long-term interests of consumers of electricity.

## 4. Data governance

11. **Data Governance Preference:** Which data governance model best aligns with industry's desire for trust, compliance, and flexibility?
12. **Adaptability:** In your view, how should the data governance model support the integration of new use cases as CER technologies and industry demands evolve?
13. **Stakeholder Engagement:** How frequently and in what format should the data governance framework engage stakeholders on changes to standards, compliance requirements, or new use cases?
14. **Data Quality:** Whilst not included in the scope of the CER Data Exchange, do you have feedback or key considerations for ensuring data quality in a manner which compliments the Exchange?
15. **Alternative Preferences:** Are there any data governance models not listed in this paper that you would like us to consider?

Regarding data governance:

- Of the options canvassed in the paper, our preference is Model B, 'Industry collaborative or Association'.
- The paper describes the role of the data governance body as including 'develops new use cases in consultation with industry'. We consider that use-cases and data standards should be developed by industry to address industry needs, not just 'in consultation with' industry. That is, the governance body should be made up of users and prospective users of the data exchange, with industry expert working groups responsible for developing use-cases and data standards at the request of the governance body.
- The above would be similar to the situation with the Information Exchange Committee (IEC) today, which is responsible for business-to-business data exchange procedures and processes, with AEMO providing the technical platforms through which data is exchanged but not dictating data standards or use-cases for the business-to-business users of the platform. Some ENA members note that IEC processes and governance can lead to small changes taking years to progress from proposal to implementation, and we see there are opportunities to improve the governance process.
- There should be an opportunity for two or more businesses to rapidly test innovative use cases through the exchange without overly exhaustive governance but for a defined time period. After the defined time, learnings from the use cases should be fed back to the governance body to support a cost/benefit analysis. If the analysis suggests there is net positive value, the use case can then be implemented across the CDX to ensure standardisation across all prospective users.

## 5. Implementation considerations

16. **Phased Implementation Roadmap:** Do you agree with the proposed phased approach for the CER Data Exchange implementation? What adjustments or considerations would you suggest to better align the phases with the needs of your organisation?
17. **Cost Recovery Model Preferences:** What are your preferences regarding cost recovery for the CER Data Exchange? Would a direct, shared, or government-supported model be preferred, and why?
18. **Regulatory and Policy Reforms:** Which areas of policy or regulatory reform do you believe are most critical to support the CER Data Exchange? How should these reforms balance compliance with operational flexibility?
19. **Technical and Operational Challenges:** What technical or operational challenges do you foresee in integrating your systems with the CER Data Exchange? Are there specific support mechanisms that would facilitate smoother adoption for your organisation?
20. **Impact on Stakeholders:** What technical, regulatory, operational, or commercial impacts would you anticipate from implementing the CER Data Exchange in your organisation, and how could the roadmap or cost recovery model alleviate these impacts?

ENA offers the following feedback on implementation considerations:

- We strongly agree that a phased implementation approach is appropriate for the implementation of a new data exchange.
- As electricity customers will ultimately bear the cost of any investment in the development of new data exchange capabilities by AEMO, distribution networks, retailers, aggregators or other market participants, no such investments should be made unless there is high confidence that they will return net positive value to customers. To this end:
  - We agree with other stakeholders that the immediate focus must be on identifying use-cases that solve actual problems that are impacting negatively on customers today.
  - We consider that any new data exchange use-cases should be supported by a cost/benefit analysis on a case-by-case basis.
  - No use-case should be pursued unless:
    - e) its intended users support it
    - f) they can articulate a clear unmet need
    - g) they can demonstrate a clear pathway for benefits to flow back to electricity customers
    - h) consumer advocates are supportive.
- ENA notes that several of the priority and strategic use-cases proposed for the CDX position DNSPs as data providers for the benefit of other participants. To the extent that a new CER data exchange platform is established and DNSPs are required to use it for the publication or exchange of CER data, DNSPs must be able to recover their efficient costs to integrate with and use the platform. DNSPs' ability to recover costs is determined by the 5-year regulatory determination process and related regulations including the cost-passthrough mechanism. The cost impact on individual DNSPs, and the mechanism and timing by which they are able

to recover these costs from electricity customers, must be considered in the planning and staging of any requirements on DNSPs to participate.

- Noting that AEMO and industry have already committed more than \$100 million to the IDX/IDAM program, this program should be leveraged as far as possible in developing the pathway to the future CER data exchange. Architectural choices made for IDX/IDAM should be compatible with the long-term target architecture for CER data exchange for the sector and aligned with contemporary digital best-practice. We understand from the CDX Q&A session held on 7 November 2024 that three data archetypes are to be supported by the IDX, and that the 10 priority use cases fall within the three supported data archetypes.
- The proposed phased implementation approach should be preceded by, and validated through, a strategically focused, consultative review phase, which should consider the capabilities of IDAM/IDX to support the long-term vision for the platform and inform the architecture, governance, and roadmap for the CDX. This phase must include the right industry, digital and cyber security expertise for each decision.
- We see a risk that the high-number of in-flight and near-future rule changes might lead to overlaps or conflicts between regulatory reform initiatives, including the development of a CDX. Regulatory and policy reforms in the energy sector should be looked at holistically to ensure that the timing and capabilities of any new CDX align with and support other reforms.