

6 March 2025

Energy Consumer Policy Team  
NSW Government

## Response to NSW Emergency Backstop & Installer Portal Consultation

### Context

Reposit Power is a technology company with several thousand under-control solar & battery systems in the National Electricity Market (NEM). We have a comprehensive understanding of the challenges and opportunities presented by the growth of Consumer Energy Resources in the NEM, and the technology which underpins these.

We have engaged in pioneering projects over the last decade, such as Project CONSORT, Project CONVERGE, the Ausgrid VPP Trial, and more recently, Project Edith, all of which have demonstrated the value that orchestrated CER can bring to the electricity system. Our Virtual Power Plants (VPP) are capable of bidding & participating in a number of different markets and services, including AEMOs Reliability and Emergency Reserve Trader (RERT) and Frequency Control Ancillary Services, demonstrating our market-leading capabilities in this space. As such, we are keen to be involved in the development and application of technologies that allow CER to participate actively in the electricity system, such as the uptake of CSIP-Aus, the underpinning of the solar backstop mechanism. We also manage solar battery installations, allowing us to bring unique perspectives that stretch from the technical challenges of a solar backstop mechanism, to solar installation processes & compliance systems.

### Question Responses

- 1. Do you support the requirement for NSW DNSPs to harmonise their implementation of the backstop mechanism? If not, please explain why.**

Yes, however we hold significant concerns at how this will be achieved whilst DNSPs operate independent procurement processes, which are likely to result in disparate utility server infrastructure being deployed.

- 2. Are the scope and timelines for the emergency backstop mechanism feasible? If not, please explain why.**

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[REDACTED]

While it may be feasible to implement *something* in the proposed timeframe, the reality presented by the Victorian implementation suggests that DNSPs are ill-equipped to deliver well-tested systems and processes in the timeframe suggested. If there is confidence that all systems can be in place by Spring 2025, we would recommend an opt-in model for an initial period (i.e 1 month), where real-world implementation can be tested and validated prior to enforcement on all new installations.

**3. Do you agree with the order of the hierarchy of measures to increase operational load in the grid during MSL events? If not, please explain why.**

The order of the measures is sufficient, however, it is missing indication of where Dynamic Network Prices and Dynamic Operating Envelopes will sit in the hierarchy. Technology such as the CSIP-Aus interface should be used to enable innovations and incentives, not just as a punitive backstop, and therefore the Emergency Backstop Mechanism implementation plan should reflect an intent for a future state where this is the case.

**4. Are the design elements of the backstop mechanisms appropriate and feasible? If not, please identify why and provide any alternative suggestions.**

Yes, the proposed elements are appropriate.

**5. Are the roles and responsibilities of each organisation appropriate and feasible? If not, please explain why and provide any alternative suggestions.**

It is unclear how harmonisation between DNSP utility server implementations is expected to be achieved, when the DNSPs are independently responsible for verification & monitoring. In Victoria, we have already seen DNSPs decide to cease accepting the software certification provided by another DNSP, and implement their own certification process.

Additionally, no mention is given to Original Equipment Manufacturers (OEMs), who will need to comply both initially, and ongoingly. While control of OEMs may be outside the scope of this consultation, influence of them is not, and there needs to be indication of how OEMs are expected to engage with the new requirements on an immediate and ongoing basis.

**6. Do you support the threshold for backstop mechanism using CSIP-AUS being 200kW and smaller? If not, please provide detail on what threshold you think is appropriate.**

While per-case exceptions should be allowed by DNSPs, the goal of CSIP-Aus is to be a standard for all DER to communicate with utility servers. There is no reason why larger units should not have the same capability, so the threshold could easily be made larger. We would support this, as enforcing the same client-side requirements across all devices will send a clear signal to OEMs that they should incorporate CSIP-Aus (IEEE2030.5)



**7. Do you have any concerns or insights into using CSIP-AUS compatible inverters and an internet connection to control the backstop mechanism?**

Internet connection of inverters is common practice already and a number of technology solutions are available to ensure connectivity can be achieved cost-effectively in a wide variety of scenarios, so this is not an extraneous requirement. This works well for single client devices at a connection point.

The CSIP-Aus standard is not well-designed for multiple client devices at a single connection point. These can instead be aggregated by gateway devices (such as Home Energy Management Systems). Language used in the consultation only mentions "inverters", and we are concerned that other CSIP-Aus clients may be forgotten and not accounted for.

Many HEMS available in Australia are engineered and/or manufactured in Australia, and these domestic OEMs (Reposit included) are more likely to be receptive to maintaining CSIP-Aus functionalities into the future, compared with international OEMs.

**8. Is it appropriate for the emergency backstop mechanism to be implemented using technologies and systems consistent with enabling the future use of flexible export limits? If not, please explain why.**

There are other capabilities of the CSIP-Aus interface which are already employed, such as Dynamic Network Prices (DNP) and Dynamic Operating Envelopes (DOE). These mechanisms utilise the interface to provide incentives and benefits which make the implementation of CSIP-Aus valuable for consumers and client device OEMs.

**9. Which, if any, existing test protocols should be considered for implementation as the consistent test protocol for NSW?**

A single consistent test protocol should be established, and there should be a requirement to DNSPs that their utility servers are compatible with any client device which passes the test protocol. If they believe the test protocol to be insufficient, DNSPs could suggest improvements to the protocol. This prevents the situation seen in Victoria, where some client implementations which have passed SAPN testing protocols have subsequently had incompatibilities or issues with other DNSP utility servers in Victoria.

**10. Do you think the conditions under which the emergency backstop mechanism could be used are appropriate? If not, why? Please suggest any alternative conditions that should be considered.**

The conditions are appropriate, but the actions defined for NSPs when MSL3 conditions are present are too vague. It would be wise to have a requirement that



NSPs introduce incentive first, and apply backstop last, so that applying backstop does not become the day-to-day common method of handling repeated MSL3 conditions, when incentives to shed generation or increase load nominally could be used more effectively in the vast majority of scenarios.

**11. Do you have any views on the proposed implementation pathway (variation of DNSP licensing conditions)?**

Once again, this section uses the phrase “harmonise their approach” with little regard to what is actually required for a harmonised *outcome*. Victorian DNSPs had a desire to have a harmonised approach but the outcome has been anything but.

**12. What information will manufacturers, installers, customers and distribution networks require to understand the changes to implement the backstop mechanism?**

**I. Who is best placed to communicate this information to the different audiences?**

Manufacturers should have obligations to meet clear requirements and pass a clear testing protocol. Beyond this, the entity selling solutions to consumers (installers/CER retailers) should be seen as the body responsible for ensuring appropriate technology/equipment is chosen, and that their customers understand the product which they are purchasing. While we understand the frustration many installers have had with equipment which does not pass backstop tests in Victoria, ultimately consumers should not be sold equipment that doesn't perform as they expect within the rules and regulations applicable to it.

**II. How should this information be best communicated to the different audiences?**

It would be valuable if industry groups like the CEC/NETCC were directly involved in backstop mechanisms and providing clear best-practice guidelines to installers, and advice for consumers. For example, NETCC guidelines on quoting for solar installations still require PV output performance estimations to use only meteorological and hardware data, with no regard for curtailment occurring due to DOEs, export limits or mechanisms such as backstop. Better involvement from these industry bodies would assist in providing consumers with clear communication about what they should expect, while holding manufacturers and installers accountable for delivering upon the solutions which they sell.

**13. What CER should the Portal capture? Please explain the reasoning behind your answers.**

**I. What types of technology?**

All devices which can generate (i.e inverters, V2G EVSE), as well opt-in for flexible loads which could be enabled for market interaction, such as



controllable EV chargers or hot water systems. Understanding how much responsive “flex” is in the electricity system will be critical as CER increases in the NEM, regardless of whether it is a generator or an intelligently-managed load.

## **II. What size (capacity) of technology?**

All sizes below 5MW should be considered - essentially, anything which is not subject to existing AEMO visibility and control requirements, should at least be providing operational data and responding to contingency signals via the CSIP-Aus interface. There should not be an incentive to over-size systems just to avoid a compliance requirement, and it is not fair on smaller customers if they are burdened with the costs of complying with a mechanism that larger customers can avoid.

## **III. What technology should be excluded? Why?**

Inflexible, non-generating loads should be excluded, and subject only to regular electrical connection guidelines (i.e. nobody wants to be registering their dishwasher!).

## **IV. Should the Portal align with the Emergency Backstop Mechanism in capturing only systems under 200kW?**

No, we should reduce the number of disparate systems and registers for storing information about similar devices.

## **V. Should the Portal capture technology consistent with that recorded in AEMO's DER register? Is there additional technology that should be captured?**

Yes. In fact, a key question which arises is “why implement a portal only for NSW, when we have a national register already?” While we are aware that the utilisation of the AEMO DER Register has been poor, it would be more appropriate to simply update the processes and requirements around DER Register registration for NSW installations (and to push at the national level for enhancement of DER Register capabilities), than to introduce a new portal that is NSW-specific.

### **14. Do you support the functions outlined for inclusion in the CER Installer Portal? If not, please explain why.**

Yes, however we would prefer that these functions were implemented in the existing DER register, allowing for nation-wide consistency.

### **15. Are there any additional functions you would like to see included within a CER Installer Portal?**

The suggested functions are appropriate initially. If the portal were nationally consistent, there could be additional benefits to including control provider information and market registration information for sites, to improve detection of



control & management conflicts where multiple CER components are installed at a single NMI.

**16. Are there additional ways that the Portal should be designed to support installers?**

It should be clear that "installer" is a broad term. Many existing DNSP connection approval processes make the assumption that an installer is a licensed electrician, whereas the licensed electrician performing work may be the subcontractor of a larger business which ultimately holds the responsibility for the installation and contract with the end-consumer. While certain works and administrative tasks (i.e. completion of Certificate of Compliance for Electrical Work) must only be performed by licensed tradesmen, the overall administration of a CER installation may involve a larger organization. Ensuring this is accurately reflected in the implementation of the installer portal will aid in understanding chain of responsibility, and enforcing compliance effectively.

**17. Do you agree that the party that applies for a CER connection should be responsible for ensuring the installers they have engaged rectify non-compliance? If not, please explain why.**

The party responsible for rectifying non-compliance should be the party that the end-consumer has a contract with. This should also be the party that applies for the CER connection. For this scenario, the answer is "yes".

However, the current proposal leaves a potential loophole, where a solar retailer may have the contract with the customer to install a compliant system, but they then have their subcontractor complete the connection application. In this scenario, non-compliance (for example, an inverter which is not CSIP-compatible) would be blamed on the subcontractor, whereas it is the retailer who has sold the customer a non-conforming installation.

It should be enforced (and this is where CEC/NETCC involvement would aid) that the business retailing CER solutions to the customer must also be the applicant for the CER connection, so that they are then held accountable for any non-compliance.

**18. Do you have any other views on compliance and enforcement within the Portal?**

Unnecessarily arduous administrative processes hurt businesses, but more importantly, if enforcement is insufficient, then compliant businesses wear the cost of increased efforts, while being undercut and outcompeted by businesses skirting their obligations entirely. One approach to enforcement might be randomised requests for more detailed information and/or auditing of information for particular installations. Businesses which consistently pass these checks should have the frequency of these checks reduced, to reduce their administrative burdens, whereas businesses



found in breach should be scrutinised more frequently until they demonstrate consistent compliance.

**19. Are there additional ways that the Portal should be designed to support installers?**

Ensure that flexible business structures are accommodated intuitively. For example, ensuring that, for licensed electricians that have user accounts, they can use the same account to perform work on behalf of one or more other businesses as a subcontractor without switching accounts (which introduces the perception of multiple identities). A common workflow might be:

- 1. Jane Smith (user) of Solar Retailer Pty Ltd (retailer) logs in and lodges a connection application for a new solar installation.*
- 2. The connection is approved with a 1kW default export limit.*
- 3. John Smith is a licensed electrician with SAA accreditation. He is subcontracted by Solar Retailer Pty Ltd to perform the installation.*
- 4. Upon completion of the installation, John Smith (user) logs into the CER Portal to upload a CCEW associated with the NMI at the job site. This is matched to Solar Retailer Pty Ltd's connection approval.*
- 5. If the 1kW default limit is not obeyed or another non-compliance is detected, Solar Retailer Pty Ltd is contacted, not John Smith. They may choose to ask John Smith to rectify, or engage another contractor - that is their business decision. Another installer attending the site and performing any significant works may issue a new CCEW and upload this via their user account.*

In this situation, it is clear which electrician has performed works onsite, and declared the installation is safe. A user from the retailing business isn't uploading a CCEW on behalf of the electrician, minimising the risk of mistakes or the blurring of responsibilities. If a manifestly unsafe installation defect is found (perhaps years later), the appropriate process for review of license can occur for that tradesperson, while if an issue with the choice of hardware installed is raised, this would be in the domain of the retailer who sold that equipment. This is why flexibility in user->business relationships in the portal will be paramount to robust and actionable compliance/enforcement processes.

**20. Do you agree with the phased approach proposed for the delivery of the Portal? If not, please explain why.**

The consultation paper states:

*Our initial scoping research has found that applications for connections are typically done by a different user than the installation, so having different portals for these stages is unlikely to result in a disjointed user experience for most users.*



We would highlight that the existing practice of different parties performing steps of the connection and commissioning processes is already a disjointed experience, and arguably one of the reasons the DER Register has been underutilized.

This disjunction also leads to less clarity on responsibilities and accountabilities for a particular installation, so failing to address this will lead to challenges in enforcing compliance in the future.

With that being said, we agree that the phased approach proposed will not be more disjointed than existing practices.

**21. Do you think that there are any functions that should be included or excluded from the first phase of the Portal development?**

Given that there will already be interfaces from DNSPs to the DCCEEW-managed portal, and likely to AEMO as well, we would ask that the underlying API be exposed and documented for end-users as well. Many businesses, Reposit included, would benefit from being able to integrate our internal systems with the CER Installer Portal, to publish and retrieve data. Machine-to-Machine interfaces are less likely to introduce data entry errors, ultimately leading to better data quality outcomes for all parties.

**22. Do you support the proposed joint NSW Government-DNSP delivery of the CER Installer Portal? If not, please explain why.**

We support the joint efforts. However we are unsure that this is the most effective path to achieve the desired outcomes, when the DER Register already exists.

**23. What information will installers and any other stakeholders require to support the roll out of the CER Installer Portal?**

What requirements will there be for businesses to access and use the CER Installer Portal to add and manage CER installations?

**I. Who is best placed to provide this information?**

DCCEEW, potentially on behalf of DNSPs.

**II. What are the best ways of communicating this information to stakeholders?**

Publications and industry briefings.

## Concluding Statements

Reposit Power acknowledges that the implementation of a backstop mechanism is a key component of integrating distributed generation across the NEM, and that there needs to be an improvement in installation compliance in order to realise this. Many of the intentions in this work are well-placed and commendable. However, we have several key concerns relating to implementation:



- While the term “harmonisation” is utilised repeatedly, there appears to be little mechanism or forethought on how this will be achieved, and it seems likely that DNSPs will, despite discussion and intent to “harmonise”, end up producing/procuring their solutions independently.
- The CSIP-Aus interface is powerful, and can be used to enable CER to participate in services that deliver more value back to consumers, as demonstrated in Project Edith, where a CSIP-Aus server delivers Dynamic Network Prices to client devices, which can then proactively respond to prevent the need for strict Dynamic Operating Envelopes or a backstop situation. If the scope for mandated CSIP-Aus compatibility does not explicitly target a future state where these valuable elements are also implemented, consumers, installers and OEMs will only see it as a punitive requirement.
- We have concerns over the decision to introduce a new portal, where an existing national register exists, albeit underutilized. While we understand that the scope that the NSW Government and DNSPs have influence over is not national-level, we feel that this is a poor reason to invest in a solution that only applies to NSW & ACT. This furthers our concern that the “harmonisation” goal may not be achieved.

We thank you for your time reading and considering this response, and look forward to engaging further as this initiative progresses throughout 2025 and beyond.

Kind Regards,

Reposit Power

**Contacts:**

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