

NSW Emergency Backstop Mechanism and CER Installer Portal consultation paper

Allume Energy response

7 March, 2025

Executive summary

Allume Energy is supportive of NSW implementing an Emergency Backstop Mechanism in response to grid issues highlighted in this consultation paper. As the manufacturer of SolShare, an example of an Inverter Power Sharing Device (IPSD), Allume Energy has particular interest in ensuring the NSW backstop mechanism, as well as any associated portals or application tools, are suitable for IPSDs.

There is an expectation of increased uptake of solar in apartment and other multi-tenant buildings in NSW as a result of the recently-announced [NSW Solar for apartment residents funding](#). Clear and practical rules for an Emergency Backstop Mechanism in NSW suitable for IPSDs will be key in contributing to a successful rollout of this joint state and federal government grant scheme.

To enable this in multi-tenant buildings, it is proposed that the measurement point for any solar curtailment or solar disconnection be at the whole multi-tenant (multi-NMI meter) site level, rather than at each individual NMI meter.

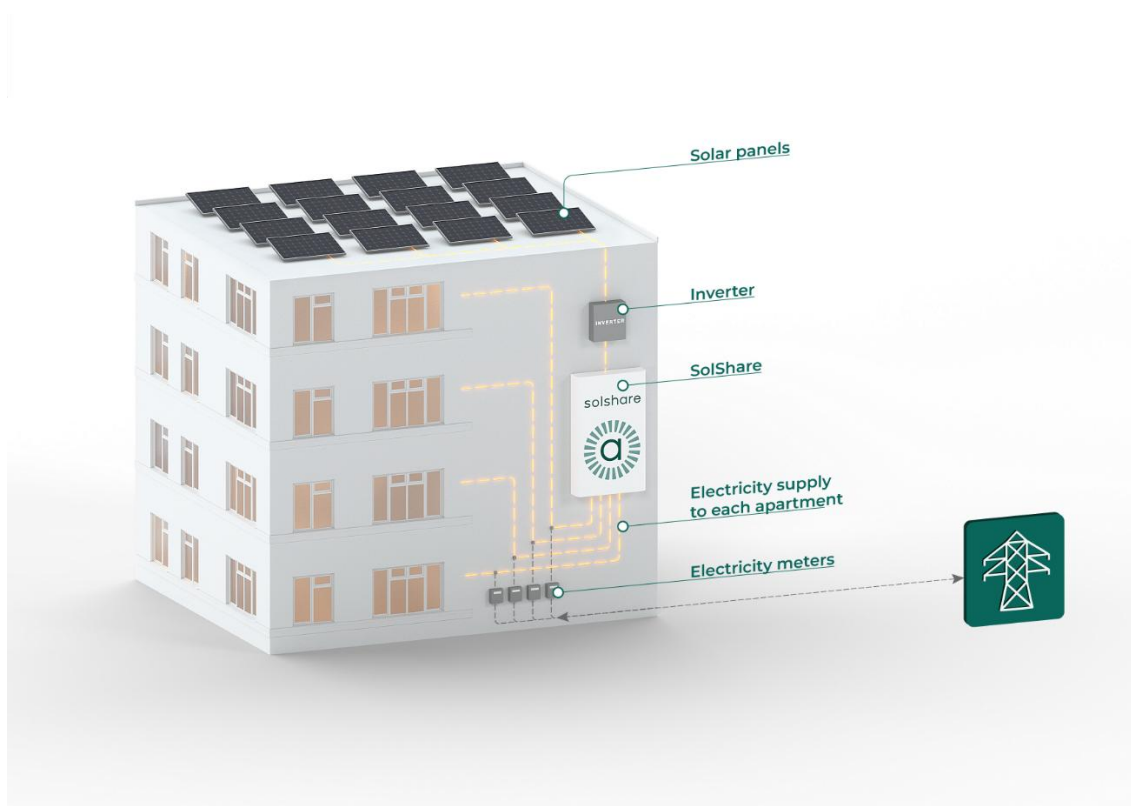
Once NSW Emergency Backstop Mechanism regulations are made clear, if there is significant product development required for IPSDs to comply, Allume Energy requests an implementation grace period of two years to allow for product development, which would also align with Phase 2 of the phased approach proposed for the CER portal.

I/ IPSD background information

SolShare is a world-first technology, which enables the sharing of solar energy from a single rooftop solar system amongst multiple dwellings within the same building. This breaks down the technical and ownership barriers that have historically prevented apartment residents from accessing cheaper and cleaner energy from the sun. This device is recognised as an IPSD (Inverter Power Sharing Device) by AS/NZS 4777.1:2024 *Grid connection of energy systems via inverters*.

An Inverter Power Sharing Device (IPSD) is typically used where a site has a number of individually metered tenancies (each with their own NMI meter) that share a common roof, such as domestic apartments or office/retail buildings. Typically, an IPSD may be used where it is not practical to install an individual solar system to each dwelling within a building.

An IPSD has an inverter port(s) for power sharing from an inverter, where the AC solar power is then shared to multiple output ports that connect to a number of tenancy distribution boards. This connection is on the tenancy side of its NMI meter.



Allume Energy's SolShare and IPSDs in general have the following behaviours:

- Only operate in grid-connected systems. They are not used in grid forming applications.
- Are not power *generating* devices: As a power *sharing* device, an IPSD cannot control the amount of power being generated, only which tenancy receives power. Parallel distribution to multiple tenancies is possible.
- Are positioned behind-the-meter to allow tenancies to benefit from feed-in tariffs (FITs) and usage offset through self-consumption of solar.
- Are configured to optimise self-consumption amongst the connected tenancies. This typically results in greater solar self-consumption than single household systems.
- Solar system sizing is typically up to 3kW of solar output per tenancy compared to average rooftop solar system size of 9.9kW [1]

[1] [Rooftop solar and storage report January—June 2024, Clean Energy Council](#)

II/ Consultation paper responses

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

Yes.

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

Yes.

However, if product development is required from manufacturers to comply with the new regulations that arise from this consultation paper, a grace period of two (2) years would be suitable to ensure compliant technology is suitably designed, tested and any relevant compliance measures are also completed.

Question 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.

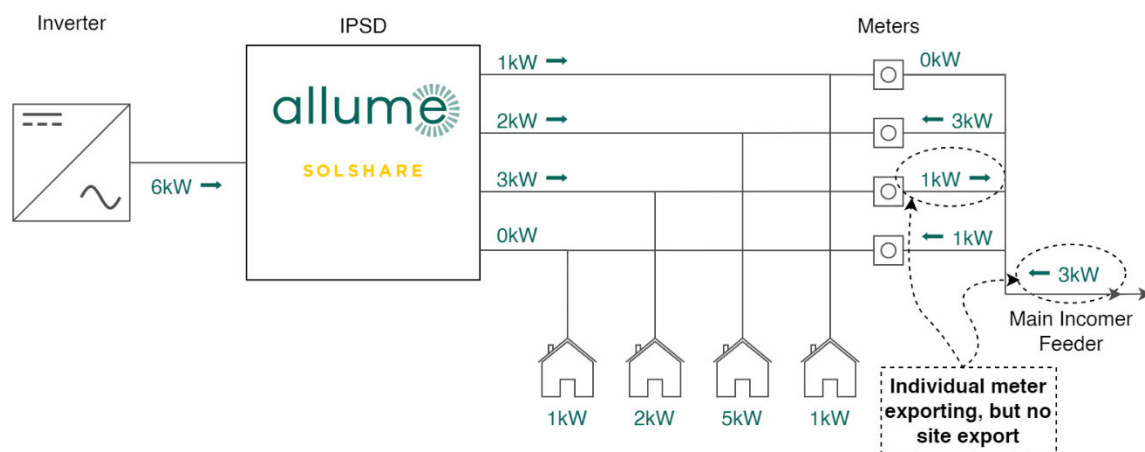
Yes.

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

In regard to the Device Functionality design element, particular attention should be given to how the backstop mechanism operates with installations involving IPSDs. The backstop mechanism should be designed in such a way that practically allows IPSDs to be installed and operate effectively within the NSW networks. In addition, any portals, application processes, testing procedures, etc., applicable to IPSDs should be practical and address the intended motivations and operation of the emergency backstop.

Solar curtailment and solar disconnection for IPSDs

Installations with IPSDs can allow solar curtailment and solar disconnection (both led by the inverter) at the aggregate whole site level, but this can mean that there is concurrent export from some NMI meters while there is import from other NMI meters. The figure below illustrates a scenario where aggregate load (measured at the main incomer feeder) is drawing from the grid, while an individual NMI meter is exporting.



When connected to an IPSD, an inverter can enable solar curtailment and solar disconnection with a power flow monitoring device at the main incomer feeder of the building. The inverter can be configured as per the manufacturer's settings to curtail or disconnect solar. However, as there are multiple NMI meters behind the grid measurement point at the main incomer feeder, the inverter's target curtailment can be achieved at the common incomer feeder point (i.e., for the whole site in aggregate) but not necessarily at each individual NMI meter.

It should be noted that if any export from any NMI meter is considered non-compliant during a backstop event, this would make it significantly challenging for installations with IPSDs to be compliant with the NSW emergency backstop. This would also be significantly challenging for the rollout (now open and taking applications) of the [NSW Solar for apartment residents funding](#).

Solution proposals

As such, for installations with an IPSD, it is proposed (in order of priority):

1. Measurement at main incomer feeder:
As the highest preference, it is proposed that installations involving IPSDs be included in the new backstop mechanism with the measurement point for solar curtailment and solar disconnection be at the main incomer feeder of the building. This is upstream of the individual NMI metering points. This could be implemented for sites with an IPSD by grouping the NMI meters in the CER Installer Portal and the aggregate being used to determine if the site is importing or exporting.
2. Removal of solar curtailment requirement:
Where practical implementation of #1 above is not possible, it is proposed that installations with an IPSD have the need for solar curtailment removed. Solar disconnection would still be enforced as with other solar installations.
3. Exclusion of IPSDs until a later date:
Where #1 and #2 above are not possible, it is proposed that solar installations with an IPSD be excluded from requirements associated with the new backstop mechanism until a later date when practical implementation can be undertaken.

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

Yes.

Question 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.

Yes

I. Do you agree with the approach for systems above 200kW? If not, please explain why and provide any alternative suggestions.

Yes

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

No views to share.

Question 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.

Yes.

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

Any test protocols that are adopted should be:

- consistent across all DNSPs in NSW, and
- suitable for installations involving IPSP and multiple NMI meters.

Question 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.

Yes

Question 11 – Do you have any views on the proposed implementation pathway (variation of DNP licensing conditions)?

No views to share.

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

An example of information required by many stakeholders is a background understanding of IPSPs, how IPSPs operate in a multi-NMI meter installation, and how this applies to the application of the backstop mechanism. In addition, the link between a single solar system and multiple NMI meters required by IPSPs should be accounted for in CER portal development, DNP application systems and verification systems.

In particular, the following points should be articulated upon release of the backstop mechanism:

- How an IPSP on a multi-NMI meter installation will be applied through the DNP's application and verification system.
- How IPSPs on a multi-NMI meter installation will be handled by the CER Installer Portal.

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

Multi-party communication is recommended from government offices, manufacturers and other parties. Allume Energy is open to direct communication with other stakeholders.

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

Methods of communication will depend on the information that needs to be shared.

Question 13 – What CER (consumer energy resources) should the NSW CER Installer Portal capture? Please explain the reasoning behind your answers.

I. What types of technology?

The power generation technologies listed in the consultation paper are appropriate. Consideration should also be given to how these devices connect into the grid, particularly with the usage of IPSP technologies.

An IPSP allows a single generating source to be distributed through multiple NMI meters. This distribution approach should be considered by the CER Installer Portal. It is proposed that a mechanism is implemented that allows grouping of NMIs connected to a single generating source. The aggregate demand/consumption of this group should be used to monitor the generating source at that site.

II. What size (capacity) of technology?

No views to share.

III. What technology should be excluded? Why?

It should be noted that IPSDs:

- currently make up a small percentage of solar installations in NSW,
- have relatively high self-consumption rates, and
- contribute relatively low export to the grid.

If there is no practical way to implement IPSDs into Phase 1 of the NSW CER Installer Portal, IPSDs could be excluded or be included in Phase 2.

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

No views to share.

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

Additional technology that should be captured includes IPSDs.

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

Yes.

Question 15 – Are there any additional functions you would like to see included within a CER Installer Portal?

Particular attention to the needs of IPSDs (in particular, around streamlined commissioning of multi-NMI meter installations) should be considered for the following proposed functions/features:

- *Integrate with DNSP connection portals*
Different DNSPs handle connection applications on their own portals differently for applications involving IPSDs - namely, where there will typically be multiple NMI meters connected to a single solar system. The integration of the new CER Installer Portal with DNSP connection portals should ensure that the CER Installer Portal is suitable for installations with IPSD devices.
- *Capture critical information about CER devices*
Installations involving IPSDs typically connect multiple NMI meters to a single solar system. Critical information (such as the same serial number) should be able to be applied to multiple NMI meters.
- *Register and test devices for emergency backstop*
Testing procedures of devices responsible for emergency backstop (e.g., inverters) should be designed to consider applicability for installations that may have an IPSD installed as well. This may include current measurement at an aggregated whole site level (i.e. at the main incomer feeder), rather than at the individual NMI meter level.

Question 16 – Are there additional ways that the Portal should be designed to support installers?

No views to share.

Question 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.

No views to share.

Question 18 – Do you have any other views on compliance and enforcement within the Portal?

No views to share.

Question 19 – Are there additional ways that the Portal should be designed to support installers?

No views to share.

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

Yes.

For any features or functionality not included in scope for Phase 1, any alternative processes implemented before the rollout of Phase 2 should be clearly defined, practical and not overly onerous for all stakeholders.

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

A practical, clear and not overly onerous process for IPSDs should be included in the first phase of the Portal development.

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

Yes.

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

Installers and other stakeholders will require additional consultation and understanding of IPSD technology throughout the consultation process, with the aim to achieve a clear and practical process for IPSDs during implementation.

I. Who is best placed to provide this information?

Manufacturers such as Allume Energy are well positioned to provide direct input where suitable on IPSD technology.

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

Methods of communication will depend on the information that needs to be shared.