



SMA Australia Pty.
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Feedback on the NSW Emergency Backstop Mechanism and CER Installer Portal

SMA-Australia welcomes the opportunity to provide feedback to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) and Consultation Paper on the NSW Emergency Backstop Mechanism and Consumer Energy Resources (CER) Installer Portal.

SMA is a leading global specialist in photovoltaic (PV) system and battery energy storage system (BESS) power conversion and control technology. Our product range spans the home rooftop sector, commercial and industrial applications, and large grid-scale applications. Our PV solar inverter and battery storage products are complemented by components for energy management, system monitoring, and data analysis. SMA has a global inverter capacity of 140 GW in more than 190 countries and more than 9GW inverter capacity in Australia. We are headquartered in Germany, with employees in 20 countries.

SMA understands the need for an Emergency Backstop Mechanism, and we support the development and use of an Emergency Backstop Mechanism in NSW as a genuine last resort measure to maintain system stability.

We strongly support the proposed requirement for NSW distribution network service providers (DNSPs) to harmonise their implementation of the Backstop Mechanism. For this to be meaningful, the NSW should define what “consistency” means, and how it will ensure that DNSPs respect and implement the government’s definition. It is not enough to simply state that DNSPs must use IEEE 2030.5 or the Australian Common Smart Inverter Protocol (CSIP-Aus).

The government should consider using a staggered start, commencing with the NSW DNSPs that are most advanced (e.g. Endeavour Energy) and delaying the least prepared DNSP(s) (e.g. Ausgrid).

The policy needs to outline roles and responsibilities when the system goes wrong. This should include responsibility for provision of diagnostic information, and compensation for costs incurred by installers due to failure by DNSPs or the provider of the DNSP’s utility server.



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Responses to questions raised in the Consultation Paper

1. Do you support the requirement for NSW DNSPs to harmonise their implementation of the Backstop Mechanism? If not, please explain why.

Yes. SMA strongly supports the proposed requirement for NSW DNSPs to harmonise their implementation of the Backstop Mechanism. However, the experience in Victoria has shown that a high-level in-principle government statement of support for consistency is useless unless it is backed by:

- A definition of what “consistency” means,
- A means of ensuring that the government’s definition of “consistency” is used by DNSPs in their agreements with providers who will implement the utility server, and
- A means of enforcing that requirement if, like the Victorian experience, DNSPs fail to deliver their utility servers in a consistent manner.

It is not adequate for the government to just state, “DNSPs must use IEEE 2030.5” or “DNSPs must use the CSIP-Aus”. The failures in Victoria demonstrate that beyond any doubt.

To ensure the NSW government’s definition of “consistency” is respected, it should review the terms of the contracts between DNSPs and providers implementing the utility server. If it is feasible and would not contravene competition law, the NSW government should also involve inverter original equipment manufacturers (OEMs) in the process to review how the requirement for the government’s definition of “consistency” will be included in contractual conditions and the enforcement and rectification mechanisms available if providers of the utility servers fail to implement them consistently.

The proposal for “consistency” begs the question, “consistent with what?” The implementation of the Emergency Backstop Mechanism has failed in Victoria and Queensland. South Australia (SA) is the only jurisdiction that has managed a successful implementation, and it seems reasonable to ensure that all DNSPs in future strive for consistency with SA.



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2. Are the scope and timelines for the Emergency Backstop Mechanism feasible? If not, please explain why.

Based on the Victorian experience, successful implementation of an Emergency Backstop Mechanism across all of NSW by spring 2025 seems like wishful thinking. It would be preferable to implement successfully later than spring 2025 rather than meet the spring 2025 deadline 'on paper' but with a system that doesn't work and creates chaos in the industry.

A staggered start would be preferable to making the Victorian mistake of attempting "everything, everywhere, all at once". A staggered start could mean commencing with the NSW DNSPs that are most advanced (e.g. Endeavour Energy) and delaying the DNSP that appears to be least advanced (e.g. Ausgrid).

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

We support the hierarchy of measures however it is incomplete. The Improving Security Frameworks (ISF) rule gives the Australian Energy Market Operator (AEMO) the ability to enter Type 1 and Type 2 contracts, and AEMO has indicated it intends to use Type 1 contracts to manage minimum system load.

A more complete hierarchy would be:

1. Hot water load shifting
2. AEMO Type 1 contracts
3. Solar export curtailment
4. Solar disconnection
5. Emergency voltage management

4. Are the design elements of the Emergency Backstop Mechanism appropriate and feasible? If not, please identify why and provide any alternative suggestions.

The design lacks guidance on what happens when things go wrong. The Victorian implementation has been plagued with problems of failures of utility servers, and failures of communication. The design would include provision for diagnostic information to assist



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installers with understanding where the fault lies. The Victorian implementation has also been hampered by regular failure of DNSPs' utility servers. A means of notification of server failure will prevent installers wasting their time when the cause of an installation issue is beyond their control.

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

The outline of roles and responsibilities lacks an explanation of responsibilities when things don't work. The roles should include provision of diagnostic information, so that installers have some chance of understanding whether they should attempt to fix a problem or if it is beyond their control to fix (e.g. server failure). Ideally, there would be a tool produced by the DNSP so installers can enter the NMI and inverter brand then in the backend it auto detects and registers the system and does the testing with frontend information on progress and error messages. This could potentially be part of the CER Installer Portal. It will be important to ensure that the CER Installer Portal is integrated with the AEMO CER Data Exchange and the AEMO DER Register.

The roles and responsibilities also omit who should be financially liable when server implementation is the cause of problems. In Victoria, installer and inverters OEMs have carried the financial burden of inadequate implementation by DNSPs and the providers implementing their utility server. This is manifestly unfair. The NSW government should outline whether DNSPs should bear any responsibility, including financial responsibility, when failure by them or the provider of their utility server causes widespread delays and costs across their network.

6. Do you support the threshold for the Emergency Backstop Mechanism using CSIP-AUS being 200kW and smaller? If not, please provide detail on what threshold you think is appropriate. Do you agree with the approach for systems above 200kW? If not, please explain why and provide any alternative suggestions.

The 200kW threshold is appropriate. Many DNSPs in the National Electricity Market (NEM) require the use of Supervisory Control and Data Acquisition (SCADA) for PV and BESS systems larger than 200kW. Systems with SCADA will be capable of contributing to the Emergency Backstop response.



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

The challenge we have is that there are standards that apply to inverters, but there are no standards that apply to DNSPs' implementation of utility servers. This is part of the reason for the failures of the Victorian implementation. There is work being progressed through the Interoperability Steering Committee and its working groups to develop a standard applicable to DNSPs' utility servers. This should be used if timing permits.

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, this is appropriate. NSW should follow the example set by SA Power Networks (SAPN). It should use a staggered start, possibly by beginning with the most advanced DNSP and delaying implementation timelines for the DNSP(s) that are not adequately prepared. Avoid making the same mistakes Victoria made.

The data requirements for the Emergency Backstop Mechanism should not be as much as will be required for Dynamic Operating Envelopes. We should look to reduce the need for live data to once a day for Emergency Backstop Mechanism. If a customer later opts in for flexible exports, then more regular data can be enabled.

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

If the timing permits, it would be preferable to apply the standard applicable to DNSPs' utility servers which is being progressed through the Interoperability Steering Committee and its working groups. If the timing won't work for that, as much as possible the aim should be for every NSW DNSP to replicate SA Power Networks (SAPN). SAPN's implementation is generally considered successful. The Victorian implementation was a disaster. The Queensland implementation using ripple control is a technological dead end.



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DNSPs should also provide a clear timeline for processing of witness testing – for example, how many applicants are in the queue ahead of them and the expected timeline for witness testing to occur.

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, the proposed conditions seem reasonable, noting that use of Type 1 contracts by AEMO should be used prior to the Emergency Backstop Mechanism being used.

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

Use of DNSP licensing conditions allows:

- the NSW government to set conditions on DNSPs' implementation, and
- the DNSPs to pass through costs to consumers, subject to approval by the Australian Energy Regulator (AER).

The Victorian government did not specify any penalties on DNSPs for failure to implement satisfactorily, and the financial burden of their failure has fallen upon installers and inverter OEMs. The NSW government should learn from the mistakes of the Victorian government, and should implement stricter conditions on DNSPs, including requiring DNSPs to compensate installers for expenses incurred due to the DNSP's failure to effectively implement its responsibilities.

If DNSPs are not ready by spring 2025, it would be unhelpful for the NSW Government to insist that the Emergency Backstop Mechanism should commence before it is ready. In Victoria, the DNSPs proceeded with the Emergency Backstop Mechanism to meet government deadlines before the system was working properly. This put installers and inverter OEMs into a position of being required to use DNSP systems that are not working properly, forcing them into a situation where they are blamed by customers for problems caused by the DNSPs.



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12. What information will manufacturers, installers, customers and distribution networks require to implement the Emergency Backstop Mechanism?

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

Each DNSP should have the same information published on their website (assuming a single rollout date). Information should be easy to access and should be part of the registration step months in advance of the start date.

Installers will need more than information on a web page – they will need hands-on training. The NSW government should either take on the responsibility for implanting training or specify whose responsibility this should be. In SA, SAPN was responsible for hands-on training of installers.

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

A source of the failure in the Victorian implementation has been an absence of diagnostics when systems fail. DNSPs need to take responsibility for providing diagnostic information.

Inverter OEMs need to know whether there will be a standard applied to DNSPs' utility server and which standard will be applied. The NSW Government should specify this.

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

I. What types of technology?

The portal should capture all CER connected to distribution grids. It should be integrated with the AEMO Distributed Energy Resources (DER) Register and/or the AEMO CER Data Exchange if it is developed in time and depending on whether it augments or replaces the DER Register.

II. What size (capacity) of technology?

To align with other jurisdictions, the upper threshold should be 200kW.

III. What technology should be excluded? Why?



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Off-grid systems should be excluded because they are irrelevant as far as Emergency Backstop Mechanism is concerned.

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

If systems larger than 200kW are required to use SCADA, it should be unnecessary to use the CER Installer Portal to capture those systems. The AEMO proposal for a CER Data Exchange could potentially capture systems larger than 200kW.

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

It makes sense for them to be consistent. The CER Installer Portal should be integrated with the AEMO CER Data Exchange and the AEMO DER Register. The proposed approach to EV chargers should be clarified.

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

Yes. It should be the single point for registration and testing by installers. It should provide installers with diagnostic information in the event of failure.

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

Yes. There should be diagnostic information to assist understanding why things fail. If there is a backlog on testing by a DNSP, it should also provide an estimate of when the test could be completed.

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

Yes. The portal should provide diagnostic information to assist installers with diagnosing why things fail. When the DNSP's utility server fails, the portal should report that to installers so that they don't waste their time trying to fix a problem that is beyond their control.



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

If a mistake was made by the installer or if the installer omitted to do something that is part of the installation process, then they should rectify the problem. However, if the problem is caused by the DNSP's server then the installer should not be penalised. When installers incur costs due to failure by the DNSP, it would be fair for the DNSP to compensate the installers affected. This would provide a strong incentive for DNSPs to include performance penalties in their contract with providers of the utility servers.

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

Making compliance through the Portal a condition of grid connection will be the most effective compliance and enforcement mechanism. However, this needs to be coupled with diagnostics for installers. It's unfair that in Victoria installers and retailers are bearing the brunt of problems caused by DNSPs' failure to properly implement their utility servers. The Portal should be capable of compliance and enforcement on DNSPs, not just on installers and retailers. The Portal should report failures by DNSPs and the NSW Government should publish this information, so that DNSPs can be held accountable.

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

Yes. It should be capable of diagnosing when the problem is at the DNSP utility server end. It should be capable of providing that (and other) diagnostic information to installers.

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

Yes. Attempting to do everything, everywhere, all at once was a failure in Victoria. WE strongly urge the NSW Government not to repeat Victoria's mistakes.

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



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It would be preferable to keep it simple to start with. Once the product works, then its functionality can be improved. Providing feedback and diagnostics to installers should be part of the minimum functionality.

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

Yes, SMA supports this initiative. We support the active involvement of government. The Victorian government took a laissez-faire approach. It left the implementation largely in the hands of the DNSPs. There were no penalties or consequences for DNSP failure. It allowed the cost of DNSP failure to be pushed onto installers. This approach was unfair and failed to deliver on the government's objectives.

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

They will need training, training, and more training. Online training should be offered. However, online training will not be enough. There will also need to be practical, hands-on training. Information on a web page will not be enough.

I. Who is best placed to provide this information?

The NSW Government and DNSPs.

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

The most effective means will be practical training and hands-on demonstration. Information on a web page won't be enough.