



AGL Energy Limited

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Energy Consumer Policy

Department of Climate Change, Energy, the Environment and Water

New South Wales Government

Submission via [NSW Government Website](#)

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NSW Emergency Backstop Mechanism and Consumer Energy Resources Installer Portal

AGL Energy (**AGL**) welcomes the opportunity to provide responses to the consultation questions posed by the Department of Climate Change, Energy, the Environment and Water (**DCCEEW-NSW**) in response to the abovementioned Consultation Paper.

AGL is making a significant investment in flexibility and has been making strong progress against our grid-scale battery and distributed energy resources (DER) targets. As of FY24 AGL had 1.25 GW of decentralised assets under orchestration, with a FY27 target of 1.6 GW. Most of these assets are installed behind the connection point, and include residential batteries and solar, as well as flexible loads and backup generation systems at commercial and industrial customer sites. AGL is also a market leader in the development of innovative products and services that enable our customers to make informed decision on how and when to use their consumer energy resource (CER) assets to optimise their energy load profile and better manage their energy costs.

AGL has supported the introduction of emergency backstop mechanism measures across various jurisdictions in Australia as a last resort solution to arrest system blackout events caused by minimum system load (MSL) scenarios. We have previously put forward that any backstop mechanism framework, including that proposed in New South Wales, must be subject to appropriate principles and safeguards to ensure that the emergency backstop mechanism is not used to manage network constraints more broadly. This is essential to maintain consumer confidence in the future role of CER in the National Electricity Market (NEM) and should aim to minimise the impact of the backstop mechanism on investment certainty, consumer uptake, and the value of CER assets¹.

AGL supports the NSW Government's requirement for distribution network service providers (DNSPs) to harmonise their implementation of the backstop mechanism, and to deliver a single CER installer portal for Common Smart Inverter Profile – Australia (CSIP-Aus) capability tests and to improve the quality of information collected on CER installations. AGL's view is that harmonisation is critical to achieve a smoother implementation in NSW, and to ensure the effectiveness of the emergency backstop.

AGL cautions that the proposed commencement of Spring 2025 may lead to industry challenges as this provides DNSPs and industry a window of less than six months to prepare. Previous implementations of the emergency backstop have demonstrated that execution is not trivial and there is a high risk of non-compliance, technical challenges, and in some instances, poor customer experience. We urge the DCCEEW to provide sufficient time for industry to trial and test the portal, and to gain familiarity with the commissioning process, before the obligation on new and replacement installations commences.

¹ AGL response to the [Queensland Emergency Backstop Mechanism Consultation](#) (October 2022) and AGL response to [Victoria's Emergency Backstop Mechanism](#) (August 2023).



Other matters AGL would like to highlight in its submission are that:

- The emergency backstop should only apply to new and replacement solar inverters and should not include retroactive application including in older solar systems which are being upgraded.
- NSW DNSPs should seek to standardise the backstop requirements for systems over 200 kW, preferably by using CSIP-Aus for systems up to 5 MW.
- Testing for commercial and industrial (C&I) installations should be adapted to reflect the actual design and operation of these systems, instead of relying on testing of export limiting.
- NSW Government should be seeking means to move controlled hot water permanently into the middle of the day to address minimum demand issues, rather than limiting its use as a backstop.
- DNSPs should be required to notify impacted customers, and their retailers, of the curtailment of their solar systems for testing and to respond to MSL events.
- The emergency backstop mechanism should not adversely impact other existing and emerging technologies that provide for wider system needs, including virtual power plants (VPPs) and other energy storage solutions.

AGL looks forward to engaging with DCCEEW-NSW and NSW DNSPs on the emergency backstop design and implementation. Just as importantly, we look forward to engaging with DCCEEW and the Australian Energy Market Operator (AEMO) on solutions to address minimum system load challenges to reduce incidence of use of the emergency backstop.

Appendix A includes detailed responses to select consultation paper's questions. If you have any queries about this submission, please contact [REDACTED]

Yours sincerely,

[REDACTED]

[REDACTED]



Appendix A – Response to consultation questions

Question	Response
Question 1 - Do you support the requirement for NSW DNSPs to harmonise their implementation of the backstop mechanism? If not, please explain why.	AGL supports this requirement as harmonisation is critical to successfully implement the mechanism and to limit its impact to consumers and industry.
Question 2 - Are the scope and timelines for the Emergency Backstop Mechanism feasible? If not, please explain why.	<p>Scope</p> <p>AGL supports implementing an emergency backstop for new and replacement solar inverters. AGL does not support any retrospective application of the backstop, including on upgraded solar systems. This distinction is particularly important for existing systems where an expansion occurs (e.g., increasing the size of a solar array). In other jurisdictions, DNSPs have required that existing inverters be updated to be compliant with AS/NZS 4777.2-2020 and to have emergency backstop capabilities. This adds unnecessary additional cost for the customer since:</p> <ul style="list-style-type: none"> - AS/NZS 4777.2-2015 compliant inverters need to be removed and replaced with 2020 models - Many OEMs only provide CSIP-AUS functionality for inverters of the same brand, which restricts the new system to having the same inverter brand as the old system. <p>AGL's view is that NSW Government should also consider exemptions from complying with the emergency backstop for:</p> <ul style="list-style-type: none"> - Battery storage systems (including EVs) - Sensitive load sites such as hospitals, medical clinics, nursing homes, traffic lights, telco facilities and utilities - Stand-alone power systems. <p>Timelines</p> <p>AGL supports the intent to implement an emergency backstop as soon as practical to address system security challenges. However, AGL does not support the proposed timelines, and urges NSW Government to learn from the experience of the recent implementation in Victoria. Implementing an emergency backstop is not trivial, and the Victorian implementation has been subject to major ongoing issues since its commencement. DNSPs delayed the implementation of their server and installers were provided access to the interface at the last minute. Once access had been granted, industry had to navigate a range of challenges including issues with onboarding, DNSP server failures, high testing failure rates, and repeat installer site visits.</p> <p>Harmonisation across NSW DNSPs (same processes, servers, portal tests, etc) would go a long way to address these challenges. In Victoria, many of the issues were driven by different implementations as each DNSP had their own servers, portals, capability tests, and processes while providing very limited support for industry. Nonetheless, an implementation of this scale will still require ample time for commissioning and testing.</p> <p>We would encourage NSW Government to factor into its implementation sufficient time for DNSPs to implement and test the portal, and at least three months for industry testing before the obligations commence.</p>

<p>Question 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.</p>	<p>AGL agrees with the hierarchy between solar export curtailment, solar disconnection and emergency voltage management. However, AGL notes that CSIP-Aus contains a range of commands which could be interpreted to meet the ‘export curtailment’ or ‘disconnection’ requirement, but which result in different physical responses from inverters. The complexity of validating these responses will also vary depending on the command. AGL’s view is that NSW DNSPs should work with industry to prioritise the implementation of commands of lower complexity. Generally, we urge NSW Government to take a ‘walk before you run’ approach – seeking to implement a minimum viable product at the start and refine over time.</p> <p>AGL’s view is also that controlled load hot water shifting should not be treated as a last-minute emergency measure, as there are currently existing and low-cost ways to shift controlled load permanently from overnight into the middle of the day, thereby preventing the likelihood of MSL events occurring in the first place.</p> <p>AGL’s hot water VPP includes 52,000 controlled load hot water systems in SA Power Networks, Ausgrid and Endeavour’s distribution areas. Through our hot water VPP, AGL is able to supply these customers’ systems in the middle of the day when wholesale prices and grid demand tend to be lower due to high levels of solar generation. As a result, customers can benefit from load and bill reductions, while the permanent shift to the middle of the day can help reduce the likelihood and severity of MSL events, supporting higher penetration of variable renewable electricity into the grid.</p> <p>AGL has found that enforced network load control (where DNSPs directly or indirectly control the assets) limits retailers’ ability to effectively orchestrate customer devices, unlock value for consumers and address both minimum and peak demand events. AGL’s view is also that it would be not be a good outcome for consumers, or the energy transition, to withhold hot water controlled load capacity in anticipation of an MSL event.</p> <p>AGL would welcome the opportunity to discuss with NSW Government the benefits of retailer hot water orchestration for consumers and how it can be used to address system integration challenges.</p>
<p>Question 4 – Are the design elements of the Emergency Backstop Mechanism appropriate and feasible? If not, please identify why and provide any alternative suggestions.</p>	<p>AGL considers the design elements are feasible. However, the implementation of the CSIP-AUS protocol significantly slows down the commissioning process, since solar installers are reliant on the testing algorithms of the DNSPs server.</p> <p>AGL’s experience in Victoria is that in some DNSPs areas where tests were being completed manually, rather than automatically, commissioning times were extended by up to 10 days, leading to poor customer experience.</p> <p>Furthermore, it is crucial that the backstop mechanism does not impact other existing and emerging technologies that provide wider system needs, including VPPs and other energy storage solutions. Careful consideration should be given to minimising the potential impact of the mechanism on retailers’ and aggregators’ capacity to offer FCAS bids using residential batteries.</p>
<p>Question 6 - Do you support the threshold for the Emergency</p>	<p>AGL supports using CSIP-Aus for systems 200 kW and smaller. However, we also suggest DNSPs implement the same emergency</p>

<p>Backstop Mechanism using CSIP-AUS being 200kW and smaller? If not, please provide detail on what threshold you think is appropriate.</p> <p>I. Do you agree with the approach for systems above 200kW? If not, please explain why and provide any alternative suggestions.</p>	<p>backstop approach for larger systems over 200 kW. In Victoria, it has been extremely difficult to meet DNSPs' different requirements for systems both under and over 200kW.</p> <p>AGL also encourages NSW Government to consider using CSIP-Aus for all solar system sizes up to 5 MW, or at the very least, for all LV-connected solar inverters and LV-connected sites (i.e., devices within scope of AS/NZS 4777).</p> <p>Should CSIP-Aus not be used for these systems, AGL would like to understand whether there are existing requirements for systems over 200 kW (e.g., GSD, GMM, SCADA) and, again, encourages DNSPs to standardise their approach.</p> <p>More broadly, we encourage NSW Government to move away from references to "rooftop" solar and referring simply to "solar PV" as the restriction will apply to ground-mounted systems in the size category as well.</p>
<p>Question 7 - Do you have any concerns or insights into using CSIP-AUS compatible inverters and an internet connection to control the backstop mechanism?</p>	<p>Refer to question 9.</p>
<p>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.</p>	<p>AGL supports the use of CSIP-Aus as it has been used across several jurisdictions and most inverters will be able to meet these requirements. However, as noted earlier NSW Government should prioritise the implementation of the minimum viable product needed to operationalise the emergency backstop (curtailment and disconnection) before fully seeking to implement flexible export limits. This additional expenditure may also not be warranted based on the DNSPs' current utilisation levels.</p> <p>As noted in our cover letter, NSW's backstop implementation must also be subject to appropriate principles and safeguards to ensure that the mechanism is not used to manage network constraints more broadly.</p>
<p>Question 9 – Which, if any, existing test protocols should be considered for implementation as the consistent test protocol for NSW?</p>	<p>NSW Government / NSW DNSPs should consider suitable tests that do not discriminate against C&I businesses, who may consume all their solar generation and not export very often.</p> <p>AGL's experience in Victoria and South Australia is that it is not always possible to test export curtailment in C&I installations, and this is being interpreted as non-conformance. In these instances, the installation has been programmed correctly but there is simply not enough solar generation to "see" export and validate the command. These new solar systems going in should not fail the CSIP-AUS DNSP server tests. Alternative methods could be needed, such as testing the ramping control of the inverters via DNSP signalling (still via CSIP-AUS), instead of export curtailment.</p>
<p>Question 10 – Do you think the conditions under which the Emergency Backstop Mechanism could be used are appropriate? If not, why? Please suggest any</p>	<p>Yes. However, AGL looks forward to engaging with DCCEEW and AEMO on solutions to address minimum system load challenges to reduce the incidence of MSL 3 events and the use of the emergency backstop.</p>

alternative conditions that should be considered.	
<p>Question 11 – Do you have any views on the proposed implementation pathway (variation of DNSP licencing conditions) or alternatives?</p>	<p>AGL's view is that the licence condition should also include an obligation on DNSPs to communicate to consumers, and their retailers, before and after a curtailment / disconnection event. This should be required when the capability is triggered regardless of the cause (e.g., due to testing or due to a MSL 3 event).</p> <p>This is important so that customers can confirm that their device has been properly re-engaged after a curtailment event. In SA, the Relevant Agent is responsible for this process, whereas, in Queensland, the generation signalling device has in-built 'fail safe' mechanism that returns the inverter to normal operation if the device does not receive or respond to the second signal within a certain period of time. The restoration of the device could be facilitated by DNSPs communicating directly with impacted customers to check their systems, through SMS notifications.</p> <p>NSW Government will be attuned to the ongoing energy affordability crisis and cost of living pressures, so it is reasonable for customers to expect advance and retrospective notice that their system is impacted. AGL had a previous experience in SA where customer inverters were disconnected during routine testing of the emergency backstop and were inadvertently not reconnected after the testing ended. Upon receiving customer concerns, AGL identified the disconnection which led to rectification. Communication before and after the test for both customers and retailers could have prevented this situation, as there was not pre-established network process to address failed reconnections.</p>
<p>Question 12 – What information will manufacturers, installers, customers and distribution networks require to implement the Emergency Backstop Mechanism?</p> <p>I. Who is best placed to communicate this information to the different audiences?</p> <p>II. How should this information be best communicated to the different audiences?</p>	<p>Industry will need communication and guidance either jointly from DNSPs, or from the NSW Government, to implement the emergency backstop mechanism in NSW.</p> <p>AGL also notes that retailers do not have access to the DER register and therefore have limited visibility as to which customers will be impacted during a curtailment event. However, retailers are often the first point of contact when consumers experience technical challenges.</p> <p>To address this, NSW Government should consider:</p> <ul style="list-style-type: none"> - Requiring DNSPs to inform consumers before / after a curtailment event (as detailed in the previous question) - Requiring DNSPs to develop a landing page to provide generic information to customers on how the emergency backstop can impact consumers (and which retailers can refer to and leverage in their own communications). - Requiring DNSPs to share the list of impacted National Metering Identifiers (NMIs) with their respective details, so that retailers can follow-up with customers as required.
<p>Question 13 – What CER should the Portal capture? Please explain the reasoning behind your answers.</p> <p>I. What types of technology?</p> <p>II. What size (capacity) of technology?</p> <p>III. What technology should be excluded? Why?</p>	<p>AGL's view is that the portal should apply to all solar PV and battery systems up to 5 MW. Over time, this could be expanded to capture devices in line with the DER Register. This is consistent with AGL's preference for CSIP-Aus to be used for the emergency backstop implementation in systems up to 5 MW (rather than 200 kW and under, as currently proposed).</p>



<p>Should the Portal align with the Emergency Backstop Mechanism in capturing only systems under 200kW?</p> <p>V. Should the Portal capture technology consistent with that recorded in AEMO's DER register? Is there additional technology that should be captured?</p>	
<p>Question 14 – Do you support the functions outlined for inclusion in the CER Installer Portal? If not, please explain why.</p>	<p>Yes. However, as noted earlier NSW Government should prioritise the implementation of the minimum viable product needed to minimise integration challenges.</p>
<p>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.</p>	<p>Yes.</p>
<p>Question 20 – Do you agree with the phased approach proposed for the delivery of the Portal? If not, please explain why.</p>	<p>AGL supports a phased implementation to minimise industry impact. However, AGL does not have sufficient information on the scope of phase 2 to comment on its scope.</p>
<p>Question 22 – Do you support the proposed joint NSW Government-DNSP delivery of the CER Installer Portal? If not, please explain why.</p>	<p>Yes. AGL's view is that NSW Government will play a critical role in delivering a harmonised implementation.</p>
<p>Question 23 – What information will installers and any other stakeholders require to support the roll out of the CER Installer Portal?</p> <p>I. Who is best placed to provide this information?</p> <p>II. What are the best ways of communicating this information to stakeholders?</p>	<p>AGL would appreciate the opportunity to trial and test the portal before implementation. The trial and testing window should be at least three months.</p>