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Environment, Planning and Sustainable Development Directorate

Australian Capital Territory Government

Submission via [ACT Government Website](http://act.gov.au)

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### ACT Emergency Backstop Capability – Consultation Paper

AGL Energy (**AGL**) welcomes the opportunity to provide responses to the questions posed by the Australian Capital Territory Government (**ACT Government**) 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 the ACT, 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 assets<sup>1</sup>.

AGL strongly encourages the ACT Government to harmonise its emergency backstop implementation with New South Wales (NSW). Harmonisation is critical to achieve a smoother implementation in the NSW-ACT NEM region, to minimise impact to industry and consumers, and to ensure the effectiveness of the emergency backstop. This harmonisation should include, but is not limited to, the technology required for different installation sizes, the capability tests required by distribution network services providers (DNSPs) and their commissioning processes.

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

- AGL is unclear on the implementation timelines proposed in the consultation paper. We urge the ACT Government to provide sufficient time for industry to gain familiarity with the commissioning process before the obligation on new and replacement installations commences. Previous implementations of the emergency backstop have demonstrated the various complexities that arise in the process, resulting in a high risk of non-compliance, technical challenges, and in some instances, poor customer experience.
- The emergency backstop should only apply to new and replacement solar inverters and should not include retroactive application including in existing systems which are being upgraded.

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<sup>1</sup> AGL response to the [Queensland Emergency Backstop Mechanism Consultation](#) (October 2022), AGL response to [Victoria's Emergency Backstop Mechanism](#) (August 2023) and AGL response to [NSW's Emergency Backstop Mechanism Consultation](#) (March 2025).



- It would be preferable to use CSIP-Aus to implement the emergency backstop mechanism for systems up to 1.5 MVA, and Supervisory Control and Data Acquisition (SCADA) technologies for larger systems, rather than using SCADA for all systems >200 kW.
- 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.
- Evoenergy should consider the removal of its existing EVO E-STOP requirement, as this function will be achieved through the emergency backstop mechanism.
- 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 the ACT Government and Evoenergy on the emergency backstop design and implementation. Appendix A includes detailed responses to select consultation paper's questions. If you have any queries about this submission, please contact Andrea Espinosa on 0422 165 705 or [aespinosa2@agl.com.au](mailto:aespinosa2@agl.com.au).

Yours sincerely,

Kyle Auret

Senior Manager Policy and Market Regulation



## Appendix A – Response to consultation questions

Question	Response
Q1. What role do you see Consumer Energy Resources playing in the energy system as it transitions to net zero emissions?	CER is a critical enabler to the transition to net zero emissions. CER offers consumers options to generate zero emissions electricity on-site while managing their energy costs. Through a combination of innovative products and services, CER can also help consumers shift or manage their load profiles while providing energy and network services that will be important in the energy transition.
Q2. Do you understand the reasoning behind establishing requirements for managing solar generation in the ACT? If not, please identify where further information is required.	AGL understands the need to implement an emergency backstop mechanism in the ACT and is supportive of this need as a last resort solution. AGL looks forward to engaging with governments and the Australian Energy Market Operator (AEMO) on solutions to address minimum system load challenges to reduce the incidence of use of the emergency backstop.
Q3. Are you clear on the scope, timelines, and conditions for the emergency backstop mechanism? Is there any further information you require?	<p><b>Scope</b></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 are 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"> <li>- AS/NZS 4777.2-2015 compliant inverters need to be removed and replaced with 2020 models</li> <li>- 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.</li> </ul> <p>AGL understands that AEMO has clarified in other jurisdictions that the emergency backstop requirement for new and replacement inverters should not extend to existing systems where a new system is added to the site.</p> <p>AGL's view is that ACT Government should also consider exemptions from complying with the emergency backstop for:</p> <ul style="list-style-type: none"> <li>- Battery storage systems (including EVs)</li> <li>- Sensitive load sites such as hospitals, medical clinics, nursing homes, traffic lights, telco facilities and utilities</li> <li>- Stand-alone power systems (if applicable).</li> </ul> <p><b>Timelines</b></p> <p>AGL is unclear on the ACT Government's proposed timelines, and whether it is seeking to align with NSW Government's implementation.</p> <p>AGL encourages ACT Government to factor into its implementation sufficient time for Evoenergy to make changes to its systems and procedures, and then at least three months for industry testing before the obligations commence.</p>

<p>Q4. Do you agree with the threshold for the emergency backstop mechanism being systems 200kW or less? If not, please provide detail on what threshold you think is appropriate.</p>	<p>AGL supports using CSIP-Aus for systems 200 kW and smaller. AGL also encourages ACT Government to consider using CSIP-Aus for solar system sizes up to 1.5 MVA instead of other technologies such as SCADA. SCADA could then apply to systems &gt;1.5 MVA.</p> <p>We also strongly encourage ACT Government to work with NSW Government to harmonise their approach for all system sizes. In Victoria, it has been extremely difficult to meet DNSPs' different requirements for systems both under and over 200kW. Harmonisation is essential to minimise implementation impacts to industry and consumers, and to improve compliance with the backstop requirements.</p>
<p>Q5. Do you have any concerns or insights into using CSIP-AUS compatible inverters and an internet connection to control the emergency backstop mechanism?</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, we note the following challenges:</p> <ul style="list-style-type: none"> <li>- <b>Application of CSIP-Aus:</b> The paper defines emergency backstop capability as the temporary curtailment (<i>reduction</i> and <i>disconnection</i>) of rooftop solar, and other distributed PV, in emergency situations. CSIP-Aus contains a range of commands which could be interpreted to meet the 'reduction' 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 Evoenergy should work with NSW DNSPs and industry to harmonise their interpretation of these requirements and to prioritise the implementation of commands of lower complexity.</li> <li>- <b>Commissioning process:</b> The implementation of the CSIP-AUS protocol significantly slows down the commissioning process of distributed PV, since solar installers are reliant on the testing algorithms of the DNSP's server. AGL's experience in Victoria is that in some DNSP areas where tests were being completed manually, rather than automatically, commissioning times were extended by up to 10 days, leading to poor customer experience. Therefore, it will be crucial for Evoenergy to test and streamline its new commissioning process as much as possible before the commencement of obligations to industry.</li> <li>- <b>C&amp;I systems:</b> ACT Government / Evoenergy should consider suitable tests that do not discriminate against C&amp;I businesses, who may consume all their solar generation and not export very often. AGL's experience in Victoria and South Australia is that it is not always possible to test export curtailment in C&amp;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.</li> </ul>
<p>Q6. Do you have any concerns with the approach of using Supervisory Control and Data Acquisition technologies to manage generation from medium-to-large scale solar systems?</p>	<p>As noted earlier, AGL's preference would be to use CSIP-Aus technology for solar system sizes up to 1.5 MVA instead of other technologies such as SCADA. SCADA could then apply to larger systems. AGL also strongly encourages Evoenergy and NSW DNSPs to harmonise their requirements for connections &gt; 200 kW.</p>

<p>Q7. What information will solar PV installers and consumers need to understand the proposed changes?</p>	<p>ACT Government could consider requiring Evoenergy to communicate with consumers before / after a curtailment 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 Evoenergy communicating directly with impacted customers to check their systems, through SMS notifications.</p> <p>ACT 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 could have prevented this situation, as there was not pre-established network process to address failed reconnections.</p>
<p>Q9. What is the best way to ensure that rooftop solar systems with emergency backstop functionality are commissioned correctly at installation stage and continue to maintain a connection over the lifetime of the system?</p>	<p>AGL urges ACT Government to learn from 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>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. Therefore, harmonisation across Evoenergy and NSW DNSPs will be critical to avoid these challenges in the NSW-ACT region.</p>
<p>Q10. What actions do you think homes and businesses could take to help align their energy use to the grid and take advantage of surplus solar energy?</p>	<p>Homes and businesses could bundle solar with battery solar systems and participate in VPPs. Energy efficiency, productivity and demand management are also essential to shift demand to reduce peak loads and manage minimum operational demand, to enable efficient system build, and to minimise energy costs for consumers. These actions can be incentivised through government support, tariffs that are simple, actionable and fair, smart meters, and incentive load management programs.</p>
<p>Q11. What are the best ways to support the use of solar and other CER while upholding the technical and operational needs of the grid?</p>	<p><b>Industry capability:</b> The ACT Government should prioritise the implementation of a minimum viable product for the emergency backstop to minimise integration challenges. Industry should also have the opportunity to trial and test the new requirements (and any new DNSP servers / portals) before obligations commence. The trial and testing window for industry should be at least three months.</p>

	<p><b>Network constraints:</b> The backstop implementation should be subject to appropriate principles and safeguards to ensure that the mechanism is not used to manage network constraints more broadly.</p> <p><b>System services:</b> 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><b>Duplicative requirements:</b> Evoenergy should review its existing connection requirements and remove those which would be duplicated through the emergency backstop. In first instance, AGL proposes that Evoenergy removes its EVO E-STOP requirement, as this function would be achieved via the proposed emergency backstop.</p>
Q12. What should the ACT Government do to support better coordination of CER with grid supply?	<p>A mix of incentives and supports will be required to ensure efficient coordination and integration of CER in the electricity market, and that customer-facing enterprises have the right signals to invest. Government support can include policies that lower financial barriers for batteries – particularly those bundled with solar and/or participating in VPPs – and EVs. These policies can also help build consumer trust in the energy transition.</p> <p>Consideration also needs to be given to the needs of all consumers in the future energy system, regardless of whether they have CER. Steps should be taken to develop solutions for vulnerable customers, renters, and other customers who may have challenges accessing CER.</p>