



INTELLIHUB GROUP & PARTNERS

SUBMISSION TO ENERGY QUEENSLAND CONSULTATION PAPER ON ENABLING AN EMERGENCY BACKSTOP MECHANISM

7 October 2022



GOODWE



GROWATT



IntelliHub and the other signatories to this submission recognise the challenges currently being faced due to falling minimum demand. We acknowledge that some form of emergency backstop mechanism may be a necessary part of the toolkit for addressing these challenges, provided it is only be used as a last resort in extreme circumstances.

However, Energy Queensland's proposed mechanism for implementing this emergency backstop is overly restrictive, out-of-step with similar schemes in other states and will impose significant unnecessary costs on solar and battery customers. We estimate that the additional cost to Queensland customers will be a minimum of \$300. Instead of mandating the use of a specific out-of-date and high-cost technology, Queensland should adopt a more flexible approach that allows a range of modern technologies to be used to achieve a better outcome, as is the case in similar regimes in South Australia and Western Australia.

This submission is made on behalf of the IntelliHub Group and SMA, Fronius, Goodwe, Enphase, Growatt and Greensync.

IntelliHub is an Australian and New Zealand based utility services company that delivers innovative metering and data solutions to maximise digital and new energy services. The other signatories are leading global Original Equipment Manufacturers (OEMs), and combined, supply the majority of solar PV inverter equipment into the Queensland market. Together, we are experienced in delivering emergency backstop solutions in other states and consider that experience from similar regimes in other states can be used to significantly improve Energy Queensland's proposal and reduce the costs to customers.

We acknowledge the need for an emergency backstop mechanism for use as a last resort

Energy Queensland is seeking submissions on a proposal to introduce an emergency backstop mechanism that would give Energex and Ergon Energy the ability to curtail the output of solar and battery inverters. This proposal has been developed in consultation with the Department of Energy and Public Works (DEPW), AEMO and Powerlink.

We acknowledge the challenges that are currently being faced by networks and market operators across Australia in managing power system security during times of very low minimum demand. We are not opposed to the concept of an emergency backstop mechanism, as long as it is only used very rarely to maintain power system security as a 'last resort' in extreme circumstances. We note that the consultation paper proposes that this power is only expected to be used around once a year or less when Queensland separates from the remainder of the NEM during minimum load conditions.

As noted in the consultation paper, there are a range of potential solutions to address the challenges associated with minimum demand. We encourage Energy Queensland, DEPW and AEMO to continue to develop these other solutions to ensure that the emergency backstop mechanism remains a genuine last resort that is used very infrequently.

Forcing the installation of a generation signaling device is not an efficient method of implementing the emergency backstop and is out-of-step with other jurisdictions

Our main concern is the method by which Energy Queensland proposes to implement the emergency backstop.

Energy Queensland proposes that all new or modified inverter connections of 10kVA and above will be required to install a generation signaling device. Energex and Ergon will use Audio Frequency Load Control (AFLC) to communicate with these devices and activate Demand Response Mode 0 (DRM0) to disconnect the inverter from the network.

Energy and Ergon will require all relevant customers to install this device through requirements of their connection agreements and amendments to their connection standards. Those standards will specify the precise item of equipment that must be installed and the requirements that equipment must meet. There is currently only one supplier of equipment that meets this specification, who will have a monopoly on its supply for all Queensland customers and installers.

This level of prescription is not necessary to implement the objectives of the emergency backstop and is inconsistent with best practice regulation and the approaches taken to similar schemes in other states. Instead of prescribing the specific *equipment* that must be used to implement the emergency backstop, a best practice regulatory regime would specify the *outcomes* that must be achieved. The problem that the consultation paper is trying to solve is the need for Energex and Ergon to be able to disconnect inverters of small customers when directed by AEMO. That problem can be solved by many different technology solutions and there is no justification for prescribing that only one specific technology solution is permitted.

Energy Queensland's approach can be contrasted with the emergency backstops that have already been successfully implemented in South Australia and Western Australia.

South Australia's Smarter Homes Relevant Agent regime and Western Australia's Emergency Solar Management regime have already been implemented to address exactly the problem that Energy Queensland's energy backstop is seeking to solve. Both of these regimes allow multiple different technology solutions for implementing the required outcome of emergency backstop disconnection and reconnection.

- The SA Smarter Homes regime requires inverters over a specified size to have remote communications, disconnection and reconnection capability. The Office of the Technical Regulator has published guidelines that specify the methods that may be used to deliver this technology.¹ There are currently 6 different permitted technologies, including a DRM device, a meter-based solution, an inverter-based API solution or a SCADA system. The Technical Regulator may also approve alternative solutions. This contrasts with Energy Queensland's proposal, where only one of these technologies will be permitted.
- The SA emergency backstop is implemented by a Relevant Agent that is appointed for the site. There are currently 50 approved Relevant Agents who use a range of different technologies and equipment suppliers to meet the required capabilities. For example, SA Power Networks' website lists 17 different supported technologies that are compatible with its Relevant Agent service, including a range of inverter, meter and DRM based solutions from different equipment suppliers.² This contrasts with Energy Queensland's proposal where there would be a single monopoly supplier of a single type of approved equipment.
- The WA Emergency Solar Management regime requires inverters over a specified size to have the capability to be remotely turned off and on in an emergency solar management event. Western Power's connection technical requirements allow the choice of 2 methods to meet this requirement – an API solution using a compatible inverter or a metering solution.³ This contrasts with Energy Queensland's proposal, which only allows a single option that is not permitted in WA.

Energy Queensland's technology approach is also not aligned with broader developments in DER technology and regulation, including the implementation of flexible exports. In WA, customers and

¹ See <https://www.energymining.sa.gov.au/industry/modern-energy/solar-batteries-and-smarter-homes/regulatory-changes-for-smarter-homes/Technical-Regulator-Guidelines-Distributed-Energy-Resources.pdf>

² See <https://www.sapowernetworks.com.au/industry/relevant-agent/supported-technology/>

³ See <https://www.synergy.net.au/global/dpv-management>

installers are advised that the 'API cloud based solution is currently expected to provide the best outcome for most customers – it is lower cost and aligned to future opportunities for Distributed Energy (DER) participation.'

It is unclear why Energy Queensland has not followed a similar approach and has instead taken a restrictive approach of only allowing the use of a single high-cost and outdated technology that is not proven for this application.

The proposal will increase costs to customers by at least \$300 and up to \$1,000

The signatories to this submission have extensive experience in delivering emergency backstop capability in SA and WA.

We generally use an API-based solution to communicate with inverters, which allows us to deliver a remote disconnection and reconnection service that would address the problems Energy Queensland is seeking to address. This solution, in Western Australia, is provided by Synergy, unlike Energy Queensland's solution which will require costly equipment and installation to be coordinated and cost borne by the customer.

The consultation paper notes that the generation signaling device is expected to cost around \$70. However, the consultation paper does not discuss the considerable additional installation costs that will be incurred to install this device. We estimate the installation of the device will require up to two hours additional installation. It may also require an additional site visit to confirm commissioning.

Additionally, to meet market requirements, inverter/DRED interface component supply may need to be redirected and reconfigured to meet the DRMO requirements.

We therefore estimate the total cost to the installer to meet Energy Queensland's requirements will be a minimum of \$300 and up to \$1,000 where additional configuration is required. This cost will be passed on to the end consumer.

This is an unnecessary cost for Queensland consumers that is not imposed on solar and battery customers in other states where more flexible and lower cost methods of implementing an emergency backstop are permitted as discussed above.

Competition issues and risks of the proposed single supplier approach

We also have significant concerns that Energy Queensland is proposing that the only way to meet its connection standards in relation to the emergency backstop will be to install equipment that can only be purchased from a single supplier. This monopoly supplier arrangement creates risks that the supplier may not be able to deliver the large volumes of equipment that will be required, which could lead to installation delays for customers seeking new solar systems or batteries. It also creates risks of monopoly pricing, which could see the claimed \$70 price for the equipment increase materially.

We also question whether the proposed approach is consistent with the Competition and Consumer Act or whether it risks infringing the prohibition on third line forcing.⁴

⁴ Third line forcing under s. 47 of the Competition and Consumer Act 2010 occurs where a business will only supply goods/services on the condition that a customer buys other goods/services from a particular third party. Energex and Ergon are proposing that, as a term of their connection agreements, they will only supply energy network services to solar and battery customers if those customers also purchase a signaling device that meets certain specifications, knowing that the only supplier of a device that meets those specification is Thew & McCann Group. This requirement may have the effect of substantially lessening competition.

These issues would be avoided if Energy Queensland adopted a more flexible approach as in SA or WA that allows a range of approved technologies from a variety of approved suppliers.

Greater oversight is needed of the implementation emergency backstop

We are also concerned that there appears to be very limited oversight of the emergency backstop regime, with Energex and Ergon given considerable powers as to how the regime is implemented through their connection agreements and connection standards with little or no regulatory oversight.

This contrasts with the SA regime discussed above where the key requirements for the scheme are set by the Office of the Technical Regulator. We consider that there is a strong case for greater regulatory oversight of the proposed regime, particularly given Energy Queensland appears to have adopted a method of implementation that will impose material costs on consumers and without a clear framework to monitor compliance. In practice, there is no effective way to validate if a system is installed correctly until a DRMO signal is sent. This risks very low compliance without installer training and audit.

We note that the emergency backstop is briefly referred to in recent amendments to Energex and Ergon's Distribution Authorities, but those amendments place very limited oversight on the implementation of the mechanism. The Distribution Authorities require a report to be provided to the regulator when the emergency backstop is used, and we recommend that these reports be published to improve oversight and transparency. The consultation paper also proposes that an annual review will be undertaken of the scheme, and we recommend that this review be conducted by DEPW or an independent person not by Energy Queensland.

If you have any questions regarding this submission please contact Jonathan Hammond, General Manager Strategy and Corporate Development on 0431 885 092 or jonathan.hammond@intellihub.com.au.

Regards,



Wes Ballantine
Chief Executive Officer
Intellihub

cc Minister of Energy, Renewables and Hydrogen
Department of Energy and Public Works
AEMO

Endorsed by
Doris Speilthenner, Managing Director APAC, Australia and New Zealand, **SMA**
Mariella Doppelbauer, Managing Director, **Fronius Australia**
Dean Williamson, Country Manager, **GoodWe**
Wilf Johnston, General Manager ANZ & Pacific, **Enphase**
Allen Zhu, Australian Country Manager, **Growatt**
Bruce Thompson, CEO, **GreenSync**