17 November 2022

Part of Energy Queensland

Ms Anna Collyer
Chair
Energy Security Board
John Gorton Building
King Edward Terrace
PARKES ACT 2600

Submitted via email to info@esb.org.au

Dear Ms Collyer

Energy Security Board - Interoperability Policy

Ergon Energy Corporation Limited (Ergon Energy) and Energex Limited (Energex), both distribution network service providers (DNSPs) operating in Queensland, welcome the opportunity to provide comment to the Energy Security Board (ESB) on its Directions Paper - Interoperability Policy (the Directions Paper).

We recognise that the Directions Paper states that "…the ESB recommended a Distributed Energy Resources (DER) Implementation Plan to support the effective integration of DER and flexible demand. The term 'DER' has since been replaced with [Customer enabled resources] 'CER', or consumer energy resources, to emphasise and focus on consumers' direct and indirect interest in new technologies and services". For this reason we have referred to CER in this response. However, we do think it is important for the ESB to consider the terms used in the broader energy legislation, International and Australian Standards, products and the industry more generally. Although we understand the use of the term CER, the current National Electricity Rules and Guidelines refer to DER and therefore we suggest careful consideration of terminology along with further engagement to ensure clarity for consumers and the entire industry.

Feedback and comments on the Directions Paper questions are included in the attached response template.

Should the ESB require additional information or wish to discuss any aspect of this response, please contact me on 0429 394 855 or Laura Males on 0429 954 346.

Yours sincerely,

Alena Chrismas

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Acting Manager Regulation

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Encl: *Ergon Energy and Energex's comments on the consultation questions*

ESB Interoperability Policy – Directions Paper

ESB question	Ergon Energy and Energex response
Consultation Question 1: Are the five identified domains correctly summarised? Are there gaps or major limitations in this framing?	Ergon Energy and Energex agree that the suggested domains provide a good overview. However, we suggest the real-time meter-to-gateway data sharing from smart meters mentioned in Domain 2 should be split out as a separate domain. Currently, in order to make use of dynamic connections, consumers are required to install two sets of metering devices. Separation of domains has potential for large cost savings for consumers with fewer metering devices required.
Consultation Question 2: What priority should each domain be assigned, considering the interest of all electricity consumers within the consumer energy resource interoperability landscape?	In our view, network security and stability are of primary concern, and as such, domain 3 (network – CER) and domain 5 (network - Australian Energy Market Operator) AEMO)) should take priority. Domain 3 (Common Smart Inverter Profile - Australia (CSIP-AUS)) is the interoperability component of most importance to Ergon Energy and Energex implementing dynamic connections. With significant progress already being made for domain 3, the focus should now be on compliance and ensuring national consistency. We suggest, domain 2 (behind-the-meter communications) should be considered the next highest priority, as it is essential for customers to get the most out of their systems if they wish to purchase multiple CER from different manufacturers.
Consultation Question 3: What are the likely costs and benefits for consumers associated with a national 'flexible export ready' mandate including in relation to future readiness of customer installations and installation costs?	Consistent standards will reduce costs for manufacturers, and therefore costs for consumers. In Ergon Energy and Energex's view, it is inadequate to mandate flexible export limits at the time of installation without having mandated behind-the-meter interoperability first. For example, a photo voltaic (PV) system that is compliant in isolation via a cloud provider may no longer be compliant in the future if the customer were to purchase additional CER from a different manufacturer. Furthermore, a cloud provider could shut down, making these previously compliant sites ineligible for dynamic connections without modifications to the installation.
Consultation Question 4: Do stakeholders agree that DNSPs are best placed to enforce a 'flexible export	In Ergon Energy and Energex's view, the relevant standard compliance is most effectively defined as part of the DNSP connection standards. We suggest there are too many possible enumerations of

ready' mandate at the time of installation? If not, what alternative models should be considered?	CER that can be installed at site for a DNSP to be able to determine if a site is capable of dynamic connections, and this determination can only be made by the installer. DNSPs are therefore best placed to enforce ongoing compliance and should work with installers to identify non-compliant installations.
Consultation Question 5: What requirements should a 'flexible export ready' installation have with regard to internet connectivity (e.g. embedded mobile communication versus LAN connectivity)?	In our opinion, communication requirements should not be defined as part of the requirements, given the variety of communications infrastructure across Australia. In Ergon Energy and Energex's view, options should be determined by what is available to the customer. We suggest there should be no mandated requirement for internet connectivity, with customers able to determine which communication method best suits their needs. CSIP-AUS provides a fallback mechanism to a static import and export limit in the case of a communications outage, and so customers should be able to decide which technology will provide them with the sufficient reliability to meet their desired access to additional capacity.
Consultation Question 6: What are the pros and cons of a flexible export ready mandate set in the Rules, via a subordinate instrument, or under a separate head of power (e.g. jurisdictional technical regulation)?	Ergon Energy and Energex suggest having a flexible export ready mandate for grid connected CER in a subordinate instrument or jurisdictional regulation. This approach to a flexible export mandate could provide the following benefits: • Provision of a clear requirement to industry to invest in developing compliant solutions in a timely manner. • Future proofing customer investments by removing older non-compliant products or solutions from the market. • Encouraging innovation and competition to minimise any financial impacts to the CER customer. Conversely, a mandate could result in the following detrimental consequences depending on the exact detail involved in the mandate: • Prevent innovation and progress in active management of CER. Dynamic connections are very new from a worldwide perspective and there are likely to be advances in innovation and development in this space in coming years. A mandate could prevent or delay alternate options being implemented which may be more beneficial for customers and networks. • Costs and complexity with contracting for customers who are adding CER at their premises. Flexible exports are a centralised technical requirement. Where a customer has CER with

	existing export limits, these will need to either comply or be set to zero export. If flexibility with changing existing installations is not provided, the benefits of dynamic connections may not be realised, and customers may have to remove existing systems with useful life in order to add new CER. • Unforeseen legislative obligations or outcomes from other Rules or similar may lead to higher cost or complexities, technical or financial risks to DNSPs. For example, the definition of micro embedded generator linked to the scope of AS/NZS 4777 rather than 30 kVA. This definition changes the application of requirements on DNSPs each time the scope of AS/NZS 4777 changes.
Consultation Question 7: If implemented under the Rules, which market body is best placed to establish and oversee the proposed requirement on DNSPs?	If implemented under the Rules, we suggest it should be considered in the context of the decisions of DER technical standards (ERC0319).
Consultation Question 8: What are the pros and cons of a flexible export ready mandate referring to CSIPAus in Standards Australia Handbook form?	Given the Handbook is not yet published, the implications cannot be yet fully understood. Nonetheless, in Ergon Energy and Energex's view, national alignment on CSIP-AUS is the best way to achieve consistency between jurisdictions. It is important to consider the speed at which revisions can be made if mandating a specific version of a standard. A new version of the IEEE 2030.5 standard will be released in 2023 which has incorporated feedback on the Australian use cases and will likely result in a significant update to CSIP-AUS that will bring current national variations to the standard back into international alignment.
Consultation Question 9: Would there be value in agreeing a national approach to public key infrastructure for consumer energy resources?	It makes sense for there to be a single national Public Key Infrastructure (PKI) provider, particularly in the case of direct connect devices where the certificate needs to be burnt into the hardware as part of manufacturing process. Having different version of products for each DNSP coverage area would add unnecessary complication to the manufacturing and installation process.
Consultation Question 10: Are there existing examples that could be used as a model for the consumer energy resources ecosystem?	We believe the SunSpec model provides a good example of an existing PKI ecosystem. However, we suggest that the compliance testing of devices not be linked to the issuing of a device certificate as it is in the SunSpec model with a separate entity performing this function.
Consultation Question 11: What are the pros and cons	In our view, a national Certificate Authority would remove the need for manufacturers to produce

of establishing a national certificate authority?	different product offerings for installation in each DNSP area.
Consultation Question 12: Do stakeholders have a view as to who should perform the role of national certificate authority, if it were created?	Ergon Energy and Energex suggest an independent national body, such as AEMO, would be best placed to perform this role. However, a framework that allows for multiple entities (like the Gatekeeper PKI framework) could also be appropriate if the number of providers was expected to remain small.
Consultation Question 13: What views do stakeholders have about the adaptability of existing industry-led product certification and compliance processes for future use?	Ergon Energy and Energex suggest customers may find 'CSIP-AUS compliant' messaging misleading. For example, until behind-the-meter interoperability is standardised, it is not possible to guarantee that a device will be interoperable with previously installed CER, or that it will remain compatible in the future.
Consultation Question 14: What views do stakeholders have about the most appropriate body to have oversight of the product certification and listing/delisting processes?	In Ergon Energy and Energex's view, the solution of listing needs to be at a reasonable cost and meet the technical requirements of DNSPs considering the information required for supply under other legislation, for example, DER Register requirements. We suggest, any delisting activities should be supported with advice on whether non-compliant products require recall. Appropriate resourcing should be provided to support national de-listing and recall activities to ensure safety to DNSP workers, electricians, and community members.
Consultation Question 15: What role could DNSPs have in the product certification/decertification process in the context of improving outcomes for industry and consumers?	Until a national certification body is available, Ergon Energy and Energex intend to maintain a list of communication devices and aggregators that have been deemed capable of communicating via CSIP-AUS but does not intend to list which CER these are interoperable with, leaving this as a responsibility of the manufacturers and installers. Where products or systems are found to have ongoing compliance issues that cannot be resolved, these systems may be deregistered from the SEP2 Utility Server and revert to static limits until such time as these issues can be rectified. In our view, in cases where fallback static limits are not obeyed, further remediation processes may be required to be undertaken by the DNSP.