



CER Stakeholder Webinar

Briefing Pack

24 October 2022

OFFICIAL



AGENDA

Agenda Items	Leads	Time
1) Welcome and Introductions	Anthea Harris	10 mins
2) Interoperability	ESB	30 mins
3) Flexible Export Limits	AER	30 mins
4) Review of Technical Standards Governance	AEMC	30 mins
4) CER Open Panel Discussion and Q&A	Facilitated by Neil Gibbs	15 mins
5) Session Close	Anthea Harris	5 mins

Policy Coordination

Three consultation papers
are being released in
September-October 2022
as part of the CER
Implementation Plan



Relationship to other Activities

Review of CER technical standards consultation paper (AEMC)	This paper explores challenges associated with the implementation of inverter standards (AS4777.2), implications for compliance and enforcement arrangements and industry roles and responsibilities for broader CER technical standards including national and jurisdictional arrangements. This follows the <i>Technical Standards for Distributed Energy Resources Rule Change</i> process completed in March 2022.
Implementation of Flexible Export Limits by Distribution Network Service Providers (DNSPs) issues paper (AER)	This paper seeks stakeholder input on how consumers' interests can best be enhanced through the evolution of regulatory frameworks to support the implementation of Flexible Export Limits including opt in/opt out arrangements for consumers, conformance monitoring, approaches to compliance and rectification, and implications of flexible exports for market participants.
Interoperability for Consumer Energy Resources directions paper (ESB)	Following submissions on the ESB's <i>Interoperability Issues Paper</i> , this paper sets out the ESB's position on priorities and actions to promote greater interoperability of CER. This includes an implementation framework for CSIP-Aus to support a nationally consistent approach to flexible exports limits, and the future development of standards for behind-the-meter interoperability and interoperability for market participants. This paper will highlight roles and responsibility issues raised in the specific context of interoperability that will be investigated more fully through the AEMC CER Technical Standards Review process.

INTEROPERABILITY

ESB

PURPOSE

Outline the ESB's
Interoperability policy
priorities and next steps
including the October
directions paper for
consultation with
stakeholders



BACKGROUND

- Development of technical standards for consumer energy resources (CER) in the NEM has been progressed via the Distributed Energy Integration Program (DEIP).
- Technical standards development includes CSIP-Aus, an Australian adaptation to the Common Smart Inverter Profile (CSIP) IEEE 2030.5 Implementation Guide for Smart Inverters.
- Prior ESB consultation included a framework to support development of ESB policy advice with respect to trade-offs and the applicability of different feature sets within CSIP-Aus.
- The Common Smart Inverter Profile – Australia provides capability to deliver Flexible Export Limits which has been the focus of recent stakeholder engagement on interoperability policy.



INTEROPERABILITY POLICY PRIORITIES

- Irrespective of the direction of market developments, network operations to manage local constraints with CER is considered a common feature of any future state.
- The ESB's first priority for standardisation of interoperability is CSIP-Aus to support the implementation of flexible exports limits by network operators in the CER-DNSP domain.
- The October ESB Interoperability policy directions paper seeks feedback on:
 - A new mandate for 'flexible export ready' installations.
 - Flexible export ready product whitelisting.
 - Digital device certificate management.



FUTURE PRIORITIES

- FELs/DOEs increases the urgency of regulatory considerations behind-the-meter / behind-the-connection point (CER-CER) interoperability.
- Future work will focus on the principle that consumers should not be unduly 'locked in' to choices of service providers based on a manufacturer's design of their CER assets.
- The ESB has requested DEIP ISC explore use-cases and feature sets in the CER-CER and CER-market interoperability domains.
- The ESB propose to continue broader interoperability policy development in 2023 under the Horizon 2 work program, exploring standards-based approaches to support customer choices.



A NATIONALLY CONSISTENT APPROACH TO CSIP-AUS IMPLEMENTATION

The principal focus of the directions paper is the proposal for a new mandate for 'flexible export ready' installations. The ESB is seeking feedback on this proposal through discussions of:

- Installations that would be covered by the mandate.
- Implementation models for a mandate.
- Compliant technology models.
- Internet connectivity requirements.
- Flexible export ready product certification.
- Public Key Infrastructure frameworks.



A NEW MANDATE FOR 'FLEXIBLE EXPORT READY' INSTALLATIONS

- New and replacement embedded generator installations capable of implementing a CSIP-Aus communication model (at least one part of technology model needs a compliant CSIP-Aus Client)
 - target date for commencement of a national mandate July 2024
 - automatic agreements up to and including 30 kW (three phase).
- New installations CSIP-Aus capable, but the customer may choose whether the functionality is active (i.e. whether they enter a flexible export agreement or opt for a static export limit).
- By supporting a range of technology models, the ESB intends to leave room for the continuing evolution of consumer energy resource technology and commercial models over time.



FLEXIBLE EXPORT READY PRODUCT WHITELISTING

- Customers engage with technology providers for product selection and installation.
- Need to be able to rely on a product certification process for compliance and fit for purpose.
- The Clean Energy Council currently maintains a whitelist on a self-managed basis.
- CEC list referred to in SA Regulation while SAPN manages product testing.
- OEMs have expressed a strong preference for a national testing and certification regime.
- Governance arrangements required to generate confidence in integrity of listing and de-listing.



FLEXIBLE EXPORT READY PRODUCT WHITELISTING

Options for establishing governance arrangements include:

- Industry self-regulation – noting the limitations industry has in enforcement
- Jurisdiction technical regulation – require jurisdictional regulation to extend beyond safety
- The Australian Energy Regulator – noting that the AER is principally an economic regulator
- The Clean Energy Regulator – noting its scope is limited to the voluntary SRES scheme
- New national CER technical regulator – major policy decision for governments



DIGITAL DEVICE CERTIFICATE MANAGEMENT

- Device authentication and authorisation for CSIP-Aus is achieved using digital certificates installed within devices which requires Public Key Infrastructure (PKI).
- PKI encompasses hardware, software, people, policies and procedures, and includes one or more certificate authorities (CA) that issue digital certificates.
- DEIP DOE Outcomes Report noted DNSPs are developing ICT systems including CA functionality and that it was *expected in the future that a national body will take on the CA role*.
- The approach to CSIP-Aus client certificate management can present trade-offs and raises questions regarding PKI for CER more broadly, including electric vehicle smart charging.
- The Commonwealth's Gatekeeper and California-based SunSpec define PKI frameworks for managing certificates, then accredit authorities based on those frameworks.



NEXT STEPS

- The approach to CSIP-Aus outlined here represents minimum levels of functionality to enable consumer choice and participation.
- This first step on interoperability policy is a building block for future interoperability to facilitate the trading of flexible CER in the market on behalf of customers within dynamic operating limits.
- Moving in to Horizon 2, the ESB is considering the relationship with electric vehicle (EV) smart charging policy development and CER-CER interoperability on premises (BTM).
- This will occur in parallel with consideration of next steps on the implementation of the CSIP-Aus mandate, with compliance and enforcement considerations together with the AEMC and AER.
- The ESB invites comments from interested parties in response to the consultation paper by 17 November 2022. All submissions should be sent to info@esb.org.au

Q&A

Navigate to www.menti.com

Use the code: 54 96 57 8

FLEXIBLE EXPORT LIMITS

AER



Flexible Export Limits issues paper

Miriam Wishart

24 October 2022

Our project – Flexible Export Limits

- The AER is leading a workstream for the Energy Security Board to help establish guard rails to support the implementation of flexible export limits, while balancing good consumer outcomes
- Operating envelopes are the limits that an electricity customer can import and export to the electricity grid
- Dynamic operating envelopes are where import and export limits can vary over time and location
- When we get the framework right, consumers could export more to the grid while maintaining the integrity of the grid
- We will provide policy direction and advice to the ESB on the implementation of flexible export limits in the National Electricity Market

The project – Flexible Export Limits

- We have prepared an issues paper to seek feedback from stakeholders on gaps / risks identified with what is needed to implement flexible export limits, and the proposed next steps
- Previously known as ‘Dynamic Operating Envelopes’, we’ve renamed the issues paper *‘Flexible Export Limits’*
- The intention is to make the issues paper more understandable (particularly to consumers) and gain broader feedback on the matters outlined in the paper

Structure of issues paper

- Introduction and background
 - Includes scene setting, how DOEs and flexible export limits relate to each other, and excludes flexible imports from scope of this paper
 - We do not expect anything we are proposing will create a barrier for future application of flexible export limits / DOEs for imports
 - Recognises that flexible export limits are already coming and are being led by distribution network system providers, for example SA and QLD
- Separate chapters focussed on issues that:
 - Require immediate action
 - Leverage existing work
 - Require future action

Immediate term actions – key issues

- Consultation on proposed capacity allocation principles, identified as a key issue by the collaborative Distributed Energy Integration Program DOE Outcomes Report
- DNSPs to develop capacity allocation methodology as the dynamic limit can only be calculated only where there is clear underlying reasoning
- Consumer participation – consideration of opt-in versus opt-out approaches
- Examination of appropriate accountability and governance arrangements for flexible export limits including suitability of connection agreements
- Interactions with third parties – reflecting the impact of flexible export limits
- Notification periods for dynamic limits (distributors providing forecasts)

Overall key goal with these actions is to balance consumer protections while supporting DNSP-led implementation of flexible export limits

Some questions asked in the issues paper – immediate actions

Capacity allocation:

- Should the Distributed Energy Integration Program principles for capacity allocation be binding for DNSPs?
- The principles include:
 - DNSPs are responsible for setting limits, with methodology to be transparent and subject to consultation
 - Allocation should maximise use of network capacity while balancing consumer expectations re transparency, cost and fairness
 - Capacity can initially be measured at connection point

Consumer participation:

- Do stakeholders agree with the expectation that over the near to medium term, consumers should continue to have the option of static export limits?
- Should consumers be expected to opt-in or opt-out of flexible export limits (where available)?

Governance of flexible limits

- What is the appropriate form of governance arrangement for managing flexible export limits and is the connection agreement a fit for purpose governance tool?
- What should be the responsibilities of traders and tech providers in ensuring consumer energy resources do not exceed any export limit set by the DNSP?

Leverage existing work – key issues

- In this chapter we outlined the interlinkages with other CER workstreams
- Gaps for which existing workstreams can be leveraged include:



Communications
protocol (CSIP Aus)



Monitoring of export
limit performance and
information provision



Device capability to
respond to flexible
export limits



Demonstrating
investment need



Consumer
protections



Consumer
understanding and
interest

Some questions asked in the issues paper – leverage existing work

Monitoring export limit performance and information provision

- Are there any additional metrics that should be considered that have not been incorporated into the AER's broader export services review?

Device capability to respond to flexible export limits

- Regarding the governance of a potential CSIP-Aus requirement, do stakeholders consider there should be a mandate for devices to be CSIP-Aus compliant for new connections in the NEM?

Demonstrating investment need

- Do DNSPs need more information than is currently available to demonstrate the investment need for flexible export limits?

Consumer protections

- Beyond the issues being canvassed in the Review of Consumer Protections for Future Energy Services, are there any other specific consumer protection issues we should explore in the context of the implementation of flexible export limits?

Future actions – key issues

- Location of flexible export limit application
- Types of connections to which flexible exports may apply
- Incentivising consumers to use flexible export limits
- Specification of implementation and operation

Q&A

Navigate to www.menti.com

Use the code: 54 96 57 8



REVIEW OF TECHNICAL STANDARDS GOVERNANCE

AEMC

REVIEW OF CER TECHNICAL STANDARDS

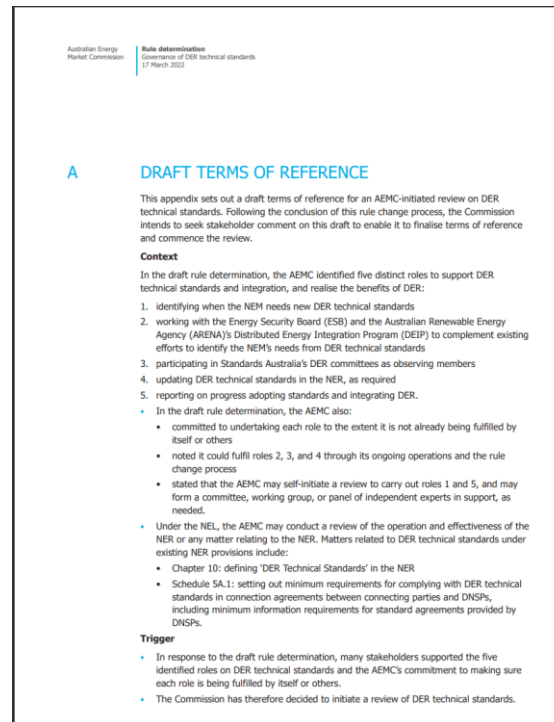
ESB CER STAKEHOLDER FORUM

OCTOBER 2022

AEMC

AEMC has committed to conduct a review on CER technical standards

- *Governance of DER technical standards* final determination (March 2022):
 - AEMC will conduct a review of consumer energy resources (CER) technical standards in the NER
- The draft terms of reference identified:
 - The need for new technical standards in the NEM
 - Progress in implementing existing standards in the NER



We have been monitoring existing standards implementation

- Since we published the draft terms of reference in March 2022:
 - Commencement of minimum inverter standards – AS 4777.2
 - Feedback from a cross-section of industry participants on AS4777.2 implementation issues
- Stakeholders have expressed a strong preference for the review to focus on implementation of existing standards
- We have refined the terms of reference – see the consultation paper for the review published September 2022

The review start with a focus on compliance and enforcement of existing standards

Identify existing activities, including roles and responsibilities, related to CER technical standards across the NEM

Review progress made in implementing existing DER technical standards including identifying where implementation is working well as well as areas for improvement

Identify what could be done to more effectively achieve the objectives of technical standards for the current technical standards and any future standards

Next steps

Consultation paper	29 September 2022
Submissions to consultation paper due	3 November 2022
Draft report	March 2023
Final report	June 2023

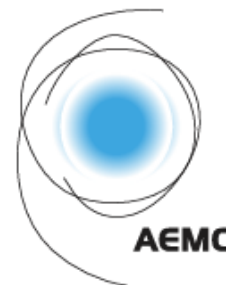
Please contact the project team:

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PANEL DISCUSSION



THANKS AND CLOSE

Submissions close dates:

Review of CER Technical Standards Consultation Paper – 3rd November

Interoperability Directions Paper – 17th November

Flexible Export Limits Issues Paper – 9th December

MEETING CLOSE