Department of Energy, Mines, Industry Regulation and Safety
Energy Policy WA
GOVERNMENT OF WESTERN AUSTRALIA

Meeting Agenda

Meeting Title:	Power System Security and Reliability Standards Working Group
Date:	29 February 2024
Time:	1.00pm – 3.00pm
Location:	Online, via TEAMS.

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda	Chair	Noting	2 min
2	Meeting Apologies and Attendance	Chair	Noting	2 min
3	Competition Law Statement	Chair	Noting	2 min
4	Updates on Technical Working Group	Chair	Noting	4 min
5	**Stage 1 – Framework** (a) Review of Procedures (b) Agreement on Stage 1 package	Mott MacDonald /Merz	Discussion	40 min
6	**Stage 2 – Gap Analysis** (a) Initial discussion on high level gaps (b) Additional Gaps to be discussed in future meetings	Mott MacDonald /Merz	Discussion	60 min
7	General Business	Chair	Discussion	5 min
8	Next steps	Chair	Noting	5 min
	Next meeting: TBD			

Please note, this meeting will be recorded.

Competition and Consumer Law Obligations

Members of the MAC's Power System Security and Reliability Standards Working Group (**Members**) note their obligations under the *Competition and Consumer Act 2010* (**CCA**).

If a Member has a concern regarding the competition law implications of any issue being discussed at any meeting, please bring the matter to the immediate attention of the Chairperson.

Part IV of the CCA (titled "Restrictive Trade Practices") contains several prohibitions (rules) targeting anti-competitive conduct. These include:

(a) **cartel conduct**: cartel conduct is an arrangement or understanding between competitors to fix prices; restrict the supply or acquisition of goods or services by parties to the arrangement; allocate customers or territories; and or rig bids.

(b) **concerted practices**: a concerted practice can be conceived of as involving cooperation between competitors which has the purpose, effect or likely effect of substantially lessening competition, in particular, sharing Competitively Sensitive Information with competitors such as future pricing intentions and this end:

- a concerted practice, according to the ACCC, involves a lower threshold between parties than a contract arrangement or understanding; and accordingly; and
- a forum like the MAC is capable being a place where such cooperation could occur.

(c) **anti-competitive contracts, arrangements understandings**: any contract, arrangement or understanding which has the purpose, effect or likely effect of substantially lessening competition.

(d) **anti-competitive conduct (market power)**: any conduct by a company with market power which has the purpose, effect or likely effect of substantially lessening competition.

(e) **collective boycotts**: where a group of competitors agree not to acquire goods or services from, or not to supply goods or services to, a business with whom the group is negotiating, unless the business accepts the terms and conditions offered by the group.

A contravention of the CCA could result in a significant fine (up to $500,000 for individuals and more than $10 million for companies). Cartel conduct may also result in criminal sanctions, including gaol terms for individuals.

Sensitive Information means and includes:

(a) commercially sensitive information belonging to a Member's organisation or business (in this document such bodies are referred to as an Industry Stakeholder); and

(b) information which, if disclosed, would breach an Industry Stakeholder's obligations of confidence to third parties, be against laws or regulations (including competition laws), would waive legal professional privilege, or cause unreasonable prejudice to the Coordinator of Energy or the State of Western Australia).

Guiding Principle – what not to discuss

In any circumstance in which Industry Stakeholders are or are likely to be in competition with one another a Member must not discuss or exchange with any of the other Members information that is not otherwise in the public domain about commercially sensitive matters, including without limitation the following:

(a) the rates or prices (including any discounts or rebates) for the goods produced or the services produced by the Industry Stakeholders that are paid by or offered to third parties;

(b) the confidential details regarding a customer or supplier of an Industry Stakeholder;

(c) any strategies employed by an Industry Stakeholder to further any business that is or is likely to be in competition with a business of another Industry Stakeholder, (including, without limitation, any strategy related to an Industry Stakeholder's approach to bilateral contracting or bidding in the energy or ancillary/essential system services markets);

(d) the prices paid or offered to be paid (including any aspects of a transaction) by an Industry Stakeholder to acquire goods or services from third parties; and

(e) the confidential particulars of a third party supplier of goods or services to an Industry Stakeholder, including any circumstances in which an Industry Stakeholder has refused to or would refuse to acquire goods or services from a third party supplier or class of third party supplier.

Compliance Procedures for Meetings

If any of the matters listed above is raised for discussion, or information is sought to be exchanged in relation to the matter, the relevant Member must object to the matter being discussed. If, despite the objection, discussion of the relevant matter continues, then the relevant Member should advise the Chairperson and cease participation in the meeting/discussion and the relevant events must be recorded in the minutes for the meeting, including the time at which the relevant Member ceased to participate.

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GOVERNMENT OF WESTERN AUSTRALIA

PSSR Standard for SWIS

PSSR Standards Working Group

Meeting 3 - 29 February 2024

Working together for a **brighter** energy future.

Purpose

1. **To review and agree the completion of the Stage 1 (assessment of standards) PSSR Standards Review.**
2. **To begin the discussion on initial high-level gaps identified as part of the initial Stage 2 works.**

Agenda

1.00pm	Item 1: Stage 1 review of Procedures
1.20pm	Item 2: Agreement on Stage 1 package
1.30pm	Item 3: Stage 2 initial discussion on high level gaps
2.55pm	Item 4: Closing

Stage 1: Review of Procedures

The PSSR Analysis workbook

- The *PSSR Analysis workbook* details the existing standards from stage 1 of the review.
- The gaps presented in the workbook are a work in progress and will continue to be updated.

High Level Summary of Stage 1 Review

	Infrastructure Planning (>1 year)	Implementation (5 to <1 year ahead)	Operation (<1 year)	Result
Supply	WEM Rules 4.5	WEM Rule 3,3A/ Appendix 12 Technical Rules Section 3	WEM Rules 3, 3B and 2.27A	Adequate installed supply with correct capability operated economically.
Transmission	Technical Rules 2.5.2 Value Customer Reliability ENAC2004	Technical Rules Section 2.1-2.3 NQRS Clause 9 to13 ENAC NFIT / Reg Test	WEM Rules 3	Adequate and economic installed Transmission infrastructure.
Distribution	Technical Rules 2.5.3	Technical Rules Section 2 NQRS Clause 6 to13	NQRS Clause 10-11	Adequate and economic installed Distribution infrastructure.
Load	Non reference services	Technical Rules Section 3 WA Electrical Requirement	WEM Rules DSM and Cyclic Load Shedding	Load is supplied reliably and does not adversely impact PSSR.
Result	Adequate installed infrastructure to supply loads within defined contingencies.	Installed infrastructure creates and transmits power of the correct quality and remains operational for defined system disturbances.	Installed infrastructure is used to maintain supply at the defined quality in a manner remains operational for credible system disturbances.	PSSR to customers at required standards.

Refer to PSSR Analysis workbook for more fulsome breakdown of all existing PSSR Standard mechanisms.

Procedures included in Review

- In addition to the Codes and Rules, the supporting procedures and guidelines have been reviewed to identify existing PSSR standards.
- The procedures reviewed are detailed on the “WEM Rules Procedures Tab” of PSSR Analysis workbook. Links to each of the procedures reviewed have been provided.
- The review focused on standards, limits or requirements that do not change significantly over time to deliver a minimum PSSR standard.
- The procedures do provide additional detail on Roles and Responsibilities that will be important when considering governance options that have not been extracted for discussion at this time.

Outcome of Procedure Review

The additional standards identified in the review of the procedures and guidelines are:

1. Application of Operating Margins, Limit Margins above the requirements of the TR Planning Standards (Operating Margins are not defined).
2. Definition of System Strength Standards (Short Circuit Ratio of 3 / Voltage phase angle change of between 30/60% Voltage oscillations up to 0.5%peak-peak RMS voltage).
3. Definition of incremental requirements of generators providing SRS and SBU.
4. Definition of Load Relief Factor (factor not specified).
5. Definition of Facility Forced Outage Rate.
6. Definition of Credible Contingencies with different detail to that contained in TR2.5.

With the exception of item 2, all of these items are secondary and supporting of the PSSR Standards identified in the WEMR and TR.

Stage 2 initial discussion on high level gaps

Stage 2 Gap Analysis – Role of Working Group

The role of this Working Group in regards to the Stage 2 gap analysis is:

- To review and provide feedback on the proposed gaps, duplications and overlaps.
- For each gap, to advise whether there is desire/value in performing a detailed options assessment in the Stage 3 options assessment (or if a single solution will be adequate).

The term ‘gap’ is used to describe any inconsistencies, overlaps missing requirements, or lack of clarity identified.

For the purposes of Stage 2 discussions, please focus on identification of gaps rather than solutions/options for gap resolution (we appreciate how tempting this can be).

High Level Gaps Identified in initial assessments

	Infrastructure Planning (>1 year)	Implementation (5 to <1 year ahead)	Operation (<1 year)	Identified Gap
Supply	WEM Rules 4.5.9	WEM Rule Appendix 12 Technical Rules Section 3	WEM Rules Market Operation & ESS	1. No clear articulation of the implementation obligations on the different ESS connections across GPS and TR.
Transmission	Technical Rules 2.5.2 Value Customer Reliability AA5	Technical Rules Section 2 NQRS Clause 9 ENAC NFIT / Reg Test	WEM Rules	1. Different planning standards that apply to network. 2. Unclear when TR drive investment and operational decisions and when they inform good practice around design activities.
Distribution	Technical Rules 2.5.3	Technical Rules Section 2 NQRS Clause 9 &13	NQRS Clause 10-11	
Load	Customer driven	Technical Rules Section 3 WA Electrical Requirement	WEM Rules DSM and Cyclic Load Shedding	1. Some gaps when customer seeks to negotiate delivered reliability (TR, UFLS etc).
Identified Gap	1. Multiple and different planning standards. 2. Demonstration of net benefit in standards for network investment but not in generation investment. 3. No clear guidance on forecasting or maintenance of fault level / system strength.	1. No specific obligation for the network to ride through system disturbance requirements placed on generators. 2. GPS requirements are globally the most extensive Merz identified in a 2023 benchmarking activity. Barrier to entry.	1. Ongoing testing requirements and responses to non-compliances are different for GPS generators than all other facilities.	

The full gap analysis is provided on the Summary Tab of the PSSR Analysis workbook

Gap 1.1 - Different Infrastructure Planning Standards

Planning Standards	Network	Supply (including DSM)
Deterministic	• Different standards applied in different contexts. Some inform design only; some inform design and operation. • Application does not consider equipment availability. • No specific penalties for not implementing investment to meet design.	• Two-part standard with one part considering forecast equipment availability. • Market response can result in over supply (at reduced cost per unit capacity) but supplementary mechanism avoids under supply.
Outcome	• NQRS and AA5 apply standards with financial penalties.	• None.
Lost Load	• Calculated for Customer Value Optimisation below.	• Single standard (0.0002%) worst case between two standards adopted and drives investment.
Customer Value Optimisation	• Most significant PSSR infrastructure expenditure is supported by net benefit business case using VCR. Value optimisation ultimately drives delivered asset (not deterministic).	• No customer value optimization.
Summary	• Competing standards to drive PSSR investment (Customer Value and Outcome Driven). • NQRS and AA5 act as a backstop for very high cost of provision customers.	• No customer value optimisation requirements. • Cost of capacity will increase significantly through transition.

Gap – It is not clear how each Standard should be applied, and customer value is not considered in all cases.

Gap B.1 Application of the Technical Rules to PSSR investment and operation

The Technical Rules overarching obligation is to

- Users and the Network Service Provider (NSP) must maintain and operate (or ensure their authorised representatives maintain and operate) all equipment that is part of their respective facilities in accordance with:
  - relevant laws;
  - the requirements of the Access Code;
  - the requirements of these Rules; and
  - good electricity industry practice (GEIP) and applicable Australian Standards.
- There is a reasonable endeavors obligations in 1.8.1(b) and (c).
- Each requirement on the network service provider in the Technical Rules has a combination of *design* | *install* | *operate* | *construct* in the obligation. The different combinations of these are intended to scope the application of the obligation by the NSP and to support interface with the value optimisation mechanism in the ENAC 2004. These definitions do not appear to provide the clarity required.

Gap: More clarity is required for when the TR should be applied as a guide to GEIP and when it the overrides economic optimisation required by the Access Code and specifically requires investment (capital or operating) in PSSR by the NSP at any efficient cost.

The position on how this clarity is provided will inform the approach to many of the gaps that Western Power has identified in its July 2023 Technical Rules Submission – refer Tab *Reference to WP TRS July23* in the

Gap 2.1: No obligation on network to ride through system disturbances

- There is no specific requirement for the network service provider to design, install or operate the network in a manner that will not trip elements for the system disturbances that generators are required to remain connected (in continuous uninterrupted operation).
- There are some financial implications under the RoCoF market.
- Assume the ride through requirements placed on generators are reasonable and could conceivably occur.
- The inability of the network to remain connected and operational for system disturbances can potentially have a significant greater impact on systems security than generators.

Gap – Network is not required to operate continuously through credible system disturbances.

Gap 3: Requirements, Ongoing Testing and Implications on non conformance across similar users

There are significant differences between:

- the requirements applied to;
- the ongoing testing for compliance of; and
- the implications of non conformance of

different users that may have a similar impact on PSSR than GPS users.

These users include:

- Large distribution connected generators;
- Large loads (such as future renewable hydrogen facilities); and
- Large sets of small users that will all respond the same way to a system disturbance (AS 4777 inverters).

These inconsistencies are a gap to equitable contribution to PSSR and ultimately PSSR noting that apply the same process to all users may not be appropriate.

Gap – No considered approach to compliance across classes of Users that can have a similar impact on PSSR

Gap A.2 Requirements on Energy Storage

Gap – The requirements on Energy Storage facilities are spread across multiple mechanisms in the TR and the WEMR and additional clarity is required.

Additional Gaps to be Discussed in Future Meetings

The following additional gaps have also been identified and will be discussed further in future working group meeting:

1. System strength and system resilience and their role in PSSR Standards.
   - The difference between inertia and system strength and the clear delineation between the responsibilities for these.
2. Impact of emerging technologies and addressing flexibility limitations within the PSSR Standards.
3. Overlaps and gaps in roles and responsibilities for establishing and applying Constraint Equations, NCS, and NCESS for maintaining PSSE.
4. Ability for customers to negotiate or change their reliability standard.
5. Consistency and approach to governance of PSSR Standards.
6. Opportunity to streamline GPS to SWIS requirements to reduce the cost of energy transition.
7. Addressing limitations on fuel, storage and renewable location diversity on supply security.
8. Any gap identified in the spreadsheet that participants wish to discuss or contribute to.