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EPWA CONSULTATION: POWER SYSTEM SECURITY AND RELIABILITY (PSSR) STANDARDS REVIEW CONSULTATION PAPER

Synergy welcomes the opportunity to provide feedback on Energy Policy WA's (**EPWA**'s) *Power System Security and Reliability (PSSR) Standards Review Consultation Paper* (**PSSR Standards Paper**) released on 19 June 2025, following the Coordinator of Energy's (the **Coordinator**'s) Power System Security and Reliability Standards Review (**PSSR Standards Review**). Synergy understands that the overarching policy intent of the PSSR Standards Review is to develop and implement a consistent, single end-to-end Power System Security and Reliability (**PSSR**) Standards governance framework for the South West Interconnected System (**SWIS**). The revised PSSR Standards framework will be underpinned by the State Electricity Objective (**SEO**) and implemented into the Electricity System and Market Rules (**ESM Rules**).

The SWIS's current decentralised framework for PSSR Standards, spread across various regulatory instruments (namely the ESM Rules, the Electricity Network Access Code 2004 (**ENAC**), the Technical Rules, the Electricity Industry (Metering) Code 2012 (**Metering Code**), and the Electricity Industry (Network Quality and Reliability of Supply) Code 2005 (**NQRS**)), creates ambiguity and presents deficiencies in the management of PSSR within the SWIS. Synergy is supportive of the creation of a single end-to-end PSSR Standards framework for the SWIS and considers this will increase clarity, create efficiencies and improve alignment for managing PSSR within the SWIS. However, Synergy notes that without the full detailed design of the proposed PSSR Standards framework, it is unable to thoroughly assess and understand the potential implications of the proposals outlined in the PSSR Standards Paper, and therefore reserves its rights to amend its position as more details are provided.

Synergy acknowledges the complexity of this work program due to the current segmented and disjointed frameworks and notes that caution is needed to mitigate against potential unintended consequences that may arise due to the segmented application of the different existing frameworks. Synergy considers ample industry engagement and consultation should be undertaken throughout the remainder of the work program. Synergy provides additional overarching comments below, with detailed comments provided in the attached tables.

1 IMPLEMENTATION OF THE PROPOSED PSSR STANDARDS FRAMEWORK

The transition of PSSR Standards framework from the current regulatory instruments into the ESM Rules could potentially present contractual and regulatory risk to industry stakeholders. Synergy considers this risk may arise due to existing contractual arrangements between Market

Participants, their customers, third parties and network operators that are likely to have binding contractual obligations tied to the existing instruments.

Synergy outlines some of these aspects below and considers further detailed consultation needs to occur to mitigate against these risks and ensure industry understands how the proposed consolidated PSSR Standards will be implemented and enforced.

1.1 Giving legal effect to the proposed PSSR Standards framework within the ESM Rules

Synergy is of the understanding that under the current linear access regime, the PSSR Standards are enforced contractually between the network operator, user and customer or third-parties. These contractual arrangements are also underpinned by regulatory and contractual instruments such as:

- Passing through the service standards under a reference service;
- Connection contracts developed under the Electricity Transfers Access Contracts (**ETAC**); or the Access and Queuing Policy (**AQP**);
- Economic Regulatory Authority (**ERA**) approved exemptions to the Technical Rules;
- Western Power approved exemptions to the Technical Rules; and
- Non-reference services established under various ETACs.

Consequently, clarity on the transition plan for industry stakeholders is going to be important, for stakeholders to understand what the current risks and liabilities are and how back-to-back contracts may need to be amended. This includes considering whether contractual arrangements and grandfathering requirements developed under the linear access regime will continue under the ESM Rules. Synergy recommends that greater clarity and consultation is provided that outlines how the PSSR Standards are intended to be legally binding on retailers, customers and third parties.

1.1.1 Access contracts

The existing framework under the NQRS places legislative obligations on Western Power in relation to customer outcomes. Additionally, customer outcomes are also contractually delivered through service standards defined under the reference and non-reference services, provided to customers and controllers through the ETAC. These service standards also flow through to the commercial contracts with customers and controllers. For example, currently the ETAC contractually warrants compliance with the Technical Rules. In addition, compliance for the eligibility to use covered services under the ETAC require compliance with the Technical Rules and West Australian Electricity Regulations. Synergy seeks clarity on how ETACs and associated contracts may need to be amended to ensure that the new PSSR Standards framework will be binding on users, customers and third parties.

Synergy seeks to understand if the intent is to establish legislation that would amend ETACs and relevant commercial contracts such that the new PSSR Standards would become legally binding and prevail over the existing PSSR Standards in a covered service or commercial agreement. Clarity is also required regarding any future amendments to the ESM Rules and if these are intended to interact with any existing access contracts. Synergy considers this information is important so stakeholders can adequately assess the business risk the revised PSSR Standards framework will have on their commercial contracts.

1.1.2 Reference and non-reference services

Under the current regime, applicants must comply with the AQP in relation to connecting equipment and nominating services to use the covered network. Synergy seeks clarity on how the revised PSSR Standards framework may affect the eligibility criteria of covered services used under the ETAC. Including whether applicants will need to comply with the revised PSSR Standard framework in relation to using covered services. Synergy notes that legislation may need to be developed to re-define the eligibility criteria for the ERA approved references services and any non-reference services commercially negotiated between Western Power and other users.

1.1.3 Compliance requirements and dispute mechanisms

Synergy considers the current compliance and monitoring regime under the ESM Rules is comprehensive and it can create a material regulatory burden on industry stakeholders to monitor and report non-compliances. Synergy seeks clarity in relation to the intended framework for compliance, monitoring and reporting for the revised PSSR Standards framework when it is implemented into the ESM Rules. Clarity is also required on the mechanism that is planned to be implemented for disputes under the new PSSR Standards framework, noting the current framework includes dispute mechanisms.

In implementing the proposed PSSR Standards framework, Synergy recommends that support in navigating the changes to performance, compliance and contractual obligations should be provided to Market Participants with user facilities that are reclassified under the proposed user facility categories or affected by the proposed PSSR Standards. Support for affected Market Participants could be in various forms, such as a compliance amnesty period to allow for any additional software or hardware upgrades that may be required, and technical guidance to promote an efficient and timely transition to the proposed PSSR Standards framework.

1.2 Application of the revised PSSR Standards framework to existing facility

Synergy supports “streamlining” the PSSR Standards framework, however, is concerned that existing facilities may be unintentionally impacted by the changes. The facilities within the SWIS are of varying ages and were subjected to a range of different standards when they first connected to the SWIS. In some circumstances, it may be cost prohibitive for facility owners to update their facilities to meet the current standards. It is therefore considered that an appropriate grandfathering mechanism is implemented alongside the PSSR Standards that will enable owners of existing facility continue to operate at their pre-agreed standards, or alternatively reach a negotiated amended standard (that may be below the Minimum User Performance Standard) with the Network Operator and/or Market Operator.

1.3 Small use customers under the NQRS

Synergy understands, as part of the work program to deliver the proposed PSSR Standards framework, customer outcome standards currently contained in the NQRS Code and access arrangements will be harmonised and reviewed. The customer outcome standards will be implemented into the ESM Rules and are intended to provide investment guidance for customer groups not adequately serviced by the deterministic standards. Synergy notes, that in order to ensure that this outcome is delivered it may be necessary to also incorporate elements of the proposed PSSR Standards framework into the Network Operator’s distribution and transmission licence, administered by the ERA.

Synergy also considers further clarity, and consultation is required on the elements of the NQRS related to payments for failure to meet certain requirements[1] and the requirements that apply to small use customers. Synergy considers this clarity is important if different standards apply to customers at different locations on the network under the proposed PSSR Standards framework. Including, if the ability to support DER and bi-directional flows is different at different locations on the network, it will affect the standards for supply and DER uptake at different locations. Including whether it is permissible to limit DER uptake at certain locations to maintain supply standards.

1.4 Locational standards and cross subsidies

Proposal 1 of the PSSR Standards Paper requires customer outcome standards to be set on a locational basis with the specific measures for customer outcome standards to be consulted on a later date. However, it is not clear whether Proposal 1 contemplates whether the Uniform Tariff Policy would continue to apply or could continue to apply. This could result in a material misalignment between the structure of network tariffs and the innovative development of retail tariffs. Synergy considers ensuring uniform pricing and quality may prove to be challenging under a regime based on locational supply quality standards due to the below:

Tariff Equalisation Contribution

The Tariff Equalisation Contribution (**TEC**) mechanism is designed to equalise electricity prices for all customers, particularly those in the SWIS and regional areas, under the Uniform Tariff Policy. Therefore, Synergy considers further clarity and consultation is required on the TEC before formulating a definitive position on locational standards. Including, whether the TEC would be retained.

Access Arrangement Nodal Pricing and Method of Price Control

Synergy considers Proposal 1 and locational standards would also require revisions to the ENAC method of price control, tariff structure statement and cost allocations in relation to the access arrangement for the SWIS. This would include the introduction of covered services that support nodal pricing in order to ensure cost reflectivity, minimise cross subsidies and ensure that there is no double recovery.

Additionally, Synergy considers that substantial changes may need to be made to the Framework and Approach (**F&A**) established under the ENAC. Synergy understands the ERA will commence public consultation on the AA6 F&A in December 2025. Therefore, further consultation and clarity is required in relation to how Proposal 1 would align and integrate with the commencement of AA6 on 1 July 2028. Especially given that the F&A and covered services do not support a locational (nodal) investment and pricing methodology.

1.5 Evolution of the SWIS and the PSSR Standards Framework

Synergy considers that the PSSR Standards (and potentially the overarching PSSR Standards framework) may need to evolve over time as the SWIS transitions towards net zero emission. The system as a whole is expected to face significant changes from different avenues, such as the facility mix, electricity demand and electrification, and network augmentations.

The PSSR Standards Paper suggested that, if required, NCESS processes can be utilised to address system strength concerns within the SWIS. It is Synergy's opinion that other mechanisms should also be considered as part of "future proofing" the SWIS. For example, additional Essential System Services (**ESS**) markets could potentially be developed to provide a pre-emptive financial signal for investments. By providing ample notification and signalling of future market needs, it

[1] Including the proposed Guaranteed Service Level scheme in the PSSR Standards Paper, page 28.

increases the possibility of more potential solutions that could be delivered, which may result in a lower cost outcome for the market (and consumers). System strength support may be able to be provided by new technologies, such as grid-forming (**GFM**) inverter-based resources (**IBR**s), or alternatively by retro-fitting existing thermal generation.

1.5.1 Grid-forming inverter-based resources

Synergy is of the understanding that GFM IBRs are a relatively new technology to the SWIS, however they are also expected to play an increasingly important role in providing system strength into the future. Synergy considers, the PSSR Standards framework should avoid implementing unnecessary barriers that may delay or deter entry of GFM IBRs. At such early stages of GFM IBRs in the SWIS, Synergy is of the view that the performance requirements within the PSSR Standards framework for GFM IBRs should be no more onerous than the requirements applied to grid-following (**GFL**) IBRs, unless doing otherwise would present a significant risk to PSSR. In circumstances where significant variations in requirements are needed for GFM IBRs, the reasoning should be documented to provide clarity and transparency to stakeholders.

The requirements for GFM IBRs may, if necessary, be strengthened over time, (with industry consultation and engagement) as the SWIS becomes more familiar with these facilities and better understands their performance capabilities. In such circumstances, any changes in standards should be undertaken in a staged manner that is also cognisant of the use case of the facilities and market incentives. Synergy notes the market design does not currently provide any financial incentives for GFM technology. Synergy considers this should be investigated as part of the work program for the ESS Framework Review that is currently being undertaken by EPWA.

2 PROPOSAL 20 – WESTERN POWER SEPTEMBER 2023 PROPOSED TECHNICAL RULES AMENDMENTS

Proposal 20 of the PSSR Standards Paper seeks to adopt a significant number of further amendments to the Technical Rules that were proposed (and subsequently withdrawn) by Western Power in September 2023. The Western Power proposed amendments are detailed within the papers *Technical Rules Review Submission to the Economic Regulation Authority*[2] and *Technical Rules DRAFT ONLY*[3] (**WP Proposed Amendments**). The PSSR Standards Paper further notes that "… *the proposed amendments to the Technical Rules have not previously been consulted on*"[4], and seeks stakeholder feedback on whether a subset (being 21 issues) of the WP Proposed Amendments should be accepted.

Synergy notes that the WP Proposed Amendments are lengthy and heavily technical documents. The PSSR Standards consultation is seeking for stakeholders to consider these lengthy technical documents (being the WP Proposed Amendments) alongside 19 other proposals that are outlined within the PSSR Standards Paper. Synergy considers this is a laborious task. Further, it is also noted that the ERA did not provide any formal response to the WP Proposed Amendments. Synergy considers, that without a response from the ERA, and also noting the significant changes that have occurred in the Wholesale Electricity Market (**WEM**) since the WP Proposed Amendments were published, that stakeholders should be afforded with further consultation on these items.

Synergy still considers that the ERA as the regulator should provide oversight and guidance on the acceptance (or not) of the WP Proposed Amendments. Ideally, Synergy suggests that stakeholders are afforded with the ERA's guidance and an industry forum, such as a

[2] Refer to https://www.erawa.com.au/cproot/23555/2/ERA-Submission-Technical-Rules-amendments-supporting-document---Sep-2023.PDF

[3] Refer to https://www.erawa.com.au/cproot/23556/2/TECHNICAL-RULES---Proposed-Sep-2023-version-Clean.PDF

[4] PSSR Standards Paper, Page 68

Transformation Design and Operation Working Group (**TDOWG**) meeting, discussing the WP Proposed Amendments as part of the consultation process for Proposal 20. Synergy does not support accepting Proposal 20 and notes that it has not been afforded reasonable consultation on these items. The adopted approach needs to carefully balance benefits against costs and effort to ensure efficient outcomes are achieved.

3 CONCLUSION

Synergy appreciates the complex nature of the work being undertaken by EPWA under the PSSR Standards Review and encourages further engagement with stakeholders to ensure the development of a consistent, single, end-to-end PSSR Standards and a PSSR Standards framework that are consistent with the SEO.

Synergy thanks EPWA for its work to date on the WEM reform program and looks forward to EPWA's continued consultation on market reform matters.

Your sincerely

RHIANNON BEDOLA
MANAGER ELECTRICITY MARKETS

DETAILED COMMENTS THE PROPOSALS AS OUTLINED IN THE PSSR STANDARDS PAPER

Proposal 1: Network planning standards for PSSR

The planning standard for the Network Operator to include both customer outcome standards and deterministic standards such that:

- The customer outcome standards be implemented as obligatory standards in the ESM Rules, with effective incentive mechanisms determined as part of the access arrangement process, and the deterministic standards be included to continue to provide guidance to the network design process.
- The customer outcome standards to be set on a locational basis.
- Specific measures for customer outcome standards will be consulted on a later date.
- The customer outcome standards will be reviewed by government on a regular basis (3-5 yearly).

Questions	Responses/Comments
Do stakeholders agree with the proposed framework?	Synergy in principle, supports the proposed framework, and considers the inclusion of customer outcome standards as obligatory standards into the ESM Rules is a positive step in ensuring that future network planning incorporates customer expectations. However, as outlined in the above letter, Synergy considers that stakeholders are unable to fully comprehend the proposed framework until clarity is provided on the detailed design and implementation and suggests that further consultation is undertaken
Do stakeholders consider that the deterministic standards should be mandatory, requiring an exemption from the ERA to deviate from them, or implemented as a guide for the Network Operator?	Synergy agrees with EPWA *"that it is appropriate to retain the deterministic criteria in the ESM Rules, as it should continue to provide guidance for network investment decisions"*[5]. Synergy considers the deterministic criteria will continue to provide a quantitative basis to: 1. Determine network investments. For example, under an access arrangement. 2. Provide the basis for determining service standard benchmarks including the reward/penalty mechanism for covered services. At this current stage, without clarity on the detailed design of the proposed PSSR Standards framework, Synergy considers the current exemption mechanism under the ENAC should continue under the proposed framework in order to ensure that there are no inappropriate barriers while ensuring consistent with good electricity industry practice, and ensuring that network planning is determined to be efficient and consistent with the SEO. Synergy considers that further analysis and consultation is needed to determine if an alternative approach may be suitable for the SWIS. Noting this should include an exemption mechanism as an ESM Rules procedure administered by the ERA or by the AEMO for the transmission and distribution system.
What indicators do stakeholders consider should be used for the customer outcome standards?	Synergy understands that EPWA will be consulting on specific measures for customer outcome standards at a later date. Synergy suggests that the matters raised by the ERA in relation to the consistent measurement and reporting of service standards should be adequately regarded. For example, the ERA highlighted that the CBD, urban and rural short SAIDI (System Average Interruption Duration Index), which measures the average number of minutes per customer of outages, was well within the prescribed limits in the NQRS. However, outage performance for rural long feeders was not and lacked adequate transparency. Consequently, this affected transparency in relation to the service standard reported for customers on rural long feeders. Therefore, in Synergy's opinion, careful consideration should be given to what current metrics are used, how they are averaged and how they are reported to ensure reported customer outcome standards reflect the actual service experience of customers. Additionally, Synergy notes there are customer outcome indicators utilised in the National Electricity Market and other international jurisdictions that are well tested and proven for power systems, for example, ASAI (Average Service Availability Index) and MAIFIe (Momentary Average Interruption Frequency Index event). Synergy suggests that further guidance could be sourced by looking to other jurisdictions to form a comprehensive set of indicators and data sets on customer outcomes for the SWIS.

[5] PSSR Standards Paper, pg 27

Proposal 1: Network planning standards for PSSR	
	Overarchingly, Synergy urges that the specific measures for customer outcome standards be developed with the long-term interest of consumers at front of mind and with reference to the principles of transparency, measurability and reliability.
General Comments	
Synergy suggests that augmentation decisions should also consider any potential impacts on exiting or planned facilities. For example, an increased voltage level may inadvertently trigger requirements for facility upgrades. Synergy considers that these impacts should form part of the cost benefit analysis undertaken as part of the network augmentation decision making process.	

Proposal 2: User categorisation framework	
A revised facility categorisation framework will be implemented in the ESM Rules, comprising of: • Large User Technical Standards: (Energy Producing Systems (incl. ESR) >10MVA, Synchronous Condensers); • Medium User Technical Standards (Energy Producing Systems (incl. ESR) ≤10MVA); • Loads (other than stand-alone ESR); and • Small User Technical Standards (equipment connected to the low voltage network)	
Questions	**Responses/Comments**
Do stakeholders agree with the proposed categorisation framework?	Synergy is generally supportive of the proposed User Facility Categorisation framework, however suggest the following amendments should be made: • An ESM Procedure (or other relevant document) should be published that clearly outlines the decision-making process and requirements that will be undertaken by the AEMO and the Network Operator in determining when a ≤10 MVA facility will be subjected to the same requirements that are placed on >10 MVA facilities. The ESM Procedure (or other relevant document) should also outline the acceptable level of PSSR risks that are used as part of the decision-making. • Synergy requires further detailed definitions of the characteristics for Synchronous Condensers that will be subject to the Large User Technical Standards before Synergy is able to properly evaluate this proposal. Synergy notes that the definition, may present unintended limitations to potential synchronous condenser mode conversions of large thermal generators. • Synergy considers the definition of the Load category needs to give consideration towards large power station service loads at existing thermal generation sites. For example, station service loads, which are critical infrastructure assets, typically draw electricity from the generators they support, but they also have backup connection access to the grid in the event that localised generators are not in service. Hence, their classification should be clarified. • Synergy considers the framework must provide clear guidance on the conditions when user facilities may change categories. • Synergy suggests that there should be a prescribed periodic review of the defined parameters of each category to ensure that the framework remains relevant but also responsive to technological and market changes. • Synergy considers that the framework should strive to be technology agnostic and ensure compatibility across categories for various user facilities.

Proposal 3: Application of standards to each category of users

- The Ideal Generator Performance Standard will be renamed the "Automatic User Performance Standard".
- The Common Requirements for all users will be based on the section 3.2 of the 2023 proposed Technical Rules.
- The following user facility standards will apply to each category of user:
  - **Large User Facility Standards:** Current ESM Rules Appendix 12 standards (subject to proposals 6-11) will apply, with a framework to negotiate between Automatic User Performance Standards and Minimum User Performance Standards, as per the current Chapter 3A and Appendix 12 negotiation framework;
  - **Medium User Facility Standards:** Common Requirements and Minimum User Performance Standards (as per the 2023 proposed Technical Rules) would apply with no ability to negotiate;
  - **Loads:** requirements aligned with section 3.4 of the 2023 proposed Technical Rules would apply with no ability to negotiate; and
  - **Small User Facility Standards:** requirements aligned with sections 3.7 and 3.8 of the 2023 proposed Technical Rules will apply.

Questions	Responses/Comments
Do stakeholders support the adoption of the proposed User Facility categorisation and User Facility Standards?	Overarchingly, Synergy supports the adoption of the proposed User Facility Categorisation (noting caveats as per response to Proposal 2) and User Facility Standards. Nevertheless, Synergy notes that the WP Proposed Amendments presents several complexities (a number of which are detailed in the General Comments section below for Proposal 3), that need to be carefully considered. Synergy advocates that separate consultation on the WP Proposed Amendments and their incorporation into the User Facility Standards be conducted prior to the adoption of these standards, and that consultation feedback be given appropriate consideration. Additionally, exemptions from the User Facility Standards and a negotiation framework for alternative technical requirements (similar to the negotiation frameworks currently in Appendix 12 and chapter 3A of the ESM Rules) should be afforded to existing user facilities in recognition of the performance standards and requirements that existed at the time these facilities were connected. Synergy also considers that detailed guidance must be afforded to existing user facilities that are reclassified when the proposed User Facility categories and User Facility Standards are implemented. Affected user facilities should be allowed a compliance amnesty period, along with support in negotiating between the Automatic User Performance Standards and Minimum User Performance Standards where applicable. Lastly, to ensure that the user facility categories and User Facility Standards remain relevant and responsive to technology changes, periodic review of these categories and standards should be mandated.

General comments

For context, Synergy provides a preliminary sample of complexities it has identified with the WP Proposed Amendments:

- Power system performance standards – Although worded mostly around low voltage connected and Medium User Facilities, 'limiting or managing' of fault current contribution from individual generators is complex and potentially requires onerous re-investment for existing assets and there is no clarity regarding grandfather clauses and consequent impacts.
- Main Switch provision for each generator – Some existing generators would potentially no longer comply and may require re-engineering and significant investment. Further, there is no mention of grandfathering or negotiation for existing generators with clear mention of updates to Technical Rules clause 3.3.12.2, "*… specifying additional main switch requirements for large generating system based on the requirements in clause 3.3.3.10 in the current Technical Rules with appropriate modifications to allow for the possibility of a distribution connected large generating system.*".
- Modelling data for power system simulation studies – *"… Network Service Provider to produce and maintain a generator and load model guideline which defines the requirements Users must satisfy…"*. This is potentially a duplication of the model which is already kept by AEMO. Additionally, the modelling requirements for Network Operators and Market Operators are likely to differ, as such it is not clear if this may place additional requirements on Users. Additionally, there is an underlying risk that with two sets of models being kept and updated, there may be errors between the models, and clarity is needed as to which model prevails when/if divergent results occur.

- User performance register – It is not clear whether additional information and operating procedures will need to be communicated for existing Users.
- Review of User control and protection settings – Network Operator will advise Users of required control and protection setting updates. Synergy considers this presents a major risk to the User generating equipment if it is not well considered and may override machine self-protection in extreme cases. Note that overly onerous deviations from typical system electrical parameters may damage generation machines if they are not disconnected. Further complexity arises with operational direction outside of Original Equipment Manufacturer's (**OEM**'s) design and negotiated operational parameters. Additionally, older thermal generation facilities may not be able to operate in a manner aligned to the original design due to asset ageing and deterioration. As such, operational control setpoints cannot be a blanketed, all-encompassing directive. Any such directions would still need to be considered and be afforded the avenue to be challenged based on plant condition and performance capability.

Proposal 4: Point of compliance with user facility standards and hybrid facilities

- The Network Operator will be required to document in a WEM Procedure, in accordance with principles set out in the ESM Rules, the circumstances in which compliance at a point other than the Connection Point will be required. Compliance will only be permitted to be assessed at either the Connection Point(s) or the alternative point(s) for facility i.e. not at both.
- Hybrid facilities that have the control and protection systems in place at all times to ensure their operation will not have a PSSR impact on the rest of the system will be treated as loads under the new User Facility Standards categorisation framework.

Questions	Responses/Comments
Do stakeholders support the proposal to continue to allow compliance to be assessed at individual components behind the Connection Point if guidance is provided on when this requirement will be imposed?	Synergy supports this proposal and notes it provides flexibility to the compliance assessment process and mitigates against barriers to hybrid facilities and/or facilities with co-located assets entering the SWIS. Support for this proposal though is contingent on the following matters: • The Network Operator's WEM Procedure needs to contain clearly defined criteria, supported by robust technical justification, for circumstances when compliance at a point other than the Connection Point is allowed. • There must be consistency in the application of the criteria when considering whether to allow assessment at a point other than the Connection Point. • There must be transparency in the decision-making process, ideally supported by publication of the decision and rational for allowing assessment at a point other than the Connection Point. • There should be no duplication of compliance requirements (aggregated at Connection Point and also separately at individual component level) without solid justification.

Proposal 5: Governance of the user facility standards framework

The existing governance framework will remain primarily the same, some modifications will be made to:

- ensure guidance on which facilities ≤10MVA are captured by the Large User Technical Standards framework;
- ensure AEMO is consulted on the performance standards for such facilities in the way it is currently consulted under Chapter 3A of the ESM Rules for Transmission Connected Generating Systems;
- require AEMO to engage directly with proponents to resolve issues if the Network Operator agrees to a negotiated position but AEMO does not and the Network Operator requests that AEMO do so; and
- expand the number of facilities who are required to have a monitoring plan registered with AEMO to include facilities that:
  - are not currently captured by the ESM Rules GPS framework; and
  - will be captured by the Large User Technical Standards under the revised framework.
- For future connections, where connection standards are negotiated between participants and the Network Operator, these negotiated standards will be made public.

Questions	Responses/Comments
Do stakeholders support the proposed governance framework?	Synergy supports the proposed governance framework at high level, however advocates for the following improvements: • As part of the transition to the modified governance framework, early engagement and guidance should be provided to the users whose facilities are identified as being impacted by the changes, and these users should be provided with reasonable timeframes to allow for navigating changed compliance obligations. • Synergy does not support making negotiated connection standards public for future connections and considers doing so can lead to public misunderstandings on the reasoning for the negotiated position and may also contribute to protracting from negotiations.

Proposal 6: Withstand Short Circuit Ratio (SCR)

Include the following in the ESM Rules with regard to withstand SCR

- A Minimum User Performance Standard for withstand SCR of 2.0 (grid-forming IBR) and 3.0 (grid-following IBR)
- An Automatic User Performance Standard for withstand SCR of 1.2 for grid-forming IBR. No Automatic User Performance Standard for grid-following inverters.
- A provision for grid-following inverters that allows for a facility that is not capable of meeting the Minimum User Performance standard to connect if there are legally binding commitments to make additional investment in the facility or for the supply to it of services to remedy, at the proponent's cost, the shortfall in capability, either on connection or in agreed circumstances, together with operational arrangements agreed with the Network Operator that apply when the investment or services have not yet been made or are not available.
- A requirement that settings used must not be different to the setting required for compliance with other Technical Requirements unless otherwise agreed with AEMO and the Network Operator.
- Clarification that continuous uninterrupted operation is not required when the SCR falls below the withstand SCR.

Questions	Responses/Comments
Do stakeholders agree with the above proposed provisions/standards?	Synergy is not supportive of t the following two proposed provisions: • A Minimum User Performance Standard for withstand SCR of 2.0 (grid-forming IBR) and 3.0 (grid-following IBR), and • An Automatic User Performance Standard for withstand SCR of 1.2 for grid-forming IBR. No Automatic User Performance Standard for grid-following inverters. Synergy notes that clause S5.2.5.15(b) of the National Electricity Rules (**NER**) sets the Minimum Access Standard requiring a SCR of 3.0 for integrated resource systems comprised of asynchronous production units, and the agreed value is determined as the minimum of 3.0 and the value at which the resource can stably operate. Synergy considers that applying different minimum standards based on technology type may be counterproductive and could discourage investments in GFM IBRs which are likely to be critical for the future resilience of the SWIS.

Proposal 6: Withstand Short Circuit Ratio (SCR)	
	Synergy suggests that detailed technical assessments and system-specific validations should be conducted before establishing performance standards for GFM IBRs in the SWIS. Further, Synergy seeks clarity as to the reasoning why it is proposed to that no Automatic User Performance Standard are applied for GFL IBRs. Is the intention that all future installations of GFL IBRs will need to be negotiated? Synergy is supportive of the remaining three proposed provisions under this proposal six, however considers more clarity is required on the circumstances and characteristics of additional investment that may be considered in creating a provision for GFL IBRs to connect at a standard below the Minimum User Performance standards.
Should corresponding changes be made to the equivalent provisions, which will apply to Medium Energy Producing Systems (inc. ESR) ≤10MVA connected to high voltage and medium voltage network?	Synergy requests further guidance is provided on the applicable User Facility Standards category for aggregated facilities prior to determining if the equivalent provisions should be made for Medium Energy Producing Systems. For example, when individual facilities fall under the Small User Technical Standards category but can aggregate up to 10 MWA behind a Transmission Node Identifier (**TNI**), would this aggregation be considered to fall under the Medium User Technical Standards category? Following on from this, should the aggregation fall under the Medium User Technical Standards category, would the SCR thresholds apply at the individual facility level or at the TNI level?

Proposal 7: Voltage phase angle jump	
• Grid-following inverters to withstand an angle jump of less than 25 degrees, • A Minimum User performance Standard for grid-forming inverters to withstand an angle jump of less than 60 degrees and supress the phase angle jump with a response time of 20ms or lower, • All inverter-based Generating Systems and each of their Asynchronous Generating units to remain in operation for any change in the phase angle of individual phases caused by occurrence and clearance of balanced and unbalanced faults, provided that the positive sequence angle change does not exceed the Minimum User Performance Standard.	
Questions	**Responses/Comments**
Do stakeholders agree with the above proposed provisions/standards?	*Grid-following inverters to withstand an angle jump of less than 25 degrees.* Synergy is currently not supportive of this provision. In Synergy's view, the voltage jump angle for GFL IBRs should align with the NER's requirement. The NER prescribes for *Minimum access standard* a voltage phase angle shift of less than 20 degrees (clause S5.2.5.16) in relation to GFL IBRs. A departure from the established requirements in the NER should be justified with mathematical modelling showing a significantly higher likelihood of a 25 degree angle jump for the smaller and less meshed SWIS. More broadly, Synergy suggests that any proposal for more onerous requirements for GFL inverters be tested with OEM suppliers prior to incorporation into performance standards. *A Minimum User Performance Standard for grid-forming inverters to withstand an angle jump of less than 60 degrees and supress the phase angle jump with a response time of 20ms or lower.* Synergy is currently not supportive of this provision. The requirement for GFM IBRs to be able to withstand an angle jump of less than 60 degrees is an onerous requirement and Synergy's view is that compliance standards for GFM IBRs should not be more onerous than the standards applied to GFL IBRs. Synergy also notes that in the NER, the requirement for GFM IBRs is to withstand an angle jump of less than 20 degrees. Therefore, prior to implementing a significantly different threshold for GFM IBRs in the SWIS, Synergy advocates that rigorous mathematical assessment is undertaken using commercially available GFM models and consultation with GFM developers be held to give confidence in the thresholds being proposed. *All inverter-based Generating Systems and each of their Asynchronous Generating units to remain in operation for any change in the phase angle of individual phases caused by occurrence and clearance of balanced and*

Proposal 7: Voltage phase angle jump	
	unbalanced faults, provided that the positive sequence angle change does not exceed the Minimum User Performance Standard. Synergy is unable to comment on this provision until there is clarity on the outcome of other proposals impacting Minimum User Performance Standards in this consultation.
Should corresponding changes be made to the equivalent provisions, which will apply to Medium Energy Producing Systems (inc. ESR) ≤10MVA connected to high voltage and medium voltage network?	As per proposal 6, Synergy requests further guidance is provided on the applicable User Facility Standards category for aggregated facilities. For e.g., when individual facilities fall under the Small User Technical Standards category but can aggregate up to 10 MWA behind a TNI, would this aggregation be considered to fall under the Medium User Technical Standards category? Synergy also notes that, in the context of aggregated facilities, any contradiction of requirements to other standards, such as AS/NZS4777, requires further consideration and consultation.

Proposal 8: Active and reactive current response during and after contingencies

Introduce new definitions for:

- Sustainment Time;
- Adequately Controlled; and
- Commencement Time

Behaviour at current limitation: Specify the behaviour of grid-forming IBR when operating above its maximum continuous current.

Injection ratio: Revise Minimum User Performance Standard for IBR from 2% to 0%.

Speed of response: Amend clauses A12.9.2.7 and A12.9.3.7 to remove the term 'Settling Time' and replace with 'Commencement Time' and specify new values for Commencement Time and Rise Time in each clause.

Total current: replace the current term 'reactive current' in clause A12.9.1.6(a) and introduce a new requirement on 'total current' contribution for both grid-following and grid-forming IBR.

Negative Sequence Current Control: Remove sub-clause A12.9.1.6(c) and add new criteria to the Minimum and Automatic User Performance Standards requiring grid-following and grid forming IBR to inject negative sequence current during unbalanced faults leading the negative sequence voltage by at least 90° and specify prioritisation between positive and negative sequence currents during faults.

Frequency of current injection: Amend clause A12.9.1.6 to add a new requirement under the Minimum and Automatic Performance Standards requiring that, during the fault, injection of active and reactive current from the Generating System and each of its Asynchronous Generating Units must have a fundamental frequency component same as the fundamental frequency of the terminal voltage.

Fault ride through activation threshold

- Amend clauses A12.9.2.5 (Automatic User Performance Standard) and A12.9.3.5 (Minimum User Performance Standard) to use voltage activation thresholds of 85% and 115% for Automatic User Performance Standard as opposed to 80% and 120% for the Minimum User Performance Standards.
- Amend clauses A12.9.2.5 and A12.9.3.5 to replace the term 'voltage at the Connection Point' with 'positive sequence voltage at the Connection Point'.

Long duration faults

- Amend clause A12.9.3.7 to lower the fault duration for which the response must be sustained and held near constant from 2 seconds to 450 ms.
- Replace the term 'adequately damped' with 'adequately controlled' in clauses A12.9.3.7 and A12.9.3.8.

Active Current Response During and After Contingencies

- Replace the term '' after clearance of the fault'' with '' after the end of the disturbance'' in subclauses A12.9.2.5(b) and A12.9.3.5(b) for both grid-following and grid-forming inverters.
- Amend subclause A12.9.2.5(b) for grid-forming inverters to specify a different level of active power that must be supplied to or absorbed from the network from 100 ms after the end of the disturbance (see consultation questions below).

Oppose fast changes in voltage magnitude: Amend clause A12.9.2.5(a) for grid-forming IBR to add a requirement for equipment covered in that clause to be capable of reducing the sensitivity of voltage magnitude to a given change in current within 20ms after the disturbance, as compared to when the facility was not connected.

Proposal 8: Active and reactive current response during and after contingencies	
Questions	**Responses/Comments**
Do stakeholders agree with the above proposed provisions/standards?	Synergy is supportive of the proposed amendments to active and reactive current response definitions with the following exception and caveats: • **Sustainment Time** (new definition) – Synergy considers that introduction of this definition is practical but is unable to comment further until there is clarification on its characteristics. • **Speed of response** – Synergy is unable to comment on the proposed values for the term 'Rise Time' in relation to GFM IBRs under the Minimum User Performance Standard and Automatic User Performance Standard and suggests that further modelling and testing is required at this stage to confirm if these values can be met. Additionally, Synergy cautions that 'Settling Time' in synchronous machines would include mechanical inertial response, which is a characteristic of the machine and not directly adjustable or altered by settings of the control systems. It is unclear from this proposal, what provision, if any will remain or be enforced for large rotating machines and how the changes are intended to allow for operation of these machines within parameter which are not necessarily adjustable. • **Negative Sequence Current Control** – Synergy is unable to support the amendment to this definition until clearer criteria and technical justification is provided for the change. Synergy considers that further discussion with OEM and IBR developers should be conducted prior to amending this definition. • **Frequency of current injection** - Synergy is unable to support the amendment to this definition until clearer criteria and technical justification is provided for the change. Synergy considers that further discussion with OEM and IBR developers be conducted prior to amending this definition. • **Fault ride through activation threshold** – Synergy considers that, subject to a range of values being permissible for voltage ride through activation thresholds, the changes to the voltage ride through threshold values are acceptable. Thresholds for ride through should be independent of technology type and should be assessed at inverter terminals or be a range of values as ride through response is not centrally controlled and will vary significantly based on pre fault conditions and the electrical distance of inverters from the connection point. Additionally, in relation to synchronous machines, fault response is a characteristic, not an adjustable value and as such the proposal for 'positive sequence voltage at Connection Point' is not a term which can be used to measure or define machine performance directly for synchronous machines. • **Long duration faults** – Without clear definition supplied for the proposed replacement term 'adequately controlled', Synergy is not able to evaluate the impact of this proposed amendment on synchronous machines from a control system point of view. • **Active Current Response During and After Contingencies** – Synergy's preference with regards to amendments proposed to subclause A12.9.2.5(b) is to retain the criteria currently in the ESM Rules (i.e. retain Active Power of at least 95 percent of the level existing just prior to the fault from 100 ms after clearance of a fault) so as to not create any new barriers to the entry of GFM IBRs into the SWIS. • **Oppose fast change in voltage magnitude** – Synergy considers that proposed amendment to subclause A12.9.2.5(a) for GFM IBRs creates additional barriers to their connection and registration, and therefore will discourage adoption of GFM technology in the SWIS. Synergy is therefore not supportive of the proposed amendment.
What is an appropriate rise time for the Minimum User Performance Standard for grid-forming IBRs?	While acknowledging that GFM IBRs inherently offer faster response capability, Synergy suggests that further technical validation is required before faster rise times are specified for GFM IBRs. Any more onerous requirements place on GFM IBRs may discourage further entry of GFM technology into the SWIS.

Proposal 8: Active and reactive current response during and after contingencies	
With regard to the Fault Ride Through Activation Threshold for reactive current response during contingencies: is the use of voltage as an activation threshold appropriate for grid-forming IBR? If so, can the same numerical values used for grid following IBR be applied?	Synergy considers that voltage-based activation thresholds are appropriate for GFM and GFL IBRs but cautions that same numerical value thresholds may not always be compatible between both technologies due to fundamental differences in control behaviour and system interaction.
Are there any additional performance metrics that should only apply to grid-forming IBR?	Synergy suggests that additional performance metrics, such as metrics for provision of inertia services, applied to GFM IBRs should contain revenue opportunities.
What is an appropriate level of active power to specify in A12.9.2.5(b) for grid forming inverters?	Synergy considers that there should not be any significantly different recovery time between GFM and GFL IBRs in relation to active power. Any variation to performance requirement for GFM IBRs, as compared to GFL IBRs (currently a recovery time of 100ms in the ESM Rules), should be supported by detailed simulation studies and market research, and these performance requirements should not be more onerous that those applied to GFL IBRs.
Should corresponding changes be made to the equivalent provisions, which will apply to Medium Energy Producing Systems (inc. ESR) ≤10MVA connected to high voltage and medium voltage network?	Synergy is not able to comment on this question until additional guidance is provided on the applicable User Facility Standards category for aggregated facilities. For e.g., when individual facilities fall under the Small User Technical Standards category but can aggregate up to 10 MWA behind a TNI, would this aggregation be considered to fall under the Medium User Technical Standards category?

Proposal 9: Disturbance ride through for multiple disturbances	
Amend the following clauses to improve clarity on disturbance ride through for multiple disturbances as follows: • Amend clause A12.9.1.4 to include a definition of when individual deviations end for use in assessing multiple disturbances. • Amend clauses A12.9.2.3 and A12.9.3.3 (the Automatic and Minimum User Performance Standards) to provide more clarity on the circumstances in which a facility must remain in continuous uninterrupted operation; • Introduce a new clause A12.9.4.2, that allows for a negotiated access standard to include the required response of a Generating System for each combination of power system disturbances or conditions specified in Appendix 12 (which should be as close to continuous uninterrupted operation as is reasonably practicable); and • Add a definition for 'end of the disturbance'.	
Questions	**Responses/Comments**
Do stakeholders agree with the above proposed provisions/standards?	Synergy is generally supportive of these provisions and welcomes the introduction of new subclause A12.9.4.2 which will provide flexibility for Market Participants to negotiate acceptable performance standards that support network stability subject to the area and conditions of the local network.
Should corresponding changes be made to the equivalent provisions, which will apply to Medium Energy Producing Systems (inc. ESR) ≤10MVA connected to high voltage and medium voltage network?	Synergy is not able to comment on this question until guidance is provided on the applicable User Facility Standards category for aggregated facilities. For e.g., when individual facilities fall under the Small User Technical Standards category but can aggregate up to 10 MWA behind a TNI, would this aggregation be considered to fall under the Medium User Technical Standards category?

Proposal 10: Damping of power system oscillations	
With regard to grid-forming inverters, add a new clause A12.4.3.8 which states that the Minimum User Performance Standard is as follows: The Generating System must have Equipment capabilities and Control Systems, including, if necessary, a power system stabiliser, sufficient to ensure that: • operation of the Generating System does not degrade the damping of power system oscillations; and • operation of the Generating System does not cause instability or poorly damped oscillations that would adversely impact the SWIS power system or other Equipment connected to the SWIS. AEMO and the Network Operator will specify a frequency range of oscillations consistent with the bandwidth of control systems for which the above requirements will apply. An upper frequency limit of 300 Hz will be applied unless sufficient evidence is provided to AEMO and the Network Operator regarding the actual bandwidth of the converter control.	
Questions	**Responses/Comments**
Do stakeholders agree with the above proposed provisions/standards?	Synergy agrees with the addition of the new clause A12.4.3.8 for GFM IBRs provided that there is clear guidance and technical justification when specifying the frequency range of oscillations consistent with the bandwidth of control systems for which the requirements will apply. Although this proposal references GFM IBRs, Synergy seeks confirmation that the new clause A12.4.3.8 is not intended to be applicable to synchronous generators. Additionally, Synergy cautions that in the implementation of this proposal, exemptions may need to be considered for legacy power system stabilisers. Synergy notes that there are likely to be cases where these are no longer supported by OEMs and are unlikely to be re-tuned for changing network requirements. Synergy considers a risk-based approach should be utilised when considering legacy machines and hardware and determining the requirements for adjustments or re-tuning these legacy power system stabilisers.
Should corresponding changes be made to the equivalent provisions, which will apply to Medium Energy Producing Systems (inc. ESR) ≤10MVA connected to high voltage and medium voltage network?	Synergy is not able to comment on this question until further guidance is provided on the applicable User Facility Standards category for aggregated facilities.

Proposal 11: Partial load rejection	
Adopt changes to the definition of continuous uninterrupted operation and clause A12.6.1.5 to recognise potential beneficial responses, such as active power response opposing phase angle jumps and primary frequency response, including inertial response opposing frequency changes.	
Questions	**Responses/Comments**
Do stakeholders agree with the above proposed provisions/standards?	Synergy is currently unable to comment on this proposal due to the following: • Clarification is required on whether these proposed changes will be applied to synchronous generators, noting that inertial response opposing frequency changes is an inherent characteristic of large synchronous machines. If this proposal is intended to be applicable to synchronous generators, will there be a minimum requirement based on machine size, type and balance of plant operation setpoint? Will any deviations from expected response be considered breaches and therefore subject to penalties? • In relation to IBRs, Synergy considers that more observation and analysis of GFM IBR behaviour is required before the changes in this proposal can be commented on.

Proposal 11: Partial load rejection	
Should corresponding changes be made to the equivalent provisions, which will apply to Medium Energy Producing Systems (inc. ESR) ≤10MVA connected to high voltage and medium voltage network?	Synergy is not able to comment on this question until further guidance is provided on the applicable User Facility Standards category for aggregated facilities.

Proposal 12: Revised system strength definition

The following definition of system strength will be implemented in the ESM Rules:

- **System Strength:** Relates to the ability of the power system to resist changes to the voltage waveform in a particular location, both during steady state operation and following a disturbance, including, but not limited to, a sudden change in a Load or an Energy Producing System, the switching of a Network element, tapping of transformers and faults.

Questions	Responses/Comments
Do stakeholders agree with the proposed definition?	Synergy agrees with the proposed definition of system strength.

Proposal 13: A future fleet outlook for use in fault level assessments

AEMO, EPWA and the Network Operator to align on a forecasting approach, in consultation with interested stakeholders through public consultation. This approach should include the methodology, inputs, assumptions, and scenarios necessary for the determination of an expected 10-year generation and ESR capacity outlook on an annual basis.

This fleet mix should reflect capacity (i.e. MW), technologies (e.g. gas/wind/solar) and broad locations (e.g. regions).

Questions	Responses/Comments
Do stakeholders agree with the proposed forecasting approach?	Synergy is broadly supportive of this proposal and suggests the following refinements to the proposed forecasting approach: • The methodology used is transparent; • There are clear and measurable metrics to quantify system strength; • Technology neutrality is maintained, ensuring that definitions can be applied fairly across synchronous and asynchronous technologies; and • There is integration of existing standards and other frameworks (e.g. System Strength Impact Assessment Guidelines) where possible.

Proposal 14: Maintaining minimum fault levels required for network protection

The Network Operator will be required to:

- develop and publish a methodology for calculating minimum fault level requirements at each transmission node;
- compare the minimum fault level requirements with the expected fault level at each node as part of the TSP each year, using the fleet outlook and the demand forecast, as part of the System Strength calculation; and
- resolve any forecast shortfalls through network reinforcement or non-network solutions (e.g. competitive NCESS procurement), as necessary.

Questions	Responses/Comments
Do stakeholders agree with the proposed approach to managing minimum fault levels for network protection?	Synergy agrees with the proposed approach at a high level, however, suggests the following matters require detailed consideration as part of the progression of this work program: • A mechanism should be implemented to allow stakeholders to query or request clarity from the Network Operator on the methodology and calculation of fault levels at transmission nodes, especially in circumstances of low inertia.

	• The whole of system cost impact must be considered, and cost benefit analysis should be a requirement as part of any procurement initiatives to address forecast shortfalls. • Clarity should be provided on the cost allocation approach for each project undertaking network reinforcement or the non-network solutions. Sufficient prior notice should be provided to impacted stakeholders. • Should there be coordination required between the Network Operator, AEMO and EPWA in implementation of this approach, there must be a clear and transparent division of responsibilities between these entities.

Proposal 15: A centralised planning/investment function for system strength to facilitate new connections	
The Network Operator will be required to forecast shortfalls in system strength required to host the expected portfolio of inverter-based resources on the system, and to take steps to procure services that can address these shortfalls through competitive mechanisms (using the NCESS framework). Provisions will be incorporated into the ESM Rules to determine whether generator settings continue to meet a test for ongoing suitability, and allow the Network Operator and/or AEMO to request that settings are retuned as appropriate through a streamlined process.	
Questions	**Responses/Comments**
Do stakeholders agree that the Network Operator should be obliged to make proactive investments to maintain system strength sufficient to host the expected fleet in a region?	Synergy agrees that the Network Operator should be obliged to forecast for shortfalls in system strength and to make this information publicly available. Synergy agrees that a proactive approach is needed to ensure that system strength is maintained in the SWIS. However, Synergy considers that NCESS should not be the sole solution for system strength concerns, with alternative approaches being the introduction of a new essential system services market for system strength, and appropriate price signally could be used to proactively incentivise the required investments. Synergy notes that existing facilities, may be able to undertake upgrades to their facilities to better assist with system strength, however, will need appropriate incentives and renumeration. By encouraging existing and new entrant facilities to also consider system strength requirements, it may be possible to achieve a lower overall cost outcome. Regardless of the approach taken to maintain system strength, Synergy suggests the following items are considered: • The chosen mechanism must be transparent, with stakeholder engagement and consultation throughout the process (covering forecasting methodology, assumptions, modelling results, and outcomes). • The principles of economic efficiency and transparency should be integral to decisions on future investments into system strength for the SWIS. • Market Participants will require clarity on how the cost of these services are expected to allocated, and the cost allocation methodology must be consulted appropriately.

Proposal 16: Coordinating assumptions and inputs for forecasting	
To achieve a coordinated approach to forecasting inputs and assumptions, a collaborative process between the parties responsible for forecasting (EPWA, AEMO and the Network Operator) should be established, with general rules included in the ESM Rules to guide the parties towards effective collaboration.	
Questions	**Responses/Comments**
Do stakeholders consider a collaborative approach will bring about the necessary consistency in forecasting?	Synergy supports the collaborative approach proposed for coordinating forecasting between EPWA, AEMO and the Network Operator. When effectively implemented, this approach can reduce the risk of conflicting signals that could undermine planning and investment confidence, as well as diminish ambiguity in the application of the PSSR Standards. The collaborative approach should be underpinned by clear governance arrangements that provide for resolution of differences and the reaching of consensus. Besides this, the collaboration should be guided by the below objectives: • Transparency of methodologies, assumptions and input sources utilised for the forecasting. • Production of quality outputs and insights that are timely and actionable from the forecasting process. • Efficient use of resources (time and manpower) and mindfulness of cost incurred for the forecasting.

Proposal 17: Ride through requirements for network elements	
Apply the facility ride through requirements, for the definitions relating to disturbances of the current ESM Rules Appendix 12.7- 12.9, on network elements with appropriate supporting text to clarify that this standard does not apply to: • Faulted primary equipment disconnected under the requirements of the current Technical Rule section 2.9. • The operation of the Load Shedding requirements of the current Technical Rule clause 2.3.2 and section 2.4. • Elements of the network that are designed to trip as part of a scheme (e.g. protection scheme or generation runback scheme).	
Questions	**Responses/Comments**
Do stakeholders support the proposal to require network elements to ride through disturbances?	Synergy is supportive of the proposal to require network elements to ride through disturbances with the following provisions: • The ride through requirements are technology agnostic and scalable to different types of network elements. • As these requirements are further refined, the exclusions outlined in this proposal should be clearly defined and enforceable. • The Network Operator and other impacted stakeholders are afforded guidance and an appropriate transition period to implement the ride through requirements for network elements.

Proposal 18: Customers' ability to negotiate or change their level of reliability through non-reference services	
The ESM Rules will provide clarity on which customer outcome standards can be modified as part of a non-reference service, and any agreed modifications will be published. Should conditions change such that the customer can be provided the reference level of reliability as per the customer outcome standards, the register will be adjusted to reflect this.	
Questions	**Responses/Comments**
Do stakeholders agree that the framework to improve clarity and transparency?	Synergy agrees that the proposed framework will improve clarity and transparency on how modifications to customer outcome standards can be made through non-reference service arrangements. Furthermore, Synergy suggests that customers should be clearly informed of any changes to the level of reliability they are able to be provided, and that the register of allowed modification to customer outcome standards is maintained on a timely and accurate basis. However, Synergy cautions against viewing non-reference services as a substitute for addressing core service needs through the reference service framework. Over-reliance on bespoke arrangements risk eroding planning certainty and creating inequities between customers.

Proposal 19: Governance of PSSR Standards	
Governance arrangements that reflect the relevant recommendations in the Energy Transformation Taskforce PSSR Standards Framework Information Paper will be implemented.	
Questions	**Responses/Comments**
Do stakeholders have any specific concerns with the allocation of roles and responsibilities in the proposed governance framework for PSSR?	Synergy does not have specific concerns with the allocation of roles and responsibilities in the proposed governance framework for PSSR. Nonetheless, Synergy notes the following for consideration: • It is important that there is clear delineation of roles and responsibilities in any areas of overlap between governance, compliance and enforcement. • The effectiveness of the proposed Reliability and Security Advisory Working Group will hinge on its composition. Synergy recommends that membership of this working group is reflective of the prominent technologies within the SWIS and is reviewed on a periodic basis. In particular, the initial membership of the Reliability and Security Advisory Working Group must include thermal generation and IBR subject matter experts to ensure proposed changes to PSSR Standards are able to be assessed with the required expert knowledge. • The development of a dispute resolution process may be beneficial to detail how disagreements between the any of the responsible parties named in the governance framework and the ERA can be raised and the subsequent interactions that must occur for dispute resolution.

Proposal 20: Western Power September 2023 Proposed Technical Rules Amendments	
Adopt the Western Power proposed solutions from the September 2023 Submission to the ERA for PSSR related matters not already considered under other proposals in this Review.	
Questions	**Responses/Comments**
Do stakeholders support the proposal to accept the subset of the Western Power proposed amendments to the relevant Technical Rules requirements?	Synergy withholds comment on Proposal 20 and requests that Market Participants be afforded more time to properly consider the 21 issues stakeholders are asked to support or oppose under this Proposal 20 as outlined in the PSSR Standards Paper. Synergy advocates that an industry forum (such as a TDOWG) is held to allow for detailed discussion on these issues. Synergy notes the items are of varying nature and require a significant degree of technical expertise to properly evaluate. Synergy considers that without sufficient consultation some aspects may inadvertently be overlooked, presenting unintended outcomes and potential risks. For example, on the issue of 'Standard for transient stability' as set out in section 3.6 of Western Power's *Technical Rules Review Submission to the Economic Regulation Authority* paper (**WP Technical Rules submission**), Synergy considers that the proposal only evaluates the network and newer technology connections. For large synchronous generators, if the requirement to achieve transient stability changes such that the unit is compelled to remain connected through a credible contingency event, there is elevated risk of damage to a synchronous generator. The preferred solution (option a) removes the protective clause relating to generators not having to exceed their designed performance level. Another example that demonstrates the need for more detailed discussion for Proposal 20 is in relation to the issue on 'Network Service Provider obligations – Power system performance', which is set out in section 3.11 of the WP Technical Rules submission. Upon initial review of this issue and the proposed solution, Synergy questions whether consideration has been given to the possible consequential impacts to existing generators' or step-up transformers' voltage and current transformer equipment. Besides the risk of equipment damage, retrospective adjustments to accommodate Western Power's monitoring equipment could be intrusive and may require an existing facility to be put on outage mode for the adjustment works to be performed. This would then lead to loss of generation availability. Synergy also notes that there is no mention of how more complex or additional monitoring requirements would be introduced, for instance in cases where more than one generator is connected to a single connection point.