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Energy Policy WA
Department of Energy, Mines, Industry Regulation and Safety
Level 1, 66 St Georges Terrace, Perth
Via email: energymarkets@demirs.wa.gov.au.

6 February 2026

RE: Power System Security and Reliability (PSSR) Standards Review Proposals 6 to 11

Dear Jai,

Tesla Motors Australia, Pty. Ltd. (Tesla) welcomes the opportunity to provide a response to the Consultation Paper – PSSR Standards Review - Proposals 6 to 11, User Facility Standards for Grid Forming and Grid Following Inverters.

We commend EPWA's commitment to proactively adapting the PSSR Standards with thorough consultation as system needs and technologies evolve. Tesla is broadly supportive of adopting the amendments, including adopting the proposed grid-forming (GFM) definition, with detailed feedback for each of the proposed technical requirements in the following pages.

The main outstanding concern within the recommendations are for the settings used for demonstrating withstand SCR under Proposal 6, with the general requirement that the settings used must not be different from the settings required for compliance with other technical requirements, unless otherwise agreed with AEMO and the Network Operator. Tesla sees this as a debilitating requirement, causing the plant to significantly sacrifice performance in order to use the settings to meet the lowest hypothetical withstand SCR requirement, regardless of the actual characteristics of that site.

Tesla suggests taking a similar approach to NER S5.2.5.15, where it is specified that alternative settings should be used for SCR tests, rather than site-specific settings. If the settings are tuned for SCR ≤ 2 and the actual SCR is much higher, there is a risk of unnecessarily compromising performance. Tuning should be fit for the purpose and aligned with the actual site conditions. We welcome the opportunity to run a technical workshop with interested parties within EPWA, Western Power, and AEMO WA, to further outline our concerns with this requirement and provide technical results to demonstrate why the use of alternate settings will be more beneficial for the grid.

We look forward to ongoing engagement within the PSSR Standards Review to support WA's operation of a safe and secure power system, and its energy transition more broadly.

Yours sincerely,

Tesla Energy Policy Team
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Tesla Responses – Power System Security and Reliability (PSSR) Standards Review

Proposal	Technical Requirement	Tesla Response
6. Withstand SCR capability at the connection point	Withstand SCR	Recommend further increasing proposed GFL MAS requirements to SCR ≤ 7.
	Settings used for demonstrating withstand SCR	Recommend allowing the use of alternate settings, same as the NEM – see cover page for more information.
	SCR boundaries where the facility is expected to remain stable	Supportive.
	Other	Recommend further guidance on suggested withstand SCR studies.
7. Voltage phase angle jump	Voltage phase angle jump response	Supportive.
	Voltage phase angle jump during the fault	Supportive. Confirmation requested that this would be automatically met by a GFL or GFM plant if meeting FRT requirements, and there is not a proposal to introduce further testing.
8. Active and reactive current response during and after contingencies	Reactive current commencement time during contingencies	Supportive.
	Reactive current rise time during contingencies	Supportive.
	Negative sequence control during contingencies	Supportive of not proposing MAS or AAS for GFM, as this is inherent within GFM capability and definition. Further clarification requested that for GFL, the request is same as the NEM for iq only, as if there are resistive faults, negative sequence won't be 90° from voltage.
	Fast opposition of voltage magnitude changes	Further clarification needed on the term 'reduce sensitivity' within proposed MAS, is this referring to reactive current injection speed?
	Fault ride-through activation thresholds	For both GFL and GFM, proposal for the under-voltage requirement to be for 90%. Supportive of 120% for over-voltage.
	The use of total current during contingencies	Supportive for GFL, but as inherent in GFM, cannot be prioritised.
	Active power recovery following contingencies	Recommendation for this to be defined, suggestion of 90% for GFM for 300ms.
	Reactive current injection ratio during contingencies	Supportive of not proposing AAS for GFM given complexity.
	Long duration faults	Supportive.

10. Damping of power system oscillations (GFM inverter performance)	Damping of power system oscillations	Not supportive of MAS for GFM for 0.1 Hz. Tesla does not support the proposal for specifying a frequency range of oscillations and suggests that paragraph is removed. Similar to the considerations in NER clause S5.2.5.13, it is not practical to specify a fixed frequency range of oscillations that aligns with the bandwidth of control systems. For grid-forming inverters, the main control loops relevant to generator performance assessments are typically outer-loop RMS-based controllers, with bandwidths generally limited to within 10 Hz. Due to variations in control methodologies among different OEMs, defining a universal RMS controller bandwidth for all GFM inverters is not feasible. Typically, GFM inverters are capable of providing active damping for oscillations within this ~10 Hz range. At higher frequencies—particularly above 100 Hz—GFM inverters generally only contribute passive damping. For very high frequency oscillations, the inverter does not respond via control loops at these frequencies. Damping is instead provided through physical or virtual impedance characteristics (e.g. filters, LCL networks, virtual admittance) that inherently absorb or dissipate high-frequency energy.
12. Instability detection mechanism (for IBRs, primarily GFL)	Instability detection mechanism	Supportive.