National Electricity Rules (NER) 5.3.9 Webinar - Question and Answer (Q&A)

This Q&A document has been prepared following the NER 5.3.9 webinar and brings together responses to questions raised by participants during the session which we were unable to address in the available time. The questions and answers are intended to provide additional clarity on the topics discussed during the webinar and to support stakeholders in their understanding of the NER 5.3.9 process guideline and fact sheet series.

If you have any further questions regarding NER 5.3.9, we encourage you to contact AEMO on contact.connections@aemo.com.au.

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1. **How are alterations treated where performance improves as a result of the alteration, but the resulting performance does not meet the current technical requirements?**

Only the performance standards affected by a proposed alteration will be assessed under NER 5.3.9. The Proponents are required to submit proposed performance standards for affected technical requirements when NER 5.3.9 applies, but the proposed alteration might not always result in changed performance standards.

For impacted S5.2 technical requirements, the negotiation of altered performance will be undertaken in accordance with NER 5.3.4A. For a minor performance change due to an alteration which will continue to meet or exceed the existing performance standard, a Proponent's proposal to retain the existing performance standard would usually be acceptable. However, where a significant improvement to performance is a consequence of the alteration or is the purpose of the alteration, this should be reflected in an updated performance standard. Section 5.1 of the NER 5.3.9 Process Guideline provides additional guidance on the boundaries for negotiations in cases where the technical requirements have changed over time.

2. **Does AEMO have any guidance on typical modification timescales, depending upon nature of the modification, or indeed maximum time limits to assess a proponent's change? This would really support proponent's project planning activities.**

The duration for completion of an alteration process can vary depending on several factors such as the type and complexity of the proposed alteration and project circumstances. The Proponents should engage early with their NSP and AEMO to discuss the proposed changes so that they can work with the Proponent to identify key activities, indicative timing and estimated assessment costs.

3. When some alterations are considered after 5.4.3A letter but before signing the connection agreement, will a new 5.3.4A process be triggered?

Alterations affecting access standards which have been accepted by AEMO in a 5.3.4A letter but are not yet included in an executed connection agreement with the NSP will not be subject to NER 5.3.9.

In practice, the assessment and negotiation of a proposed alteration at this stage will be consistent with the NER 5.3.9 process described in the NER 5.3.9 Process Guideline. However, the access standards for such an alteration would be reassessed as part of the application to connect process under NER 5.3.4A and would be formalised in a subsequent 5.3.4A letter (replacing the initial letter), rather than a NER 5.3.10 notification.

The Proponent should check with their NSP and AEMO how their proposed alteration will be treated under transitional arrangements for any rule changes that occur subsequent to the initial 5.3.4A letter but prior to execution of the connection agreement.

4. As per NER 5.3.9 (d), the proposed alteration in column 1, including power converters, is deemed to affect certain Clauses. The like for like fact sheet states that replacing subcomponents that do not impact performance against S5.2 does not require 5.3.9. However, if we only replace a sub-component of the converter like IGBT. Does this case meet 5.3.9 criteria?

If the proposed replacement of the sub-component does not change the simulation models of the system (for example, the PSCAD average model), NER 5.3.9 will not apply. However, some IGBT replacements may impact the detailed PSCAD model even if the average PSCAD model is not impacted. In such situations, the Proponent will need to provide the updated detailed PSCAD model, in line with the Power System Model Guidelines (PSMG).

5. In case of combining R1 and 5.3.9 what will the proponent receive as the outcome? 5.3.10 or R1 registration? Or Both?

When the NER 5.3.9 alteration is assessed as part of the R1 capability assessment, the Proponent will receive:

- a NER 5.3.10 notification to confirm the completion of the alteration assessment, and
- a NER 5.3.7A (k) notification to confirm the completion of the capability assessment.

6. For projects with longer development timeframes, such as offshore wind, how does the NER 5.3.9 change process apply where a proponent initially relies on generic models during the application phase and subsequently provides OEM-specific models and tuning as the project design matures?

The NER 5.3.9 process only applies for proposed alterations of schedule 5.2 plant which:

- meets the NER 5.3.9 criteria, and
- has existing performance standards that have been included in a signed Connection Agreement.

Performance standards would not typically be agreed based on based on generic models. However, if they are, there would be an expectation that site-specific models will be provided, and performance against the agreed performance standard verified as part of the R1 capability assessment process.

7. Considering that the 5.3.9 process was created for modifications in existing synchronous machines (i.e. very different process than R1 for IBRs), is it a valid approach to capture all of modifications under the same umbrella?

The NER does not limit the NER 5.3.9 process to a particular type of technology. NER 5.3.9 applies if a proposed alteration meets the NER 5.3.9 criteria.

8. Do protection relay firmware updates require notification?

NER 5.3.9 will not apply to firmware updates that do not meet the NER 5.3.9 criteria. Some firmware updates can affect the structure or underlying functionality of controller systems which may impact performance. Therefore, Proponents should engage with the NSP and AEMO to discuss the proposed update and its expected impact.

If NER 5.3.9 does not apply to the firmware update, the Proponent should carry out testing to confirm that the update has not impacted performance and inform the NSP and AEMO of the proposed update to assist with operation of the network.