Meeting record

Meeting:	Siemens and AEMO meeting, RE: Power System Model Guidelines consultation submission.
Date:	10 May 2023
Time:	4:00pm – 5:00pm (AEST)
Location:	Microsoft Teams meeting

Attendees:

Name	Company, Department
Nilesh Modi	AEMO - Lead Specialist, Operational Analysis & Engineering, Operations.
James Guest	AEMO - Senior Engineer, Operations.
Hayley Gilbert	AEMO - Stakeholder Engagement Advisor, Government & Stakeholder.
Kim Hoej Jensen	Siemens Gamesa – Chief Engineer of Simulation Models.
Ignacio Perez Santos	Siemens Gamesa – Team Leader, Onshore EMT Models.
Daniel Ryan	Siemens Gamesa – Grid Connection Engineer.
Behzad Naderi	Siemens Gamesa – Grid Connection Engineer.
Naser Nourani Esfetanaj	Siemens Gamesa – Power Systems Engineer.

Disclaimer

This document provides an overview of the main points of discussion at a meeting convened by Siemens, on 10 May 2023 to provide information and facilitate further discussion on matters relating to Siemens' submission to the Power System Model Guidelines which AEMO is currently consulting on. Readers please note that:

- This document is a summary only and is not a complete record of discussion at the meeting.
- For presentation purposes, some points have been grouped together by theme and do not necessarily appear in the order they were discussed.
- The views expressed at the meeting and reflected here are not necessarily those of AEMO.

Meeting Notes

This meeting was to discuss five main points raised by Siemens;

- Item 1. Fortran DLL interface and B4.82/IEEE wrapper and interface:
    - Siemens sought clarification on the requirements and main objectives of the Guideline updates to these files.
    - AEMO noted that precompiled files received are highly specific to the visual studio version they are compiled in, and future versions of the software may not accept these files. Therefore, the desire of the updated Guidelines is for OEMs to use a format that will be guaranteed to be compatible in the future. The only way to futureproof this is for all code to be provided in DLL and interface between PSCAD and DLL is open-source code.
    - Siemens noted that they have not previously experienced issues with portability of precompiled files for different versions of visual studio with their wind turbine models. However, acknowledged AEMO's experience with models from other OEMs.
- Item 2. Open electrical blocks (uncompiled) and forward compatibility:
    - Discussion about requirements under the current Rules and Guidelines for understanding what is possible regarding complied/uncompiled files.
    - Siemens suggest there is an IP risk for themselves and other OEMs. AEMO noted they have not had any other OEMs raise this IP risk issue.
    - Sharing arrangements for PSCAD models was discussed, with AEMO confirming the models are for AEMO and NSPs only, however, that they may also be shared with third party consultants from time to time. Siemens asked if AEMO would accept two different models; one for AEMO and another for NSPs that could be shared with consultants. AEMO advised maintaining two types of models isn't favourable, however note the Guidelines do not change the Rules on what is currently acceptable.
    - Siemens asked AEMO to give advice on the possibility of submitting two models (which would be the same, only one would use Blackbox function), with the open model being stored securely by AEMO in a similar manner to the current practice of submitting uncompiled PSSE Fortran code. AEMO advised it would not accept two models however would consider accepting one uncompiled model that can be blackboxed internally by AEMO for release in the 4-state PSCAD model.
- Item 3. Other possibilities for securing forward compatibility of PSCAD models:
    - This item was discussed as part of item 2 above.
    - It was noted there will be a transition period once the Guidelines are published and that AEMO will work with OEMs to ensure smooth transition and compliance with updated Guidelines.
- Item 4. Model and wind farm aggregation:
    - Siemens have seen recent connections for wind and solar, whereby during connection there was a push from AEMO/NSP to split the aggregates rather than have a single aggregate.
    - Multiple transformers make splitting aggregates difficult, and Siemens point out there are not changes in the Guidelines to detail this or allow more flexibility.
    - AEMO suggest that fewer aggregates should be better.
    - Siemens flagged this as something AEMO could look at during this update to the Guidelines to make this clear and could detail a single easiest way possible for all parties. AEMO noted this.
- Item 5. Any other future requirements for PSCAD modelling proposed by AEMO:

- Technical discussion on file requirements for various software platforms and what is/could be compatible.

- AEMO did not have anything to raise as part of the PSMG consultation, however, did note the Connections Reform will shortly establish some working groups with OEMs and encouraged Siemens to take part in those groups.