

MEETING SUMMARY

MEETING: Connection Simulation Tool Industry Working Group Session 2
 DATE: Thursday, 17 March 2022
 TIME: 10am – 12noon
 LOCATION: Virtual
 TELECONFERENCE DETAILS: Teams

ATTENDEES:

NAME	COMPANY / DEPARTMENT
Margarida Pimentel Alistair Wells Elliott Kuhlmann Dave Lenton Sarah Squire Chris Graham	AEMO
Thai Vo	GE Renewable Energy
Sylvain Grandidier	Siemens Energy
Charbel Antoun	TransGrid
Corey Chin	Powercor
Amir Mehrtash	Power System Consultants
Scott Partlin	NEOEN
Hieu Nguyen	Powercor

APOLOGIES:

NAME	COMPANY / DEPARTMENT
Natasha Thompson Ronny Schnapp	NEOEN
Patrick Rossiter	GE Renewable Energy
Wai-Kin Wong	Hatch

Disclaimer - This document provides an overview of the main points of discussion at an industry working group convened by AEMO on 17th March 2022 to provide information and invite perspectives and feedback on matters relating to the Connections Simulation Tool.

Readers please note that:

- This document is a summary only and is not a complete record of discussion at the forum.
- 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 forum and reflected here are not necessarily those of AEMO.
- Views will be taken into consideration through the development of the solution however there is no commitment to address all points raised.

The working group session covered previous feedback, a demonstration of the tool, proposed support channels, rollout approach and pricing.

Feedback was noted as follows;

1. Feedback from previous sessions

a. Network Visibility

- i. Users will be provided support to understand how to use the tool. This includes access to local area representative PSSE model with other plants in the network modelled as individual machines on that plant's POC bus (ie how big the plant is etc).
- ii. The case when an OEM uses the tool independently of a registered participant (ie to study a generic model) is still being worked through. They will likely be provided with a network diagram so they can nominate a point of connection for the studies.

2. Demonstration section

a. Key Generators

The number of committed generators needing to be integrated for network studies of a new plant can be up to 30-50. Studies are conducted on 10-20 faults. The number of faults studied would depend on the location/complexity of the site.

AEMO noted that if sufficient generators needed to be integrated into the PSCAD models for a particular plant using the tool, it could add time to the quoted "2 week setup period" (where AEMO sets up the tool for the user). This is however avoided by the tool's BAU requirement on AEMO to maintain an up-to-date PSCAD V5 network model which includes committed generation, meaning many of those up to 30-50 plants should already be captured prior to that "2 weeks setup period".

In response to 'Would AEMO setup and test several plant dispatch scenarios before setup of the provided model into the tool?': No, as the user will have the complete flexibility to test these things themselves.

It is expected that most projects would have completed several PSCAD/PSSE SMIB and/or PSSE network studies prior to using the tool. The tool can then be used to further test the user's models in whatever plant configuration the user wants to set up, tuning and fixing any issues that arise (this is the primary expected purpose of the tool).

AEMO will integrate the generators into the models and users will have access to their own model and can set up appropriate scenarios for testing their plant. AEMO can check details regarding the performance of network-side elements which cannot be determined from the requested/provided network signals via a request to do so through the support channels which will exist in the tool. Effort spent on the project by AEMO will be reflected in charges.

b. Software

AEMO is transitioning to PSCAD 5 and this will be reflected in the requirements to use the tool. Models will need to be in PSCAD v5 compatible with the associated AEMO nominated Fortran compilers.

c. Licencing

The use of the tool includes the associated PSCAD licences. It is available on a virtual server so it is not required on the user's computer.

d. Multiple trips

It was noted that tripping refers to the time at which the fault itself is applied. The remote and near-end breaker times are captured within the breaker components themselves on the network side (within the master server). AEMO will set up breaker timings per what we would test internally within AEMO. Complex faults can be set up via a request.

e. Uploading of new models.

Within the currently confirmed functionality, users cannot upload a new model but would need to resubmit. In this situation, you would submit a new model by way of creating a new 'case' (new instance of the tool), while we would already have the AEMO network models ready from your previous 'case', and so it would be much faster. Any movement of files into the system is completed at the AEMO end for security reasons.

f. Results

Model modifications can be exported as a snapshot, and this copy of the model will then be reviewed by AEMO staff and provided back to the user.

3. Support

- a. No concerns or comments were raised.

4. Timelines

- a. Revised effort for this Working Group identified. The fourth session will be divided into two smaller sessions over the coming months. No concerns were raised.

5. Rollout

- a. No feedback received

6. Pricing model

a. Time to proficiency

It was noted that it could take users to take time to become proficient in the use of the tool. They queried whether the system could be made available to enable users to try it before using it and paying full price. The project will assess this option.

b. Intermittent use.

Members indicated that they would probably use the tool over several months. During this time there would be periods of investigations and model

preparation outside the use of the tool. It was raised that it would be valuable to be able to pause the tool as needed.

This is not the current structure of the tool. This is noted as a potential future development area.

c. Reasonable fees

Indicative fees were discussed. It was noted that they were viable if the tool speeds up the connection process so they can start building the plant sooner. However, it would not be the case if the tool does not improve the actual model approval process.

OEM could see value for a new solution where the tool could prove equipment validity in the Australian market (dependant on the size of the solution).

d. Invoiced organisation

Typically developers would pay for costs for a tool such as this. The proposed approach would mean that the company undertaking studies in the tool would have to pass costs through to the participant.