MEETING SUMMARY

MEETING:	Connection Simulation Tool Industry Working Group Session 1
DATE:	Friday, 5 November 2021
TIME:	1pm – 3pm
LOCATION:	Virtual
TELECONFERENCE DETAILS:	Teams

ATTENDEES:

NAME	COMPANY / DEPARTMENT
Siham Knowles Alistair Wells Elliott Kuhlmann Yuchao Ma Dave Lenton Sarah Squire	AEMO
Thai Vo Patrick Rossiter	GE Renewable Energy
Sylvain Grandidier	Siemens Energy
Charbel Antoun	TransGrid
Hieu Nguyen	Powercor
Amir Mehrtash	Power System Consultants
Ronny Schnapp	NEOEN
Wai-Kin Wong	AGL

APOLOGIES:

NAME	COMPANY / DEPARTMENT
Scott Partlin Natasha Thompson	NEOEN
Steve Robinson Bertrand Etchepare	AEMO

Disclaimer - This document provides an overview of the main points of discussion at an industry working group convened by AEMO on 5th November 2021 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 members were provided with an overview of the tool including background, timelines, benefits, and a demo of the minimum viable product (MVP) version of the tool.

1. CSTIWG Terms of Reference

No changes to the Connections Simulation Tool Industry Working Group Terms of Reference were recommended. The group will continue to work aligned with this document.

2. Users of the Connections Simulation Tool

The Group identified the following new scenarios to use the tool

- **Preliminary Studies**
  The tool could be used by Developers, OEMs and Consultants to conduct preliminary studies very early in the development process for a project.
    - This would be to investigate options for a project prior to developing detailed designs
- **OEMs Equipment test**
  OEMs could use the tool to test equipment under certain circumstances (in a weak area of the network).
    - AEMO could provide system strength studies to be used for this purpose.
- **Incumbent Generator**
  The tool could be made available to enable studies to be conducted on an existing plant that plans to extend or change equipment.
- **NSPs**
  NSPs could reduce internal work by using the tool (they would not need to maintain their models)
    - A feedback mechanism on improving the model where discrepancies are found would help build trust in the model.

The benefit of using the tool was identified for all stages of the connections process. The early stages were considered particularly helpful to develop better confidence in the designs. It was noted that later in the process would be simpler to set up from the AEMO perspective which would also impact associated costs.

3. Value

Project Type
The following projects were seen as providing the greatest value for using the tool

- **High Risk projects**
  Connecting to a part of the network that is less resilient.
- **Projects of long duration**
  The tool would help mitigate risks in projects that take many years to develop

- **Large projects**
  Larger projects would likely warrant the spend on the tool.

  It was noted that good experience using the tool may result in wider use of it.

Other Identified Benefits

- The use of the Connections Simulation Tool was seen as a way to
  - De-clog the upstream connections process
  - Get faster resolution of connection issues

Barriers

The following were identified as barriers to using the tool

- **Set-up time**
  Time is required to set up the environment for each site. If the time lapse between requesting and accessing the tool was too long it may not be worthwhile. 1-2 weeks was considered reasonable. Longer than a month was considered a barrier.
- **Set-up Requirements**
  Developers might not want to use the tool if they cannot influence the setup parameters of the network (particularly load flow), and have some flexibility to alter the conditions they are studying
- **Connection to the Distribution Network**
  If the plant is connected to the distribution network, it is expected additional set-up time would be required for the provision and integration of local network data into AEMOs models.
- **Ease**
  Developers might not want to use the tool if they feel they need to do endless studies. Sometimes it's easier to get AEMO/NSP to undertake the studies.
- **Certainty**
  Developers want certainty the tool will result in fewer iterations.
- **Costs**
  Tool fees would need to take into account the balance between effort, risk and time.
- **Visibility**
  If a sufficient level of visibility is not provided (whether through measurements, direct network visibility, or other means) the tool would be less useful and its use-cases would diminish.
- **Alignment of Network Data in 4 state model**
  If NSPs become users, they would require the ability to update model data per their own records. Without a way to update models where it is deemed required, confidence in the tool would be reduced.

Opportunities

- **Variable Studies**
  A value was seen on enabling users to run studies on their plant in different situations (eg strong, medium or weak grid).
- **Provision of Matching PSSE case**
  A value was seen in providing users with a PSSE snapshot that mimics the PSCAD network case that is not visible to them (or a similar method to increase the visibility of the network configuration).

4. Cost

Detailed costs considerations are to be discussed in the next session.