

Connections Simulation Tool

Connections Simulation Tool
Industry Working Group (CSTIWG)

Session 4
12th July 2022



*We acknowledge the Traditional Owners
of country throughout Australia and
recognise their continuing connection
to land, waters and culture.*

*We pay our respects to their Elders past,
present and emerging.*

Agenda

#	TIME	TOPIC	PRESENTER
1	5 mins	Welcome	Margarida Pimentel
2	10 mins	Timeline	Alistair Wells
3	15 mins	Feedback from previous sessions	Alistair Wells
4	15mins	The Contract Process	Alistair Wells
5	5 mins	SAM Portal	Sarah Squire
7	20 mins	Pricing Model	Alistair Wells
8	15 mins	Adoption Approach	Sarah Squire
9	5 mins	Next steps and close	Alistair Wells

Online Forum Housekeeping

Session



Recorded



Please mute your microphone, this helps with audio quality as background noises distract from the information being shared.

Join the conversation or use the “raise hand” function for any questions or comments

Be respectful of all participants and the process.

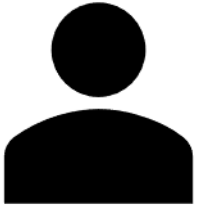
We will record this session for note taking purposes.

This presentation and the associated high-level summary of the meeting will be uploaded to the AEMO website

The meeting will adhere to the AEMO Competition Law Meeting Protocol outlined in the appendices

Information in this presentation is indicative and subject to change throughout the development of the solution and into operations

The AEMO Project Team



Margarida Pimentel
AEMO Business Sponsor



Alistair Wells
Project Lead



Chris Espinoza
Program Manager



Sarah Squire
Change Manager



Kevin Gupta
Business Analyst

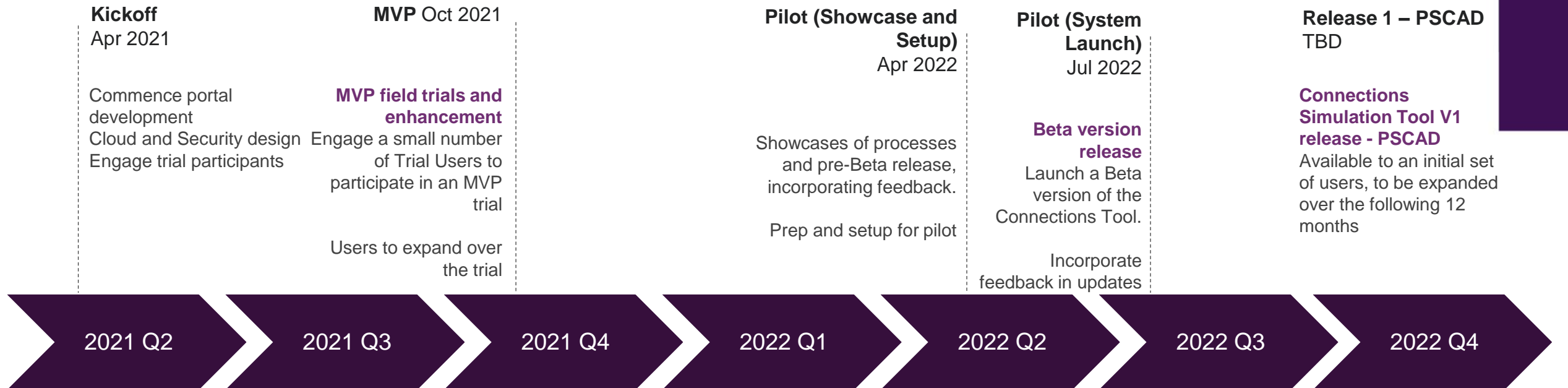


Nathan Crooks
Lead Engineer



Maddison Coppard
Engineer

Connections Simulation Tool Revised Rollout



* Dates are indicative

Industry Working Group
(indicative focus and timing)

Session 1

- Terms of Reference
- Industry scenarios
- Benefits / Barriers
- Opportunities

Session 2

- Features
- User Experience
- Pricing Model
- Functionality
- Process

Session 3

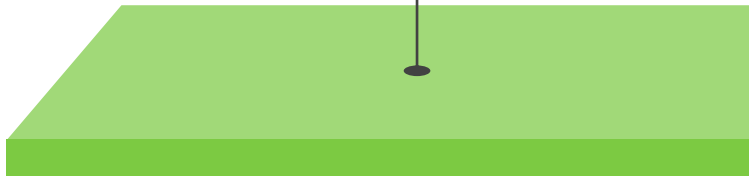
- Support
- Rollout

Session 4

- Cost Model
- Agreements
- Adoption

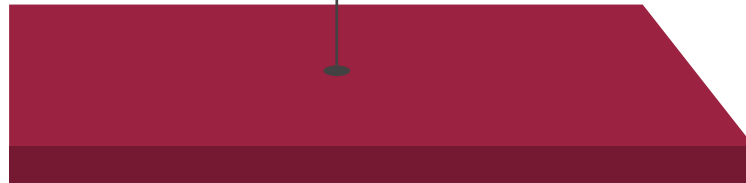
Your Feedback

Thank you for your feedback from the previous sessions. An update of outstanding feedback is summarised below.



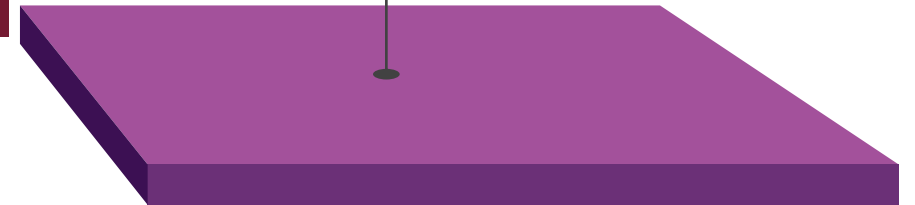
Supported in Release 1

- A mechanism for users to view ongoing costs
- Provide users with a PSSE snapshot or network diagram
- A list for users showing what faults are already available in the case (the default list)
- Ability to amend a submitted model
- Outputs (results or model files excluding executable files) will be sent to the user, not the Registered Participant
- Faults and measurements can be requested in the 'Create Case' step, and will be included where it requires a reasonable amount of effort from AEMO to setup



Currently under assessment for Release 1

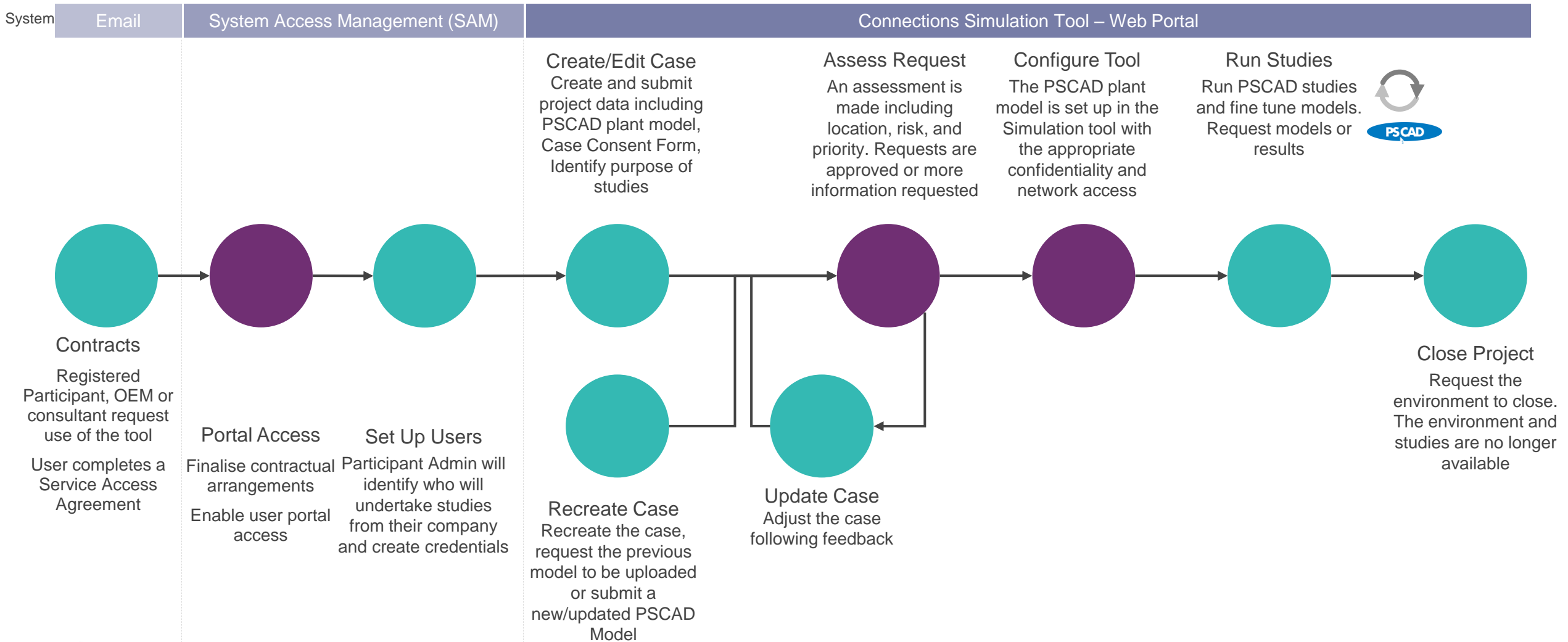
- PSCAD template to aid the case submission.



To be considered in future releases.

- The ability for OEMs to test models independent of a project
- Restricted access within a company
- Cost threshold triggers to notify the user company's PA
- Predefined end date for cases
- Ability to view and edit elements beyond the plants POC (including faults, measurements etc)
- Flexibility on fault conditions (Inclusion of CBF, CB and reclosure times, etc)
- Simulation batch runs

Final User Process




Billing occurs on a monthly basis and invoiced to the company that undertakes the studies in the tool

Key: ● AEMO ● Developer/registered participant ● Developer or delegated Consultant/OEM (Conducts studies and is billable entity)

Agreements and Forms

There are two legal papers that must be submitted to use the Connections Simulation Tool

Service Access Agreement (SSA)



Service Access Agreement Purpose: Enables people within an organisation* to use the Connections Simulation Tool. It sets out the conditions under which users can access the tool. It references the Pricing schedule which will be available on the AEMO website.
* Sub consultants (inc Registered Participants and OEMs) can access the tool via the parent agreement when appropriate

Signed By: Authorised representative from the user company via DocuSign

When: Once only per user company before the first use of the Tool.

Information including standard service access agreement can be viewed on the AEMO website.


The process:

1. Users request an agreement through the mailbox providing key information.
2. AEMO creates and emails a SSA in DocuSign
3. User company completes and signs the form via DocuSign
4. User receives an email acknowledging the finalisation of the SSA via DocuSign.

Information Contained:

- User Company details
- Terms and Conditions

Case Consent Form (CCF)



Case Consent Form Purpose: Provides authority for the user company to run studies on a specific prospective plant and received case results / model config directly from AEMO.

Signed by:

1. An authorised representative from a user company, and
2. The Registered Participant for the plant that will be studied. Note the tool user may also be the Registered Participant.

When: Must be signed and submitted every time a case is created or recreated.

Process:

1. The template will be located on the AEMO website
2. Tool user to fill in the form relating to a specific site collaborating with the relevant Registered Participant
3. Upload the file in the Case Create or Recreate Case screens within the Connections Simulation Tool.

Information contained:

- Authorisation from Registered Participant to use the tool for a specific plant
- Details of Registered Participant, plant/project and tool user
- Invoicing details

System Access Management (SAM)

SAM is used by Participant Administrators (PA) to set up Participant Member access to AEMO's External Portal applications. For the Connections Simulation Tool, a PA will need to be nominated from each user's company. AEMO will set up the PA so they can use SAM.

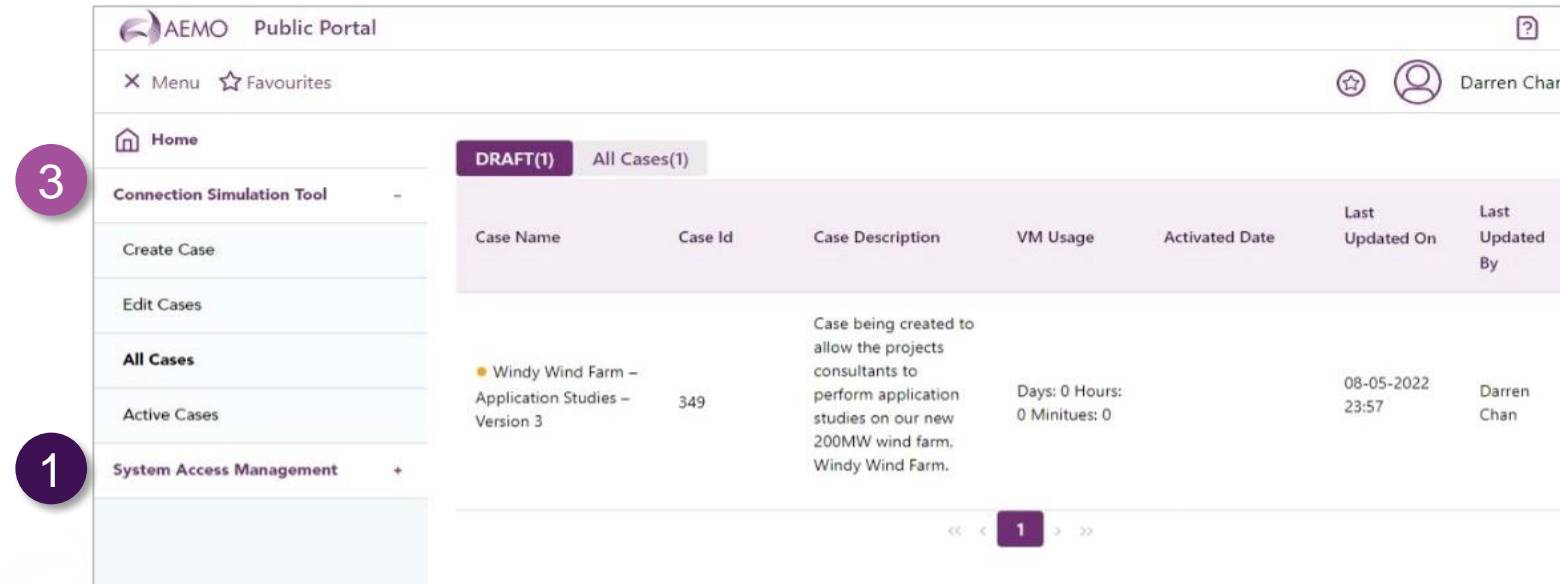
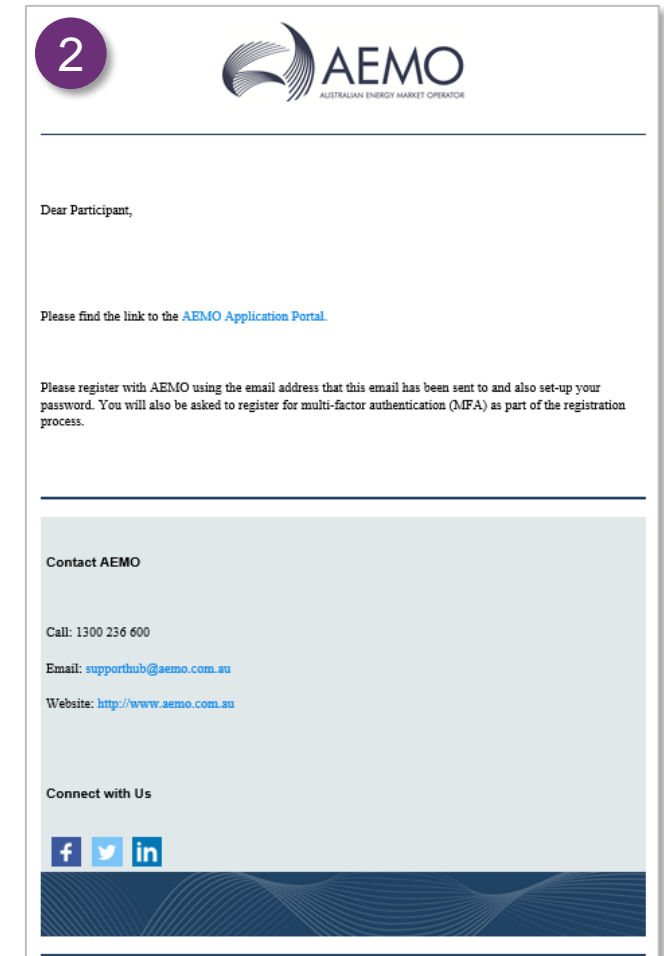


1 PA Nominates Users
The PA manages user access for their company. If required they can grant access to external users (eg if they want input from a consultant or OEM).

2 User Registers
Once a user is granted access to the AEMO Markets Portal and tool, they will receive an email requesting them to register and create a system password.

3 Start using the Tool
Once a user has access they will be able to see the Connections Simulation Tool tab in the Markets portal.

Users will be able to see all cases associated to the user company



SAM is accessed in the External Markets portal.

CST Price Model

Cost modelling for the Connections Simulation tool has been assessed over a 36 month period based on a cost recovery operating model.

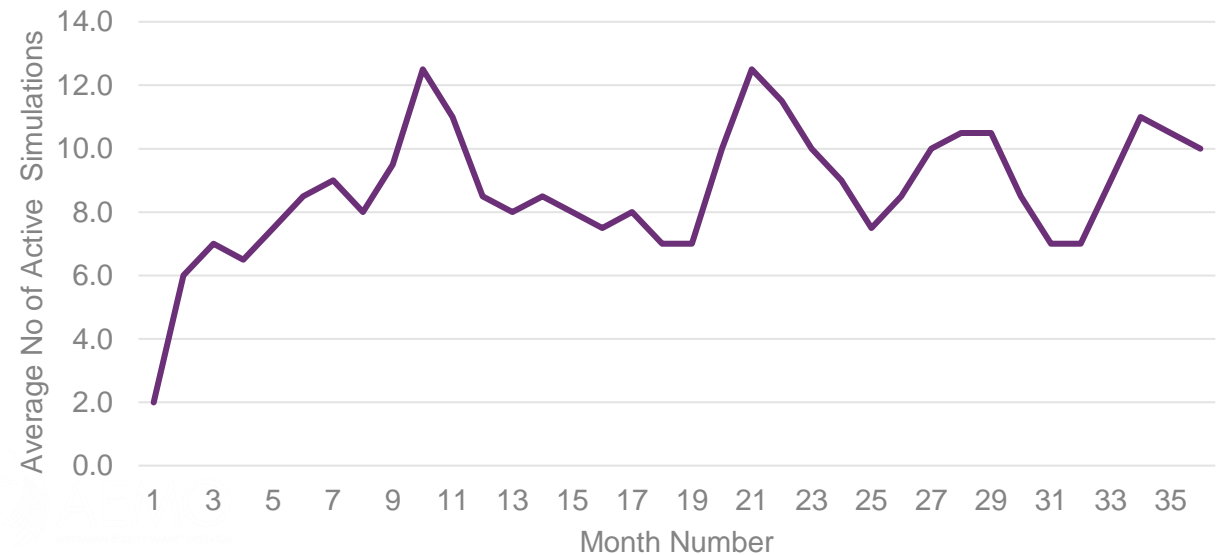
Engineering effort and environment costs will be charge on an as used basis. Other resources costs (management, administration, IT support and engineering) are absorbed into the fee structure.

Cost are based on the following assumptions

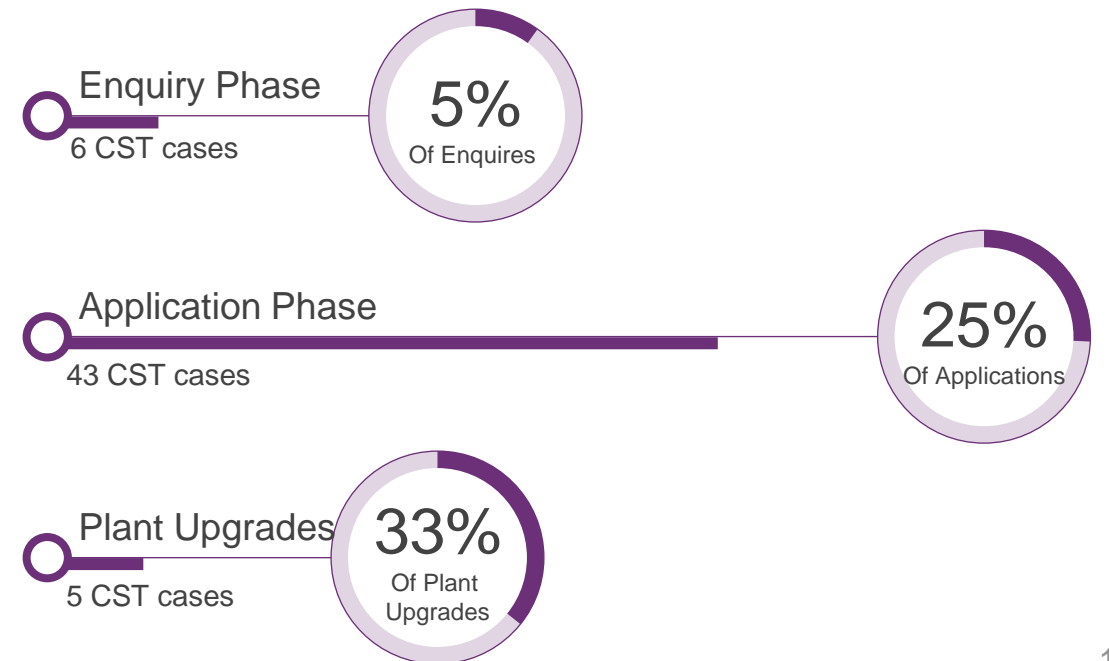
The tool will be used for 54 Cases per annum, with 20 of these being paused and recreated



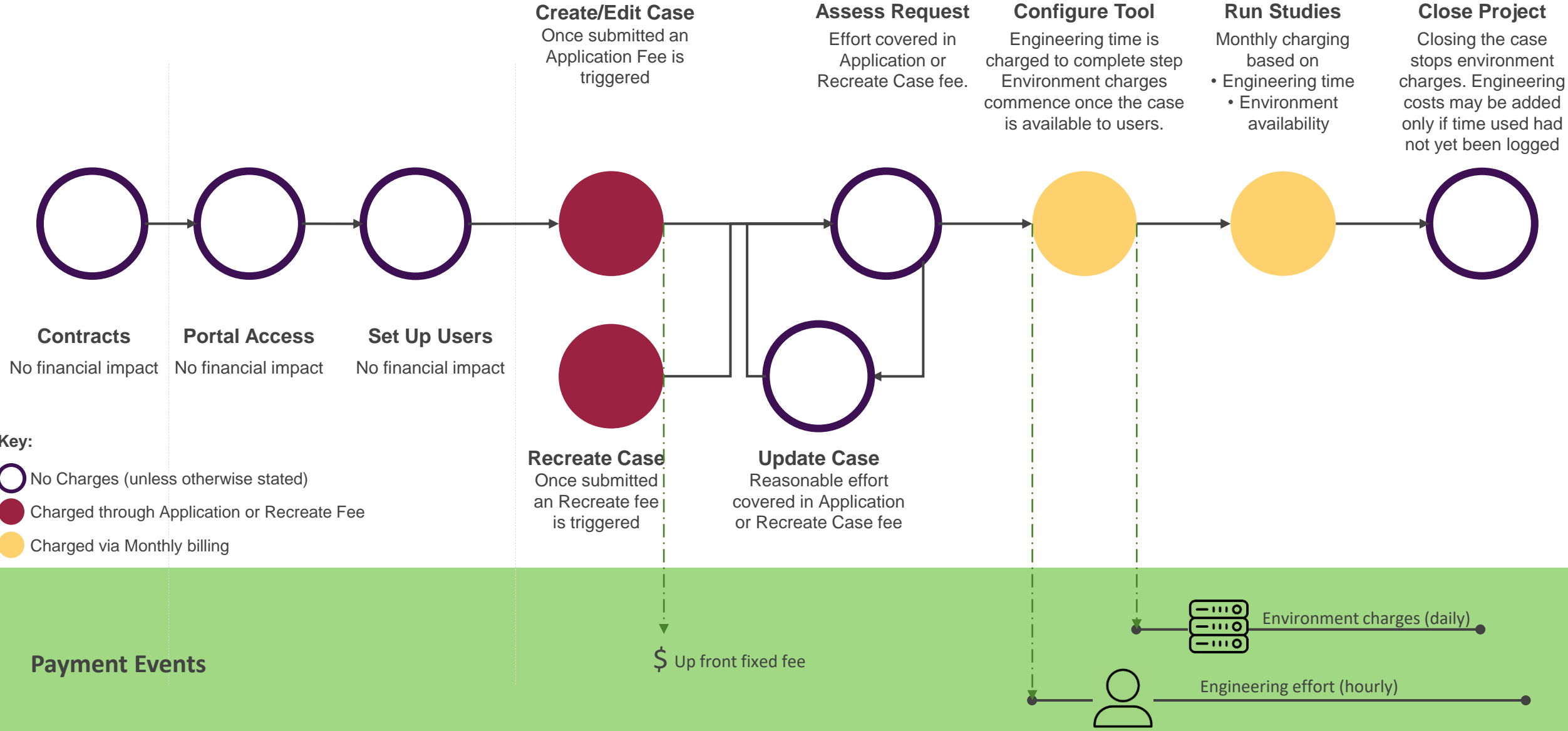
It is anticipated that there will be up to 13 active cases at one time



Demand for the CST is anticipated to align to three phases of the Connections Process and address a portion of the applications in these phases.

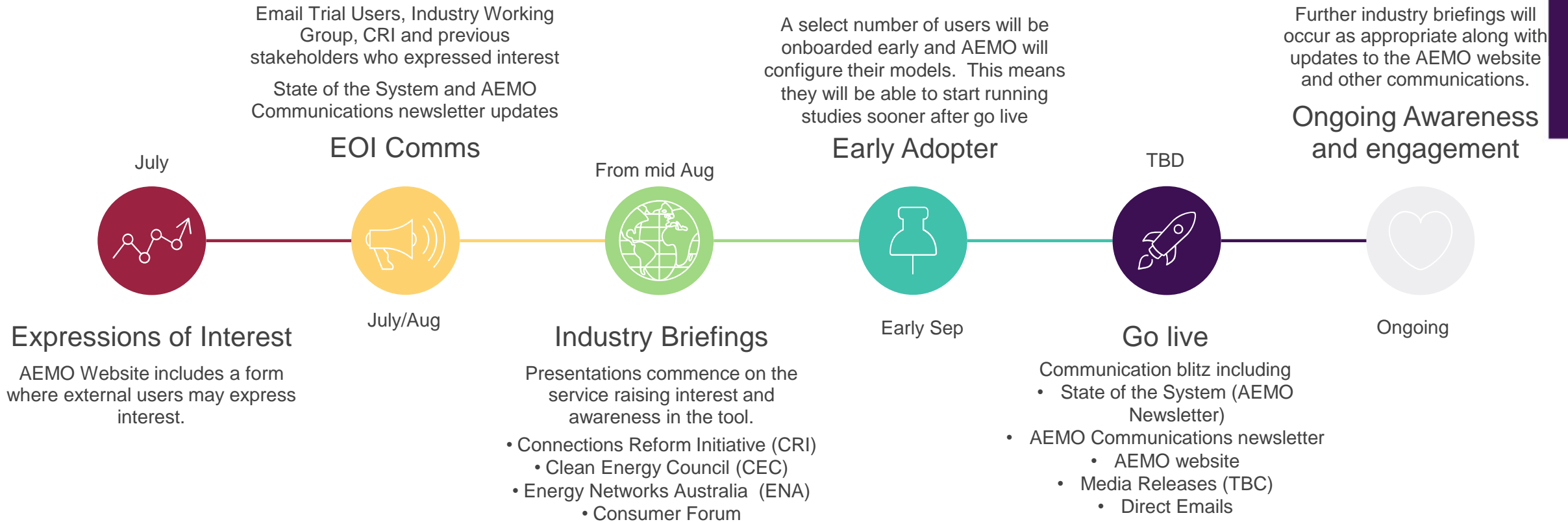


Fee Process



Industry Rollout Approach

We aim to create awareness of the tool ahead of its release so we can hit the ground running



Working Group feedback sought

Next Steps

We thank you for your valued input over the last 4 session.

Please go back to your business and provide feedback on the pricing model by 19th July 2022

If you have further feedback from today's session please email us at ConnectionsTool@aemo.com.au.

1. You will be sent a high level summary of the meeting notes from this session in the next week - prior to uploading to the AEMO website.
2. We will notify you when you can request use of the tool

Questions and further feedback Thank you

For further information visit

<https://www.aemo.com.au/initiatives/trials-and-initiatives/connections-simulation-tool-project>

or contact

ConnectionsTool@aemo.com.au



Appendices

Appendix 1

AEMO Competition Law Meeting Protocol

AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO regarding proposed reforms or other initiatives, all participants agree to adhere to the CCA at all times and to comply with this Protocol. Participants must arrange for their representatives to be briefed on competition law risks and obligations.

Participants in AEMO discussions **must**:

- Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
- Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
- Immediately and clearly raise an objection with AEMO or the Chair of the meeting if a matter is discussed that the participant is concerned may give rise to competition law risks or a breach of this Protocol

Participants in AEMO meetings **must not** discuss or agree on the following topics:

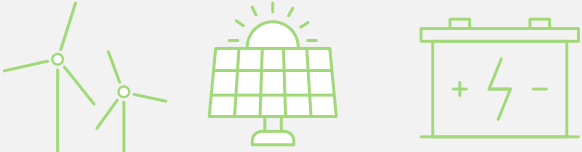
- Which customers they will supply or market to
- The price or other terms at which Participants will supply
- Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
- Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
- Refusing to supply a person or company access to any products, services or inputs they require

Under no circumstances must Participants share Competitively Sensitive Information. Competitively Sensitive Information means confidential information relating to a Participant which if disclosed to a competitor could affect its current or future commercial strategies, such as pricing information, customer terms and conditions, supply terms and conditions, sales, marketing or procurement strategies, product development, margins, costs, capacity or production planning.

Appendix 2 Demonstration Scenario


RenPower Pty Ltd

Registered Participant

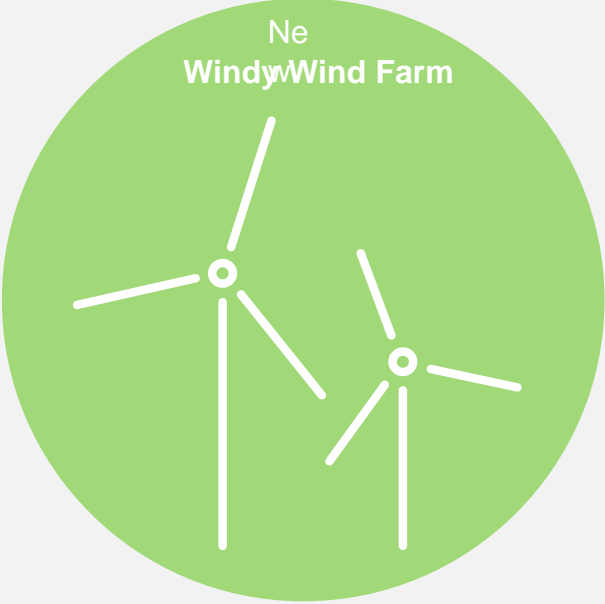


Operate several renewable plants.

They want to build a new plant



Sandeep
Project Manager



Ne
WindyWind Farm

GoodEng Consulting

Consultant

RenPower has engaged GoodEng Consulting to design their new wind plant and prepare their formal connections application.



Anisha
Engineering Manager



Chris
Engineer



AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Connections
Simulation Tool

RenPower and GoodEng have agreed to use the Connections Simulation Tool to investigate issues with their plant models.

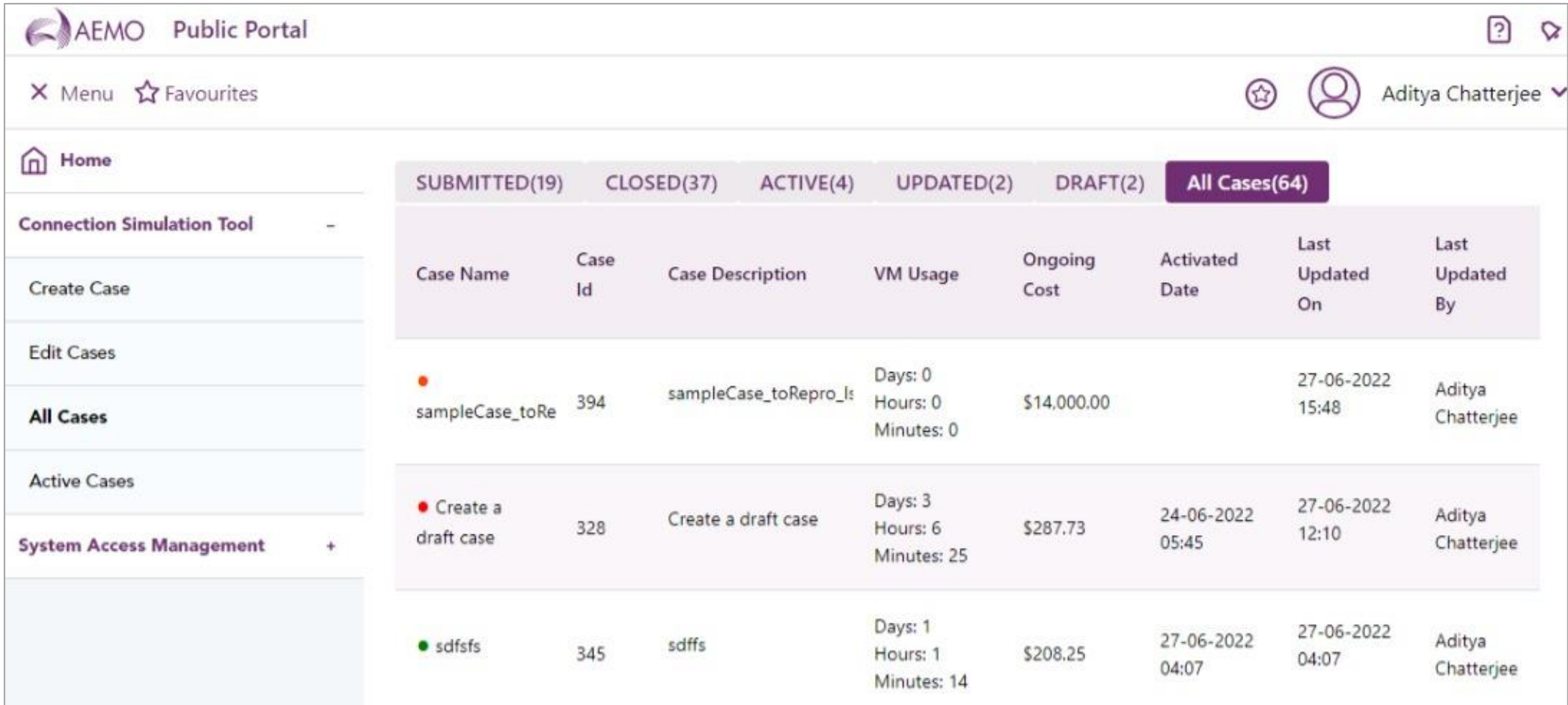
Appendix 3

Industry Working Group Members

Name	Organisation	Industry Sector
Thai Vo Patrick Rossiter	GE Renewable Energy	OEM
Sylvain Grandidier	Siemens Energy	OEM
Charbel Antoun	TransGrid	TNSP
Corey Chin	Powercor	DNSP
Amir Mehrtash	Power System Consultants	Consultant
Scott Partlin (Apology) Natasha Thompson Ronny Schnapp	NEOEN	Developer
-	AGL	Developer
Wai-Kin Wong	Hatch	Developer

Appendix 4 Costs

The total cumulative cost displayed after a case is submitted. It includes the one-off application fee or recreate case fee, AEMO engineering effort, and VM usage when a case is active.



AEMO Public Portal									
Menu Favourites		Aditya Chatterjee							
Home		SUBMITTED(19) CLOSED(37) ACTIVE(4) UPDATED(2) DRAFT(2) All Cases(64)							
Connection Simulation Tool -		Case Name	Case Id	Case Description	VM Usage	Ongoing Cost	Activated Date	Last Updated On	Last Updated By
Create Case		sampleCase_toRe	394	sampleCase_toRepro_ls	Days: 0 Hours: 0 Minutes: 0	\$14,000.00	27-06-2022 15:48	27-06-2022 15:48	Aditya Chatterjee
Edit Cases		● Create a draft case	328	Create a draft case	Days: 3 Hours: 6 Minutes: 25	\$287.73	24-06-2022 05:45	27-06-2022 12:10	Aditya Chatterjee
All Cases		● sdfsf	345	sdffs	Days: 1 Hours: 1 Minutes: 14	\$208.25	27-06-2022 04:07	27-06-2022 04:07	Aditya Chatterjee
Active Cases									
System Access Management +									