



VPP Demonstrations

Current/Prospective Participant Working Group

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	Item	Responsibility
13:30 – 13:35	Welcome, introduction and reading our Competition law protocol	AEMO
13:35 – 13:45	VPP Demonstration Update	AEMO
13:45 – 14:00	VPP Demo onboarding process overview	AEMO
14:00 – 14:10	FAQ & Information	AEMO
14:10 – 14:15	Standards Update	AEMO
14:15 – 14:25	Open Q&A	All
14:25 – 14:30	Close	AEMO

AEMO Competition Law Protocol

Competition Compliance Statement

AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA).

Guiding principles

What you must do

Participants in AEMO discussions must:

1. Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
2. Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
3. 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

What you must not do

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

1. Which customers they will supply or market to
2. The price or other terms at which Participants will supply
3. Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
4. Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
5. 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.

VPP Demonstration Update

VPP Demonstrations Updates

Current Participants:

- Energy Locals – Energy Locals & Tesla (South Australia)
- AGL (South Australia)

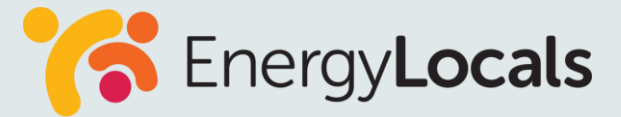
Prospective Participants:

- 5 participants undergoing enrolment (SA, QLD and NSW)
- 2 prospective participants nearing enrolment
- ~30 interested participants

Other updates:

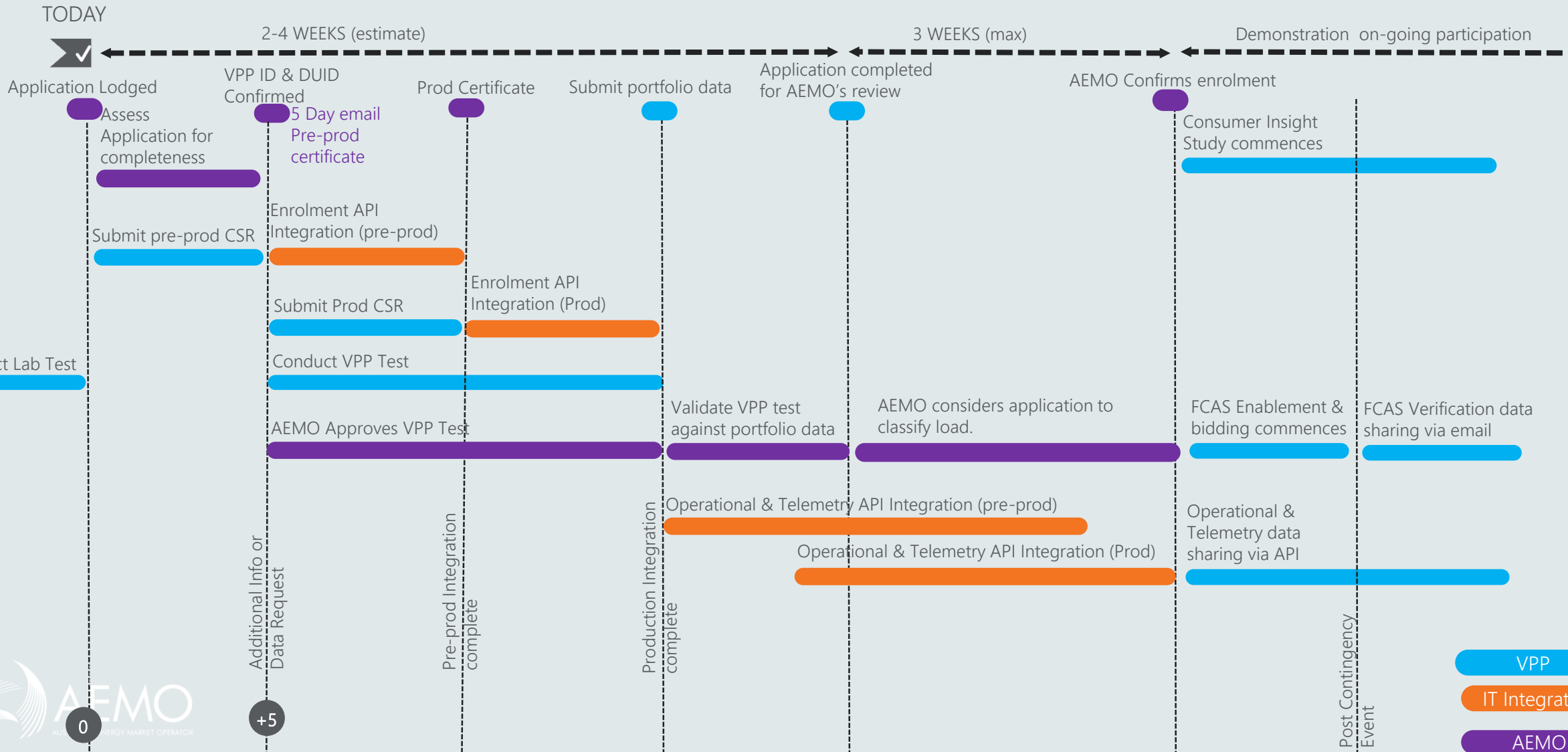
- Consumer Insights Study - Currently undertaking qualitative longitudinal surveys with Energy Locals and AGL customers.
- Updated [VPP Enrolment Form](#) and [guide](#) now available on AEMO's [VPP Website](#) – any new submissions should use the updated form.
- Updated [VPP FCAS Verification Data template](#) published.
- Enrolment, Operational & Telemetry data can now be shared with AEMO via API prior to reaching 1 MW. This opportunity is available to existing participants and those undergoing the registration process to become a Market Customer or MASP.

Note – this does not provide access to MSATS or bidding, and a project plan must be supplied that shows when 1MW will be achieved.

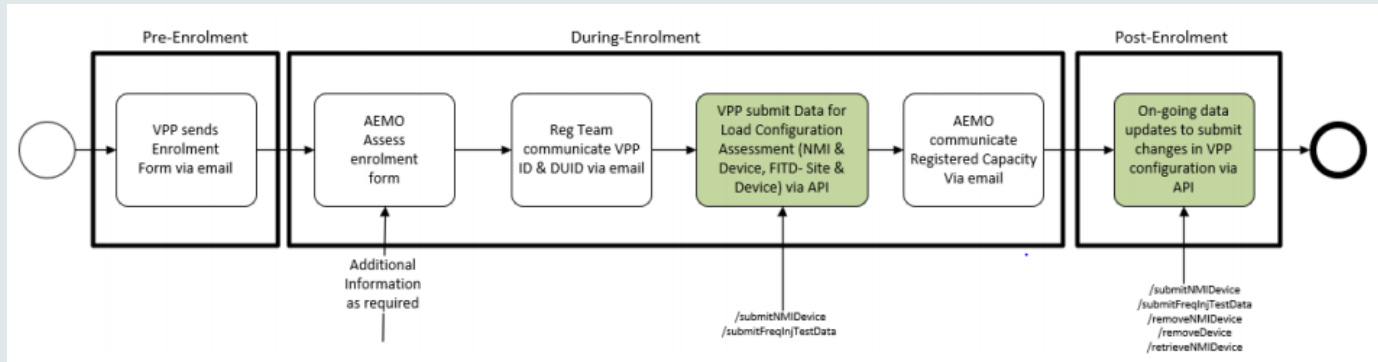


VPP Onboarding process flow

Timeline view



Enrolment Process Overview



Enrolment step	Description	Method	Outcome
Pre-enrolment	Applicant to submit <ul style="list-style-type: none"> Registration application to be a MC or MASP (if required) VPP enrolment form Complete Cyber Security Questionnaire Certificate Signing Request & Keys (if applicable) Third-party authority (if applicable) 	Email and Post	Application logged

Enrolment step	Description	Method	Outcome
During enrolment	AEMO to <ul style="list-style-type: none"> Provide Signed certificates Confirm VPP ID and DUID and send data request email to the applicant Confirm registered capacity to VPP Applicant to <ul style="list-style-type: none"> Provide additional information requested by AEMO Submit data for the ancillary service load configuration assessment: <ol style="list-style-type: none"> site level information i.e. NMI and Device data by DUID Frequency Injection Test Data (FITD) for distinct Battery types and site (i.e. DUID) VPP wide test to demonstrate capability to deliver amount of FCAS being applied for. 	VPP ID and DUID confirmed via email Certificate provided via email APIs (for data submission)	<ul style="list-style-type: none"> VPP ID & DUID confirmed Determination of Load Configuration and Capacity to deliver Contingency FCAS. Determination of enrolment in VPP demonstrations

Post-enrolment	Description	APIs	Manage VPP's fleet capacity and configuration
	On-going data submission by the participant to update VPP portfolio information and fleet configuration <ul style="list-style-type: none"> Sites getting added or taken off from fleet FCAS response verification data VPP Operational data (including Aggregated and Telemetry data) 		

Reference:

[VPP Demonstration Participant Onboarding Guide](#)
Section 2.5 – Enrolment Process Overview

FAQ & Information

General FAQ

Q. The Operational Data API indicates that operational forecasts need to be submitted as per NEM market time constructs of Pre-Dispatch and ST PASA timeframes. How do we best interpret this?

It is advised to submit 48hr rolling window forecasts for the 5 minute interval operational and availability data. For the 30 minute interval availability data, it is advised to submit 192hr rolling window forecasts.

For submitOpsForecast and submitAvailForecast5Min

- Time horizon of forecast is 48 hours rolling window
- Time resolution is 5 mins
- Re forecasted every 5 mins.

For submitAvailForecast30Min

- Time horizon of forecast is 8 days or 192 hours rolling window
- Time resolution is 30 mins
- Re forecasted every 30 mins.

Refer to example on next slide

Example – Operational and Availability Forecasts

5 min interval: forecast data

Start Time	18/08/2020 10:00
Time Measurement	Dispatch Interval time ending (i.e. 10:00 represents measurements for period 9.55 to 10:am).
Re-forecast	Re-forecasted every 5 mins for next 48 hrs
Resolution	5 min
Time horizon	48 hrs
No of intervals	576

Interval #	Measurement Time
1	18/08/2020 10:00
2	18/08/2020 10:05
3	18/08/2020 10:10
...	...
576	20/08/2020 9:55

30 min interval: forecast data

Start Time	18/08/2020 10:00
Time Measurement	Trading Interval time ending (i.e. 10:00 represents measurements for period 9.30 to 10:am).
Re-forecast	Re-forecasted every 30 mins for next 192 hours
Resolution	30 min
Time horizon	192 hrs (or 8 days)
No of intervals	384

Interval #	Measurement Time
1	18/08/2020 10:00
2	18/08/2020 10:30
3	18/08/2020 11:00
...	...
384	26/08/2020 9:30

General FAQ

Q. AEMO require 3 additional participants to be enrolled by 31 October 2020 to meet the extension criteria for the VPP Demonstrations. What needs to be done for the consumer insight survey to meet this criteria (in addition to participating in FCAS markets and sharing data with AEMO)?

To meet this criteria, the participant must have had the consumer insights survey **distributed** to at least 75% of their customers.

Q. When do we complete the VPP wide test?

This can only be completed after AEMO has signed off the results from the frequency injection/lab tests.

Q. How do we submit the Frequency injection test/lab test results and the VPP wide test results?

These need to be submitted to AEMO using the [VPP FCAS data template](#) available on AEMO's [VPP Demonstration website](#).

Q. How many of the FCAS markets do we need to participate in?

AEMO would prefer participants participate in all markets, however, if you are unable to participate in all markets, please contact us via DERProgram@aemo.com.au to discuss.

Please also note that the same capacity does not need to be available across all markets.

E.g. A VPP may have 2 MW raise and 1 MW lower.

Standards Update

Uplift activities around standards:

- Voltage Disturbance Ride Through capability
- Battery disconnections
- Droop settings
- Interoperability
- [Initial Standard consultation](#)

Open Q&A

Getting In Touch

Please send all questions, comments and feedback to:

DERProgram@aemo.com.au

This will support us in responding promptly with the right information.

Please continue to send queries through to the DER Program mailbox.

CSBA Contact Details:

Please contact **Sabrina Cook** from CSBA for Consumer Insight study related queries:

Sabrina Cook | Customer Experience Consultant

Sabrina.cook@csba.com.au

M:+61 452 622 390

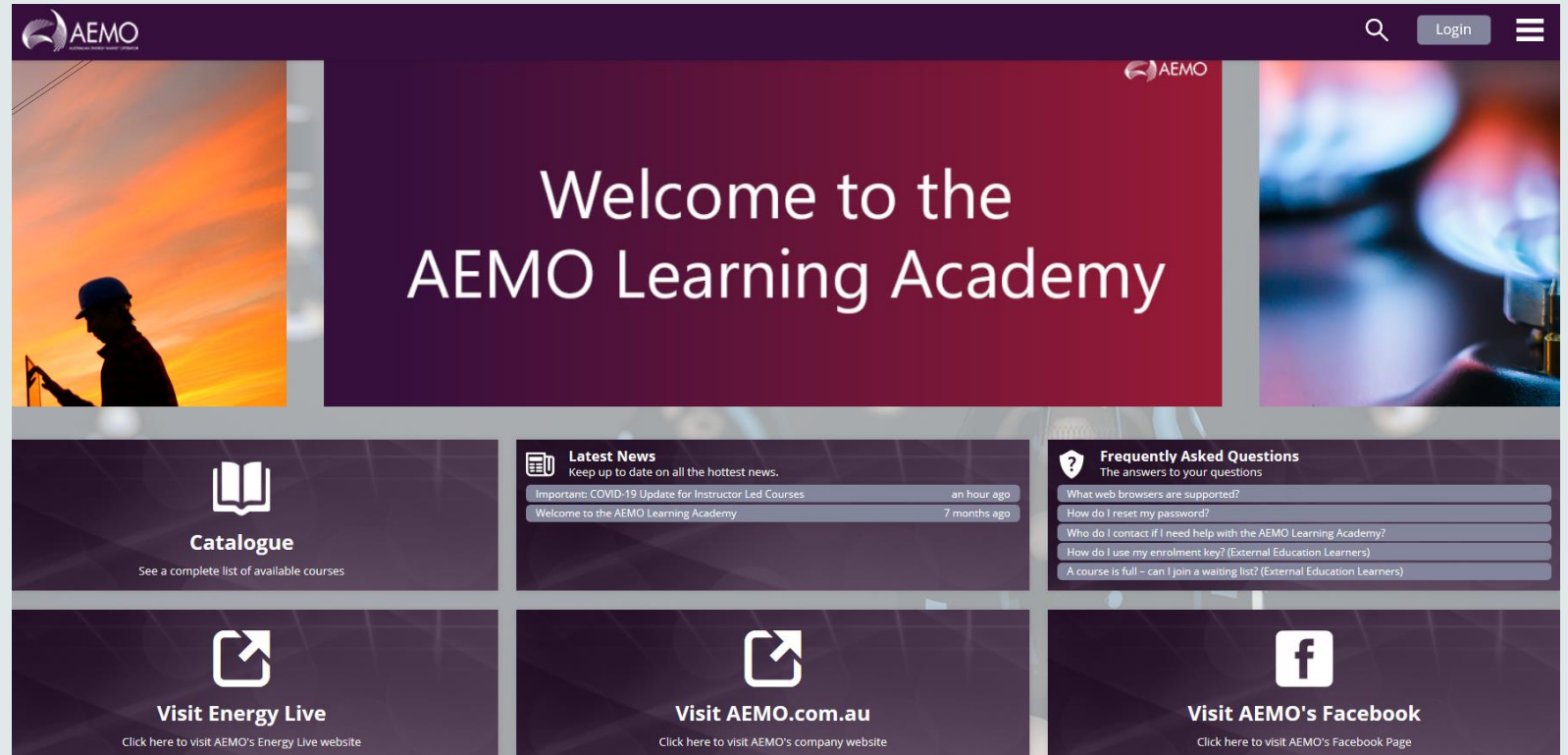


Close

- Next Meeting: 22 October 2020
- All questions for FAQ to be submitted: 1 October

Further information?

AEMO offers a National Electricity Market (NEM) overview training - visit AEMO's [Learning Academy](#) for details on upcoming course.



The screenshot shows the AEMO Learning Academy website. The header features the AEMO logo, a search icon, a 'Login' button, and a menu icon. The main banner area has a dark purple background with the text 'Welcome to the AEMO Learning Academy' in white. To the left of the banner is an image of a person in a hard hat looking at a device against a sunset background. To the right is an image of a person's face in profile, looking at a screen. Below the banner are three main content blocks: 1. 'Catalogue' with an open book icon and the text 'See a complete list of available courses'. 2. 'Latest News' with a calendar icon and the text 'Keep up to date on all the hottest news.' It lists two items: 'Important: COVID-19 Update for Instructor Led Courses' (an hour ago) and 'Welcome to the AEMO Learning Academy' (7 months ago). 3. 'Frequently Asked Questions' with a question mark icon and the text 'The answers to your questions'. It lists four questions: 'What web browsers are supported?', 'How do I reset my password?', 'Who do I contact if I need help with the AEMO Learning Academy?', and 'How do I use my enrolment key? (External Education Learners)'. Below these are three navigation buttons: 'Visit Energy Live' (with an external link icon), 'Visit AEMO.com.au' (with an external link icon), and 'Visit AEMO's Facebook' (with the Facebook 'f' logo).