



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
14:00 – 14:05	Welcome, introduction and reading our Competition law protocol	AEMO
14:05 – 14:15	VPP Demonstration Update	AEMO
14:15 – 14:30	VPP Demo onboarding checklist overview	AEMO
14:30 – 14:45	FCAS Specification document overview	AEMO
14:45 – 14:55	FAQ & Information	AEMO
14:55 – 15:25	Open Q&A	All
15:25 – 15:30	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:

- 3 participant undergoing enrolment
- 5 prospective participants nearing enrolment
- ~30 interested participants

Demonstration status update:

- VPP Demonstrations Knowledge Sharing Report #2 published.
- Onboarding checklist published
- AEMO will revisit the term 'VPP' and other tests that may be undertaken as part of the demonstration, at a later date – thank you for your input.



VPP Demonstration - Extension

- AEMO confirmed the extension of the VPP Demonstration to June 2021.
 - The extension will facilitate a broad range of technologies and businesses to participate in the demonstration.
 - AEMO and industry will obtain further insights into the technical, market and consumer impacts of the DER participation in contingency FCAS markets.
- The extension until June 2021 is conditional on having at least three (3) additional participants fully enrolled by 31 October 2020.
 - These additional participants will need to be fully functioning (i.e. bidding, sharing data and participating in consumer insights survey)
 - AEMO may review the decision to extend the demonstration, if this condition is not met.
- During FY21, AEMO will be working with industry and consumer groups to explore the on-going arrangements for DER to participate in the contingency FCAS markets.
 - We will engage with active and potential VPP participants on the technical settings, business models and regulatory arrangements to support long-term arrangements for DER participation in FCAS markets - expected to commence in FY22.

VPP Onboarding Checklist Overview

[Available here](#)

FCAS Specification Overview

[Available here](#)

FCAS delivery considerations

Value stacking

- Will the VPP continue to do energy arbitrage when enabled for FCAS and responding to a frequency excursions?
- If the VPP continues to do energy arbitrage when enabled for FCAS, how are you ensuring that the energy price signal does not cause the VPP to go in the opposite direction as the FCAS response?
- For example, energy price signal is high when the VPP is enabled for the lower contingency services and has to charge to deliver FCAS. Will the VPP ignore the high energy price signal?

Measurement and calculations

- Is the FCAS delivery measured from the battery flow only or is the variation in load or PV during the frequency excursion taken into account as well?
 - If there is a change in PV or load during a frequency excursion where the VPP is enabled to deliver FCAS, the VPP will still be required to meet its FCAS enablement as there is no difference with the required amount of FCAS to be delivered.
- How is the basepoint is calculated? For example, based on average measurement of battery power in the last 5 seconds before the frequency leaves the Normal Operating Frequency Band.

FCAS Specification

- Which figure under Section 2.1 of the VPP demonstrations FCAS specification is more relevant to your VPP?
- Which one of the 2 metering options allowed under Section 2.2 of the VPP demonstrations FCAS specification has been selected?

FAQ & Information

General FAQ

Q. Can we create a sub-account within MSATS to allow access to data?

Yes, you can create sub-accounts. This can be done by selecting the Administration – User Administration menu in the MSATS browser.

The following guide provides an overview of the User Rights Management in the MSATS browser:

- [Guide to User Rights Management](#)

The relevant rights to the user credentials must then be assigned. Information on how to do this is available in the [VPP Demo Participant Onboarding Guide](#). Section 2.6.2 and 2.6.3 covers the relevant information as shown to the right.

2.6.2 User Account

AEMO's MSATS system is central to the authentication process that occurs when VPP APIs are called. Participant can use an existing user account or create a new user account. Participant Administrators (PAs) in your organisation can create and manage user accounts. PAs also assigns Rights to the user account.

For more information on creation and management of User Accounts refer to [Guide to User Rights Management](#)

2.6.3 Required Rights for the user account

PAs must assign the rights to the correct user account in order to be able to call VPP APIs. This is required for both pre-production and production environments.

See below the Rights for each data feed type. For;

- Registration (Enrolment) APIs use and assign "MMS_VPP_REGISTRATION"
- FCAS Response Data APIs use and assign "MMS_VPP_FCAS"
- VPP Operational Data use and assign "MMS_VPP_OPS"
- Telemetry Data use and assign "MMS_VPP_TELEMETRY"

Q. Where can we find more information about the MASS FCAS verification tool?

More information can be found via the MASS FCAS verification tool guide available on [AEMO's Market Ancillary services specification and FCAS verification tool](#) (MASS FCAS VT) webpage. [This guide](#) has explanations of how the tool works, and when the fast, slow and delayed services are initiated.

The MASS FCAS VT is used for the frequency injection/lab test on a single BESS. AEMO uses the 1s aggregated response to confirm the maximum ancillary service capacity that will get registered for the VPP wide test and for compliance purposes after the VPP is registered. **The MASS FCAS VT is not used when verifying the VPP wide response.**

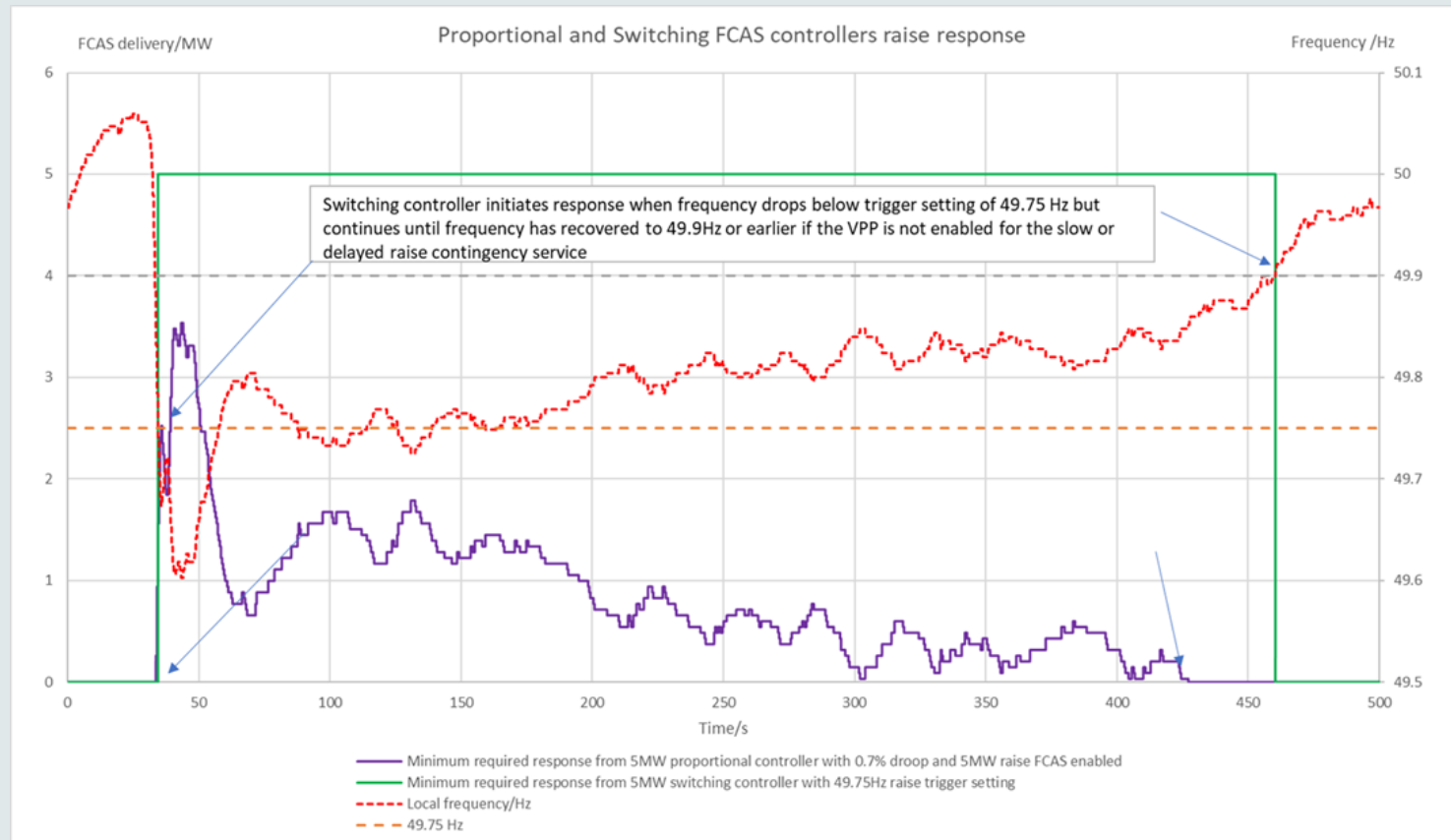
General FAQ

Q. If a participant has a switch-controlled and a proportional controlled fleet, can these both operate in the market and how?

- A participant can use both a proportional (droop) controller and a switching (step) controller but these cannot be combined under one DUID.
- These fleets can operate in any of the 6 FCAS contingency markets but would need to meet AEMO's testing requirements whereby AEMO would determine the maximum FCAS response for each fleet (DUID).

If the FCAS response from the Battery Energy Storage System (BESS) is delivered by a switching controller, the maximum FCAS capacity from each BESS will depend on how quickly the FCAS response is initiated after the switching controller is triggered.

- Each BESS will be assigned a frequency trigger setting and the FCAS response will not be proportional to the frequency deviation – for a switched controller. It will be a step change in active power as shown in the example for a 5MW VPP with a raise trigger setting of 49.75Hz. Note that the participant is responsible to monitor the state of the charge of the BESS to ensure that the minimum FCAS delivery requirements are met.



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:

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M:+61 452 622 390

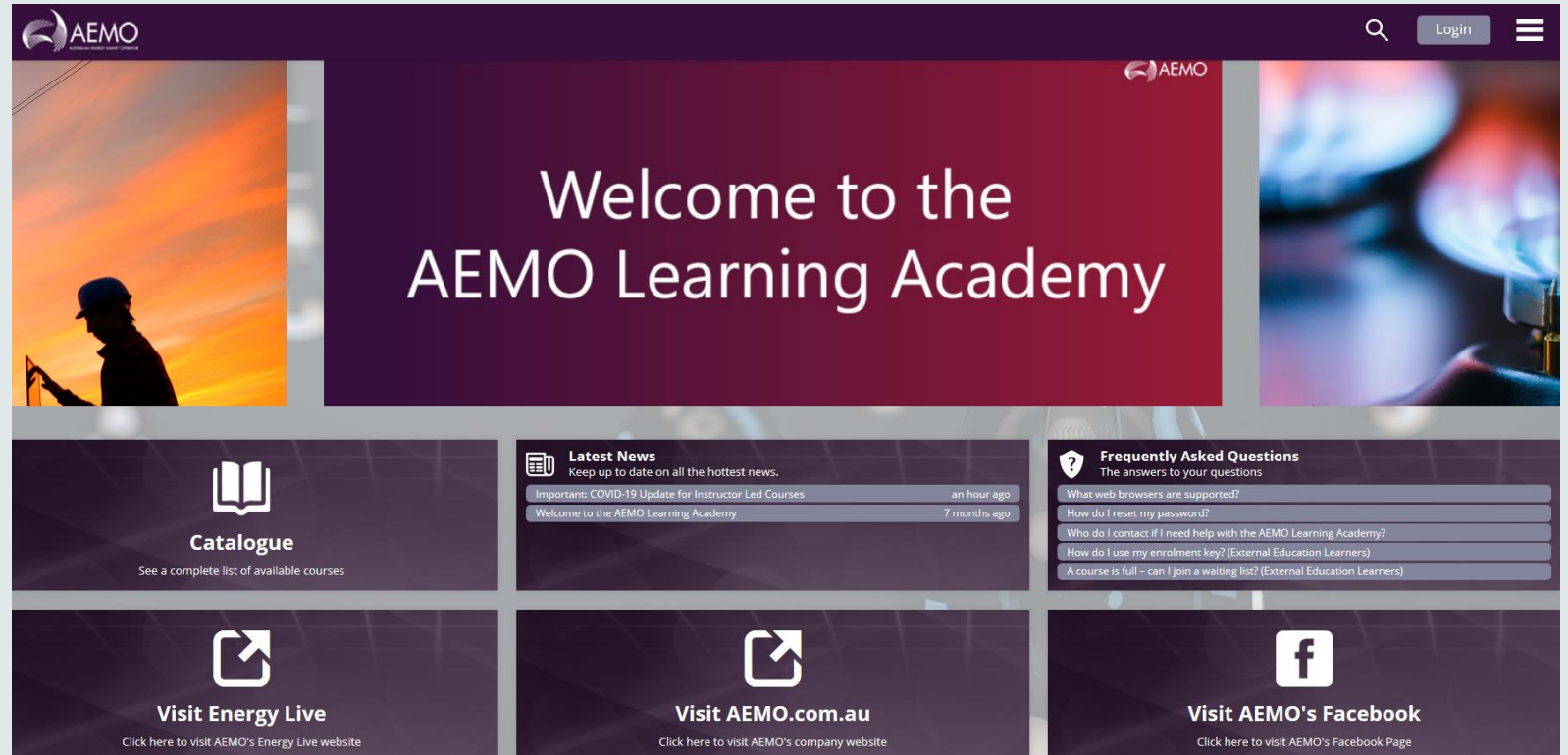


Close

- Survey will be issued to prospective VPP participants shortly.
- Next Meeting: **17 September 2020**
- All questions for FAQ to be submitted: **1 September**

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 hamburger menu. 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. 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.' Below this are two news 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.' Below this are 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)'. At the bottom 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).