MASS Consultation – 1-1 meeting minute summary

AEMO held 1-1 stakeholder meetings following the conclusion of the first stage of consultation on the amendments to the Market Ancillary Service Specification.

These meetings were held to seek further clarification on information provided by stakeholders in submissions, or at the formal request of stakeholders seeking to discuss or provide additional information. A summary of the minutes from each meeting has been provided below.

1. Planet Ark Power

1.1 Agenda

The meeting was requested by AEMO to discuss the following key items:

- Current measurement sampling rate of the inverters on site
- Implications of AS/NZS 4777.2:2020
- Grid flow data capture

1.2 Items for discussion or Noting

1.2.1 Sampling Rate

What is the current measurement sampling rate of the inverter on site?

- Planet Ark Power confirmed that this is at 20 microseconds (50kHz) but noted that data is not stored at 20 microseconds. However, it can be done for short periods of time before being averaged out at 1s or 1min intervals. They noted that the 20 microseconds data is used for development type work, and that 50ms or 100ms would be no issues for them. They indicated that the measurements on larger size batteries have their own control systems outside of the box that would take the data and store that in a central server.
- Planet Ark Power also indicated that 50ms data for FCAS events would not required that much storage.
- They also noted it is important to consider how inverters are actually behaving/responding – increased numbers of inverters will further impact the system stability and unless we understand how they are actually behaving/responding, this could have negative impacts in future.
- Planet Ark Power indicated that an Australia Standard type test like those done on inverters could be completed to confirm performance. Once an inverter had been tested and high-speed data was captured, then AEMO could fall back on 1s or 1min data for the fleet as there is confidence that the inverter will respond accurately/up to particular standard. They noted that this is already being done via the volt-var and volt-watt test which is a very similar process.

Is Planet Ark Power suggesting that data can be captured at the same measurement time specified in AS/NZS 4777.2:2020?

- Planet Ark Power can capture the event data only and store for the required period time. They can also make sure that the inverter is compliant with the FCAS requirements (via testing). The response within 6s can easily be measured through existing meters; it is more the data around the point where the delivery commences which could be specified in a test.

1.2.2 Grid Flow

Planet Ark Power's submission mentioned combining residential load using the 'Elexsys' system – Is this an Energy Management System (EMS)? And can it control grid flow?

- It is an EMS. Elexsys could manage the power flow and reactive power.

AEMO also raised another consideration on whether FCAS should be measured at grid flow or at device level. Noting that Elexsys is measuring at grid flow, what if behind the meter there was more than 1 market participant – 2 batteries, operated by Participant A and Participant B. Is device level measurements also important if an under-delivery is detected at grid flow?

- Planet Ark Power noted that if everyone responded correctly 100% of the time, then only grid flow would be required. However, they indicated this is unlikely as not all devices will respond sufficiently. When determining which participant behind the meter underdelivered, there still needs to be an asset level measurement.

1.2.3 Other topics discussed

- Planet Ark Power indicated there was a need to consider the impact of voltage requirements in AS 4777.2:2020 and how this would impact device response in FCAS events. This involves setting an appropriate hierarchy of response and considering impacts when frequency returns within the Nominal Operating Frequency Band (NOFB). In relation to power stability and delivery of FCAS, Planet Ark Power indicated that if inverters are not accurate enough, the scenario arises where we could be putting energy in when not required due to false triggers. A lot of this is covered in the FCAS specification – preventing instability due to power fluctuations.
- Planet Ark Power also noted the need to consider relay breakdown, harmonics, and communications issues. There is a need to consider changes over time – while they may have one result now, a different result may be observed in future.