Landis+Gyr
Level 1, 850 Ann Street
Fortitude Valley, QLD 4006

11th March 2021

AEMO

Re AEMO MASS Review

Thank you for the opportunity to provide our response to the AEMO's consultation regarding your consideration to amendments of the MASS. It is Landis+Gyr's view that electricity meters have an important role to play in the ancillary markets that MASS supports.

Landis+Gyr would be pleased to contribute further to the AEMO's consultation process. In summary Landis+Gyr believe:

- The measurement must occur at the Point of Connection. Having the measurement point at any other location will introduce complexity to the settlement process when the market is looking for an aggregate response. It may also lead to perverse outcome where one device acts in a positive manner to the event whilst another device may act in a negative manner, allowing participants to manipulate the market outcome.
- The existing electricity metering system is best placed to be used as the mechanism to detect and record the response to FCAS events. The metering system not only consists of the physical meter but also the communications, data collection and data processing systems. Leveraging the metering system to also including MASS settlement data is seen as an incremental step and a cost-effective approach to the widespread types and numbers of devices that would be able to participate in the market.

Operating for over 120 years Landis+Gyr is a global organisation with local presence in more than 30 countries. Worldwide, we have deployed more than 300 million meters to customers and we have become the leading provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios in the market, Landis+Gyr delivers innovative and flexible solutions to help utilities solve their complex challenges in smart metering, across electricity, gas and water, grid edge intelligence and smart infrastructure. With sales of USD 1.8 billion, Landis+Gyr employs approximately 6,000 people in over 30 countries across five continents, with the sole mission of helping the world manage energy better. Australia is one of our key markets and we are committed to supporting future industry needs through innovation, value-add and reliability of our products and services, while helping to reduce costs.

Our focus is on providing leading technology, meters that have advanced features and a roadmap to support future industry requirements. We always welcome the chance to work with participants and stakeholders to understand their long-term requirements as input to our roadmap. Accordingly, we are excited to have the opportunity to contribute to this consultation.

In responding to this consultation Landis + Gyr have limited the response to areas Chapter 2 DER participation in FCAS Markets with our response below.

Landis+Gyr
Level 1, 850 Ann Street
Fortitude Valley, QLD 4006

1. Which option for the ongoing measurement requirements for DER described in Section 2.3 do you want AEMO to implement and why? Should any other options be considered?

Landis + Gyr supports Option 1 with a measurement period of 100 ms. The next generation of meters being released into the market will be able to support this requirement, possibly even 50 ms as metering platforms mature. At the same time DER appliances will continue to evolve and their response to events will continue to improve. The measurement device must therefore, as a minimum be closer aligned to existing market requirements.

2. Which option do you think is more consistent with the NEO, and why?

Landis + Gyr supports Option 1 with consideration given to a measuring interval of 100 ms as this provides electricity consumers a cost-effective solution. Factors supporting this are:

- The national electricity market currently has in place and established electricity metering system. Having the measurement in another device would replicate costs. The cost structure not only includes the measuring device but also the communications, data processing and business support and data validation processes.
- The electricity meter is an established device that is calibration complies to various standards. Including the data points required for settlement of MASS events is viewed as the lost cost approach.
- The measurement must occur at the Point of Connection as the market is looking for an aggregate response. Having the measurement at any other location may have perverse effects including market manipulation that may affect the reliability and security of the national electricity system.

3. Should AEMO consider any principles other than those described in Section 2.4 to guide its assessment?

The NEO provides the market with clear guiding principles and sets the framework for policy and market rules to be implemented against. At this stage Landis + Gyr believes the NEO provides sufficient guidance to the market.

4. What is the difference in implementation costs, such as updating the communication links or installing additional equipment, for capturing data at a resolution of either 50 ms or 1 second for every NMI for different VPP facility types? Do you consider the cost difference to be prohibitive for participating in the Contingency FCAS markets? Please provide examples or analysis if possible.

Landis + Gyr has taken the view that the verification and validation of a market response must be undertaken by the electricity meter at the Point of Connection. The electricity meter is a ubiquitous device that is designed and constructed as a cost-effective, precision certified measuring instrument. The communications and data processing infrastructure that has been implemented has proven to be to be secure and robust. The addition of MASS data collection and processing to this infrastructure whilst not free would be a small incremental cost when compared to a new alternate system.

The market has seen a similar change with the introduction of 5-minute data to the whole market. The cost associated with this change was largely confined to the back-office data storage and processing. There was minimal additional cost to the measuring and data collection system. A similar outcome is expected with the capture of MASS data.

Landis+Gyr
Level 1, 850 Ann Street
Fortitude Valley, QLD 4006

Landis+Gyr
manage energy better

5. Do you think that either of the options presented will result in more or less competition in the Contingency FCAS markets?

To create a competitive FCAS market, a large deployment of devices is required to be installed behind "the meter". Landis + Gyr believes that responding to an FCAS event should be separated from settlement of the event. This will allow a large number of devices that detect and act upon an FCAS event to participate as they are not burdened with measurements and communication requirements associated with a metering system.

The other aspect is the measurement interval. Whilst Landis + Gyr believes 50 ms is achievable, landing on 100 ms for instance would allow for a range of devices to operate within the same metering framework.

6. Are there any technical risks that you envisage if the Option 2 measurement requirements are allowed? How material do you consider those risks and how could they be efficiently mitigated?

Measurement Location
The market is looking for a response over a network area and as such the measurement must take place at the point of connection. If this not done and settlement is done at the appliance then there may be perverse outcomes when one appliance behind the point of connection responds in a positive manner to the event whilst another appliance responds in a negative manner which negates the response or could even be worse.

Implementation Time Frame
Whilst technical possible within the existing metering system infrastructure, time is required to develop and implement the required functionality in the metering devices together with the back-office data capture and processing systems. Clear and precise specifications are required which are considerate of the overall outcome that is sought.

7. Does the sampling rate of one second rather than 50 ms for Fast Contingency FCAS under Option 2 and the determination of the FCAS delivery at the inverter/controllable device level create market distortion or negatively impact the FCAS markets?

Consideration needs to be taken on both the measurement period and the size of the DER device. Australia is leading the world in the deployment of small scale (household) solar energy systems and they are now a significant contributor to the energy market. Having a lower requirement for this market segment may indeed create market distortion or create risk in the FCAS market.

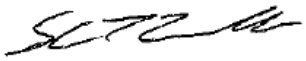
8. If Option 2 was adopted, should the changes to the measurement requirements of the MASS be limited to small-scale DER (under 1 MW per NMI), or should a different threshold apply, such as 5 MW? For example, what do you see as the risks and benefits of expanding these measurement requirements to other FCAS providers and in what circumstances might that be appropriate?

Please refer to comments made in the response to Question 7.

Landis+Gyr
Level 1, 850 Ann Street
Fortitude Valley, QLD 4006

Landis+Gyr
manage energy better

Yours sincerely,



Opi Taumalolo
Head of ANZ Product Management

Mark Bell
Technical Account Director - Queensland