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Mr Andrew Winter
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Dear Andrew

AEMO Issues Paper – Market Ancillary Service Specification (MASS)

United Energy (UE) appreciates the opportunity to respond to AEMO on the Issues Paper – Market Ancillary Service Specification. UE looks forward to the development of the MASP in a manner which meets the market requirements and encourages a competitive market to deliver ancillary services at the lowest cost for customers.

UE recognise that MASS applies to demand response services provided into the market through the AEMO dispatch system. AEMC state that network service providers demand response programs are independent of this and hence do not need to comply with the MASS. In UE's opinion any equipment or services that could provide ancillary services and benefits to both parties and ultimately to consumers at the lowest cost should not be precluded, even if this includes services provided by networks (DNSP).
UE has selectively responded to questions from the Issues Paper below.

Barriers for new entrants

What barriers to entry for new Market Participants and new technologies are contained in the current MASS and what options are available to overcome the barriers while maintaining the integrity of the markets?

There appears to be some barriers associated with DNSPs being able to participate in the MASS in relation to demand side participation using shared network assets. UE (and potentially other DNSPs) are able to dynamically control active power load on the shared network (and therefore influence frequency) to a certain extent within the timeframes contemplated by the MASS through the application of small changes in voltage delivered at points of supply to customers. Tests that UE has undertaken in the past suggest that a 1% voltage reduction can lead to a 1% reduction in active power load. Such capability would be useful in delivering services for the 'slow' and 'delayed' categories.

Furthermore, many DNSPs including UE are increasingly deploying energy storage technology and demand management programmes for network support purposes. Such technology and programmes could also be leveraged for ancillary services when available in sufficient aggregated volume. The Market Ancillary Services Specification (MASS) should not limit technology opportunities to only those connected to the Automatic Generation Control (AGC) when there may be other solutions to achieve the same frequency control. Conformance to the AGC should not be a barrier to the opportunity for emerging battery technology to participate in ancillary services markets.

Distribution network assets should not be precluded if these assets are able to respond within the 4 seconds. We have network devices that can measure frequency and meet the interval requirements.

AEMO needs to consider the technologies already available and utilise the service that meets the technical requirement and meets the NEO.

What options exist for determining the total change in power flow from aggregated loads?
We believe that 'baselining' techniques similar to those used in demand management programmes can be used for verifying total changes in power. Alternative techniques can also involve measuring the step change responses at the start and conclusion of the response, or agreeing on mathematical models that predict the behaviour.

Do you agree with the approach to determining the performance of variable generation and if not, how should it be determined?
Yes, we agree with the linear interpolation method.

Other than high speed recorders, what options exist for verifying the performance of the plant while maintaining the integrity of the services?
It is possible to use multiple sources of recordings including aggregating smart meter high speed data capture of individual sites, coupled with SCADA recordings for aggregated sites, or even recordings from other intelligent electronic devices deployed throughout the networks. It is important that AEMO allow some flexibility for a range of solutions in the MASS.

Definition of the Services

Do you agree that the principle underlying the MASS should be related to the control of power system frequency, and not just the delivery of defined an amount of energy? What other principles do you believe are required?
Yes. However we would like to see an Inertia Service also captured as a standalone market ancillary service to signal a market value for inertia which is required in circumstances where there is a high rate of change of frequency. This would value the additional market services that a rotating (synchronous) machine provides compared to an inverter. UE understand that this additional market ancillary service is being considered in a rule change proposal and may result in NER amendments with a flow on impact to the MASS.

What limitations exist to inhibit plant enabled to provide one of the contingency services from handing-over smoothly to other services following an event and how can these limitations be addressed?
Uncertainty in the load model response over longer periods of time and time of day / day of year variations for voltage control solutions can be a limitation. We could undertake system tests to derive appropriate load models for various operating conditions.

What should AEMO consider when drafting of a detailed description of the transition requirements from one contingency service to the next?
AEMO should consider the range of capability of the service from best case to worst case performance characteristics, or assume a level of reliability of service in instances where the ancillary service has some uncertainty, such as in voluntary demand response programmes for example.

Performance parameters and verification requirements

Do you agree with the principles for contingency verification and if not what principles should apply?

Yes. However we would like to see an Inertia Service also captured as a standalone market ancillary service to signal a market value for inertia which is required in circumstances where there is a high rate of change of frequency. This would value the additional market services that a rotating (synchronous) machine provides compared to an inverter.

What amendments are required to the FCASVT to better represent the performance of your plant?
It needs to also cover voltage control providing frequency ancillary services where a change in voltage at customer supply points results in a change in active power consumption.

How could the response of a large number of small scale installations, such as batteries at households, be verified in response to a local frequency disturbance?
Use multiple sources of recordings including aggregating smart meter high speed data capture of individual sites, coupled with SCADA recordings for aggregated sites.

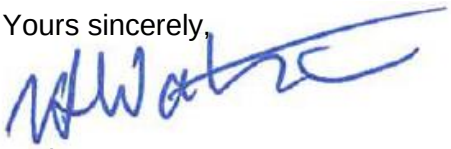
Allocation of switching controller settings

What limits exist in switching controllers on potential range of frequency settings and can this be adjusted?
We would need to modify our control systems (hardware, software and configurations) to be able to provide ancillary services. If this is done we don't envisage any limits.

Do you agree with the proposed principles for the allocation of switching controller frequency settings? If not what principles should apply?
Yes.

Should you have any questions on the response, please do not hesitate to contact Rodney Bray on 8846 9745 or myself on 8846 9856

Yours sincerely,



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