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David Reynolds

Australian Energy Market Commission

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21 October 2021

Dear David,

Capacity commitment mechanism for system security and reliability services

AGL Energy (AGL) welcomes the opportunity to comment on the Australian Energy Market Commission (AEMC) Capacity commitment mechanism for system security and reliability services directions paper.

AGL is a leading integrated essential service provider, with a proud 184-year history of innovation and a passionate belief in progress – human and technological. We deliver 4.2 million gas, electricity, and telecommunications services to our residential, small, and large business, and wholesale customers across Australia. We operate Australia's largest electricity generation portfolio, with an operated generation capacity of 11,208 MW, which accounts for approximately 20% of the total generation capacity within Australia's National Electricity Market.

AGL agrees with the AEMC that a new approach to procure, value, and schedule essential system services is required in the NEM to ensure efficient timely incentives for the provision and investment in system services. We consider that compensation for essential system services will grow in significance as a factor which drives a generator's decision to remain, enter, or exit a market. For this reason, we suggest that determining the appropriate approach to valuing the provision of system services should be balanced with how the provision of energy is valued, and also whether any payments for capacity apply, such as the Physical Retailer Reliability Obligation. Given the current lack of clarity regarding the potential implementation of capacity payments in the NEM, and the lack of clarity regarding the required essential system services as discussed below, AGL suggests delaying the draft determination for this rule change and engaging in another round of consultation before deciding on the appropriate approach. Delaying the draft determination would also allow the analysis to benefit from greater clarity regarding the impact of the Energy Security Board's consideration of the Unit Commitment for Security which overlaps with this rule change.

Essential system services

The AEMC has indicated that AEMO has been able to identify and develop specific secure system configurations that represent a secure technical operating envelope and that more work is required to define the core fundamental physical requirements of the power system that satisfy operational prerequisites in a technologically-neutral manner. AGL strongly agrees with the AEMC that there is a need to transition from system configurations to unbundled service-based procurement over time. We suggest that more work should be completed now before a new system services scheduling approach is chosen, so that the decision can be informed by our current best thinking on which essential system services are required, how they might be best specified in a

technologically neutral manner, and how and when they may be unbundled. We consider that moving from a systems configuration approach is key and suggest the AEMC develop further understanding of how and when this can occur before moving to the draft determination stage.

A key concern with the continued reliance on the system configurations approach and the consequent bundling of system services is that the number of participants in each market from a competition perspective may be very limited. This is particularly the case where system configuration is based on the provision of system strength since the geographic dimension of a system strength market is very small compared to energy and other system services. Unlike energy, frequency, and inertia which can be supplied from other regions, system strength is a local requirement. A provider of system strength a few hundred kilometres up the network will not typically be a substitute or competitor to a local provider. As a result, multiple separate markets would be required for each region and each market may only have a few or even just one participant. For example, in South Australia there are only four owners of synchronous generator units and one owner of network synchronous condensers, and they do not all provide system services to the same area.

The current approach

Under the current approach pre-dispatch and dispatch engines optimise energy and FCAS, and directions are used by AEMO to ensure the necessary unit combinations are online to ensure the power system is secure. This approach which relies on the frequent use of directions which were designed to be a last resort mechanism has significant shortcomings. First, it is reliant on a determination by AEMO which is unpredictable and opaque and therefore does not clearly drive investment decisions. Second, it relies on unit combinations rather than specified system services to ensure system security, which weakens transparency and the opportunity for new providers of these services, thereby locking in the provision of these services by existing providers. Third, the compensation available under directions is inadequate since it:

- is based on short-run marginal cost
- is often erroneously determined without including the opportunity cost of fuel
- does not account for scarcity, even though the need for a unit to be directed online indicates that the supply and demand are tight for the services provided by that unit, and
- does not account for the increased costs of bringing forward plant maintenance requirements, which are based on hours run and can be significant.

While the current approach has significant shortcomings, it gives AEMO confidence that the units required will be online and is likely to be less reliant on directions going forward as new system strength rules are implemented and more synchronous condensers and batteries, which have the capability to provide system services, are installed in the NEM. For these reasons, we suggest the AEMC consider whether the current approach may be the best interim approach until the market ancillary services (MAS) approach (the ideal approach as discussed below) can be implemented, rather than implementing the non-market ancillary services approach (NMAS) which may be onerous to implement and risk delaying the ultimate implementation of the MAS. We also suggest that the AEMC consider addressing the issues identified above with the current approach while the current approach persists.

The market ancillary services approach

Under the MAS approach pre-dispatch and dispatch engines would be updated to optimise not only energy and FCAS, but also system security support services. AGL agrees with the AEMC that the MAS approach, if workable, may result in more efficient outcomes when compared to the NMAS approach because it would align the financial incentives of market participants to maximise their own profits with the efficient outcomes for the system as a whole. We consider the MAS approach to be the ultimate ideal approach, since under the MAS approach the market determines whether a unit is dispatched and at what price, without intervention by AEMO. This allows market forces to drive behaviour and also facilitates transparency, which combined with the benefit of real-time pricing, should lead to more efficient signals for the provision and investment in essential system services. While the AEMC has indicated that the MAS approach may not fully lead to the unit commitment necessary to ensure system security, and therefore directions may still be required, as discussed below, AGL suggests this flaw also applies to the NMAS approach.

We suggest the AEMC complete further work to consider the viability of the MAS approach and expected timing of when unbundled service-based procurement through the MAS approach may be viable. We note that the August 2021 *Inertia Ancillary Service Market Options* paper prepared for the Australian Energy Council, to which AGL provided input, indicates the feasibility of the MAS approach for the provision of inertia.

The non-market ancillary services approach

Under the NMAS approach an optimisation engine, separate to the spot market, would procure and schedule specific or bundled system security support services through structured contracts for multiple dispatch intervals. This is the AEMC's preferred approach as it expects it would give AEMO greater certainty that the necessary unit combinations would be dispatched when compared with the MAS approach and because it does not have the drawbacks of the current approach, including that as a bid-based system it should lead to more efficient outcomes and better investment signals.

AGL considers that the NMAS approach has significant shortcomings when compared to the MAS approach. First, the NMAS optimisation engine is more likely to lead to the provision of system services being controlled centrally by AEMO. Second, the NMAS optimisation engine by being separate to pre-dispatch and dispatch is likely to be less transparent than the MAS approach. Third, it is not clear that the NMAS approach will give significantly greater certainty that the necessary units are committed than would be expected under a MAS approach since the NMAS approach is also reliant on self-commitment and is an ahead mechanism and is therefore reliant on forecasts rather than real-time information.

While AGL agrees that an NMAS approach may be preferable to the current approach, given its shortcomings we suggest that it should be only implemented if it becomes clear that the MAS approach is not viable in the short to medium term. As outlined above, we suggest the AEMC complete further work to assess how and when a MAS approach with unbundled technological neutral service-based procurement may be viable and engage in further industry consultation before moving to a draft determination on this rule.

If you have any queries about this submission, please contact Anton King on (03) 8633 6102 or aking6@agl.com.au.

Yours sincerely,

Chris Streets

Senior Manager Wholesale Markets Regulation