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ERC0284 CONSULTATION PAPER – COMPENSATION FOR PARTICIPANTS AFFECTED BY INTERVENTION EVENTS

AGL Energy (**AGL**) welcomes the opportunity to comment on the Australian Energy Market Commission's (**AEMC**) consultation on compensation for market participants affected by intervention events, which considers two rule change proposals from the Australian Energy Market Operator (**AEMO**).

AGL is one of Australia's leading integrated energy companies and the largest ASX listed owner, operator and developer of renewable generation. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional thermal generation as well as renewable sources. AGL is also a significant retailer of energy and provides energy solutions to over 3.6 million customers in New South Wales, Victoria, Queensland, Western Australia and South Australia.

AFFECTED PARTICIPANT COMPENSATION FOR FCAS LOSSES

The first rule change request seeks to include frequency control ancillary services (**FCAS**) market losses in the list of factors to be considered when determining additional compensation claims lodged by participants. This rule proposal was identified as a gap in the National Electricity Rules (**NER**) by the Intervention Pricing Working Group (**IPWG**) and unanimously supported in that forum. Our responses to the consultation questions are set out below.

Question 2: Should affected participant compensation include FCAS?

AGL supports amendments to the NER that would facilitate affected participants' recovery of FCAS losses. Energy and FCAS market losses should be treated consistently, which in turn gives effect to the central purpose of intervention pricing. That is to put participants in the position they would have been in, but for the intervention.

Question 3: How should FCAS be included in affected participant compensation?

The rule change proposal suggests that FCAS costs be included in the list of factors to be considered when a participant lodges an adjustment claim, however the AEMC suggests an alternative approach of including FCAS in the automatically calculated compensation. AGL supports this alternative proposal, noting administrative efficiency and consistency with the determination of compensation for energy losses.

Question 4: Should affected participant compensation be net of FCAS liabilities?

AGL agrees that FCAS liabilities should also be included in the automatic calculation should the AEMC amend the NER to include FCAS compensation. This approach is consistent with treatment of energy and prevents over or under recovery by affected participants.

COMPENSATION FOR SCHEDULED LOADS AFFECTED BY INTERVENTIONS

Question 5: How to determine compensation for scheduled loads

Scheduled load compensation is calculated with reference to BidP, which is the price of the highest priced price band specified in a dispatch bid for the scheduled load in the relevant intervention price trading interval. AGL considers the current definition is not appropriate as it can lead to under-compensation in most scenarios and also poses a risk of over-compensation.

UNDER-COMPENSATION EXAMPLE

AGL has prepared an example using NEMDE pricing runs from a 9 February 2017 trading interval to show how under-compensation can occur across a volatile intervention pricing period with the current BidP definition.

The scheduled load provides the following dispatch offer (assuming TLF is 1).

Band	7	8	9	10
Price	$35	$70	$120	$10,000
MW	100	100	100	0

Ramping constraints have been ignored for simplicity and the example assumes perfect conformance in following targets, thereby using dispatch run targets as 'metering data'.[1] Based on the scheduled load's dispatch offer, the NEMDE intervention and dispatch output is shown below.

QLD1	Price		Dispatch MW		
SETTLEMENTDATE	Intervention	Dispatch	Intervention	Dispatch	
9/02/2017 17:05	$ 917.96	$ 264.96	0	0	
9/02/2017 17:10	$ 262.02	$ 98.66	0	100	
9/02/2017 17:15	$ 990.13	$ 102.28	0	100	
9/02/2017 17:20	$ 11,639.00	$ 100.92	0	100	
9/02/2017 17:25	$ 85.83	$ 86.85	100	100	
9/02/2017 17:30	$ 37.94	$ 37.94	200	200	
	$ 2,322.15	**$ 115.27**	50	100	MW
			25	**50**	MWh

[1] NER clause 3.12.2(a)(2) requires metering data

In our example, the intervention run has dispatched the scheduled load for 25MWh for the 17:30 intervention price trading interval. The 'metering data' indicates that the load has consumed 50MWh. Therefore, the 50MWh will be charged at $2,322.15/MWh even though the scheduled load's dispatch offer had $120.00/MWh as the highest price it was prepared to pay for its energy consumption. This example demonstrates that compensation is warranted, but what amount is reasonable?

Assuming QD = energy actually consumed minus energy hypothetically consumed

= 25MWh

Applying the AEMO rule proposal, the highest priced band the scheduled load is dispatched from:

Compensation = (($2,322.15/MWh x 1) - $120.00) x 25MWh

= $57,178.68

Applying the AEMC suggestion, the lowest price band the scheduled load is dispatched from:

Compensation = (($2,322.15/MWh x 1) - $70.00) x 25MWh

= $55,053.68

Applying the current NER, the price of the highest priced price band specified in a dispatch bid for the scheduled load in the relevant intervention price trading interval:

Compensation = (($2,322.15/MWh x 1) - $10,000) x 25MWh

= -$191,946.32 (negative so no compensation)

In our example, the scheduled load had 100MW (50MWh) in the highest priced band from which it was dispatched, therefore the appropriate BidP was $120.00 and AEMO's proposed definition results in an appropriate outcome even though the $70 bid band dispatched for one five minute interval.

Had the scheduled load been dispatched greater than the volume in that band (for example, 110 MW), then AGL suggests a modification to AEMO's proposal is most appropriate. Specifically, a volume weighted price is the appropriate BidP, applying a combination of the $120 (100MW) and $70 (10MW) bid bands.

OVER-COMPENSATION EXAMPLE

Using the same example, the NER as currently drafted allows for potential over-compensation of scheduled loads. Assuming that the scheduled load tripped after the first dispatch interval and AEMO did not receive a rebid until the completion of the trading interval, the QD would now equal -25MWh (0MWh actual minus 25MWh hypothetical). Assuming the loss of load did not supress price, the outcome could potentially be as follows under the current rules:

Compensation = (($2,322.15/MWh x 1) - $10,000) x -25MWh

= $191,946.32

The intervention pricing methodology is imperfect, giving rise to anomalous and unexpected outcomes at times. Market Customers, and eventually consumers, should not be exposed to the risk that scheduled loads are over-compensated during intervention pricing periods.

MATCHING DISPATCH TARGETS

A further consideration is whether compensation should be payable if the dispatch targets are identical in NEMDE's intervention and dispatch runs. If the targets are identical in the two NEMDE runs then any compensation paid though the application of metering data may be rewarding the participant for not following targets. We encourage the AEMC to consider the potential implications of any proposed changes to the compensation formula.

VALUE OF QD

The AEMC has asked whether the value of QD in the compensation formula requires clarification. The consultation paper states:

> *AEMO has advised the Commission AEMC that QD is calculated by taking as the reference point the amount of energy consumed by a scheduled load in the dispatch run of NEMDE (i.e. the amount of energy actually consumed by the load during the intervention event).*

AGL disagrees with AEMO that the methodology for calculating QD accurately represents the amount of energy actually consumed by the load. Our understanding is that the consumption value is an approximation based on six data points in a thirty-minute trading interval provided by the NEM dispatch engine. For batteries, this is highly problematic, as their consumption may vary considerably across any four second SCADA point (i.e. fast frequency response).

Where a compensation scenario occurs, the "metering data" component of the QD value should use settlement quality data for the entire intervention price trading interval, rather than an inferred value calculated from a limited, unrepresentative data set. Clarification is also required regarding AEMO's use of 5-minute "metered data" as a proxy for the "metering data" required by Clause 3.12.2(a)(2).

Should the status quo remain that compensation for scheduled loads is only one way (i.e. no entitlement to claim where DC is negative), the AEMC should also consider whether the same should apply when QD is negative. Allowing a negative QD may have unintended consequences as demonstrated in the over-compensation example above.

Question 6: Should scheduled load compensation include FCAS?

AGL considers that scheduled load compensation should be treated consistently with generator compensation. Accordingly, should the AEMC make a rule so that generators are compensated for FCAS losses, this should also extend to scheduled load. As the AEMC notes, several pumped hydro and battery assets are currently registered as both generators and market customers yet are treated inconsistently in the case of intervention.

Question 7: Should compensation for scheduled loads be net of direct costs incurred or avoided?
&
Question 8: Should compensation for scheduled loads be one way or two way?

AGL has considered these two questions together because considered as high-level principles, it appears appropriate that scheduled load compensation would be net of direct costs incurred or avoided and applied two-ways. We understand this approach seeks to minimise the possibility of participants over or under recovering, and treat scheduled loads treated consistently with energy and FCAS.

That said, AGL has been unable to think of real-world examples of direct costs a scheduled load may incur or avoid as a result of being dispatched differently, or situations where a scheduled load would need to repay revenue. We must consider the risk of unintended consequences in the absence of knowing how such rule changes would work in practice. Given the complexities underlying intervention pricing (e.g. treatment of network constraints), which therefore impact compensation formulas, the risk of unknown cost and settlement outcomes must be dealt with before the AEMC changes the rules in this area.

If you have any queries about this submission, please contact Liz Gharghori on (03) 8633 6723 or lgharghori@agl.com.au.

Yours sincerely,

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