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Australian Energy Market Commission PO Box A2449 Sydney South NSW 1235

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Wholesale demand response mechanism Draft rule determination

Snowy Hydro Limited welcomes the opportunity to comment on matters raised in the Draft Rule Determination (Draft Determination) from the Australian Energy Market Commission (the Commission) on the Wholesale Demand Response Mechanism (WDRM).

Snowy Hydro Limited is a producer, supplier, trader and retailer of energy in the National Electricity Market ('NEM') and a leading provider of risk management financial hedge contracts. We are an integrated energy company with more than 5,500 megawatts (MW) of generating capacity. We are one of Australia's largest renewable generators, the third largest generator by capacity and the fourth largest retailer in the NEM through our award-winning retail energy companies - Red Energy and Lumo Energy.

Australia's energy system is undergoing a rapid and profound transformation. The energy industry's investment focus has shifted to a combination of gas generation, renewables and enabling technologies with more than 3,000 megawatts of coal generation exiting the market in Australia over the last three years. The changes in these market conditions have led to the on-going development of demand response products and services by retailers through market-based solutions.

This proposal incorrectly assumes that a rules-based mechanism will lead to a more 'optimal' level of demand response than exists under the current market approach. In fact, the NEM was structured to allow the demand side to both participate and respond to price signals in the spot market, and for this interaction of supply and demand to determine an economically optimal outcome for all parties, including end-use customers. There are already facilities available for demand response to participate in the NEM, either directly as a wholesale participant, or via a retailer. Snowy Hydro agrees that demand response is an important tool for managing volatility, but it cannot substitute for the critical role played by generators in underpinning the long-term security of the market. What is being contemplated is, in effect, a privileging of the demand side, which will ultimately undermine the efficiency of the energy only market. There is already a robust market for demand response that would have occurred without this mechanism. In this respect it represents a wealth transfer from those who do not participate, to those who do, without any corresponding benefit.

Snowy Hydro supports competitively neutral technology approaches that do not advantage one technology over another, and a transparent market approach that aids the price discovery process. This is vital to enable an equal playing field in the NEM and to avoid reliability issues in the future.

There are no barriers to entry to warrant WDRM. Demand response service providers can offer services to retailers, or offer them to customers by becoming a retailer. Expectations about finding the "optimised amount" of demand response in the NEM is with little evidence to what that amount actually is, and with no transparency about how such a mechanism could achieve this lofty aim in the

absence of two-sided market competition. This will instead cost market participants at a time they are working to keep costs down for consumers. By adopting a WDRM the Commission is favouring one technology over another without ever knowing what the optimal amount under the current market structure would be.

The proposed early implementation for the mechanism guided by the time needed for AEMO to update its system to implement the mechanism needs to also consider market participants and the required complex and expensive changes needed to be made. Retailers would need to make the key system changes to help recover and store data from demand response participants along with working through the settlement process to understand the costs of the customer's baseline level of consumption in the wholesale market. Retailers would be required under early implementation to make changes to develop systems twice for 30 minutes and then for 5 minutes after the 5 minute settlement rule is implemented. Snowy Hydro's initial submission to the consultation highlighted the costs associated with implementation of such a mechanism, if it proceeds, needs to be following the implementation of 5 minute settlement and not before¹.

The draft determination on the WDRM introduces substantial risk to retailers as well as potential distortions to investment signals. If the Commission were to progress with a WDRM in the form proposed, Snowy Hydro considers that the issues regarding the scheduling, baseline measurements and methodology, costs to the consumers, reimbursement and settlements still need to be further assessed. Our detailed comments on components of the draft determination include:

- Scheduled generators are rightly subject to strict compliance obligations in relation to, among other things, their availability, intentions and performance. It is generally accepted that these measures are necessary for an efficient and workable market. It would, then, be both inequitable and damaging for the market if corresponding obligations were not placed on demand response participants. It would mean that a unit of energy supplied by forgone consumption is valued more highly than supplying that unit of energy from a scheduled generator. It would also distort price discovery and cause other market inefficiencies, including reduced confidence in pre-dispatch prices, inaccurate reserve forecasting by AEMO, a reduced ability for AEMO to manage the central dispatch process and an incorrect pricing of financial contracts. This will ultimately harm efficient investment in the market.
- Demand response loads need to be scheduled by AEMO and on equal footing with generators. This includes having the same obligations as generators when participating in the market.
- The additional costs of the demand infrastructure under the mechanism will go to retailers, with customers ultimately left to pay for a service that will financially benefit demand response aggregators.
- The focus on large customers and prohibition of small customers in a WDRM is appropriate. There would need to be significant system costs and complexities associated with aggregating portfolios of small customers to participate in wholesale demand response under the proposed mechanism. Retailers would be required to enact significant system changes for small customers to participate in this scheme, the cost of which would be ultimately borne by consumers.
- Predicting the demand-supply balance will become increasingly challenging if AEMO does not reduce the information asymmetries and enhance transparency between Market Participants and the demand side. This is vital to enable an equal playing field in the NEM and to avoid reliability issues in the future.

¹ Snowy Hydro submission to Wholesale demand response mechanisms Consultation paper, << <u>https://www.aemc.gov.au/sites/default/files/2019-01/Snowy%20Hydro.pdf</u> >>

- The baseline methodologies are likely to be inaccurate and uncertain. This will create significant retail risk as they will be based on assumptions and will be highly subject to gaming. Retailers will need to incorporate this risk into their retail contracts, another cost on consumers.
- AEMO determining baseline methodologies, with consultation, instead of allowing market
 participants to develop and submit their own baseline methodologies is a sensible approach.
 Should the market participants have had the ability to develop and submit baseline
 methodologies to AEMO there would have likely been negative impacts on dispatch and
 pre-dispatch for DRSP which would flow on to the rest of the NEM.
- The Commission's decision to use a funding mechanism to reimburse retailers that does not reflect their current hedging practice represents a fundamental flaw in the proposal creating another layer of risk. As a result, the WDRM settlement model potentially raises significant risks to retailers with large commercial and industrial (C&I) customers in their portfolios whose contracts permit them to participate in wholesale demand response.
- The early implementation of 24 October 2021 is not supported as the complexity and pervasiveness, which requires the involvement of numerous parties in every transaction, including retailers, is expected to have a long implementation timeframe. The costs on retailers in early implementation need to be properly considered as we prepare for 5 Minute Settlement. The DRM implementation date should allow AEMO and industry to focus on implementing the five-minute settlement reforms, prior to implementing the DRM reforms.

The mechanism remains a complex arrangement which will create a further overlay on the operation of the market for a service that can already be provided within the current framework. The Commission must consider that any proposed market improvement must pass the tests that it not distort or reduce the efficiency of the operation of the energy-only market and, in addition, it must not reduce the transparency of market signals for investment in new plant.

Snowy Hydro appreciates the opportunity to respond to the Draft Rule Determination and any questions about this submission should be addressed to <u>panos.priftakis@snowyhydro.com.au</u>.

Yours sincerely,

Panos Priftakis Head of Wholesale Regulation Snowy Hydro

The current market and the distortionary impacts of WDR mechanisms

There are already facilities available for demand response to participate in the NEM, either directly as a wholesale participant, or via a retailer. Retailers are incentivised to enter into demand response services with customers in order to win their business, or otherwise risk losing the customer to a competing retailer. If large customers are not seeing interest in some demand response offerings, it is because they are either small in size, slow responding, or unreliable, therefore they are of low value compared to firm dispatchable services.

Demand response historically has been used at times of high price, therefore its use is already part of the NEM price and demand history and priced into any retail arrangement. Adding it again would account to double dipping on the one service, or subsidising something that is not available. There are no barriers to consumers providing demand side response and there is no factual evidence to suggest that there are insufficient incentives on retailers to offer demand response services. Retailers already provide Commercial and Industrial (C&I) customers with demand side services raising questions on the need for a WDRM. If there are concerns that C&I customers are struggling with the current market the Commission should plan a session with market participants and C&I customers to sort them out, providing a more cost efficient outcome.

A major criticism of the amount of demand side services that retailers currently provide is that they are not being "optimised". Expectations about finding the "optimised amount" of demand response with little evidence to what that amount actually is has led to the reasoning behind the proposed WDRM. The International Review of Demand Response Mechanisms in Wholesale Markets by the Brattle Group², commissioned by the Commission, noted that demand response around the world had not met that "optimal" amount with findings regarding WDRM. The paper noted:

- Singapore: The new energy market Demand Response program has now been running for two years, but has seen very limited participation and no obvious market benefit.
- ERCOT: In ERCOT, demand response participation slightly increased from 2014 to 2018. Some of this growth is due to increased participation in the Emergency Response Service (ERS).
- PJM: In PJM, wholesale demand response participation remained relatively stable from 2014 to 2018.³

The Brattle Report noted resources were infrequently dispatched in the wholesale energy market, because prices were not as volatile and so often did not reach levels where the demand response would be economic to dispatch. The NEM was designed to operate in a competitive national market with volatility being another electricity market feature since deregulation. Volatility is especially important in energy-only markets, as it is the only opportunity peaking power stations have to recover fixed costs and sustain investment and maintenance while also complementing demand response.

AEMO noted that wholesale demand response would incentivise most responses during high market price events triggered by peak demand or an unexpected generator outage, rather than the potential daily occurrence of high photovoltaic generation causing low or negative prices in the middle of the day⁴. Volatility may be a more important driver for more participation of demand response.

² Brattle Group prepared for the AEMC, 2019, "International Review of Demand Response Mechanisms in Wholesale Markets"

³ Brattle Group prepared for the AEMC, 2019, "International Review of Demand Response Mechanisms in Wholesale Markets" ⁴ AEMO, 2018, *"Wholesale Demand Response Mechanisms – Consultation Paper"*, pp13

The WDRM will likely undermine the efficiency of the energy only market. Energy only markets are designed in allowing generators to recover capital costs at times of tight demand supply, the idea being that at these times prices will be high. However, the introduction of a demand side market that incentivises C&I customers to bid their energy through the WDRM, reducing peak prices for generators, reduces the time frames for them to recover their capital costs. This comes at a particularly sensitive time when the market is transitioning to renewable generation.

Instead, Snowy Hydro encourages customers to contact our business if they have a demand response service they would like to offer under either a wholesale or retail arrangement.

Small customers

The focus on large customers and prohibition of small customers in a WDRM is appropriate. The Commission has correctly noted that *"extending this mechanism to cater for small customers would increase the costs and extend the implementation time given the increased system and process complexity required to include them."⁵ Snowy Hydro notes that there would need to be significant system costs and complexities associated with aggregating portfolios of small customers to participate in wholesale demand response. Retailers would be required to enact significant system changes for small customers to participate in this scheme, the cost of which would be ultimately borne by consumers. There are different billing systems with fundamentally different architecture and logic for billing C&I and mass market sites.*

The development of accurate baselines for individual small customers would be difficult. Customers would be able to leave at any time, our business would have significant unknown information to be able to design and trust meaningful baselines for an extremely seasonal and volatile load. Any error in the baseline would impose significant costs on retailers. For example, if baselines were overstated it could lead to a significant cost to retailers having to pay additional hedging costs. Hence, the complexity of many of these issues must be given further consideration before small customers are included in the scheme. This would be in addition to redesigning our concessions, hardship and bad debt logic and systems.

Should there be a concern for small customers not utilising demand response under the current market conditions, the Commission has correctly noted that *"there are a number of opportunities emerging under the current arrangements for these consumers to participate in demand response."*⁶ Most jurisdictions in the NEM have established, or are developing, programs to incentivise the uptake of technology that will enable residential and business customers to participate in demand response programs.

A consumer for example may be a party to a virtual power plant arrangement and wish to have their residential storage and solar PV separately metered to enable participation with the virtual power plant. There has been significant investment in establishing and operating Virtual Power Plants in the NEM. The chart shows a timeline of industry players conducting trials of Virtual Power Plants (VPPs).

⁵ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, ppiv

⁶ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, ppv



Participant category, Registration, Dispatch and pre-dispatch

The price discovery process will become more challenging in a dynamic NEM environment over time, with increasing distributed generation and demand response. It is therefore important that the Australian Energy Market Operator (AEMO) has visibility of demand response and the implication on its ability to manage power and system security in the short-term and longer-term. Increasing the supply and/or demand management technologies should be based on the provision of accurate and timely information.

If demand response participants do not provide AEMO with information about their supply and demand side intentions, an inefficient price discovery process could lead to market inefficiencies which include:

- reduced confidence in pre-dispatch prices
- inaccurate reserve forecasting by AEMO
- a reduced ability for AEMO to manage the central dispatch process and an incorrect pricing of financial contracts.

It is vital for the NEM that any demand response service provider (DRSP) should participate in central dispatch in a transparent, scheduled manner, similar to scheduled generators. Snowy Hydro strongly believes that DSRPs should have a number of obligations and incentives consistent with the obligations imposed on scheduled generators. These include compliance with dispatch targets, bidding and rebidding obligations and incurring FCAS contribution factors deviating from dispatch

targets, as these obligations are vital for maintaining the integrity of the central dispatch and price setting process.

Predicting the demand-supply balance will become increasingly challenging if AEMO does not reduce the information asymmetries and enhance transparency between Market Participants and the demand side. This is vital to enable an equal playing field in the NEM and to avoid reliability issues in the future. It is for this reason Snowy Hydro is concerned by certain aspects of the proposed DRSP category:

1) DRSPs no longer need to aggregate at least 5MW of wholesale demand response capacity

The focus should be for both transparency reasons and to provide scheduling obligations that this should apply for large loads over 5MW. The aggregations for anything below 5MW could make the task for AEMO complicated which is why the 5MW threshold should be used to avoid making the calculation of baselines inaccurate.

2) DRSPs are not subject to causer pays under the second draft rule

If the DRSP registration category is combined with the existing registration category for market ancillary service providers (MASP), therefore being able to provide ancillary service, then there is no reason for the category to not be subject to causer pays. Scheduled demand response units should be obligated to follow its consumption profile with a causer pays penalty applicable for not following the profile.

The causer pays criteria is for regulation Frequency Control Ancillary Services (FCAS) services and is key to the way that regulation services are paid for. Excluding this from DRSP's could lead to loads not responding as expected and a regulation service needed to be procured to manage the frequency. This could lead to non DRSP demand subsidising demand response as residual causer pays gets lumped on customer load. Any causer pays factors that cannot be allocated to a generator are by default assumed to be caused by the retail load which means that these costs are then smeared onto the retailers.

The Draft Determination notes that *"it is unclear how much demand response would be provided through the mechanism, and what the impact of this demand response would be on power system frequency, the second draft rule does not require contribution factors to be determined for DRSPs."*⁷⁷ This is worrying as AEMO's recent frequency rule change expresses concerns regarding the deterioration in power system frequency performance. If AEMO has concerns regarding minisming the ongoing operational impact on each generating system and reducing the risk of load shedding or generation shedding following power system frequency events then all scheduled loads should be subject to causer pays. The cost of not knowing the amount of demand response will be greater if frequency is impacted than the costs of AEMO implementing the changes.

It is important that the AEMO has the visibility of demand response and the implication on its ability to manage power and system security in the short-term and longer-term.

3) Providing wholesale demand response with numbers added - Example in Draft Determination

⁷ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp152

Figure 1 example below, from the Draft Determination, shows when the DRSP received a dispatch instruction to reduce consumption below its available capacity and provide wholesale demand response under the proposed mechanism.



Figure 1: Providing wholesale demand response⁸

Snowy Hydro believes the following will need to be further assessed from the example by the Commission to avoid any issues moving forward. These include:

- Care must be taken on how the load can deviate if the baselines are inaccurate. The expectation should be that the load meets the target and baselines are accurate as this process will not be done automatically as it is currently done for scheduled generators.
- The non demand responsive load which is not separately metered should have fixed metering or a fixed number otherwise it is meaningless as it will be lost in the variability. If a load decreases total output, this example would allow DRSP to change the non-demand responsive loads which would mean if they didn't meet their target they could easily change the non-demand responsive.
- Processes and checks need to be properly undertaken to make sure that the load is meeting dispatch.

Snowy Hydro welcomes the decision to have the DRSP loads considered part of the "good faith" bidding provisions in the National Electricity Rules (NER). This approach will ensure these aggregated DRSP loads are transparent to the market. Also, the DS bidding obligations in the NER ensure the DRSP bids its load into the market in good faith.

The uncertainty/firmness of demand response has generally meant it has not been relied on in significant volumes to manage risk, as retailers need to over procure demand response capacity to effectively increase its firmness. The Commission's proposal that recommends that the AER's contracts and firmness guidelines address the circumstances where a retailer has a qualifying contract for the provision of demand response with its own customer is sensible. However this should be taken one step further in allocating risk associated with the firmness of consumers' wholesale demand response to be managed by the DRSP. The DRSP should ensure that their customers can provide firm demand response⁹.

⁸ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp148

⁹ AEMC, Wholesale demand response mechanism, Draft rule determination, 18 July 2019, pp 202

Baselines

Baseline methodologies have the potential to create significant risk for retailers. From the Draft Determination the Commission's efforts to establish appropriate baseline methodologies by applying specific metrics that the baseline methodologies would be required to comply with is vital¹⁰. There needs to be stringent compliance requirements to be applied to the proposed baseline methodologies.

Snowy Hydro believes AEMO determining baseline methodologies, with consultation, instead of allowing market participants to develop and submit their own baseline methodologies is a sensible approach. Should the market participants have the ability to develop and submit baseline methodologies to AEMO there would likely be negative impacts on dispatch and pre-dispatch for DRSP which would flow on to the rest of the NEM.

The quality of a baseline is directly related to how predictable a load is, such as large commercial and industrial which are more predictable, however irrespective of the checks and balances provided to strengthen baselines, they will always expose retailers to potential risks. That is, when a DRSP baseline is overstated for a scheduled load to be bid into the NEMDE for a dispatch period, then the additional hedging costs applied to the retailer could be significant. To this end, our view is that a DRSPs load bid into the market must ensure its consumption must not vary within some very tight parameters outside of its normal consumption range. Baseline metrics should be detailed enough to ensure only loads with stable enough baselines are able to become DR candidates. That is, candidates who have a large variable load with significant fluctuations cannot be a candidate as their normal fluctuations cannot provide a stable baseline.

<u>Settlement</u>

Snowy Hydro is deeply concerned that the Commission's settlement model creates financial risk for retailers. Under the Commission's settlement model the reimbursement rate is based on the 12 month rolling average of wholesale spot prices instead of the forward contract prices that retailers usually use to hedge their load with. Unfortunately, this creates a significant financial exposure for retailers that generally use forward contracts to hedge their load. As a result, retailers with a large portfolio of commercial and industrial (C&I) customers that participate in wholesale demand response could be exposed to a significant financial risk where their customers trigger demand side responses. Thus, if as the Commission argues that the *"the purpose of the reimbursement rate is to reflect the wholesale cost component of an average customer's retail tariff"* ¹¹ then the easiest way to achieve this objective is for the reimbursement rate in the settlement model to be based on forward contract prices.

Snowy Hydro notes that under the second draft rule, the settlement reimbursement rate will be calculated on a quarterly basis and is based on a rolling average of demand-weighted wholesale spot prices over the previous 12 months which is consistent with the methodology proposed under the first draft determination. Under the approach proposed by the Commission there is discrepancy that the retailer could be out money depending on the number of large customers they have which has the potential to cost the retailer significantly. Whichever large load decides to switch off the retailer will be left paying the 12 month average spot.

The methodology attempts to find a reasonable surrogate for a retailer's hedging costs by using a reference to the previous years average wholesale spot price. The concern with this approach is the

¹⁰ AEMC, Wholesale demand response mechanism, Draft rule determination, 18 July 2019, pp 132

¹¹ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp218

reference to an average wholesale price from the previous year is it assumes risk and price are equal across time and fails to adequately capture the key factors that actually influence a retailer's hedging costs.

The Commission considers that "a retailer's exposure in the wholesale market should be approximately unchanged following the implementation of a wholesale demand response mechanism, regardless of whether or not its customer is participating in the mechanism."¹² Care should be taken in considering that a retailers' exposure could be approximately unchanged as without the appropriate information the retailers are likely to incur costs which are unnecessarily imposed on them. As noted in our previous submission to the first draft rule a retailer's hedging is dynamic. A customer's contract price will reflect the time, load, and temperature at the time of the commercial transaction. It is therefore important that retailers know information in advance as anytime a submission is changed the supplier will be left forecasting an unknown quantity. We therefore believe that the information for retailers is enhanced by requiring additional information about customers that have an arrangement with a DRSP in order to adjust their hedging strategy for those customers if required in real-time.

The Commission undertakes quantitative modelling to determine the historical rates produced by different methodologies in each mainland NEM region under a number of alternative methodologies in the settlement model over a three year period. ¹³After completing this exercise, it concludes that the use of a 12 month rolling average of wholesale spot prices in the settlement model to reimburse retailers is appropriate. From our perspective, even if the Commission has determined that the use of a 12 month rolling average of wholesale spot price is appropriate in the settlement model, there is always a reasonable chance that the outcome might be different. Hence, the only way in which the Commission can guarantee that retailers will not be subjected to a financial exposure under the settlement model, is to assume they use forward contracts to hedge their loads for their customers.

The Commission argues in its quantitative modelling that the use of forward peak contract prices in the settlement model will generally lead to a higher reimbursement rate compared with the use of average spot prices. ¹⁴ They also argue the magnitude between these differences varies between jurisdictions. However, we note that the Commision fails to present any real evidence to demonstrate that the use of a settlement model based on forward contracts is inappropriate. In fact, the only argument that the Commission presents to avoid using forward contract prices for the reimbursement rate in the settlement model is that it would be difficult to do in South Australia because of the market liquidity issues. While agreeing with the Commission that this would indeed be difficult, we would welcome the opportunity to work with the Commission to develop an alternative approach in South Australia.

Snowy Hydro is also concerned that the settlement model has the potential to make large C&I customers less attractive to retailers. If for example retailers with large C&I customers are constantly exposed to a financial risk because they are reimbursed based on the 12 month demand weighted spot prices, there is the potential for this to disincentive us from supplying these customers. As a commercial entity, Snowy Hydro would seriously consider pricing in a risk premium under the current settlement model for our C&I customers.

Finally, under the settlement model set out in the second draft rule, the Commission has noted that costs *"will be recovered from the customer via the DRSP through AEMO's settlement process"*¹⁵ which is *"intended to address the missing money issue and not impose any unmanageable costs on that*

¹² AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp203

¹³ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp214

¹⁴ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp218

¹⁵ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp203

retailer or its customers.^{"16} At a time when retailers are implementing numerous reforms and proposals the Commission should continue to remain aware that the complex proposals could lead to unknown costs on retailers with little benefit to the market. If this is the case the settlement process should then be reviewed a year after the proposal.

Snowy Hydro believes the retailer being billed in the wholesale market at the baseline level of consumption and subsequently charges its consumers for their actual consumption is a sensible approach. This draft rule may minimise the extent of the changes required to retailer billing systems from the first rule.

Timing and Moving forward

The Draft Rule Determination proposes to bring forward the implementation date from July 2022 to 24 October 2021. The Commission notes that *"by reducing the costs and complexity of the mechanism for AEMO to implement, the implementation date can be brought forward"*¹⁷ with little consideration on the costs and complexity this will have on market participants. Snowy Hydro therefore does not support expediting this rule change and bringing the implementation forward from 1 July 2022.

Market participants have comprehensive system changes scheduled to deliver global settlement, five minute settlement and the retailer reliability obligation. The Commission needs to be aware that the costs across industry would be significant. The industry needs to make the relevant changes to accommodate these rule changes and ensure they are implemented smoothly. Additional obligations that would be required to comply with any other rule changes at this time would only slow down our process. Retailers would need to make the key system changes to help recover and store data from DRSP who pays the retailer for the costs of the customer's baseline level of consumption in the wholesale market. They would then be required to report on that data to AEMO for reconciliation purposes. These values would also need to be reconciled against the amount that a retailer would be charged by AEMO at the wholesale price which includes the customers level of DR plus its consumption level

The mechanism, should it proceed, should be implemented no earlier than 1 July 2022 or after 5 minute settlement.

¹⁶ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, pp203

¹⁷ AEMC, Wholesale demand response mechanism, Draft rule determination, 12 March 2020, ppvii